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***Case No COMP/M.5675-
SYNGENTA / MONSANTO'S
SUNFLOWER SEED
BUSINESS***

Only the English text is authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 8 (2)
Date: 17/11/2010



EUROPEAN COMMISSION

Brussels, 17.11.2010
C(2010) 7929 final

PUBLIC VERSION

COMMISSION DECISION

of 17.11.2010
declaring a concentration to be compatible with the internal market
and the EEA Agreement

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(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,
Having regard to the Agreement on the European Economic Area, and in particular Article 57 thereof,

Having regard to Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings¹, and in particular Article 8(2) thereof,

Having regard to the Commission's decision of 21 June 2010 to initiate proceedings in this case,

Having regard to the opinion of the Advisory Committee on Concentrations²,

Having regard to the final report of the Hearing Officer in this case³,

WHEREAS:

- (1) On 28 April 2010, the Commission received a notification concerning a concentration by which the undertaking Syngenta Crop Protection AG (hereinafter "Syngenta" or "the Notifying Party") acquired sole control of the global sunflower seed business of Monsanto Company (hereinafter "Monsanto" or "the Target Business") by way of purchase of assets. Syngenta and the Target Business are jointly referred as "the merging parties".

I. THE NOTIFYING PARTY AND THE TARGET BUSINESS

- (2) Syngenta is a company based in Switzerland active in the agricultural sector, in particular in seeds and crop protection. Syngenta was created by the spin-off and merger of the crop protection business of Novartis AG and AstraZeneca plc and the seed business of Novartis AG in November 2000.⁴ Syngenta is active on a global basis

¹ OJ L 24, 29.1.2004, p. 1. With effect from 1 December 2009, the Treaty on the Functioning of the European Union ("TFEU") has introduced certain changes, such as the replacement of "Community" by "Union" and "common market" by "internal market". The terminology of the TFEU will be used throughout this Decision.

² OJ C

³ OJ C 7929

⁴ See Commission decision of 26 July 2000 in Case IV/M.1806 – Novartis/AstraZeneca.

in sunflower seed. In the Union, it operates one breeding centre located in France and produces sunflower seed in France, Hungary, Romania and Spain. It commercialises sunflower seed in a number of Member States. Syngenta holds an interest of [...] in Maisadour Semences S.A. (hereinafter "Maisadour")⁵, a French company which is active in sunflower seed markets in Europe.

- (3) Monsanto Company is a multinational group based in the USA, specialised in agricultural products. The Target Business encompasses all inventories of sunflower seed, germplasm, intellectual property rights, know-how, contracts, commercial data and some employees of Monsanto's sunflower seed business. The European breeding stations and production sites of Monsanto are excluded from the transaction. The Target Business is not active in sunflower seed treatment products.

II. THE OPERATION AND THE CONCENTRATION

- (4) The transaction consists of the acquisition by Syngenta of Monsanto's sunflower seed business worldwide. With the operation, Syngenta acquired sole control, by way of acquisition of assets, of the sunflower seed business of Monsanto. The transaction is therefore a concentration within the meaning of Article 3 of Regulation (EC) No 139/2004 (hereinafter the "Merger Regulation").

- (5) The transaction was completed on 31 August 2009 on a global level. In the Union, the transaction was subject to an obligation of notification in two Member States, namely Spain and in Hungary. According to the information submitted by the Notifying Party, at the time when the latter was informed of the request for referral submitted by Spain, the transaction had been implemented everywhere in the Union except for Spain.

III. UNION DIMENSION

- (6) The concentration does not meet the thresholds of Article 1(2) of the Merger Regulation. While the aggregate worldwide turnover of Syngenta is in excess of EUR 5000 million (Syngenta: EUR [...] million), the aggregate Union-wide turnover of the Target Business is below EUR 250 million (Target Business: EUR [...] million). Nor does the notified concentration meet the thresholds set out in Article 1(3) of the Merger Regulation, since the Target Business does not generate a turnover of more than EUR 25 million in any Member State. The notified concentration therefore does not have a Union dimension within the meaning of Article 1 of the Merger Regulation.
- (7) The Commission decided to examine the concentration on 12 November 2009 in accordance with Article 22(3) of the Merger Regulation, following a request for referral from Spain of 1 October 2009 pursuant to Article 22(1) of the Merger Regulation, joined by Hungary on 14 October 2009 pursuant to Article 22(2) of the Merger Regulation.

* Parts of this text have been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets and marked with an asterisk.

⁵ See Commission decision of 30 June 1999 in Case IV/M.1497 – Novartis/Maisadour.

IV. THE PROCEDURE

- (8) On 31 May 2010, the Notifying Party submitted a remedy proposal to address the serious doubts raised by the Commission.
- (9) By decision dated 21 June 2010, the Commission found that the notified operation raised serious doubts as to its compatibility with the internal market and initiated proceedings pursuant to Article 6(1)(c) of the Merger Regulation.
- (10) On 2 July 2010, the Notifying Party submitted its written comments on the decision to initiate proceedings pursuant to Article 6(1)(c) of the Merger Regulation.
- (11) A non-confidential version of certain key submissions of third parties collected during the first phase investigation was provided to the Notifying Party on 9 August 2010.
- (12) On 18 August 2010, pursuant to Article 10(3) of the Merger Regulation, the Commission, at the request of the Notifying Party, adopted a decision to extend the procedure by ten working days.
- (13) On 1 September 2010, in order to dispel the serious doubts identified by the Commission, the Notifying Party submitted commitments with a view to rendering the concentration compatible with the internal market as provided for in Article 8(2) of the Merger Regulation.
- (14) On 2 September 2010, pursuant to Article 10(3) of the Merger Regulation, the Commission, at the request of the Notifying Party, adopted a decision to extend the procedure by ten additional working days.
- (15) On 17 September 2010, the Notifying Party submitted an improved remedy package.

V. OVERVIEW OF THE SUNFLOWER SEED INDUSTRY

- (16) The transaction concerns the economic sector of sunflower seed. This section provides a brief overview of the sunflower seed industry in Europe as a background for the discussion of market definitions and for the competitive assessment of the transaction.

1. SUNFLOWER SEED FOR PLANTING – THE DIMENSION OF THE INDUSTRY

- (17) Seeds for planting fall into three broad groups: (i) agricultural crops, (ii) vegetable seeds and (iii) ornamental seeds. Sunflower seed belong to the group of agricultural seeds, a category also comprising maize, wheat, sugar beet and soybean.
- (18) As the Notifying Party explains, sunflower crop is predominantly used for the production of vegetable oil for food consumption and cooking. Within vegetable oils, sunflower oil is generally considered by customers to be of a higher quality and a healthier cooking alternative to oil produced from other vegetable seeds (such as palm oil and soybean oil). Sunflower oil consumption is high in Europe, with demand for sunflower oil increasing approximately 2-4% per annum.⁶

⁶ Form CO, p.42.

- (19) Europe is one of the largest sunflower growing areas in the world. In 2007, the total global sunflower seed industry's turnover was estimated at approximately EUR 400 million of which the Union market accounted for EUR 153 million. In the Union, sunflowers are cultivated on approximately 3,7 million hectares, corresponding to 3,7% of the arable land.⁷ Sunflowers can only be cultivated in areas with sufficient sunshine. The main sunflower growing Member States are France (with 10% of the global market), Hungary, Spain, Bulgaria and Romania. Other major European sunflower growing countries are Ukraine, Russia and Turkey, which share some similarities, in terms of agro-climatic conditions, with several sunflower growing Member States.
- (20) Volume sales in sunflower seed are measured in units consisting of 150 000 kernels which contain approximately 10 kilograms of seed. With a unit a farmer can plant up to 2,5 hectares. Depending on the growing area, one hectare can yield between 1-3 tons of commodity sunflower seed⁸. On the basis of an average of 500 kernels per sunflower plant, a unit of sunflower seed delivers approximately 5 tonnes commodity sunflower seed.
- (21) According to the Notifying Party, in Hungary, the total cultivation area of sunflower is approximately 500 000 hectares. In Spain, the total area currently dedicated for the cultivation of sunflower is approximately 750 000 hectares⁹. The volume of sunflower seed sales in Spain in 2008 was 273 000 units and in Hungary 226 800 units, which represent respectively 17,8% and 14,8% of the total volume sales in the Union (1,54 million units). The value of sunflower seed sales in Spain in 2008 amounted to EUR 25 million and in Hungary EUR 29 million, which represent respectively 16,6% and 18,7% of the total sales in the Union (EUR 152.19 million).¹⁰
- (22) In recent years, in particular in Romania and Bulgaria, sunflower acreage has strongly increased. Outside the Union, Russia, Turkey and Ukraine are considered to be growing markets. In Western Europe, production has been shifting to high value high oleic sunflower oil¹¹ (for which the largest market is France). Those products are priced at a premium due to their health and quality characteristics.

2. HYBRID SUNFLOWER SEED

- (23) Open or naturally (by insects, birds, wind, etc.) pollinated varieties of sunflower have been grown for millennia. However, today, in the Union, up to 99% of the sunflower seed production consists of hybrid sunflower seed.¹² The merging parties, in particular, only produce sunflower hybrids. Hybrids result from controlled pollination which

⁷ Form CO, p.42.

⁸ Commodity sunflowers, as opposed to sunflower for planting, are the end products from which the oil is to be extracted.

⁹ Form CO, p.51.

¹⁰ Form CO, Annex 7.1-7.3.-(1)- Seeds and Form CO Annex 7.1-7.3.-(2)- Seeds.

¹¹ High oleic sunflower oil is very high in oleic (monounsaturated) acid: it is usually defined as having a minimum 80 percent oleic acid (Form CO, p.47). High levels of oleic acid have been suggested to lower bad cholesterol which, in turn, results in a smaller risk of heart disease.

¹² Form CO, p. 40.

ensures that all seeds of a crop descend from parents with known traits¹³ and are therefore more likely to have the desired plant characteristics, such as higher yield performance and better disease resistance.¹⁴ Given those advantages, open pollinated varieties have nearly entirely disappeared from the market in the Union. One important feature of hybrid sunflower seed is that they are not self-sustaining, therefore farmers need to purchase new hybrid seed varieties for planting every year.

- (24) Based on the information submitted by the Notifying Party, in contrast to seeds of many other crops, to date no genetically modified (GM) sunflower trait has been de-regulated¹⁵ or been submitted for de-regulation in any jurisdiction. Furthermore, based on information from third parties, it appears that no genetic modification of sunflower is expected in the foreseeable future.

3. THE INDUSTRY CYCLE: A TWO-STAGE INDUSTRY

- (25) The sunflower seed industry can be described as a two-stage industry encompassing first, the development of new sunflower varieties via breeding (development of parental lines which are crossed to create hybrids) and second, the commercial production and commercialisation of those sunflower hybrids (also called multiplication). Varieties¹⁶ refers thus to both parental lines¹⁷ and hybrids¹⁸ in this Decision.
- (26) Table 1 describes the different stages and steps of the complex sunflower value chain. Those activities will be explained in further detail below. As Table 1 shows, a separate further downstream industry can be identified after the commercialisation of the sunflower seed for planting; that "third stage" aims at producing the sunflowers used for crushing and oil production. The notified concentration does not concern activities in the downstream activities as neither of the merging parties is active in the production of commoditised sunflower seed for crushing or oil extraction.

Table 1: The sunflower seed business value chain

¹³ A plant variety characteristic associated with the expression of a single gene.

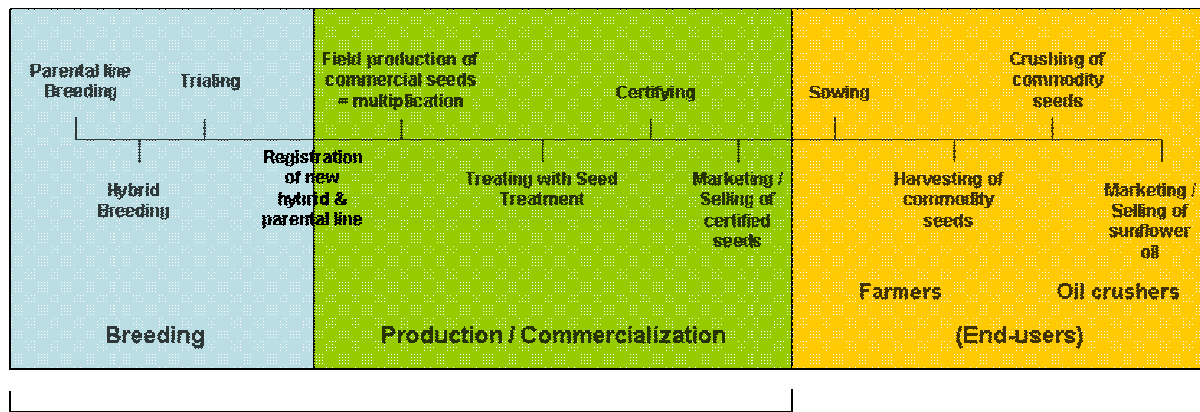
¹⁴ Form CO, p. 39.

¹⁵ GM traits or better "events" in the Union follow a de-regulation process. Once an event has been de-regulated, varieties carrying this event need to be registered (Form CO, p. 215).

¹⁶ A variety is a plant grouping within a single botanical taxon of the lowest known rank, which grouping, can be: (i) defined by the expression of the characteristics resulting from a given genotype or combination of genotypes, (ii) distinguished from any other plant grouping by the expression of at least one of the said characteristics and (iii) considered as a unit with regard to its suitability for being propagated unchanged. Source: Miller, J.F., "Sunflower", in Walter Fehr (ed.), "Principles of cultivar improvement", Vol.2 Chapter 16, New York: McMillan.

¹⁷ Parental lines are individuals of a particular plant species which are identical to each other in the genetic information they contain (genotype) due to the long inbreeding or self pollination. Both sets of chromosomes in a parental line contain essentially identical genes due to the forced repeated self pollination involved in the fixation of the line. Source: Miller, J.F., "Sunflower", in Walter Fehr (ed.), "Principles of cultivar improvement", Vol.2 Chapter 16, New York: McMillan.

¹⁸ Hybrids are the first generation offspring of a specific cross of two genetically distinct parental lines.



(27) The sunflower seed industry has a very long production cycle. Its two main stages consist in the breeding of varieties and the production, commercialisation and distribution of hybrids.

3.1. Development of varieties via breeding (stage 1)

(28) The development of varieties through breeding is a lengthy process consisting initially in the creation of male and female parental lines and in testing the actual hybrids resulting from the crossing of those parental lines. The creation of parental lines may take three to five years. Following the breeding of the parental lines, approximately three to five years account for the internal testing (trailing) of the hybrids by the breeding seed company and approximately two to three years account for the official registration trials (which are carried out partly in parallel with the internal testing). The production cycle in the industry is hence roughly ten years¹⁹ until the registration of a new hybrid. Those different steps will be described in the following sub-sections.

3.1.1. Germplasm

(29) The germplasm refers to the genetic source of a specific plant, in this case sunflower²⁰. As such, it constitutes the basic raw material for the breeder to work with. The collection of genetic material of a breeder on specific plant species constitutes its germplasm pool. It is a fundamental resource for crop production and plant improvement. In practice, to create a germplasm pool, breeders stock male and female parental line samples, as well as hybrids, creating a "library" of seeds.

(30) The portfolio strength of a given germplasm pool (that is to say, genetic diversity, strong disease package that addresses significant local pathogens, enhanced oil profile and herbicide technology) is a key differentiating factor amongst competitors in the market for the commercialisation of sunflower hybrids.

¹⁹ This is a very rough estimate based on the information received from the Notifying Party (Form CO, p. 216) and responses received during the market investigation. (Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 15). As explained below, the breeding cycle might be longer or also shorter.

²⁰ Form CO, p. 40.

3.1.2. Breeding of parental lines and hybrids

- (31) Plant breeding aims to create new hybrids with desired characteristics for specific purposes, such as high yield, low impurities and resistance to specific insects and herbicides, via controlled pollination of male and female parental lines.
- (32) The breeding process starts with developing the (male and female) parental lines²¹. In the initial stage of the breeding of a parental line, the breeder tries to generate the largest segregation²² possible by crossing two very distinct lines that will lead to the largest diversity possible in terms of offspring. In subsequent generations, once it has identified the variety which expresses the desired characteristic, the breeder starts "fixing" the line by repeated self-pollination (or self-fertilisation)²³. The purpose of fixing the line is to achieve that both sets of chromosomes of the parental line contain essentially identical genes²⁴. The fixed parental line ensures that the offspring of the fixed parental line will express the selected characteristic.
- (33) In this process called pedigree breeding the parental line is used to produce the next generation of varieties, from which, in turn, parent plants are then selected. It may take three to five years until a new stable parental line is established, also depending on the use of different technologies, such as molecular breeding²⁵ and whether winter nurseries²⁶ are used to accelerate the process. It is standard practice among breeders following the initial cross creating a new line to use the codes F1, F2, F3, etc. to denominate the successive generations resulting from self-fertilisation. For example, an F3 line denotes a line which is the result of three generations of self-fertilisation (at this stage the line is not yet fixed). According to common industry practice a line is fixed only after F6 (that is to say, after 6 generations of self-fertilisation)²⁷. Only at that stage is it relatively certain that the official registration process will start. However a parental line already in the registration process can still be withdrawn, notably if the line is not yet sufficiently fixed.
- (34) In turn, a hybrid is the result of the crossing of two stable parental lines that have certain desired characteristics. The first hybrid (filial) generation whose parents were (different) parental lines are named F1 hybrids. The F1 hybrid typically exceeds both parents in vigour and yield²⁸. The time required to breed new hybrids from fixed parental lines may be another three to five years.

²¹ Parental lines are also referred as "inbred lines" or "inbreds" in the industry.

²² Segregation relates to the process at meiosis, through which when chromosomes split to form haploid pollen or ovule cells the genes separate leading to a separation of characters.

²³ Self-pollination is used to attain homozygosity of the desired genes to ensure that the line has the relevant traits. Homozygosity is attained when both sets of chromosomes in a parental line contain essentially identical genes. Self-pollination is obtained by covering the individual sunflower heads with bags.

²⁴ Lines are considered to be fixed when 99% of the genome is identical. See agreed non-confidential minutes of meeting with Pioneer of 26 July 2010.

²⁵ For the definition of molecular breeding please refer to footnote 38.

²⁶ Winter nurseries are usually located in South America, allowing conducting two breeding cycles in one year.

²⁷ Therefore, the time required for the fixation of the parental line takes on average six breeding cycles.

²⁸ This phenomenon is known as hybrid vigour or heterosis.

- (35) The subsequent generation of offspring resulting from the F1 hybrid (that is to say, the F2 hybrid generation) no longer exhibits the vigour and yield advantage of the F1 hybrid due to the random combination of the inherited traits from the two parents (male and female). Therefore, to produce consistent F1 hybrids, the original cross must be repeated each season. As in the original cross, this is usually done through controlled pollination. The primary disadvantage of hybrids is that the seeds often cannot be saved from year to year. Seeds saved from hybrid usually will not produce the same hybrid the subsequent year because most of them are not self-sustaining.
- (36) Screening/testing and trialling of newly created hybrids are an essential part of the breeding process. They take place in all Member States where the hybrid may eventually be commercialised. The main purpose of the tests is to find out which agro-climatic conditions the products are best adapted to and in which Member States they may, therefore, be successfully commercialised²⁹.
- (37) Breeding is the most important driver for the competitive differentiation of the players active in sunflower seed. The purpose of breeding is the continuous development of new parental lines with new or improved traits and the creation of new sunflower hybrids showing higher agro-climatic performance. Advances in breeding have resulted in several notable innovations, such as improved agronomic characteristics, better disease tolerance, herbicide tolerance and high oleic content seed. It appears, however, that improvement in the yield of individual plants through breeding is not easy to achieve and has remained relatively stable in recent years³⁰.
- (38) Breeding entails essentially two types of activities, although a clear separation is often difficult between them: one might be described as "basic (or fundamental) research" and the other as "applied research". Based on the results of the market investigation, basic research consists of activities aimed at identifying and developing germplasm, traits and tools without direct practical use in sunflower seed breeding for commercialisation. Examples of such activities in breeding include molecular marker development, mutagenesis and crosses with wild species. Activities directed at the development and improvement of elite parental lines and hybrids could be characterised as "applied research". Examples of such activities include pedigree breeding using elite parental lines, marker assisted trait introgression³¹ and disease screening and selection in segregating populations.³² Applied research in breeding pursues a market oriented objective by trying to develop the best varieties for each segment.
- (39) The market investigation has confirmed that breeders fall broadly into two categories: public institutes and commercial breeders. Public institutes are normally interested in a comprehensive understanding of all traits of a plant while commercial breeders, given their stronger market-orientation, tend to concentrate on the last breeding stage (with a special focus on quality and productivity parameters). Commercial breeders may also conduct some basic research to identify and develop new proprietary traits to

²⁹ Form CO, p. 43.

³⁰ Agreed non-confidential minutes of the interview with Advanta of 15 July 2010.

³¹ Transfer of a limited number of genes into a breeding line from another species (for example, wild species) by repeated back crossing to the recurrent parent.

³² Replies to the Commission's request for information pursuant to Article 11 of the Merger Regulation (hereinafter "Article 11 letter of the Commission") to seed competitors of 23 July 2010, question 2.

incorporate in their elite parental lines and hybrids, but they are in general more reticent to conduct basic research given the uncertainty and risk of failure it involves. Some public institutes release inbred lines with certain traits which may be licensed to seed companies which aim to incorporate the desired traits in their own germplasm and breeding programmes.³³ Public institutes tend to be more open to collaboration than seed companies although their germplasm is generally less performing (in yield and oil content)³⁴. While cooperation of seed companies with public institutes is often focused on obtaining access to parental lines with specific traits such as disease resistance, cooperation with other seed companies focuses on gaining access to elite parental lines that make it possible to create commercial hybrids.³⁵

- (40) On the basis of the information submitted by the Notifying Party³⁶ and confirmed by the market investigation³⁷, biotechnology plays an increasing role in sunflower seed breeding in the form of marker-assisted breeding (also known as molecular breeding).³⁸ According to the Notifying Party, this technology is currently being actively used by breeders to accelerate the lengthy process of breeding. The use of molecular breeding shortens the breeding cycle by approximately two years, reducing it to six to eight years instead of eight to ten years, which gives a significant competitive advantage for the launching of new hybrids in the market. In general, molecular markers are proprietary and never exchanged by seed companies.

3.1.3. Exchange of parental lines and licensing of varieties

- (41) A practice of exchanging or licensing of parental lines between breeders has developed, notably to diversify their respective portfolios, by providing them with access to parental lines of other breeders (either another seed company or a public research institute) for crossing with their own lines. Such crossings may result in the creation of so called "co-hybrids", hybrids which have desired characteristics of parental lines coming from two different germplasm pools. In turn, "fully-own hybrids" are those which a breeder develops entirely from its own available genetic material.
- (42) According to the industry practice, should the use of parental lines of another market player result in the development of successful co-hybrids which are later commercialised on the market, the company commercialising the co-hybrids pays royalty fees to the third party owner of the parental line. The royalty fee is calculated on the basis of the sales of the resulting co-hybrids, amounting to approximately 10%-12,5% of the sale price of the co-hybrids³⁹. According to some market participants, in

³³ Replies to Article 11 letters of the Commission to seed competitors of 23 July 2010, question 3.

³⁴ Replies to Article 11 letters of the Commission to seed competitors of 23 July 2010, question 27 (Dow AgroSciences – non confidential).

³⁵ Replies to Article 11 letters of the Commission to seed competitors of 23 July 2010, question 9 (Dow AgroSciences – non confidential).

³⁶ Form CO, p. 213.

³⁷ Replies to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 23.

³⁸ Genetic or molecular markers are being used to identify genes in the plant tissue and to relate the genotype of plants to the phenotype. Depending on the characteristics, few or many different genes can influence a desirable plant characteristic. The use of molecular markers can map thousands of genes. This allows plant breeders to screen large populations of plants for those traits they are interested in.

³⁹ Form CO, p. 200.

certain situations companies have been so interested in access to a particular line that they have accepted a higher level of royalties, up to 25%.⁴⁰

- (43) The process of parental line exchanges has been described by some competitors (namely Advanta⁴¹ and another competitor⁴²) in the following way. When looking for a partner for exchanging and licensing parental lines, each seed company has an idea of the strengths and weaknesses of its competitors' germplasm, given the hybrids that they commercialise, which are tested by each player for benchmarking purposes on a regular basis. The creation of a joint hybrid entails, in an initial stage, meetings between breeders and business people from both interested companies. Those meetings result in the assessment of the compatibility of the respective companies' breeding material. Where the results are positive, they may decide to exchange a handful of female lines under a confidentiality agreement to test against male lines. Interesting hybrids resulting from the crossings made by each company will be further tested. If a given co-hybrid is successful, the parties might conclude a commercial agreement. The terms of the licensing agreement are subject to negotiation between the involved parties and cover, among other things, the duration, territorial coverage, production and royalties involved. The territory for licensing of parental lines usually comprises at least the Union, but sometimes also other important sunflower growing countries, such as Ukraine, Russia and Turkey.
- (44) Licences may also be granted for the commercial exploitation of hybrids. Hybrids may be licensed either to vertically integrated seed companies, should they have an immediate gap in their hybrid portfolio and/or to seed companies active only in commercialisation, with no breeding capabilities (as licensed hybrids, as opposed to parental lines, do not require further breeding). Similarly to parental lines, the company commercialising the hybrids pays royalty fees to the licensor on the basis of the sales of the licensed hybrids. The royalty fees for hybrids are usually higher than for parental lines, amounting to approximately 20%-25% of the sale price of the hybrids⁴³.

3.1.4. Registration and intellectual property protection

- (45) Before a new hybrid can be commercialised, both the hybrids and the related parental lines need to be registered, which normally takes two to three years. Registration of parental lines and hybrids may be undertaken in parallel although the criteria for registration differ⁴⁴. If a new hybrid has been put into the official registration process and one of the parental lines is already registered (for example, because it is the parental line of another hybrid that is already registered), the registration process does not have to be repeated for the already registered parental line. Therefore seed companies tend to maintain the registration of the parental lines even if the relevant hybrid has been withdrawn from the market.⁴⁵

⁴⁰ Minutes of meeting/conference call with a competitor.

⁴¹ Minutes of meeting/conference call with Advanta 15 July 2010.

⁴² Minutes of meeting with an anonymised competitor.

⁴³ Form CO, p. 200.

⁴⁴ Response to Article 11 letter to Syngenta, 19 August 2010, question 7.

⁴⁵ Response to Article 11 letter to Syngenta, 23 August 2010, question 3.

- (46) Registration occurs typically in those Member States where the parental line or hybrid has proven its adaptation and where it will be used and/or commercialised. Once a parental line or hybrid is registered in one Member State, it is also included in the Common Catalogue of varieties of agricultural plant species, allowing its commercialisation across the Union without the need for further national registration.
- (47) Parental lines need to fulfil the Distinct Uniform Stable (hereinafter "DUS") test before they can be registered: they need to be distinct from already registered lines⁴⁶, uniform in the sense that all the plants derived from them should be identical⁴⁷ and stable as to their characteristics when they are reproduced⁴⁸.
- (48) Hybrids need to follow the Value for Cultivation and Use (hereinafter "VCU") protocol, meaning that they must perform better than the hybrids currently on the market. The VCU criteria relate to several traits which may vary depending on the country of registration.⁴⁹
- (49) The general rules with respect to the protection of new varieties of plants are established by the International Union for the Protection of New Varieties of Plants Convention (hereinafter "the UPOV Convention")⁵⁰. All varieties⁵¹ (including parental lines and hybrids) that are new, distinct, uniform and stable can be protected with specific intellectual property ("IP") rights, namely Plant Variety Protection ("PVP")⁵² or Plant Breeder's Rights ("PBR")⁵³. According to the Notifying Party, for sunflower seed, the protection of parental lines has proven to be a sufficient and the most effective protection for the breeder's innovation and investments⁵⁴. Therefore, the Notifying Party protects only its parental lines.

⁴⁶ This criterion ensures that the line is original and distinct from the actual lines already commercialised in the market. For this, the officials have to develop a description of each line following 40 description points as stipulated by UPOV. In that context, it should be noted that "essentially derived" lines, that is to say, lines that show more than 85% genetic similarity with an original line, cannot be considered as distinct lines.

⁴⁷ For instance, same flowering date, same height, etc.

⁴⁸ This criterion means that if the line is reproduced, the test results leading to the description of this line should be the same than the results of the previous generation. This also explains why two or three years of registration are needed to confirm the stability of a product.

⁴⁹ Traits common to all countries are the yield and oil content of the seed. Some disease resistances can however be added to the index of calculation (for example, Orobanch resistance is particularly important in Spain). The registration threshold also depends on the country of registration.

⁵⁰ The International Union for the Protection of New Varieties of Plants (known as "UPOV" from its French acronym) is a convention to which all Member States of the Union and the Union itself are signatories. Its mission is to provide and to promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.

⁵¹ For the definition of variety under the UPOV Convention, see footnote 16.

⁵² Form CO, p. 195.

⁵³ PBRs qualify what breeders, that is to say, the ones who bred, discovered and developed a variety, are allowed to do with PVP-protected material from other breeders (for example, they are allowed to breed with hybrids, but not to trace back the parental lines). (Form CO, p. 194.) Varieties cannot be protected by patent, as patent protection does not apply to plant varieties within the Union. In the USA, contrary to the Union, patents can also be granted to protect plant varieties.

⁵⁴ Form CO, p. 195.

- (50) Once a PVP has been granted, authorisation of the breeder of the protected variety is required for production or reproduction of the variety, conditioning for the purpose of propagation, offering for sale, selling or marketing, exporting, importing and stocking for any of those purposes. However, the so-called "breeder's exemption" under the PVP allows other breeders to further improve varieties or create new varieties out of varieties that are commercially available in the market by carrying out breeding projects with PVP-protected varieties. The owner of a PVP-protected variety can only prevent commercial sale but not the breeding and development of new parental lines and hybrids. However, it appears that, in practice, hybrids of other breeders are not used to develop own hybrids, as it is a costly and rather inefficient, if at all possible, way to develop new hybrids.

3.2. Production, commercialisation and distribution (stage 2)

- (51) Once a new plant variety is registered, it can be produced in commercial quantities. The actual production of commercial seeds is often carried out by contract growers. The first step in the production is the multiplication of the so-called basic or foundation seeds (the actual "parents" of the hybrid) stemming from the "pre-basic" or "pre-foundation" seeds (which are actually the "grandparents"). Then, from the female and male parental lines, hybrids are multiplied in commercial quantities, also called "commodity crop seeds". The production country often differs from the country of commercialisation.
- (52) Afterwards the seed is purified, sorted, treated with seed treatment products and packed at the seed company's processing plants or by third undertakings. These activities are less specialised and, although all major seed companies are active in the whole value chain, can be successfully carried out on a smaller scale by subcontracted third parties.
- (53) Seeds also need to be certified at the end of the processing in order to be suitable for selling and sowing. There are two stages in certification: varietal certification as required by the Organisation for Economic Co-operation and Development (OECD) and technological certification (required when certification takes place within the Union⁵⁵). Controls are conducted in the fields and in processing plants⁵⁶. Once a product is certified (in the Union or in countries that have ratified the OECD protocol), a label is affixed. That label is recognised internationally. However, seeds may arrive non-definitively certified in a Member State and undergo processing and certification in that Member State. In the Union, a European phytosanitary passport is delivered and a blue certification label is applied on seed bags, allowing seeds to be traded freely.⁵⁷

⁵⁵ Annex II to Council Directive 2002/57/EC of 13 June 2002 on the marketing of seed of oil and fibre plants.

⁵⁶ The national certification authorities verify that certification is done properly: in France, for instance, the SOC (Service Officiel de Contrôle et de Certification) conducts controls in the fields where seeds are multiplied to verify the varietal purity, the varietal identity, the cultural condition and the sanitary condition of the plant as well as the absence of Mildew. Inspections are then carried in processing plants by employees of seed companies who are specifically trained and approved for that purpose. The SOC nevertheless make unexpected controls and audits to verify that certification is done properly by companies' laboratories. Inspections are then carried in processing plants by employees of seed companies who are specifically trained and approved for that purpose.

⁵⁷ Agreed non-confidential minutes of the interview with GNIS - Service Officiel de Contrôle et de Certification (SOC) of 16 March 2010.

- (54) Usually, it is also at this stage that sunflower hybrids are treated to protect them against certain pests and diseases in the early stage of their development (when the seed is still in the soil). Seed treatment formulations consist of either fungicides or insecticides.⁵⁸ Sunflower hybrids sold throughout the Union are nearly all pre-treated with seed treatment fungicides⁵⁹ while only approximately 10% of sunflower seed is treated with seed treatment insecticides.
- (55) Seed companies sell their seeds mainly to independent distributors and/or cooperatives or to oil crushers and/or agents. Sales directly to farmers are very limited. The distributors and/or cooperatives offer and deliver the seeds directly to the farmers via regional (local) distribution centres. Usually, seed distributors are not active on a Union-wide scale but only in one Member State. Their geographic focus differs from one Member State to another, but they often serve customers within a 50-100 km radius. Usually distributors are not only active for one crop or species, but market many different crop seeds and other related products, such as crop protection products.
- (56) Farmers often source seeds for more than one crop and might vary the crops from year to year, depending on the need for rotation and which crops they hope to be the most profitable. It appears that sunflower is a rotating crop and can therefore only be planted again in the same land after several years. Therefore, farmers typically choose first the crop they intend to grow and then choose the actual sunflower seed hybrid most adapted to the local agro-climatic conditions. The market investigation also revealed that, for crop security reasons, farmers typically do not rely on a single type of hybrid when purchasing sunflower seeds⁶⁰.
- (57) Seed producers may also sell their seeds to oil crushers or agents who order a certain volume of seed from a seed company, deliver the seeds to farmers and afterwards purchase – in their own name – the resulting harvest from the farmers, thereby taking the merchandising risk. This model is particularly common in Spain.
- (58) The lifetime of a hybrid usually ranges from five to six years although it may be longer for the best selling hybrids⁶¹. It may also happen that a hybrid is taken out of the market earlier as it does not perform commercially as expected. Hybrids are usually removed from the register at the end of their lifetime.

4. THE MARKET PLAYERS AND RECENT TRENDS IN THE INDUSTRY

- (59) The main seed companies active in the Union are Syngenta, Pioneer, Monsanto, Limagrain and Euralis. They are vertically integrated, active both in breeding of varieties (and generally also in trading of varieties) and in commercialisation of sunflower hybrids. Limagrain and Euralis are active in breeding through their joint venture Soltis.

⁵⁸ Herbicides are agents for weed control, therefore they are only used for crop protection but not for seed treatment.

⁵⁹ Only sunflower seeds used by organic farmers are not treated. According to the Notifying Party, they make up approximately 0.4% of the market.

⁶⁰ See for example, Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 24; and responses to Article 11 letters of the Commission to Hungarian seed distributors/purchasers of 29 April 2010, question 18.

⁶¹ Minutes of meeting with a competitor.

- (60) There are also market players that are active in only one stage of the sunflower seed industry as defined in recital (25). Certain public institutes may be only active in breeding of sunflower varieties, such as the French Institute National de la Recherche Agronomique (hereinafter "INRA"), the Spanish Cordoba-based Instituto de Agricultura Sostenible (hereinafter "Institute of Cordoba"), the German University of Hohenheim, the Bulgarian Dobroudja Agricultural Institute (hereinafter "Dobrudja Institute"), based in General Toshevo, the Romanian Fundulea-based Research Institute for Cereals and Industrial Crops (hereinafter "Institute of Fundulea") and the Hungarian Kaposvári Egyetem TKI (hereinafter "TKI") . However, the Serbian, Novi Sad-based Institute of Field and Vegetable Crops (hereinafter "Institute of Novi Sad") is also active outside the Union in commercialisation of sunflower seed⁶². Conversely, some other market players such as Saaten Union and De Sangosse are only active in commercialisation of sunflower hybrids. Often, there are also other small local competitors without breeding activities. The latter companies license hybrids from integrated seed companies, such as the merging parties, or from public institutes.
- (61) Based on the information received from the Notifying Party and confirmed by the market investigation, complexity in terms of breeding in the sunflower seed markets has increased over the last 10 to 15 years. The Notifying Party explains that this is driven by increasing pressure from pests and diseases, such as the appearance of new types of diseases such as Downy Mildew or parasites such as Orobanche, as well as by the appearance of new customer demands, such as specialty oil composition or herbicide tolerance. As a consequence, significant research and development (hereinafter "R&D") efforts are required to keep up with those market needs. This is a highly innovation-intensive industry, which is also illustrated by the significant increases in R&D efforts and expenditure and the role of biotechnology.
- (62) In the last 10 to 15 years, the industry has been subject to significant consolidation. In the mid-1990s approximately 22 players accounted for more than 90% of the sunflower demand in the Union. Today, only four to five players serve the vast majority of the sunflower seed demand in the Union. Moreover, given the high investment required, , the role of public institutes is diminishing.

VI. ACTIVITIES OF THE PARTIES

- (63) The Notifying Party and the Target Business are active in both breeding and trading of sunflower seed varieties and in commercialisation of sunflower hybrids throughout the Union, as well as in other parts of the world.
- (64) The Notifying Party operates two breeding centres (one in France and one in Ukraine) from which it serves Europe. Before the transaction, Monsanto operated five breeding centres from which it supplied the European market for sunflower hybrids⁶³, two of them in France (Monbéqui and St Amand Longpré), one in Hungary (Szatymaz), one in Spain (Seville) and one in Turkey (Leluburgaz). After 2005, the breeding activities

⁶² Agreed non-confidential minutes of the interview with the Institute of Field and Vegetable Crops of 10 June 2010.

⁶³ Response to Article 11 letter of the Commission to Monsanto of 9 April 2010, question 2; Response to Article 11 letter of the Commission to Monsanto of 21 May 2010, question 8.

that Monsanto had in its centre in Spain were gradually transferred to the centre in Turkey.⁶⁴

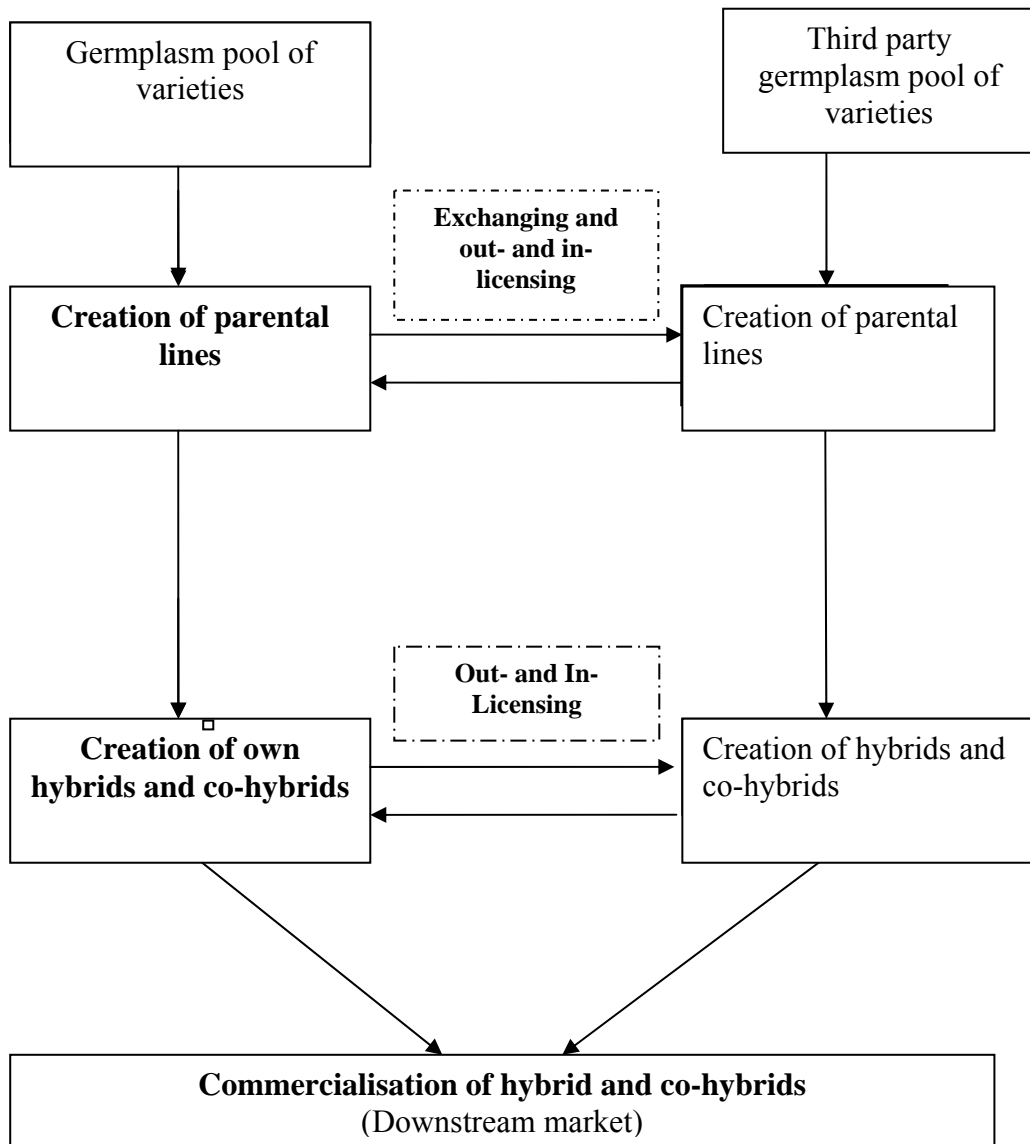
- (65) The outcome of the parties' breeding activities/efforts are mainly used to supply hybrids for their own commercial activities, but also to supply varieties to third parties via exchanging of parental lines and licensing of varieties. While the in-house supply of varieties typically captures the largest part of the outcome of their breeding efforts, the parties are also significantly active in the exchange of parental lines and licensing of varieties.
- (66) Both Syngenta and Monsanto have exchanged and in/out-licensed parental lines with other large seed companies active in breeding in order, in particular, to diversify their germplasm portfolio. The parties, in particular Syngenta, have also used parental lines from public institutes for the creation of co-hybrids.
- (67) The parties also out/in license hybrids. As explained above, hybrids may be licensed to companies without their own breeding capabilities. Licensing may also take place between vertically integrated seed companies, notably when one of them intends to fill a perceived gap in its portfolio. For instance, Syngenta out-licensed the hybrids [...] and [...] to [...] and the hybrid [...] to [...] ⁶⁵ while Monsanto out-licensed the hybrid [...] to [...] ⁶⁶.
- (68) As regards the commercialisation of hybrids, both parties are active in all the major sunflower growing countries in Europe via local subsidiaries and sales force, but they are not directly active in the distribution of hybrids.
- (69) Table 2 illustrates the different activities of the parties as regards the main stages of the sunflower seed business.

⁶⁴ Response to Article 11 letter of the Commission to Monsanto of 18 May 2010, question 8 and question 13.

⁶⁵ Annex 8.10.d.-(2)-Seeds of Form CO.

⁶⁶ Response to Article 11 letter of the Commission to seed competitors – phase II of 22 July 2010, question 18.

Table 2: Overview of the parties' activities



VII. PRODUCT MARKET DEFINITION

1. TRADING OF SUNFLOWER VARIETIES

1.1. The view of the Notifying Party

- (70) The Notifying Party proposes the definition of a single product market for sunflower seed varieties encompassing the two stages of the sunflower seed industry described in Section V, that is to say, both the breeding and trading of sunflower seed varieties and the commercialisation of sunflower hybrids.⁶⁷ The Notifying Party claims that there is no separate market for breeding, as the only commercial activity distinct from the commercialisation of hybrids is the licensing of parental lines and hybrids. However, according to the Notifying Party, licensing of hybrids and parental lines (or trading of varieties) does not constitute a separate commercial activity. Therefore, the Notifying Party claims that those activities do not constitute a separate product market but form part of the overall market for sunflower seed varieties.⁶⁸
- (71) To support the proposed market definition, the Notifying Party explains first, that there is a considerable degree of vertical integration in the industry, as most of the companies active in the market for sunflower seed also grant licences for parental lines and hybrids.⁶⁹ Moreover, hardly any competitors are active only in the licensing business, either as a licensor or as a licensee.
- (72) Furthermore, the Notifying Party argues that, within seed companies, licensing of parental lines and hybrids is not organised as a distinct business activity, but is part of the overall seed business.⁷⁰ In the Notifying Party's view, most seed companies do not split off breeding into a separate unit.⁷¹
- (73) Moreover, the licensing activity is, according to the Notifying Party, merely an ancillary activity, which constitutes a minor source of revenue for seed companies.⁷²
- (74) Finally, the Notifying Party refers to previous Commission decisions where an overall market for a given seed has been considered with no distinction between the different stages of the seed industry⁷³.

⁶⁷ Form CO, p.46.

⁶⁸ Notifying party's submission to the Commission of 31 May 2010.

⁶⁹ Form CO, p.46.

⁷⁰ Form CO, p.46.

⁷¹ Reply of the Notifying Party of 2 July 2010 to the Decision of 21 June 2010 initiating proceedings pursuant to Article 6(1)(c) of the Merger Regulation.

⁷² Form CO, p.52; and Notifying Party's submission to the Commission of 31 May 2010, p. 4.

⁷³ Commission Decision of 17 August 2004, in Case M.3465 - Syngenta CP/Advanta; Commission Decision of 20 August 2004 in Case M.3506 - Fox Paine/Advanta, Commission Decision of 30 June 1999 in Case M.1497 - Novartis/Maisadour JV; Commission Decision of 21 June 1999 in Case M.1512 - Dupont/Pioneer Hi-Bred International.

- (75) The Notifying Party submits that, in any event, it is unable to provide market shares or an estimated overall value for a potential market for the trading of sunflower varieties.⁷⁴

1.2. The results of the market investigation

- (76) The market investigation did not confirm the submission of the Notifying Party regarding the existence of a single product market encompassing all activities related to the supply, trading and commercialisation of sunflower seed varieties. On the contrary, the investigation revealed a number of elements indicating that a distinction should be made between (i) the upstream market for the trading (namely the exchange and licensing) of varieties (parental lines and hybrids) and (ii) the downstream market for the commercialisation of hybrids.
- (77) First, the trading of varieties fulfils different market demands from the commercialisation of sunflower hybrids. Therefore, those activities are not to be regarded as substitutable by their respective users. In effect, the activity of trading of varieties consists of the exchange and licensing of parental lines (and, to a more limited extent, the licensing of full hybrids)⁷⁵ among seed companies or between the latter and public research institutes. The exchanged and/or licensed parental lines are crossed with the parental lines of the licensee with the objective of developing new co-hybrids, distinct and better performing (in terms of traits and/or yield) than existing hybrids which are currently commercialised. The licensee obtains the right to use those "semi-finished products" and needs to engage in crossing, testing and eventually official trialling of the resulting hybrids. The licensee intends, with the exchange and licensing of parental lines, to shorten the long breeding cycle, in order to accelerate its access to the commercial markets downstream, and to complement its portfolio of hybrids. While this further breeding is not necessary in the case of the licensing of full hybrids, the objective of this activity is also, as in the case of the exchange and licensing of parental lines, to allow the licensee to broaden or complete its portfolio of hybrids, and notably to fill any significant gaps. Those activities are therefore upstream (and distinct) from the activities of the commercialisation of sunflower hybrids, namely the sale to distributors, cooperatives and oil crushers of commercial quantities of sunflower seed.
- (78) Second, the relevant actors on the demand side are different upstream and downstream. In the case of the trading of sunflower varieties, the demand side consists of seed companies, whereas, in the case of the commercialisation of sunflower seed, the demand side consists of local distributors, cooperatives and oil crushers (and exceptionally also some farmers), which seed companies supply with substantial quantities of already registered and multiplied seeds. Distributors, cooperatives, oil crushers and/or farmers are not involved in trading of varieties.
- (79) Third, contrary to the claim of the Notifying Party, the relevant actors on the supply side are often different. There are several market players that are exclusively or predominantly active only either in the upstream market of trading of varieties or in the downstream market of commercialisation of sunflower hybrids.

⁷⁴ Form CO, p.52.

⁷⁵ On the basis of a comparison between the commercialisation of royalties earned from the out-licensing of parental lines, on the one hand, and full hybrids, on the other hand, 90% of the licensing activities concern parental lines and only 10% relate to licensing of hybrids.

- (80) Thus, there are several companies that are exclusively or predominantly active in the upstream activities of trading of varieties. Most of the public research institutes are mainly active in out-licensing of parental lines and hybrids without being active in commercialisation of sunflower seed. This is notably the case of most of the non-profit oriented research institutes, such as the Institute of Cordoba and University of Hoheinheim, but also some research institutes with a commercial profile such as the two leading institutes, INRA, via its subsidiary Agri Obtentions, and the Institute of Novi Sad⁷⁶. Additionally, even some large seed companies with important breeding capability, such as Dow, are only active within the Union in the market for the trading of varieties, without being active in the commercialisation of hybrids in any Member State. Furthermore, some seed companies choose to be active in a certain number of Member States exclusively via licensing and in others only in the commercialisation of hybrids. For instance, with regard to the downstream markets for the commercialisation of sunflower hybrids, Euralis is absent from Romania and Bulgaria, while Caussade Semences is absent from Hungary.
- (81) Similarly, some companies are present only on the downstream market for the commercialisation of sunflower seed hybrids without being active in the upstream market for trading of varieties. This is notably the case of seed companies without significant breeding capability such as KWS SAAT AG (hereinafter "KWS"). However, this can also be the case of seed companies with large breeding capabilities. For instance, Pioneer, one of the leading market players in the commercialisation of sunflower seed is not active in the out-licensing of parental lines and hybrids⁷⁷. There are also indications that the number of seed companies only active in the commercialisation of hybrids might increase in the future due to the large R&D costs associated with breeding: R&D costs represent a particularly high percentage of the total cost of sunflower hybrids, reaching a level that is comparable or even superior that of royalty fees⁷⁸.
- (82) Fourth, the market investigation indicates that, within seed companies, licensing of parental lines and hybrids is often organised as a distinct business activity, separate from the commercialisation activities. In fact, seed companies are typically organised on the basis of a division between the upstream and downstream activities. Most seed companies have separate business units dealing with the activities of breeding and trading of varieties and with the commercialisation of hybrids⁷⁹. The market investigation indicates that the latter is typically carried out by local subsidiaries of the seed companies. The research, breeding and development activities and the exchange and licensing activities are carried out by specialised units, different to those dealing

⁷⁶ As indicated, the Institute of Field and Vegetable Crops is however active in commercialisation of seeds outside the Union.

⁷⁷ Pioneer's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 7.

⁷⁸ Internal documents of Syngenta: "Procès-verbal de la réunion du Conseil d'administration du 25 septembre 2008. Projet Maisadour Semence" (p. 7): "The cost of R&D compared to the theoretical cost of royalties. (...) In sunflower, it is 21%, that is above a royalty market of 20%, but which evolves towards 25%. The new contract with Syngenta will predict this rate of 25%, applied on the market of elite germplasm."

⁷⁹ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 10 and responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 10.

with the commercialisation of hybrids.⁸⁰ In the case of Limagrain and Euralis, their breeding activities and their activities of trading of varieties are carried out by a common joint venture, Soltis, while the commercialisation of hybrids is carried out by each of the founding company separately⁸¹. Similarly, in the case of Monsanto, two separate entities, namely Monsanto SAS and Monsanto International Sarl – both subsidiaries of the Monsanto Company –, dealt with out-licensing of varieties to third parties.⁸²

- (83) Fifth, the geographic areas in which varieties are traded and hybrids are commercialised is different (see, in that regard, the respective sections on the geographic market definition). Whereas the germplasm pool and the breeding efforts are focused on wider climatic zones and the license and exchange of varieties typically cover the whole of the Union, the markets for commercialisation of sunflower hybrids are national in scope.
- (84) Sixth, contrary to the Notifying Party's submission, the fact that, in past cases⁸³ the Commission may not have distinguished between the different activities in the seed industry does not prevent it from considering, on the basis of its in-depth market investigation in this case, that a separate market for the trading of sunflower varieties exists.
- (85) Seventh, the market investigation did not confirm the submission of the Notifying Party according to which the exchange and licensing of varieties is a purely ancillary activity to the commercialisation of sunflower seed. In fact, the activities of trading of varieties are significant both in strategic and economic terms.

1.2.1. Strategic importance of the activities of trading of varieties

- (86) The result of the market investigation revealed that the exchange of parental lines is a crucial activity for most seed companies in order to diversify their germplasm and to fill the gaps in their respective portfolios. Nowadays, it is very important to be active on the markets for commercialisation of hybrids in several Member States and to cover all the key segments. Therefore, in order to remain competitive in those markets, seed companies cannot generally afford to be completely absent in any of those key segments. Licensing of parental lines and/or full hybrids is key in that regard. Licensing is considered as the first step for a company to enter the market or one of its segments before it is able to successfully commercialise sunflower hybrids on its own. Moreover, the in-licensing of varieties is crucial for companies without significant breeding activities, such as KWS and Maisadour⁸⁴. As one of the respondents explain,

⁸⁰ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 10.

⁸¹ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 10

⁸² Form CO, p. 204, Target Business' responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 10, and email of 6 October 2010 from the Target Business' external counsel.

⁸³ See footnote 73. None of these cases was the object of an in-depth investigation further to the opening of proceedings pursuant to Article 6(1)(c) of the Merger Regulation.

⁸⁴ In 2008, sales of co-hybrids accounted for [90-100%] of KWS' total Union turnover in sunflower seeds and for [20-30%] of Maisadour's compared to a market average of 19,4% (as shown in Table 3). Source: responses to Article 11 letters of the Commission to seed competitors of 2 June 2010, question 3 d).

"Whereas in the past, public institutes were providing germplasm to the market, it is now hard (especially for small companies which do not have a large germplasm) to be performing without collaboration with seed companies. In that context, licensing is very important."⁸⁵ Additionally, for some of the large seed companies such as Limagrain or Advanta, exchanging and licensing of parental lines is crucial for the diversification of their germplasm and in order to be competitive in some markets.⁸⁶ Even for the largest companies licensing of varieties is important to quickly fill in the gaps in their germplasm portfolio and to be competitive in several markets.⁸⁷

1.2.2. Economic importance of the activities of trading of varieties

- (87) The economic significance of these activities, beyond the royalties directly obtained through them, is demonstrated in particular by the value and share of sales of co-hybrids on the market. Co-hybrids, as outlined above, are hybrids developed from parental lines coming from two different germplasm pools, resulting thus from the exchange or licensing of parental lines. As set out in Table 3, based on the market investigation, sales of co-hybrids (using an in-licensed parental line) represent roughly 20%⁸⁸ of the overall Union sunflower market, excluding the sales of in-licensed full hybrids.

Table 3: Sales of sunflower co-hybrids in the Union (2007-2009)

	2007	2008	2009
Sales of co-hybrids at Union level ('000 EUR)	[...]	[...]	[...]
Sales of sunflower hybrids (including both full hybrids and co-hybrids) at Union level ('000 EUR)	[...]	[...]	[...]
Percentage of co-hybrids as of the total sales of sunflower hybrids in the Union	[15-20%]	[15-25%]	[15-25%]

Source: Article 11 request for information to sunflower seed competitors_2 June 2010, question 3 c) ii) and Article 11 request for information to sunflower seed competitors_29 April 2010, question 70.

- (88) The figures regarding the share of co-hybrids are particularly significant for some companies. Indeed, looking at Syngenta's and the Target Business' sales figures, the sales of co-hybrids represent about [40-50%]* of Monsanto's and [10-20%]* of Syngenta's total sales in sunflower hybrids in Europe, the Middle East and Africa (hereinafter "EMEA"). At the level of individual Member States, the sale of co-hybrids amounted to more than [50-60%]* of Syngenta's sales in Spain and [40-50%]* of Monsanto's sales in Hungary.⁸⁹

⁸⁵ Agreed minutes of the interview of 10 June 2010 with the Institute of Field and Vegetable Crops.

⁸⁶ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 11.

⁸⁷ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 9.

⁸⁸ Based on the responses for 2007, 2008 and 2009, to Article 11 letter of the Commission to sunflower seed competitors of 2 June 2010, question 3 c) ii).

⁸⁹ Form CO, p. 210.

1.3. Conclusion

(89) Based on the above, it is concluded that the upstream market for the trading of sunflower varieties constitutes a separate product market for the purposes of this Decision.

2. COMMERCIALISATION OF SUNFLOWER HYBRIDS

2.1. The view of the Notifying Party

(90) In line with previous Commission decisions, the notifying party submits that sunflower seed constitutes a separate product market since the different kinds of crop seeds are not mutually substitutable⁹⁰.

(91) The Notifying Party also submits that the commercialisation of sunflower seed constitutes a single product market that should not be further sub-segmented according to the seed characteristics. In principle, sunflower seed can be characterised by four different criteria⁹¹:

- (1) Maturity: from very early to very late; maturity refers to the time when sunflower seeds are able to reproduce themselves; in other words, maturity is a measure for how long a sunflower plant takes from planting to maturing, from very early to very late; this characteristic is a relative criterion and there is no fixed system of classification; varieties are classified comparatively;
- (2) Pest and disease resistance: this covers resistance /tolerance to pest and diseases affecting sunflower such as Downy Mildew and Orobanche⁹². Within those segments, different races exist for some of the diseases – for instance, today nine different races are known for Downy Mildew, while two predominant races are known for Orobanche (races E and F).
- (3) Herbicide tolerance: seed companies have developed seeds which are tolerant to certain non-selective herbicides. For sunflower there are two herbicide-tolerant systems present in the market: The “Clearfield” system based on the chemical class of Imidazoline (“IMI”, promoted by BASF, and the “Express” system based on the chemical class of Sulfonylurea (“SU”, promoted by Pioneer’s parent company DuPont.

⁹⁰ Commission Decision of 9 April 1996 in Case IV/M.556 – Zeneca/Vanderhave; Decision of 30 June 1999 in Case IV/M.1497 – Novartis/Maïsadour; Decision of 21 June 1999 in Case IV/M.1512 – DuPont/Pioneer Hi-Breed; Decision of 17 August 2004 in Case COMP/M.3465 – Syngenta CP/Advanta and Decision of 20 August 2004 in Case COMP/M.3506 – Fox Paine/Advanta. That various crop seeds are not mutually substitutable was also noted in the Commission's Decision of 9 April 1996 in Case IV/M.556 – Zeneca/Vanderhave (Source: Form CO, p. 45).

⁹¹ Form CO, p. 47.

⁹² Orobanche (or broomrape) is a genus of over 200 species of herbaceous plants which parasitize the sunflower. The soil of Spain, but also of Bulgaria and Turkey is to a large extent affected by Orobanche. As the parasite mutates over time, several races of Orobanche can be distinguished to affect the Spanish soil depending on the geographic area considered.

- (4) Oil characteristics: this segment is classified by oil content as well as fatty acid composition of the seed. Two characteristics are distinguished: linoleic and high oleic ("HO")⁹³.
- (92) First, as to the possible further sub-segmentation of the market for sunflower seed, the Notifying Party claims that is impossible to segment the market conclusively according to any of the characteristics mentioned. Second, it submits that customers – mostly distributors – purchase sunflowers belonging to a wide range of segments covering the entire product range. Third, it also argues that, from a supply side perspective, suppliers cover most of the different segments in their portfolio.

2.2. The results of the market investigation

- (93) The market investigation confirmed that the commercialisation of sunflower hybrids constitutes a separate product market from the commercialisation of other crop seeds. The various kinds of seeds seem not to be mutually substitutable since customers are likely to grow different crops for particular purposes or to meet specific needs.⁹⁴
- (94) The market investigation also explored whether a further segmentation of the market for the commercialisation of sunflower hybrids is necessary according to a number of different characteristics/traits expressed by or present in hybrids.
- (95) As regards demand side substitution, the market investigation revealed that different segments of sunflower hybrids share the same intended end use⁹⁵ and the same customers. When purchasing sunflower seed, farmers try to choose among the hybrids which are best adapted to the local agro-climatic conditions of their land. Therefore, each and every sunflower hybrid combines various characteristics. For instance Monsanto's successful hybrid Transol is very well adapted to the specific Spanish agro-climatic conditions. The distributors, the direct customers of seed companies, therefore purchase and offer a diversified portfolio of hybrids covering the various segments. Even if, when considered in isolation, each of the segments or traits might be thought to be to some extent distinct from and complementary to the others, as commercialised hybrids combine the characteristics, the pricing of the different segments appears to be constrained. Thus, even the applied volume discounts depend on the total volume of all hybrids customers buy from a given seed company, irrespective of the segment. Furthermore, from the perspective of the sunflower grower, the different sunflower hybrids are subject to similar sowing and harvest conditions. Moreover, farmers can easily switch between hybrids belonging to

⁹³ Linoleic sunflower oil is the "original" sunflower oil which is high in polyunsaturated fatty acids. Linoleic sunflower seeds have about 68% linoleic acid, whereas high oleic sunflower seeds usually have at least 80% oleic acid.

⁹⁴ See Commission Decision of 9 April 1996 in Case IV/M.556 – Zeneca/Vanderhave; Decision of 30 June 1999 in Case IV/M.1497 – Novartis/Maisadour; Decision of 21 June 1999 in Case IV/M.1512 – DuPont/Pioneer Hi-Breed; Decision of 17 August 2004 in Case COMP/M.3465 – Syngenta CP/Advanta and Decision of 20 August 2004 in Case COMP/M.3506 – Fox Paine/Advanta.

⁹⁵ The end use of sunflower seed does not generally differ irrespective of the segment purchased to produce a commodity crop. However the efficiency and the risk associated to the seed will differ according to the seed segment purchased.

different segments, although such switching will be limited to a certain extent by the local agro-climatic conditions⁹⁶.

- (96) Additionally, in order to establish whether there are significant differences between prices and margins for various sunflower hybrid segments, detailed economic data submitted by the parties was analysed. The examination focused on those sunflower hybrid segments of specific relevance to Spain and Hungary, in particular, the segments of Orobanche-resistant and high oleic seed in Spain and herbicide-tolerant and high oleic seed in Hungary. The results obtained provided no evidence that the sunflower hybrid segments analysed constitute separate markets.
- (97) As regards supply side substitution, most seed producers offer a wide portfolio of hybrids covering most of the segments. Moreover, the hybrids belonging to different segments in a company's portfolio result from breeding (at least partially) from the same pool of germplasm. The breeding process for the development of sunflower hybrids also hardly differs according to the specific sunflower segment considered.

2.3. Conclusion

- (98) On the basis of the above, it is concluded that the different segments of sunflower hybrids belong to the same relevant product market. The relevant product market is thus the market for the commercialisation of sunflower hybrids.

3. SUNFLOWER SEED TREATMENT

3.1. Introduction

- (99) Seed treatment aims to protect seeds from certain pests and diseases in the early stage of their development (when the seed is still in the soil). The seeds are treated (or "dressed") before they are planted. Seed treatment formulations consist of either fungicides or insecticides. Seed treatment fungicides are used to kill or inhibit fungi or fungal spores, whereas seed treatment insecticides are used against insects.⁹⁷ Seed treatment products are used for sunflower seed, but also for all major field crops such as cereals, corn, oilseeds or sugar beet.
- (100) Sunflower seed sold throughout the Union is nearly all pre-treated with seed treatment fungicides⁹⁸, while only a minority of sunflower seed is treated with seed treatment insecticides.

3.2. The view of the Notifying Party

- (101) First, the Notifying Party distinguishes between seed treatment products (applied pre-sowing) and plant treatment products (applied post-sowing). In fact, seed treatment formulations are often based on the same active ingredients as fungicides and

⁹⁶ A farmer can choose to plant a standard seed or a herbicide-tolerant seed in a soil prone to weeds. In a soil subject to a specific pest pressure, it can opt to plant a standard seed and treat it with insecticides and fungicides or to plant a seed tolerant to the specific pest.

⁹⁷ See Form CO, p. 58.

⁹⁸ Basically only sunflower seeds used by organic farmers are not treated with seed treatment fungicides. They make up only approximately 0,4% of the market.

insecticides applied for crop protection post-sewing⁹⁹, but they are not entirely identical as seed treatment products often contain specific additives. In the Notifying Party's view, seed treatment is a different technology from crop protection and gives better protection than the latter from the beginning of the plant's development. Defining separate markets would also be consistent with previous decisions of the Commission¹⁰⁰.

- (102) The Notifying Party also proposes to separate seed treatment products by crop, in line with Commission practice¹⁰¹, given that not all seed treatment products can be applied for sunflower seed and that seed treatment products (that is to say, the exact formulation and additives) are registered on a crop-by-crop basis.
- (103) The Notifying Party furthermore suggests – also in line with previous decisions of the Commission¹⁰² – dividing the market for seed treatment according to two main sub-segments, namely fungicides and insecticides. The Notifying Party submits that the two products serve different purposes, protecting the seeds against fungi or insects, respectively.
- (104) Accordingly, the Notifying Party proposes to delineate two relevant markets for the purpose of the competitive assessment: the market for sunflower seed treatment fungicides and the market for sunflower seed treatment insecticides.

3.3. The results of the market investigation

- (105) In the course of the market investigation, customers, as well as competitors, confirmed that sunflower seed treatment fungicides and insecticides are not substitutable with other crop protection products for sunflower, notably because the application techniques, the active ingredients, dose rates and the registration requirements vary.¹⁰³ Furthermore, seed treatment and crop protection products are not substitutable based on their economic and technical characteristics.¹⁰⁴ Finally, the customer base is also different. Whereas seed treatment products are mainly sold to seed companies, which then market the treated seeds, crop protection products are sold to distributors.
- (106) Another technique to protect plants at the early stage of the development is applying soil disinfectants. Soil disinfectants are insecticides in the form of granules, which are directly applied to the soil by the farmers after sowing. However, the market

⁹⁹ Seed treatment products contain, besides active ingredients, additional specific inert ingredients such as additives, polymers, anti-freezing agents, dyes or pigments. See Form CO, p. 58.

¹⁰⁰ Commission decision of 17 April 2002 in Case COMP/M.2574 – Bayer/Aventis Crop Science, (recital 810) and Commission decision of 17 August 2004, COMP/M.3465 – Syngenta CP/Advanta (recital 28).

¹⁰¹ Commission decision of 17 August 2004, COMP/M.3465 – Syngenta CP/Advanta (recital 28).

¹⁰² Commission decision of 17 April 2002, COMP/M.2574 – Bayer/Aventis Crop Science, (recital 823) and Commission decision of 17 August 2004 COMP/M.3465 – Syngenta CP/Advanta (recital 28).

¹⁰³ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, Questions 18 and 19; Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, Question 11.

¹⁰⁴ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, Questions 18, 19, 20.

investigation suggests that those products are not used for sunflowers and are not substitutable to sunflower seed treatment insecticides¹⁰⁵.

- (107) The market investigation indicated that some sunflower seed treatment fungicides/insecticides is used also on other crops. The extent to which sunflower seed treatment products are used for other crops varies however between fungicides and insecticides seed treatment products. The main fungicide product in the European Economic Area ("EEA"), Syngenta's Apron XL, is mainly used in the Union for sunflower and to a lesser extent for other crops like cotton and different vegetables.¹⁰⁶ Syngenta's insecticide seed treatment products, Cruiser, Cruiser OSR, Apron XL and Maxim/Celest, are used to a much larger extent on other crops like corn, cereals, sugar beet and peas and potatoes¹⁰⁷. However, both fungicide and insecticide seed treatment products need to be registered on a crop-by-crop basis and the pressure to use seed treatment products is different between the different crops.
- (108) Finally, seed treatment fungicides and seed treatment insecticides target different pests and diseases and therefore they are not considered substitutes.¹⁰⁸ Sunflower seed treatment products combining insecticides and fungicides are practically not offered on the market.

3.4. Conclusion

- (109) This notified concentration will therefore be assessed on the basis of separate markets for sunflower seed treatment insecticides and sunflower seed treatment fungicides.

VIII. GEOGRAPHIC MARKET DEFINITION

1. TRADING OF SUNFLOWER VARIETIES

1.1. The view of the Notifying Party

- (110) As the Notifying Party does not agree to the definition of a separate market for the trading of sunflower seed varieties, it also does not take a view with respect to the geographic scope of that market.

¹⁰⁵ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, Questions 22 and 23. One market participant indicated that insecticides can theoretically be substituted by soil disinfectants, but practically cost and machinery input are too high compared to the crop output.

¹⁰⁶ According to the best estimates of Syngenta, Apron XL is used [70-80%]* on sunflower seeds Union-wide. In Hungary [90-100%]* and [70-80%]* in Spain of Apron XL is used on sunflower seeds. See Notifying Party's response to Article 11 letter of the Commission of 4 August 2010, Question 1 a), e).

¹⁰⁷ According to the best estimates of Syngenta, Cruiser 350 is used only less than [10-20%]* on sunflower seeds Union-wide. In Hungary only [40-50%]* of Cruiser 350 is used on sunflower seeds while the product is not registered for sunflower seeds in Spain. See Notifying Party's response to Article 11 letter of the Commission of 4 August 2010, Question 1 a), e).

¹⁰⁸ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, question 19, 20.

1.2. The results of the market investigation

- (111) The results of the market investigation revealed several elements indicating that the market for the trading of varieties is Union-wide.
- (112) First, licences for varieties, whether parental lines or hybrids, are usually granted on an at least Union-wide basis, although there are some examples of licences granted for a limited number of Member States¹⁰⁹, for instance in the case of the Target Business for some hybrids and parental lines. Moreover, most of the customers are large seed companies active throughout the Union.
- (113) This approach logically follows the scope of the breeding efforts which are not targeted at national markets but rather at addressing the particularities of the agro-climatic conditions of the climatic regions in which the seeds will be planted and/or at developing specific desirable characteristics/traits such as oleic content, pest resistance, and herbicide tolerance. While the importance of segments and diseases vary from one Member State to the other, most of the segments and diseases are present throughout the Union¹¹⁰. Therefore, the vast majority of respondents indicated that they do not focus their breeding efforts to any particular Member State but operate on a broader scale.¹¹¹ While their strengths often vary depending on the given segment and disease, most seed companies focus their breeding efforts on several segments and diseases which allow them to cover the entire territory of the Union.
- (114) Thus, Syngenta has only one breeding centre in the Union, in France, where the crossing of parental lines and the development of hybrids adapted to the specific agro-climatic conditions of the different Member States takes place. Monsanto operated a few breeding stations (for instance in France, Spain until 2005 and Hungary) with different breeding focus to specific segments (such as early, mid-early or medium maturity varieties development, disease screening, etc.). Each of Monsanto's breeding centres covered areas wider than a single Member State. When asking seed companies about the number and scope of their breeding centres, they indicate that even if they have more than one centre in the Union, the focus of these centres is on different sunflower seed segments rather than on specific countries.
- (115) Furthermore, based on the market investigation, the trading of varieties does not appear to be as broad as global given the specific agro-climatic conditions in Europe compared to the rest of the world (such as South America and North America). Syngenta's competitors underline that access to an adequate germplasm pool adapted to European agro-climatic conditions is an important obstacle to face when entering the European sunflower seed markets.¹¹²

¹⁰⁹ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 14.

¹¹⁰ For instance, while *Orobanche* pressure is particularly important in Spain and Bulgaria, *Orobanche*-resistant hybrids are also sold in other Member States, such as Hungary and Romania. Similarly, herbicide tolerant products are particularly important in Hungary, but they are sold in most Member States in the Union. High oleic segment is particularly important in France, representing more than 50% of the market, and it is also gaining importance in Spain and Hungary.

¹¹¹ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, questions 57, 59 and 60.

¹¹² Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, questions 25-28.

- (116) Moreover, it does not appear that the geographic scope of the trading of varieties is larger than Union-wide (that is to say, including other significant European sunflower growing countries such as, for instance, Russia, Ukraine and Turkey). With regard to the Target Business' out-licensing activity, in particular the territorial scope of the licensing agreements, [60-70%]* of the Target Business' licence agreements in 2007-2009 did not cover a territory broader than the Union¹¹³. On Syngenta's side, [90-100%]* the out-licensing agreement for full hybrids covered the Union¹¹⁴. Moreover, most of the royalties earned by the Target Business as a result of its out-licensing activity were related to sales in the Union: [90-100%]* of the royalties earned by the Target Business in the period 2000-2010 were related to sales in the Union compared to only [0-5%]* that were related to sales in European countries outside the Union¹¹⁵. In addition, most of the gross profits generated by co-hybrids commercialised by Syngenta and Monsanto (which reflect the result of their in-licensing activity) originated from sales in the Union: [60-70%]* in the case of Monsanto in 2008 (against [30-40%]* originating from sales in Russia, Ukraine and Turkey) and [60-70%]* in the case of Syngenta that same year (against [30-40%] originating from sales in Russia, Ukraine and Turkey).¹¹⁶
- (117) Finally, the Union has a distinct regulatory framework. With regard to registration, once a new variety has been registered in a Member State it accedes to the Common Catalogue of Varieties of Vegetable Species. The variety can then be sold across the Union without restriction¹¹⁷. With regard to intellectual property (hereinafter "IP") rights, a system for the protection of plant variety rights has been established by Union legislation. Parental lines and hybrids may be protected by IP rights, which are called plant variety protection ("PVP"). Council Regulation (EC) No 2100/94 of 27 July 1994 on Community plant variety rights¹¹⁸ stipulates in Article 2 that those IP rights have uniform effect within the territory of the Union. That Regulation establishes the Community Plant Variety Office (CPVO) for the purpose of its implementation. Article 27 of that Regulation deals notably with licences.¹¹⁹

¹¹³ Target Business' response to Article 11 letter of the Commission to sunflower seed competitors of 30 August 2010.

¹¹⁴ Annex 8.10.d.-(2)-Seeds to the Form CO.

¹¹⁵ Source: Commission's calculation based on economic data submitted on 2 August 2010 by the Target Business regarding its out-licensing activities.

¹¹⁶ Commission's calculation based on the submission of economic data of the Target Business responding to Article 11 letter of the Commission of 2 August 2010 and submission of economic data of the Notifying Party responding to Article 11 letter of the Commission of 2 August 2010.

¹¹⁷ Form CO, p. 185.

¹¹⁸ OJ L 227, 1.9.1994, p. 1.

¹¹⁹ Article 27 of Regulation (EC) No 2100/94 provides:

"1. Community plant variety rights may form in full or in part the subject of contractually granted exploitation rights. Exploitation rights may be exclusive or non-exclusive.

2. The holder may invoke the rights conferred by the Community plant variety right against a person enjoying the right of exploitation who contravenes any of the conditions or limitations attached to his exploitation right pursuant to paragraph 1."

1.3. Conclusion

- (118) Given the above, it is concluded, for the purposes of this Decision, that the geographic scope of the market for trading of sunflower varieties is larger than national and is Union-wide in scope.

2. COMMERCIALISATION OF SUNFLOWER HYBRIDS

2.1. The view of the Notifying Party

- (119) The Notifying Party takes the view that the sunflower seed markets are national in scope, given: (i) the importance of national authorisation procedures and registration of varieties in each Member State, despite the Common Catalogue of varieties of agricultural plant species¹²⁰ (for commercial/marketing reasons); (ii) the existence of national recommendation lists; (iii) the different product mix in the Member States to suit the different agro-climatic conditions; (iv) the national distribution systems (whereby the distributors are usually active at local or regional level within the Member States); (v) the limited level of trade within the Union; and finally (vi) the different prices for seeds across Member States.

2.2. The results of the market investigation

- (120) During its market investigation, the Commission explored whether the geographic market could be considered wider than national, in particular given the general trend in the market to commercialise the same hybrids in several European countries. The general trend of marketing "multi-country products" or "pan-regional products", as well as the increasing share of the products in the total sales volume of hybrids in Europe, is highlighted in several internal documents submitted by the Target Business to the Commission¹²¹. In addition, although national registration of hybrids seems to remain an important consideration for customers, thus for major seed companies, such as Pioneer, Euralis and Limagrain indicate that they can achieve substantial sales with a hybrid which is not registered in a given Member State¹²².
- (121) The market investigation confirmed the views of the Notifying Party that the market for commercialisation of sunflower seed is national in scope, based notably on the factors detailed below.
- (122) The majority of the respondents to the market investigation indicated that the conditions of sales differ significantly across Member States due to differences in product profiles and local distribution requirements¹²³. Commercial hybrids, to a substantial degree, are customised to suit the specific conditions of each country or regional area (in terms of disease resistance, seed treatment, herbicide tolerance, maturity, etc.). As a result, customers normally buy seeds that are adapted to local agro-climatic conditions from producers operating in their own Member State.

¹²⁰ Once a seed variety has been registered in one Member State, the new variety will be included in the "European list", Common Catalogue of Varieties of Vegetable Species and can then be sold throughout the Union without further national registrations.

¹²¹ Response of Monsanto to Article 11 letter of the Commission of 30 March 2010. ([...]*).

¹²² Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 54.

¹²³ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 66.

Purchasing locally ensures the farmer that the purchased seed is well adapted to the specific agro-climatic conditions of the area where the given hybrid will be planted. Therefore, in general, farmers show a preference for "national products" (that is to say, registered in their country).

- (123) National registration still plays a role (although not a compulsory condition) for selling a hybrid in a particular Member State. As submitted by the Notifying Party, once a hybrid has been registered in a specific Member State, it can theoretically be sold in any other Member State. In practice, however, most seed producers still opt for national registration of hybrids in each Member State where they are to be sold, as national registration is viewed by farmers as an important insurance for the quality of the product they are purchasing.
- (124) Farmers consider that the product quality is also guaranteed by the reputation of seed companies and particular hybrids. Thus farmers show a certain preference to purchase previously tested hybrids. In this respect recommendations of national associations which also carry out trials, are also regarded as a quality guarantee and therefore also play a role in the choice of the hybrid to be grown.
- (125) The market investigation furthermore confirmed the importance of national distribution systems. Most seed companies operate with a local sales force carrying out substantial marketing activity and providing expert advice to both end customers and distributors¹²⁴. It appears that without the national sales force it is not possible to achieve substantial market presence. Indeed, customers of the large seed companies, distributors (and cooperatives and oil-crushers in Spain) also indicated during the market investigation that they exclusively or to a very large extent source from local subsidiaries of seed suppliers.¹²⁵ Volume discounts are granted on the basis of customer purchases only within a given country.¹²⁶
- (126) During the market investigation the majority of competitors confirmed that the price level of sunflower seed to final consumers, as well as wholesale prices, differ across Member States.¹²⁷ The correlation between the list prices for hybrids of the merging parties sold in parallel in several countries was examined in order to test whether those countries could belong to the same geographic market. The results of that analysis provide no evidence that markets are wider than national. Only with respect to Spain and Portugal was some evidence found in that regard, notably since Koipesol, a subsidiary of Syngenta, sells in both Member States with the same list prices. However, the results were not sufficiently conclusive. Moreover, the Portuguese sunflower market is in any event of a very limited size. Finally, Monsanto is hardly present at all in the Portuguese market.
- (127) Furthermore, the supply patterns indicate that markets are national in scope. The data submitted by the merging parties for the period 2007 to 2010 indicate that Monsanto

¹²⁴ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 65.

¹²⁵ Responses to Article 11 letters of the Commission to Hungarian seed distributors/purchasers of 29 April 2010, question 11; and Answers to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 17.

¹²⁶ Responses to Article 11 letter of the Commission to Hungarian seed distributors/purchasers of 29 April 2010, question 13; and responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 19.

¹²⁷ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 62.

and Syngenta's national subsidiaries sold mainly within the countries where they were active. Monsanto's national subsidiaries never sold sunflower seed abroad. The French subsidiary of Syngenta sold limited quantities to Austria, Bulgaria, Germany, Hungary, Romania, Spain and Turkey, although not on a systematic basis. In addition, the market investigation did not find evidence of substantial trade flows across Member States. In fact, most distributors indicate that they are recommended not to sell abroad or are even contractually prevented from selling abroad.¹²⁸ Moreover, customers are generally not aware of prices in other Member States.¹²⁹ The only exception, as indicated in the previous recital, is Koipesol, which sells sunflower seed in both Spain and Portugal.

- (128) The different market shares achieved by the main seed producers in the main sunflower producing Member States also supports the existence of separate national markets for sunflower seed. For instance, Monsanto's market share in the commercialisation of sunflower seed in 2008 was [70-80%]* in Germany, [20-30%]* in France and [0-5%]* in Bulgaria. Likewise, Syngenta's market share in the commercialisation of sunflower seed in 2008 varied from [90-100%]* in Portugal and [50-60%]* in Hungary to [10-20%]* in Bulgaria and [5-10%]* in Germany¹³⁰.
- (129) As regards supply side substitution, certain regulatory barriers still apply in the seed market which contribute to delineating the geographic markets as national. In particular, Member States conduct official trials to assure the quality control of the commercialised seed. In this respect, before seeds can be sold two series of tests must be passed: (i) the DUS (for the parental lines; and (ii) the VCU for the hybrid. The procedures, conditions and length of the national tests differ substantially.
- (130) Moreover, when seed companies introduce a specific hybrid in several countries, this is usually not done at the same time. Consequently, the life cycle of a given hybrid typically differs significantly across countries.

2.3. Conclusion

- (131) In view of the above, it is concluded that the markets for the commercialisation of sunflower seed are to be considered as national in scope.

3. SUNFLOWER SEED TREATMENT

3.1. The view of the Notifying Party

- (132) The Notifying Party submits¹³¹ that the markets for sunflower seed treatment insecticides and fungicides should be considered as national.¹³² To support that view,

¹²⁸ Responses to Article 11 letters of the Commission to Hungarian seed distributors/purchasers of 29 April 2010, question 7; and Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 18.

¹²⁹ Responses to Article 11 letters of the Commission to Hungarian seed distributors/purchasers of 29 April 2010, question 12; and Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 8.

¹³⁰ Form CO, p. 75.

¹³¹ Form CO, p. 72.

¹³² Syngenta in the case COMP/M.3465 – Syngenta CP/Advanta was however of the opinion that seed treatment markets should be defined as being at least EEA-wide. According to its submission, the view

the Notifying Party emphasizes that: (i) a national registration system still exists for sunflower seed treatment; (ii) seed treatment products are sold to national sales organisations/subsidiaries of multinational seed companies (which are the most typical customers of treatment products); (iii) price rebates and promotions are usually negotiated at national level; and (iv) diseases differ from one Member State to the other, generating different needs and uses for seed treatment.

3.2. The results of the market investigation

- (133) The Commission has, in previous decisions, considered seed treatment markets to be national.¹³³ One of the main reasons was the national legislative framework and registration system. While Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market¹³⁴ created a Union-wide registration system for the active ingredients used in treatment products, the treatment product itself is still subject to national authorisation.¹³⁵
- (134) However, the legislative framework is evolving. First, in some Member States (such as Spain) the import and sale of treated seeds is allowed even if the seed treatment product is not registered at national level. Second, the current registration system will change in the near future. A new Regulation¹³⁶ entering into force in 2012 provides for a system based on mutual recognition of authorisation, allowing a product for seed treatment authorised in one Member State to be authorised more quickly in other Member States if certain conditions laid down in that Regulation are met, for example where agricultural, plant health and environmental (including climatic) conditions are comparable.
- (135) Additionally, the Notifying Party recognises that prices for sunflower seed treatment products are already uniform at Union level, at least with respect to multinational seed companies, which account for more than 80% of the demand. Seed companies' European headquarters usually conclude framework contracts and negotiate European

that the seed treatment market is national was "incompatible with past achievements to harmonise product characteristics and registration requirements on an EEA-wide basis and to promote parallel trade between EEA states".

¹³³ See Commission decision of 26 July 2000, COMP/M.1806 – Astra Zeneca/Novartis (recital 83) and Commission decision of 17 April 2002; COMP/M.2547 – Bayer/Aventis Crop Science (recital 27). In Commission decision of 17 August 2004, COMP/M.3465 – Syngenta CP/Advanta (recital 7) the geographic market definition was left open.

¹³⁴ OJ L 230, 19.8.1991, p. 1.

¹³⁵ Directive 91/441/EEC sets out a two stage assessment system for approval of plant protection (including seed treatment): active ingredients are registered at Union level (Annex I to that Directive) and individual products have to be authorised at a national level by the respective Member State. Once a substance (active ingredient) is included in the positive list (Annex I to that Directive), Member States may authorise the use of products containing that active ingredient. Member States require the national registration of seed treatment products (that is to say, the formulations making up the individual product) before they are marketed in their respective territories. When those products are registered in individual Member States, they are registered for each individual crop they may be used on. This means that the concrete product is being nationally registered and not only the active ingredient.

¹³⁶ Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC (OJ L 309, 24.11.2009, p. 1).

prices with seed treatment companies. The market investigation has confirmed that there are no significant price differences between Member States.¹³⁷

- (136) As well as similarities, sunflower seed treatment fungicides and insecticides show some differences, which need to be considered when assessing the geographic scope of these markets. Whereas fungicides are in fact indispensable for the sunflower plant to grow unharmed, insecticides are not always applied and the proportion of insecticide treated seeds in relation to all sunflowers seeds varies significantly between Member States.¹³⁸
- (137) Moreover, while similar fungicides are needed everywhere, it is not the case for insecticides. Thus, preferred seed treatment insecticides differ from one Member State to another, as insect species and pressure differ. In addition, the regulatory conditions may differ; some Member States even prohibit the use of seed treatment insecticides entirely.
- (138) While Syngenta sells sunflower seed treatment fungicides in all Member States where sunflowers are grown, it is only active in [...]*,[...]*,[...]* and [...]* with regard to sunflower seed treatment insecticides. Moreover, while Syngenta has a quasi-monopoly in seed treatment fungicides across the Union (its market shares are comprised between [90-100%]* in all Member States), its market shares and the competitors it faces in seed treatment insecticides vary significantly across Member States.

3.3. Conclusion

- (139) The above elements suggest that the geographic scope of the two markets might differ. The market for sunflower seed treatment fungicides appears to be Union-wide in scope. However, given that the competitive assessment would not change under any alternative geographic market definition, the exact scope of the sunflower seed treatment fungicides market can be left open.
- (140) Concerning the market for sunflower seed treatment insecticides, the differences in the competitive landscape, products offered to customers and treatment habits indicate that, for the purposes of this Decision", the market should be considered as national in scope. However, the market definition can also be left open for sunflower seed treatment insecticides as the competitive assessment would not change under any alternative geographic market definition.

IX. COMPETITIVE ASSESSMENT

1. THE IMPORTANCE OF THE GERMPASM PORTFOLIO AND OF THE BREEDING ACTIVITIES

- (141) The market investigation has revealed that the scope and breadth of the germplasm portfolio and of the breeding capabilities of seed companies are essential for them to

¹³⁷ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, Question 26, Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, Question 17, 18.

¹³⁸ Form CO, p. 70-72.

become and to remain competitive on the different markets for sunflower seed. In particular, they determine to a significant degree the role that a seed company can play in the markets for commercialisation of sunflower hybrids and also act as the main barrier to entry in those markets. Similarly, they indicate the potential of a company in the market for trading of varieties, as well as its incentives to actively participate on that market. Moreover, given the long development cycles involved in breeding, market shares calculated on the basis of currently commercialised hybrids do not always fully reflect the overall strength of seed companies.

- (142) In particular, the germplasm portfolio is the fundamental asset of a seed company. As competitors explained in the market investigation, access to adequate germplasm, well adapted to the relevant agro-climatic conditions, is key to ensuring their long term commercial success.¹³⁹ The main rationale for the notified concentration is the acquisition of the germplasm pool of Monsanto.
- (143) The general importance of the scope and breadth of a germplasm portfolio has increased in recent years. As a number of competitors indicated in the market investigation, sunflower breeding has proved to be a particularly complex activity over the last two decades. In particular, the markets for sunflower seed have increased in sophistication with the introduction of new differentiated segments such as those of high oleic and herbicide resistant hybrids, which require the incorporation of the corresponding new traits in varieties capable of expressing the desired characteristics, without diminishing their yield performance or oil content. Therefore "given the different traits to be incorporated in the material, it is necessary to increase the number of lines to test during the breeding."¹⁴⁰
- (144) Most companies indicate, in that regard, that the acquisition of an adequate germplasm pool is of crucial importance when a company wants to enter the European market from an alternative geographic location.¹⁴¹ As one of the companies explain, "[a]lthough potential entry [...] in the European market is theoretically possible, this entry would require significant costs [...] in terms of time and resources to adjust the original germplasm to the current European market conditions."¹⁴² Any potential entrant which intends to develop a relevant share in seed commercialisation is required, in any event, to devote significant resources to breeding both in terms of time and investments before it can bring new hybrids into the market¹⁴³.
- (145) Furthermore, the market investigation has highlighted the crucial role of breeding activities as the main competitive driver of the industry. It is through their strength in breeding that companies ensure their ability to continuously bring new varieties on to the market. Breeding is the most time consuming and resource intensive stage of the overall sunflower seed business¹⁴⁴. In order to maintain and develop their breeding

¹³⁹ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, questions 25 and 26.

¹⁴⁰ Agreed non-confidential minutes of the interview with Advanta of 15 July 2010.

¹⁴¹ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 25 (Pioneer) question 28 (Advanta).

¹⁴² Agreed non-confidential minutes of the interview with Advanta of 15 July 2010.

¹⁴³ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, questions 25c, 25d, 26c and 26d.

¹⁴⁴ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, questions 25 and 26.

capacities, the largest seed companies devote significant resources to R&D. The incorporation of technology in plant breeding, in particular as regards molecular breeding¹⁴⁵ and biotechnology, has increased the cost of R&D devoted to plant breeding significantly. The capacity to speed up the breeding process to bring new and better varieties to the market has a significant impact on a company's profitability. For this reason, for instance, the larger breeders use winter nurseries and devote significant resources to the development of molecular markers, which smaller competitors cannot generally afford.

- (146) The breadth of the germplasm pool available to a company also indicates the ability and incentives that it has to engage in the exchange and licensing of parental lines with third parties for the development of new varieties. As will be explained in more detail below, smaller companies are unable to be extensively involved in the exchange and licensing of germplasm, on account of their limited available germplasm. Medium-sized companies are better placed and have more incentives to proceed with such exchanges and licensing to a significant extent in order to shorten the breeding cycles and fill the gaps in their respective germplasm portfolios. Finally, companies with very large germplasm portfolios may have fewer incentives to exchange varieties and to grant licenses.

2. MARKET FOR TRADING OF SUNFLOWER VARIETIES (EXCHANGE AND LICENSING OF PARENTAL LINES AND HYBRIDS)

- (147) In order to assess the respective market positioning of the companies active in the market for the trading of sunflower varieties, and in particular the importance of Syngenta and the Target Business, several considerations should be taken into account. First, the Notifying Party was unable to provide any estimate of the size of a potential market for the trading of sunflower varieties. All the more, it could not estimate market shares in such a market. Second, there are no studies or figures publicly available. Third, no single indicator clearly provides a definite view on the potential and the positioning of the market players.
- (148) A number of different indicators have therefore been identified, which, when seen in combination, should provide information of the potential and positioning of Syngenta, the Target Business and their competitors. The qualitative evidence provided by the merging parties and other market players during the market investigation should also be taken into account.

2.1. Market structure

- (149) There is a common and generalised practice in the seed industry of exchanging and licensing genetic material between seed companies and between seed companies and public institutes. Those exchanges serve notably the purpose of diversifying the genetic material of seed companies with respect to some traits/characteristics. Given the large R&D efforts required to respond quickly to the appearance of new diseases, to develop new traits and to be present in all the large European sunflower cultivating countries, having access to other seed companies' or public institutes' germplasm material is increasingly important to remain competitive in the market. Access to third party material is even more important for companies with a smaller R&D / breeding

¹⁴⁵ Responses to Article 11 letters of the Commission to seed competitors of 23 July 2010, question 23.

capability and for companies having a reduced germplasm portfolio relevant to the Union market.

- (150) In value, the Union market for trading of varieties (parental lines and hybrids) generated royalty fees of approximately EUR [...] million in 2008. The overwhelming majority of those royalties were generated by the out-licensing of parental lines ([90-100%] of the total in 2007 and [90-100%] in 2008), while the out-licensing of (full) hybrids generated much fewer royalties. Sales of co-hybrids (excluding in-licensed full hybrids), resulting from the breeding activities further to the exchange and licensing of parental lines, reached EUR [...] million in 2008, representing roughly 20% of the overall market for the commercialisation of sunflower hybrids.
- (151) The real significance of the exchange of parental lines is even more important than appears from those figures. The figures do not fully reflect the real flow of parental lines amongst seed companies but only a portion of it, namely those exchanges that have ultimately resulted in the development of successful co-hybrids which any of the exchanging partners have agreed to commercialise. Usually a significant number of parental lines need to be exchanged and crossed with the parental lines of the other party before a successful co-hybrid can be developed.

2.1.1. Supply side

- (152) On the supply side of this market, the main actors are integrated private seed companies with breeding capabilities and public institutes. Due to the substantial consolidation in the seed industry, the number of breeders, either seed companies or public institutes, has significantly decreased in the last two decades. According to the Notifying Party, while in the mid-1990s, approximately 22 players accounted for more than 90% of the sunflower supply in the Union, today, only eight to nine players account for more than 90% of supply¹⁴⁶. This is due to several acquisitions having taken place in the industry but also to the fact that some market players, in particular public institutes, have left the market, due to their inability to cope with growing R&D costs¹⁴⁷ (for instance, costs linked to conducting field trials on a large geographic scale, to the increasing role of biotechnology, or to the need for winter nurseries).
- (153) The notified concentration is part of this ongoing movement of consolidation. Before the notified concentration, only a handful of commercial breeders were active to a significant degree in the Union: (i) two large seed companies: Syngenta and Pioneer, (ii) three medium-sized companies: Monsanto, Euralis and Limagrain (the last two with a joint venture for their breeding activities, Soltis), and (iii) three smaller ones: RAGT, Caussade Semences and Maisadour (over which Syngenta has joint control¹⁴⁸). In addition to those actors, Dow – while only marginally present in the downstream national markets for the commercialisation of sunflower hybrids in the Union – is also active in the trading of varieties in the Union. However, not all of those commercial breeders are active to the same extent in the trading of varieties. As will be explained in this section, the most active are the medium-sized companies such as the Target Business and Soltis.

¹⁴⁶ Form CO, p. 105.

¹⁴⁷ Form CO, p. 105.

¹⁴⁸ See IV/M.1497 – Novartis / Maisadour, Commission's Decision of 30 June 1999.

- (154) While the market investigation showed that there are also some public institutes active in sunflower breeding, it also revealed that only a few of them are involved to a significant extent in the market for trading of varieties, namely the Institute of Novi Sad¹⁴⁹, INRA via Agri Obtentions, the Institute of Fundulea, the Hungarian Szeged-based Gabonakutató Nonprofit Kft (Cereal Research Non Profit Ltd., hereinafter "GK") and the Dobroudja Institute. Moreover, the market investigation revealed that public institutes follow different business models. While some public institutes focus on basic research, such as the Institute of Cordoba, or the Institute of Fundulea, others present a more market oriented profile, such as the Institute of Novi Sad, Agri Obtentions or to, a minor extent, GK.
- (155) Table 4 reflects the share of those players on the basis of the total royalties received from trading of varieties in the Union.

Table 4: Royalty fees received for the out-licensing of varieties - hybrids and parental lines - in the Union (as a % of the total royalties received by all market players for licensing of varieties)

	2007	2008
Monsanto	[15-25%]	[15-25%]
Novi Sad	[10-20%]	[10-20%]
Limagrain	[10-20%]	[10-20%]
Syngenta	[10-20%]	[10-20%]
Euralis	[10-20%]	[10-20%]
Dow	[5-15%]	[5-15%]
Agri Obtentions	[5-10%]	[5-10%]
Dobroudja	[5-10%]	[5-10%]
Fundulea	[<2%]	[<2%]
Gabonakutató	[2-5%]	[<2%]
Maisadour	[<2%]	[<2%]
Pioneer	[<2%]	[<2%]

Source: Article 11 request for information to sunflower seed competitors_2 June 2010, question 3 e

- (156) As Table 4 illustrates, Syngenta and Pioneer, the two largest companies in the commercialisation of sunflower seeds, are not the most active players in the market for trading of varieties. On the contrary, Syngenta is only the number four player and Pioneer is not active in the market at all¹⁵⁰. The most active actors on this market, in proportion to their downstream market shares but also in absolute figures, are the medium-sized seed companies such as Monsanto, Euralis and Limagrain. Smaller players, such as Maisadour, are present to a very limited extent as they are more active in in-licensing than in out-licensing (due to their limited germplasm portfolio).
- (157) Indeed, while it is vital for a company to have a sufficiently good and diverse germplasm portfolio to significantly out-license varieties and engage in exchanges of parental lines, the companies with the largest germplasm portfolios which have achieved high market shares in the downstream markets have less need and incentive to exchange genetic material with their competitors. Thus, companies characterized by high market shares in the commercialisation markets, namely Syngenta and Pioneer, are conversely less represented in the upstream licensing market than their market

¹⁴⁹ Responses to Article 11 letter of the Commission to sunflower seed competitors of 2 June 2010, question 3 e) (presented in Table 4).

¹⁵⁰ Pioneer's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 7.

share in the downstream markets for commercialisation would suggest. In turn, medium-sized companies in the markets for commercialisation of sunflower seed, especially Monsanto, but also Euralis and Limagrain, have more incentive to engage in trading activities given the more limited size of their germplasm portfolio and are thus proportionally more active in the market for trading of varieties.

- (158) The presence of public institutes (with the exception of the Institute of Novi Sad) on the market for trading of varieties is less important than that of private seed companies. This may seem surprising as it could be expected that public institutes would play a more active role in the trading of varieties than seed companies, given that most public institutes are not active in the downstream markets and thus do not directly compete with their licensees on those markets. However, as will be explained in more detail below, public institutes are losing competitiveness, especially in terms of the scope and breadth of their germplasm pool due in particular to their difficulties in funding.

2.1.2. Demand side

- (159) On the demand side, as Table 5 illustrates, the main actors are private seed companies. Public institutes are mainly active in out-licensing of varieties and, only marginally active, if at all, in the in-licensing of varieties. Seed companies actively in-licence either from public institutes or from other private seed companies (Table 5).

Table 5: Demand side of the market for the trading of varieties. Royalty fees paid for the in-licensing of varieties - hybrids and parental lines - in the Union (as a % of the total royalties paid by all market players for licensing of varieties)

	2007	2008
Euralis	[15-25%]	[20-30%]
Limagrain	[20-30%]	[20-30%]
KWS	[10-20%]	[10-20%]
Monsanto	[5-15%]	[5-15%]
Syngenta	[5-15%]	[5-15%]
Maisadour	[5-10%]	[2-5%]
Pioneer	[2-5%]	[2-5%]
Dow	[<2%]	[<2%]
Public institutes	[<2%]	[<2%]

Source: Answers to Article 11 request for information to sunflower seed competitors_2 June 2010, question 3 d)

2.2. The notified concentration is likely to increase the ability and incentives of the two merging parties together ("merged entity") to significantly reduce activities and/or raise prices in the upstream market thereby significantly impeding effective competition on the downstream markets for commercialisation of sunflower hybrids (input foreclosure)

- (160) By removing a significant breeder and market player in the market for trading of varieties, the notified concentration is likely to deprive Syngenta's downstream competitors (both actual and potential) of access to an important and large germplasm portfolio. It is likely that downstream competitors will be denied access not only to the Target Business' germplasm material but also to that of Syngenta. The acquisition of the Target Business by Syngenta would result in the creation of the largest and broadest germplasm portfolio in the Union. As such, the merged entity would engage

less, if at all, in exchanging activities with other seed companies and/or would request higher royalty fees or impose other more restrictive commercial conditions. Given the importance of having access to third parties' genetic material, especially for medium-sized and small seed companies or new entrants, and in view of the reduced number of alternatives available in the market, the notified concentration is likely to lead to partial or complete input foreclosure. The effect of such foreclosure is likely to be meaningful: it would have a sizable impact on prices, quality and choice in the downstream markets and may also have negative effects on prices, innovation and access to external germplasm in the upstream market. As shown below, the merged entity would have both the ability and incentive to foreclose.

2.2.1. Ability to foreclose access to relevant germplasm

2.2.1.1. The Merged Entity would be the most important breeder and would have the largest portfolio of germplasm material adapted to the Union.

(161) Several indicators are relevant in assessing the relative strength of Syngenta and the Target Business in terms of breeding, germplasm pool and, therefore, potential for the trading of varieties. The main indicators to be examined are the following:

- (i) the R&D expenses devoted to European sunflower breeding, which is an indicator of the market players' R&D capability and investment;
- (ii) the number of elite parental lines, which is an indicator of the size of a market player's germplasm; The Commission has here taken into account the submission of the Notifying Party which pointed to the fact that the overall number of parental lines in a seed company's portfolio is not necessarily a good indicator for the quality and breadth of the germplasm pool, as not all parental lines form the basis of successful hybrids¹⁵¹. As regards elite parental lines mitigates this risk, as elite parental lines refer to those male and female parental lines used for the development of hybrids or co-hybrids that are already commercialised or planned to be commercialised in the near future (in one to four years);. Moreover, the Commission asked for the number of elite parental lines by segment in order to assess the strength of market players in particular key segments.
- (iii) the number of molecular markers, which gives an indication of the capacity of market players to reduce the time needed to develop new parental lines due to marker assisted selection; and
- (iv) the number of successful registrations of new hybrids, which indicates the ability of companies to breed successfully, hence to create hybrids outcompeting the industry standards.

Research and Development (R&D)

(162) The merged entity would represent the largest sunflower R&D capability in the Union. As presented in Table 6, regarding R&D expenses, both Syngenta and Monsanto increased their respective sunflower seed R&D expenses in Europe between 2007 and 2009: from EUR [...] * to [...] million for Monsanto and from EUR [...] * to [...]

¹⁵¹ Reply of the Notifying Party of 2 July 2010 to the Decision of 21 June 2010 initiating proceedings pursuant to Article 6(1)(c) of the Merger Regulation, recital 16.

million for Syngenta. As a result, the combined R&D expenditure in 2009 (EUR [...] million) was far larger than that of competitors (Soltis EUR [...] million, Pioneer EUR [...] million and Maisadour EUR [...] million¹⁵², as shown in Table 6). Those figures show that both Syngenta and the Target Business invested significant financial resources in breeding. This is confirmed by the investment in nurseries¹⁵³ and trials illustrated in Table 9.

- (163) Moreover, internal documents of Monsanto also suggest [...] ¹⁵⁴. To reinforce its presence in the region, Monsanto established most recently a breeding centre in Hungary and increased its expenditure by approximately [50-60%]* between 2007 and 2008¹⁵⁵. These [...] investments by Monsanto in sunflower breeding contradict the Notifying Party's claim that the Target Business lacked the necessary investment in R&D¹⁵⁶.

Table 6: European sunflower R&D expenses in EUR thousands

	2007	2008	2009
Syngenta	[...]*	[...]*	[...]*
Monsanto	[...]*	[...]*	[...]*
Combined	[...]*	[...]*	[...]*
Soltis (Euralis + Limagrain)	[...]	[...]	[...]
Pioneer	[...]	[...]	[...]
Maisadour	[...]	[...]	[...]
Dow	[...]	[...]	[...]
Dobroudja	[...]	[...]	[...]
Fundulea	[...]	[...]	[...]
Gabonakutato	[...]	[...]	[...]

Source: Replies to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 16

¹⁵² According to the Target Business' internal documents, [...]*, [...] and [...] also had R&D expenses around EUR [...] million.

¹⁵³ Nurseries are the places where varieties are propagated and grown for the purpose of breeding.

¹⁵⁴ Monsanto's response to Article 11 letter of the Commission of 18 May 2010, Question 11 and Annex Q.11.

¹⁵⁵ Monsanto's response to Article 11 letter of the Commission 11 letter of the Commission of 30 March 2010, Annex Q.2.

¹⁵⁶ Notifying party's response to Article 11 letter of the Commission of 2 July 2010 and Notifying Party's response to the Decision of 21 June 2010 initiating proceedings pursuant to Article 6(1)(c) of the Merger Regulation, recital 17.

Table 7: European sunflower R&D Capability (2008)

Company	Budget EUR million (nurseries)	Budget EUR million (only trials)	Number of plots in trial	Number of rows in nursery	Number of trial locations
Syngenta	[...]*	[...]*	[...]*	[...]*	[...]*
Monsanto	[...]*	[...]*	[...]*	[...]*	[...]*
Combined	[...]*	[...]*	[...]*	[...]*	[...]*
Soltis(Euralis + Limagrain)	[...]	[...]	[...]	[...]	[...]
Pioneer	[...]	[...]	[...]	[...]	[...]
DOW	[...]	[...]	[...]	[...]	[...]
Novi Sad	[...]	[...]	[...]	[...]	[...]
Nardi Fundulea	[...]	[...]	[...]	[...]	[...]
Gabonakutato	[...]	[...]	[...]	[...]	[...]
Dobroudja Agric Inst. (*)	[...]	[...]	[...]	[...]	[...]

(*) 2009 figures

Source: Replies to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 15

Elite parental lines

(164) The merged entity would have at its disposal by far the most complete germplasm portfolio. Based on the number of elite parental lines used in hybrids commercialised during the period 2000-2010 in the Union (shown in Table 8), the size of the merged entity's germplasm would exceed several times the size of the next competitors' germplasm. Syngenta and the Target Business together own [45-55]% of the elite parental lines used in hybrids commercialised during the period 2000-2010 in the Union, followed by Competitor 1 [15-25]%, Competitor 2 [10-20]%, Competitor 3 [5-10]% and Competitor 4 [<5]%. Accordingly, respondents in the market investigation generally consider that when it comes to germplasm pool, the merger would bring together the first and second players.¹⁵⁷

¹⁵⁷ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 24.

Table 8: Number of elite parental lines used in hybrids commercialised during the period of 2000-2010 in the Union

Company	Number	%
Syngenta	[...]*	[15-25]%
Monsanto	[...]*	[25-35]%
Combined	[...]*	[45-55]%
Competitor 1	[...]	[15-25]%
Competitor 2	[...]	[10-20]%
Competitor 3	[...]	[5-10]%
Competitor 4	[...]	[<5]%
Competitor 5	[...]	[<5]%
Competitor 6	[...]	[<2]%
Competitor 7	[...]	[<2]%
Competitor 8	[...]	[<2]%
Total	[...]	100%

Source: Replies to Article 11 request for information to sunflower seed competitors_22 July 2010, question 12

(165) Those figures are not substantially different if one looks at a more recent period (presented in Table 9): Syngenta and the Target Business together represented [40-50]% of the elite parental lines used in hybrids commercialised during the last four years in the Union.

Table 9: Number of elite parental lines used in hybrids commercialised in the last 4 years in the Union

Company	Number	%
Syngenta	[...]*	[15-25]%
Monsanto	[...]*	[25-35]%
Combined	[...]*	[40-50]%
Competitor 1	[...]	[15-25]%
Competitor 2	[...]	[15-25]%
Competitor 3	[...]	[5-10]%
Competitor 4	[...]	[<5]%
Competitor 5	[...]	[<5]%
Competitor 6	[...]	[<5]%
Competitor 7	[...]	[<5]%
Competitor 8	[...]	[<2]%
Competitor 9	[...]	[<2]%
Total	[...]	100,0%

Source: Replies to Article 11 request for information to sunflower seed competitors of 22 July 2010, question 13

Molecular breeding

(166) The market investigation highlights the fundamental role of biotechnology in the industry, namely molecular breeding, which is key to remaining competitive in sunflower breeding. The market investigation also showed the increasing importance of biotechnology in the industry as one of the most important factors amongst breeders. Both Syngenta and the Target Business are perceived as the strongest actors in molecular breeding¹⁵⁸. [...]*¹⁵⁹.

¹⁵⁸ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 23.

¹⁵⁹ [...]*

- (167) Also, both the market investigation and internal documents of the Target Business showed that the Target Business has markers for the most crucial segments such as IMI-tolerance, Orobanche resistance and mildew resistance¹⁶⁰. This contradicts the Notifying Party's claim that the Target Business was not strong in molecular breeding¹⁶¹. Similarly, Syngenta has markers for most of the key segments with the exception of Orobanche resistance traits¹⁶².

Successful registration of hybrids

- (168) Both Syngenta and the Target Business were also actively and successfully using their R&D resources. In 2007, the Target Business obtained registration in the Union for [10-20]* different hybrids while Syngenta, the market leader, obtained registration for [10-20]* hybrids¹⁶³. In 2008, the Target Business also obtained registration for [10-20]* different hybrids while Syngenta obtained registration for [10-20]* hybrids¹⁶⁴. This contradicts the Notifying Party's claim that the Target Business was unable to create high quality competitive hybrids¹⁶⁵. As explained in recital (48), in order to be registered, a hybrid has to fulfil the VCU test, demonstrating in official trials that it has superior performance compared to existing commercialised hybrids.

2.2.1.2. The merged entity's germplasm would cover all the market segments and would enjoy a particularly strong position with respect to certain key segments

- (169) Prior to the concentration, both Syngenta and the Target Business already had large germplasm portfolios covering most of the key segments. However, both of them had their own strengths and weaknesses with respect to the individual segments. After the concentration, the merged entity would further enlarge its germplasm portfolio and acquire a particularly strong position with respect to certain key segments. The merged entity would thus enjoy a significant competitive advantage over its main competitors, in particular public institutes which have a more restricted germplasm portfolio with respect to the different segments.
- (170) In the fast growing segment of high oleic sunflower seed, which already represents 16% of the Union market¹⁶⁶, the merged entity would enjoy a very strong position. Already prior to the concentration, the Target Business was the market leader in the Union in that segment followed by Syngenta. The market investigation revealed that the merged entity would have by far the largest germplasm material in the high oleic segment. Based on the number of parental lines used for high oleic sunflower hybrids

¹⁶⁰ [...]*

¹⁶¹ Reply of the Notifying Party of 2 July 2010 to Commission's Decision of 21 June 2010 initiating proceedings pursuant to Article 6(1)c of Council Regulation No 139/2004, recital 23.

¹⁶² Responses of the Notifying Party and the Target Business to Article 11 letter of the Commission of 23 July 2010, question 14.

¹⁶³ Source of the data: Annex to the Notifying Party's response to Article 11 letter of the Commission of 4 June 2010, question 9.

¹⁶⁴ For the Notifying Party, see Annex 8.11.a.-(1)-Seeds of the Form CO; for the Target Business, see Annex to the Notifying Party's response to Article 11 letter of the Commission of 4 June 2010, question 9.

¹⁶⁵ Reply of the Notifying Party of 2 July 2010 to the Decision of 21 June 2010 initiating proceedings pursuant to Article 6(1)(c) of the Merger Regulation, recital 17.

¹⁶⁶ Form CO, p. 113.

commercialised in the Union, the merged entity would have a share of [70-80]%. The remaining competitors have significantly less germplasm material relevant to this segment. As Table 10 illustrates, none of Syngenta and the Target Business' competitors has a share of more than [5-10]% of the total parental lines relevant to this segment. Most public institutes are completely absent from this key segment.

Table 10: Number of elite parental lines belonging to the high oleic segment used in hybrids commercialised in the Union

Company	Number	%
Syngenta and Monsanto combined	[...]*	[70-80]%
Competitor 1	[...]	[5-10]%
Competitor 2	[...]	[5-10]%
Competitor 3	[...]	[5-10]%
Competitor 4	[...]	<5]%
Competitor 5	[...]	<5]%
Competitor 6	[...]	<2]%
Competitor 7	[...]	<2]%
Competitor 8	[...]	<2]%
Total	[...]	100%

Source: Replies to Article 11 request for information to sunflower seed competitors_22 July 2010, question 14

- (171) This particularly strong position in the high oleic segment is also illustrated by the merging parties' high market share in the downstream market. On the basis of their sales in 2008, Syngenta' and the Target Business' had an aggregated combined share of close to [50-60%]* (Monsanto [20-30%]*, Syngenta [20-30%]*) in the commercialisation of high oleic hybrids in the Union. At Member State level, the Target Business was market leader in France (where the high oleic segment is particularly strong, representing between 50-60% of the market) and Syngenta in Spain and Hungary¹⁶⁷.
- (172) In the Orobanche-resistant segment, which is of particular relevance for the Spanish market, the merged entity would hold [50-60%]* of the elite parental lines used in hybrids commercialised in the Union (Table 11), with only two other players having a meaningful number of parental lines in this segment, that is to say [15-25]% each. Moreover, the merged entity would also be market leader in Orobanche race F, which is the fastest growing segment in Orobanche. It is interesting to note that just as in the segment of high oleic hybrids, most public institutes are either absent from or have a limited presence in this very important segment. Moreover, access to germplasm material relevant to this segment was often mentioned by potential new entrants as an important barrier to entry, especially in Spain¹⁶⁸.

¹⁶⁷ Target Business' response to Article 11 letter of the Commission of of 18 May 2010

¹⁶⁸ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question, 77. Advanta's email of 13 October 2010.

Table 11: Number of elite parental lines belonging to the Orobanche-resistant segment (race E and race F) used in hybrids commercialised in the Union

Company	Number	%
Syngenta and Monsanto combined	[...]*	[45-55]%
Competitor 1	[...]	[15-25]%
Competitor 2	[...]	[15-25]%
Competitor 3	[...]	[5-10]%
Competitor 4	[...]	[<5]%
Competitor 5	[...]	[<5]%
Competitor 6	[...]	[<2]%
Competitor 7	[...]	[<2]%
Competitor 8	[...]	[<2]%
Total	[...]	100%

Source: Replies to Article 11 request for information to sunflower seed competitors_22 July 2010, question 14

(173) In the herbicide-resistant segment, the merged entity would be again in a leading position with [25-35]% of the elite parental lines used in hybrids commercialised in the Union (Table 12). In contrast to the Orobanche and high oleic segments, there are alternative players with significant market shares in the herbicide-tolerant segment. However, there are two different technologies competing in this segment, one called "IMI", dominated by the merged entity, and one called "SU", dominated by Pioneer. At this stage of the market development it is difficult to know whether the two technologies would coexist or one would replace the other.

Table 12: Number of elite parental lines belonging to the herbicide-tolerant segment (IMI or SU) used in hybrids commercialised in the Union

Company	Number	%
Syngenta and Monsanto combined	[...]*	[25-35]%
Competitor 1	[...]	[15-25]%
Competitor 2	[...]	[10-20]%
Competitor 3	[...]	[10-20]%
Competitor 4	[...]	[5-15]%
Competitor 5	[...]	[5-15]%
Competitor 6	[...]	[<2]%
Competitor 7	[...]	[<2]%
Competitor 8	[...]	[<2]%
Total	[...]	100%

Source: Replies to Article 11 request for information to sunflower seed competitors_22 July 2010, question 14

(174) Finally, Syngenta and the Target Business' germplasm are to a large extent complementary in terms of maturity, the Target Business' germplasm being very strong in early and mid-early maturities where Syngenta is weaker¹⁶⁹.

¹⁶⁹ Responses of the Notifying Party and the Target Business to Article 11 letter of the Commission of 23 July 2010, question 14.

2.2.1.3. The Target Business has played an important role in the trading of sunflower varieties

- (175) The ability of the merged entity to foreclose is further evidenced by the role played by the two companies, especially the Target Business, in the market for trading of varieties before the notified concentration.
- (176) The result of the market investigation indicates that, on basis of the royalty fees received for out-licensed varieties, the Target Business was the most active market player representing, in 2008, [15-25]% of the total royalty fees received (Table 4). The merged entity would account for [25-35%] of the total in that year.
- (177) Considering only the out-licensing of parental lines (which represented [85-95]%) of the royalties received for the out-licensing of varieties in 2008, against [5-15]% for the out-licensing of hybrids), the Target Business was also the most active player between 2007 and 2008. As shown in Table 13, the Target Business represented [15-25%] of the total royalty fees received by market players in 2008 for the out-licensing of parental lines, and Syngenta and the Target Business combined, [20-30]%.
- (178) In particular, the Target Business was the most active private seed company in the trading of sunflower varieties. Excluding public institutes, whose role is expected to decline as will be evidenced in section 2.2.1.4., the Target Business accounted for [25-35]% of the total royalty fees received by private companies for the out-licensing of parental lines, and Syngenta and the Target Business combined, [35-45]%. Pioneer, one of the strongest players in the commercialisation markets does participate as a licensor in the market for trading of varieties¹⁷⁰. The only remaining private seed companies engaged to some meaningful extent in out-licensing activities are Euralis and Limagrain.

Table 13: Royalty fees received for the out-licensing of parental lines (% of the total royalties received by all market players for licensing of parental lines)

	2007	2008
Monsanto	[10-20]%	[10-20]%
Syngenta	[5-10]%	[5-10]%
Combined	[20-30]%	[20-30]%

Source: Answers to Article 11 request for information to sunflower seed competitors_2 June 2010, question 3 e)

- (179) The role of the Target Business in the market for trading of varieties can also be assessed by looking at the share of the sales of co-hybrids created using a line of either Syngenta or the Target Business in the total sales of co-hybrids (in value)¹⁷¹. As can be seen from Table 14, co-hybrids created using a line of the Target Business represented [10-20]% of the total sales of co-hybrids in the Union in 2009. The statement of the Notifying Party that Monsanto's out-licensing activity has not resulted in highly competitive co-hybrids¹⁷² is therefore not confirmed by the market investigation results. Co-hybrids created using a line of either Syngenta or Monsanto represented [20-30]% of the total sales of co-hybrids in the Union in 2009.

¹⁷⁰ Pioneer's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 7.

¹⁷¹ This measure underestimate the size of the market for trading of varieties as it does not take into account the sales achieved by in-licensed full hybrids.

¹⁷² Reply of the Notifying Party of 2 July 2010 to the Decision of 21 June 2010 initiating proceedings pursuant to Article 6(1)(c) of the Merger Regulation.

Table 14: Share of the sales of co-hybrids created using a line of Syngenta or the Target Business in the total sales of co-hybrids in the Union (in value)

Co-hybrids using a line of:	2009
Monsanto	[10-20]%
Syngenta	[5-10]%
Combined	[20-30]%

Source: Answers to Article 11 request for information to sunflower seed competitors_22 July 2010, question 19

(180) Moreover, prior to 2009, KWS, by far the strongest seed company without significant own breeding activities, relied entirely on its licensing cooperation with the Target Business¹⁷³. Therefore, as a result of the transaction, even the strongest non-integrated seed company present in a number of markets in Europe, particularly in Central and Eastern Europe, risks disappearing or being marginalised. KWS is one of the main market players in the downstream Hungarian market, which is already a very concentrated market with few competitors present¹⁷⁴. More generally, in the course of the market investigation some competitors submitted that a consequence of the on-going consolidation of the market has been the termination of partnerships (exchange and licensing agreements) that had been initiated with companies that were acquired by other market players¹⁷⁵.

(181) In conclusion, the Target Business played a significant role in the trading of sunflower varieties. Despite its smaller size, it had a significantly more important role in the market for trading of varieties than the biggest integrated seed companies, Syngenta and Pioneer. As regards public institutes, there are very few actors having a meaningful role in this market. Furthermore, as shown in sections 2.2.1.1 and 2.2.1.2., Target Business had the ability to further develop its activities in the upstream market.

2.2.1.4. The decreased access to the Target Business' germplasm material and the reduction of activities in the trading of varieties by the merged entity would not be compensated by the role played by public institutes

(182) The result of the market investigation confirmed that, to a large extent, public institutes would not be in a position to compensate the disappearance of the Target Business as an independent player. As one competitor pointed out, "the results obtained by the public institutes during the last two decades in terms of germplasm development could not counteract the effect of the stop or significant reduction of line exchanges among private companies"¹⁷⁶.

(183) First, the market investigation revealed that most public institutes (except for the Institute of Novi Sad) are focusing more and more on "fundamental research", that contributes to the understanding of the genetics, physiology, pathology, etc., of the sunflower species (not necessarily resulting in a product or cultural practice), instead of developing parental lines and hybrids to be directly licensed or commercialised. As explained by the Institute of Cordoba : "in general, two types of public institutes can be distinguished: institutes carrying basic research only and institutes active also in the

¹⁷³ [...]*

¹⁷⁴ [...]*

¹⁷⁵ See for instance the agreed minutes of the interview of 10 June 2010 with the Institute of Field and Vegetable Crops.

¹⁷⁶ Advanta's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 28.

commercialisation of hybrids (Novi Sad). [...] As private companies are usually not involved in basic research since it is highly time consuming and resource intensive (in terms of laboratory and instruments use). IAS is not directly competing with private companies but rather complementing their activity."¹⁷⁷

- (184) Second, when evaluating the strength and weaknesses of the R&D capability and germplasm pool of the different market players, most of the competitors rank even the most important public institutes such as INRA in a weaker position than the large seed companies.¹⁷⁸ While INRA, for instance, was strong in France in the past, some competitors¹⁷⁹ and INRA's subsidiary Agri Obtentions¹⁸⁰ report that its germplasm pool has some geographic limitations and might only be well adapted in a limited number of Member States.
- (185) Third, the market investigation confirmed that public institutes are collectively less active than seed companies in the Union. In 2009, [30-40]% of commercialised co-hybrids had been created using parental lines from public institutes whereas [60-70]% had been created using parental lines from private companies only¹⁸¹. In terms of the royalties paid for the in-licensing of parental lines, [60-70]% of those royalties were paid for parental lines in-licensed from private seed companies in 2009, compared to [25-35]% for parental lines in-licensed from public institutes¹⁸². As regards Syngenta itself, the proportion of sales generated by co-hybrids created using parental lines from public institutes in Syngenta's sales in the Union has been decreasing over the last ten years, from [30-40]% in 2002 to [10-20]% in 2010. The same trend can be seen for the Target Business: the proportion of its sales generated by co-hybrids created using parental lines from public institutes went down from [5-15]% in 2004 to [<5%] in 2009¹⁸³.
- (186) Fourth, the market investigation revealed that small market players mainly in-license germplasm material from private seed companies rather than from public institutes (Table 15). By contrast, the largest sunflower seed companies, such as Syngenta and Pioneer, mainly in-license from public institutes. The tendency of smaller companies to in-license from private seed companies can be expected to continue, given the growing importance of the key segments such as high oleic, Orobanche resistance and herbicide tolerance where most of the public institutes are absent or are present only to a limited extent.

¹⁷⁷ Agreed minutes of the interview of 7 June 2010 with Institute of Cordoba.

¹⁷⁸ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 24.

¹⁷⁹ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 24.

¹⁸⁰ Agri Obtentions' response to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 21.

¹⁸¹ Responses to Article 11 letter of the Commission to sunflower seed competitors of 2 June 2010, question 3 c).

¹⁸² Responses to Article 11 letter of the Commission to sunflower seed competitors of 2 June 2010, question 3 d).

¹⁸³ Submission of economic data of the Target Business responding to Article 11 letter of the Commission of 2 August 2010 and submission of economic data of the Notifying Party responding to Article 11 letter of the Commission of 2 August 2010.

Table 15: Share of the royalties paid for in-licensed parental lines that are paid to public institutes

	2008
Syngenta	[90-100%]*
Monsanto	[10-20%]*
Competitor 1	[60-70]%
Competitor 2	[30-40]%
Competitor 3	[25-35]%
Competitor 4	[5-10]%
Competitor 5	[<5]%

Source: Answers to Article 11 request for information to sunflower seed competitors_2 June 2010, question 3 d)

(187) Moreover, a number of respondents to the market investigation pointed to the fact that public institutes, in particular in Eastern Europe, are generally losing competitiveness as they lack sufficient funding. For instance they fail to invest in biotechnology and off-season winter production facilities¹⁸⁴. Public institutes usually do not have winter nurseries¹⁸⁵, which are used by breeders in order to be able to have two breeding cycles per year and thus considerably shorten the overall breeding process¹⁸⁶. Even the most actively licensing public institute, the Institute of Novi Sad does not compare to the Target Business in terms of trials and nurseries (see Table 7). Smaller public institutes, such as the Institute of Fundulea have only minimal budgets for nurseries (as shown in Table 7). As one of the respondents explains "[a] number of these other public institutes have declined in recent years due to their dependence on public money, which did not allow them to invest to the level now required in the market and also due to the departure of a number of key researchers to the private sector [such as] Fundulea (in Romania) and Dobroudja Agricultural Institute (in Bulgaria)."¹⁸⁷ This is further confirmed by another respondent: "the relative value of the public lines has been declining with the reduction of the resources deployed by public institute, with the consequence of reducing the market attractiveness of derived co-hybrids"¹⁸⁸.

2.2.2. Incentive

(188) As a result of the notified concentration, the availability of a wider in-house germplasm would decrease Syngenta's incentive to trade varieties, in particular when compared with the Target Business before the notified concentration. The merged

¹⁸⁴ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 38.

¹⁸⁵ Agreed minutes of the visit of 26 August 2010 to Pioneer's sunflower breeding station in Montech.

¹⁸⁶ A first cycle of breeding is held in Europe where the varieties being bred are grown in the first half of the year (flowering in July-August) before being shipped to the Southern hemisphere – mainly to Chile – in order to start a second cycle (with flowering in December-January).

¹⁸⁷ Agreed minutes of the interview of 10 June 2010 with the Institute of Field and Vegetable Crops.

¹⁸⁸ Advanta's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 24.

entity is less likely to need to fill gaps in its germplasm portfolio, and therefore less likely to enter into exchanging and eventually licensing of parental lines and hybrids. In that respect, it is likely that the merged entity would behave like Syngenta, prior to the merger, whose activity on the market for trading varieties was not as important as its strength in commercialisation and breeding would suggest.

- (189) Syngenta's competitors have raised concerns that the number and scope of licensing agreements will be reduced and that it will be harder to trade varieties¹⁸⁹. This concern is well explained by one respondent: "With the consolidation of the seed industry, biggest companies like Pioneer, Syngenta, could enlarge their germplasm base and could become more and more self-sufficient for what regards access to traits, different maturity groups, hybrid performance, etc. [...] Consequently, the need to exchange or license in germplasm has been decreasing. Second tier companies with no secured access to some key traits (like broomrape tolerance) or with limited R&D resources have been therefore in a weaker or impossible position to negotiate in co-hybrids programs."¹⁹⁰ As a result, the importance of co-hybrids in total sales is expected by market players to decrease¹⁹¹.
- (190) As has been shown in Table 4, Syngenta was already less active than the Target Business in the trading of varieties before the notified concentration. Syngenta represented [10-20]% of the total royalty fees received by market players for the out-licensing of varieties in 2008, compared to [15-25]% for the Target Business. In particular, Syngenta was less active in out-licensing parental lines: it accounted for [5-10]% of the total royalty fees received by market players for the out-licensing of parental lines in 2007-2008, compared to [15-25]% for the Target Business.
- (191) Moreover, Syngenta's partners for in-licensing of varieties were almost only public institutes, which shows that the company is less interested in entering into exchanging and out-licensing agreements with other private seed companies. Indeed, in 2008 [90-100%]* of the royalties paid by Syngenta for in-licensed parental lines were paid to public institutes (Table 15). In contrast, the Target Business' partners for in-licensing of varieties were mostly private seed companies, which clearly demonstrates that prior to the notified concentration the Target Business had a strong incentive to enter into exchanging and licensing agreements with private seed companies. In 2008, [80-90%]* of the royalties paid by the Target Business for in-licensed parental lines were paid to seed companies, compared to [0-5%]* for Syngenta. As can be seen from Table 16, companies that have high market shares in the downstream market for commercialisation of sunflower seed are much less likely to in-license varieties from private seed companies than companies with an intermediate positioning in the market for commercialisation. With the notified concentration, one of those intermediate companies disappears.

Table 16 - Shares in the royalties paid for in-licensed varieties to private seed companies (2007-2008)

	2007	2008
Limagrain	[30-40%]	[30-40%]
Euralis	[10-20%]	[20-30%]

¹⁸⁹ Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, questions 24 and 32.

¹⁹⁰ Advanta's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 24.

¹⁹¹ Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 21.

KWS	[15-25%]	[15-25%]
Monsanto	[10-20%]	[10-20%]
Maisadour	[5-10%]	[2-5%]
Pioneer	[2-5%]	[<2%]
Syngenta	[<2%]	[<2%]

Source: Answers to Article 11 letter to the Commission to sunflower seed competitors_2 June 2010, question 3 d)

- (192) Not only are the strongest companies in commercialisation of seeds less likely to seek exchange partnerships with seed companies, they are also less likely to out-license varieties, as has been demonstrated in section 2.1. Companies characterised by intermediate market shares in the commercialisation market, especially Monsanto, but also Euralis and Limagrain, are in contrast more active in out-licensing than their market share in the downstream market for commercialisation would suggest, which can be explained by the fact that while they are significant enough players to represent an interesting partner for exchanges, they are not big enough to be competitive in all segments without resorting to those exchanges.
- (193) This further reinforces the argument that a vertically integrated seed company with a strong position in the downstream markets will have a limited incentive to actively license its parental lines to competitors in the said downstream markets: a bigger entity which is more active on the market for commercialisation and with a germplasm of significant quality, scope and breadth, would consequently have less need to be active in the market for trading of varieties. It will also be reluctant to reinforce its competitors in a situation where those competitors are less likely to have important traits. As a consequence, if Syngenta and Monsanto become one entity with bigger market shares downstream, it is likely that Syngenta would be even less active on the licensing market as it would have lesser incentives to out-license. This would translate into a reduction in the trading activities of the merged entity and/or an increase in the royalty fees requested or a worsening of the conditions attached to the licensing of varieties.
- (194) The margin generated at the downstream level from the sale of finished co-hybrids or full hybrids is significantly more important than the royalty income which, for licensed parental lines, typically amounts to 10%-12,5% of the price of co-hybrids¹⁹² and, for licensed full hybrids, to approximately 20%-25% of the price of the hybrids¹⁹³. In contrast, the average margin generated by the sale of co-hybrids in the Union in 2008 was [...] * for Syngenta and [...] for Monsanto¹⁹⁴, and the average margin generated by the sale of hybrids in the Union in 2008 was [...] * for Syngenta and [...] * for Monsanto¹⁹⁵. The loss arising from a reduction of the licensing activity would therefore be minor, especially taking into account the fact that, as a counterpart, the merged entity would incur fewer costs for in-licensing as it would have less need to in-license varieties.

¹⁹² Form CO, p. 200.

¹⁹³ Form CO, p. 200.

¹⁹⁴ The margin made on the sales of co-hybrids is calculated as (gross profits – royalties paid for in-licensed parental lines) / gross sales. Gross sales are calculated as (list price * volume).

¹⁹⁵ Commission's calculation based on the submission of economic data of the Target Business responding to Article 11 letter of the Commission of 2 August 2010 and submission of economic data of the Notifying Party responding to Article 11 letter of the Commission of 2 August 2010.

Furthermore, that loss would be more than compensated by an increase in the revenues in the downstream markets for commercialisation of seeds.

- (195) As was pointed out by competitors in the course of the market investigation and underlined in this section, it is therefore likely that the merged entity would not continue to give access to its varieties under the same conditions or would not have the same interest in entering into joint research agreements as prior to the concentration .

2.2.3. Effects on the downstream markets

- (196) The effect of the vertical foreclosure on the downstream markets would be sizable in all downstream national markets, including Spain and Hungary, where the effects of the transaction must be assessed by the Commission following the referral by those Member States.

- (197) First, the effect of the reduction in competition in the market for trading of varieties would be felt through a reduction of supply: part of the existing demand would not be served. The market investigation has shown that the past consolidation of the market has led to a decrease in the genetic material made available by the biggest sunflower seed companies, which have less need than the smaller ones to enter into the trading of varieties given the breadth of their in-house germplasm and which are reluctant to give access to their own varieties to competitors¹⁹⁶. The reduction of supply, as some competitors indicated during the market investigation, would lead to a decrease in the share of co-hybrids¹⁹⁷, and ultimately to the reduction of the number and type of hybrids available on the market. More specifically, this would have a sizable impact in Spain where co-hybrids represent a large share of sunflower seed sales¹⁹⁸. In particular, Orobanche resistance is a must-have trait to be competitive in Spain and, as shown in Table 11, the merged entity would own [45-55]% of the elite parental lines belonging to the Orobanche-resistant segment (race E and race F) used in hybrids commercialised in the Union in the last ten years ([40-50]% of those used in hybrids commercialised in Spain). The reduction of the trading of varieties would also have a large impact in Hungary, where co-hybrids created with parental lines in-licensed from Monsanto represent [...] of the sales of KWS¹⁹⁹. Additionally, the best selling hybrid of Limagrain in Hungary (representing [40-50]% of Limagrain's sales in Hungary in 2009)²⁰⁰ is a co-hybrid created with a line in-licensed from Syngenta. Moreover, in Hungary the merged entity would own [45-55]% of the elite parental lines used in hybrids commercialised in Hungary in the last ten years.

- (198) Second, the resulting imbalance between supply and demand on the market for trading of varieties is likely to lead to price increases. During the market investigation, some competitors expressed concerns that the resulting decrease in the trading of varieties

¹⁹⁶ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 24.

¹⁹⁷ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 21.

¹⁹⁸ Taking into account the sales of Syngenta, Monsanto, Pioneer, Limagrain and Euralis, their sales of co-hybrids represent 31,9% of their total turnover in sunflower seeds. Source: responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 19.

¹⁹⁹ See footnote 173.

²⁰⁰ Source: Kleffmann data. The referred hybrid is LG5655.

would lead to an increase in the level of royalty fees²⁰¹. As one respondent pointed out, "assuming this should enter in their strategy to develop a co-hybrid business, [Syngenta's] increasingly dominant position versus minor players would advocate for a significant royalty increase"²⁰². The increase in royalty fees and/or the imposition of more restrictive conditions on the licenses could therefore form part of the merged entity's foreclosure strategy. Price increases could also be the simple result of a reduction in overall access to licensed varieties.

- (199) Third, foreclosure of access to the merged entity's varieties would significantly raise the barriers to entry in the downstream markets for commercialisation of sunflower seed. Respondents to the market investigation consider, in that regard, that access to an adequate germplasm pool is essential for potential new entrants. A "greenfield entry", that is to say entry without a European adapted germplasm pool, does not seem to be possible. Therefore, the substantial reduction of the licensing activity of the merged entity and the disappearance of the Target Business as a potential licensor would also have an effect on potential competitors, since such entry can not only be based on the germplasm available from the few remaining players in the market. During the market investigation, some of the players indicated that the transaction would raise entry and marketing costs and render new entrants' efforts in R&D prohibitive in the long term.²⁰³ Pioneer notes that the reduction in the activities concerning the exchange and licensing of parental lines and hybrids would play a significant role as a barrier to entry as "it would take a company at least 7-10 years to start afresh and would need to license products in the short to mid-term"²⁰⁴. Advanta adds that "it will be more and more difficult to access all traits, materials, variants for a company with a subcritical germplasm base and R&D expenditures. Sources of such material are in the hand of fewer companies, with a monopolistic approach of the market, willing to discourage new entries"²⁰⁵. This is particularly true for the Orobanche-resistant segment, which is key for any potential entry in Spain²⁰⁶ and where the merged entity would own more than half of the elite parental lines used in hybrids commercialised in the Union. As one of the competitors explained, it has so far not been successful in accessing parental lines with Orobanche resistance from Syngenta for the development of co-hybrids incorporating that trait.²⁰⁷

²⁰¹ Advanta's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 32.

²⁰² Advanta's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 32.

²⁰³ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, see for instance question 29, and responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 2.

²⁰⁴ Response of Pioneer to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 62.

²⁰⁵ Advanta's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 62.

²⁰⁶ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question, 77. Advanta's email of 13 October 2010.

²⁰⁷ Email of 13 October 2010 from an anonymised competitor, agreeing to disclose the following excerpt of its response to question 20 of Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010: "efforts to access inbreds with Orobanche tolerance from Syngenta for the development of co-hybrids with this characteristic have so far not been successful".

- (200) Fourth, it will be more difficult for smaller competitors to innovate in the market for commercialisation of sunflower hybrids, as access to certain key traits to develop elite parental lines adapted to key market segments, such as Orobanche resistance, herbicide tolerance, high oleic, and thus the ability to propose increasingly differentiated products, will also be more difficult. A direct consequence of that reduction in the innovation capability of smaller competitors will be a higher barrier to expansion for those companies, as innovation and differentiation are the main drivers of commercial success. Ultimately farmers will face a reduced choice compared to the situation without the concentration.
- (201) Fifth, the stronger position of the merged entity and its reduced incentives to out-license, combined with the associated effects that have been identified (reduction in choice and supply, increase in royalty fees and/or imposition of more restrictive conditions, higher barriers to entry, increased difficulty to innovate), may also have an impact on the prices downstream as competition would be reduced as a result of the impact of foreclosure on the ability of competitors to enter, expand and innovate.
- (202) Finally, the notified concentration, which has already been largely implemented, may have already had an impact on KWS and therefore on the downstream market in Hungary. In fact, with the notified concentration the strongest non-integrated seed company, present in a number of markets in Europe, risks disappearing or being marginalised. [...] *²⁰⁸. After the concentration, it would therefore be more difficult to commercialise sunflower hybrids without being vertically integrated and the downstream market for commercialisation will be significantly affected (for instance the market share of KWS was approximately [0-5%]* in Hungary and in the Union in 2008).
- (203) It is concluded that the merged entity is likely to foreclose competitors and therefore the merger would significantly impede effective competition in the downstream market.

2.3. Effects of the transaction on competition in the upstream market

- (204) In addition to the effects on the downstream markets discussed in section 2.2.3 for the commercialisation of sunflower seed deriving from an input foreclosure strategy, the risk of anticompetitive effects can also be identified on the upstream market itself.
- (205) In fact, after the notified concentration, the merged entity may decide to use its increased market power upstream in order to increase royalty fees or to demand more restrictive conditions for out-licensing of varieties with regard to particular segments on the downstream markets where it is not present in a given country. Those segments may consist of varieties with particular traits or a combination of traits.
- (206) The risk of an increase in royalty fees following the notified concentration has been raised by the market investigation. One competitor fears that the terms of the licensing contracts will be revised to the advantage of the suppliers²⁰⁹, especially when the companies seeking to in-license are not able to provide a sufficient counterpart by out-licensing a variety with similar potential to the partner in return (as part of an exchange). This situation is even more likely given the asymmetry created by the notified

²⁰⁸ See footnote 173.

²⁰⁹ Agreed minutes of the conference call of 15 July 2010 with an anonymised competitor.

concentration, in so far as the difference in size (and in particular in the scope, breadth and quality of the respective germplasm) between the merged entity, on the one hand, and the smaller companies, on the other, is considerably increased. As one respondent points out, "[Syngenta's] increasingly dominant position versus minor players would advocate for a significant royalty increase"²¹⁰.

- (207) In particular, the merged entity could use its increased market power upstream in order to increase royalty fees or to demand more restrictive conditions than in the past with regard to actors that are only active upstream. This is true for public institutes that are looking for (and currently have) research agreements/programs with seed companies, as well as for companies that are not active in the different Union downstream markets for commercialisation of sunflower seed but are active in the trading of varieties in the Union, like Dow. For instance, Agri Obtentions had an exclusive co-breeding program with Syngenta for segments where Agri Obtentions currently does not have parental lines, namely herbicide and Orobanche resistance parental lines²¹¹. This co-breeding program also has the objective to release high oleic parental lines. Likewise, the Institute of Novi Sad breeds joint hybrids with partners which then take care of the registration and commercialisation and it continues to receive some parental lines (in the form of an exchange) as it is looking for specific traits (in particular resistance to Orobanche F) which it currently does not have in its portfolio²¹². After the concentration, the activity of those institutes in the upstream market could be limited should Syngenta decide to cooperate significantly less with those institutes or demand more restrictive conditions for such co-breeding programs. This would have an impact on both the level of innovation and the number of varieties accessible to companies and/or institutes active in the upstream market, potentially leading to price increase.

2.4. Conclusion

- (208) For the reasons set out above, it is concluded that the notified concentration is likely to significantly impede effective competition in the markets for commercialisation of sunflower hybrids in Spain and Hungary.
- (209) Moreover, the merged entity would be in a position to increase prices and impact the level of innovation in the upstream market thereby significantly impeding effective competition in the Union market for the trading of varieties.

3. COMMERCIALISATION OF SUNFLOWER HYBRIDS

3.1. The Spanish market for the commercialisation of sunflower hybrids

- (210) This section examines the effects of the notified concentration on competition in the Spanish market for commercialisation of sunflower hybrids.

²¹⁰ Advanta's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 32.

²¹¹ Non-confidential version of the email from Agri Obtentions of 5 August 2010.

²¹² Minutes of the interview of 10 June 2010 with the Institute of Field and Vegetable Crops.

3.1.1. The market structure and its main characteristics

3.1.1.1. The demand side of the market

- (211) In terms of both value and volume, Spain is the third largest sunflower seed market in the Union. The turnover generated by the sales of sunflower hybrids in Spain in 2008 was approximately EUR 25 million²¹³ which in volume represented about 273 000 units of sunflower seed.²¹⁴
- (212) There are essentially two major types of customers of sunflower seed in Spain. Distributors and cooperatives, on the one hand, which account for approximately 50% of the market, and oil crushers, on the other, which account for approximately 48% of the market. The remaining 2% is accounted for by farmers purchasing directly from seed companies.²¹⁵ None of the major market players in the commercialisation of sunflower hybrids is integrated with distributors or end-users (farmers and oil crushers).
- (213) The distributors and the cooperatives are independent companies which sell the seeds to farmers and/or to farmer cooperatives. There are about 1,000 regional and local distributors, serving approximately 12,000 farmers, in Spain.²¹⁶ In general, distributors and cooperatives are not only active in one vegetable crop but sell a variety of different crop seeds such as corn, wheat and soybean to their clients. The amount that each of those players purchases is relatively limited compared to the total size of the sunflower seed market, in general remaining well below 1% thereof²¹⁷. Cooperatives in Spain typically operate as an intermediary body in the purchase of crop seeds on behalf of their farmers and in the later supply of the commodity seed produced by the farmers.²¹⁸ The major advantage of cooperatives is that they can obtain better terms for the purchased seeds than the farmers operating individually. As to the commercial relation with their suppliers, most of the cooperatives conclude contracts directly with the seed companies (via their representatives) but also purchase from distributors.²¹⁹
- (214) There are essentially twelve significant oil crushers²²⁰ in Spain which accounted for approximately EUR 12 million in purchased seed in 2008. The oil crushers either produce the oil themselves or act as agents of the seed companies. When acting as agents, the oil crushers order a certain volume of seed from a seed company, deliver

²¹³ Form CO, p.75.

²¹⁴ Form CO, p.74.

²¹⁵ Form CO, p.116.

²¹⁶ Form CO, p.117.

²¹⁷ Responses to Article 11 letters of the Commission to Customers in sunflower seed – Spain - second phase, 29 July 2010, question 12.

²¹⁸ Responses to Article 11 letters of the Commission to Customers in sunflower seed – Spain - second phase, 29 July 2010, question 3.

²¹⁹ Responses to Article 11 letters of the Commission to Customers in sunflower seed – cooperatives Spain - second phase, 29 July 2010, question 14.

²²⁰ Koipesol, a brand from Syngenta, does not sell directly to oil crushers but to distributors, cooperatives and farmers. However, Koipesol uses oil crushers (for example, Sovena and SOS) as agents with whom it has distribution agreements to distribute and deliver its seed varieties to farmers and distributors. According to the Notifying Party, about 50% of Syngenta's seed sales are accounted for by the model in which Koipesol relies on crushers as agents.

the seeds to a particular farmer and afterwards collect the resulting harvest from the farmer thereby eliminating the commercial risk of the farmer²²¹. Besides this agency model, farmers usually sell their harvest to large oil crushers and sunflower commodity traders (who again are sometimes distributors). The market investigation revealed that besides using the seed for the extraction of oil, there is a recent trend in which certain oil crushers use the sunflower seed for the production of biodiesel.²²² The market investigation indicated that oil crushers do not tend to have exclusive contracts for certain varieties of sunflower seed²²³. As regards the type of sunflower seed of interest to the oil crushers, they purchase both linoleic and high oleic sunflower seed,²²⁴ although the oil is extracted separately²²⁵.

- (215) As can be seen above, the concentration of the customer base in Spain is relatively low given the large number of independent distributors, cooperatives and other customers, such as oil crushers/agents active in the market for commercialisation of sunflower hybrids²²⁶.

3.1.1.2. The supply side of the market

- (216) The supply side of the market for commercialising sunflower seed in Spain, in contrast to the demand side, is very concentrated. As Table 17 illustrates, based on 2006-2008²²⁷ volume figures²²⁸ provided by the Notifying Party, there are five significant market players in Spain which together represent [80-90%]* of the market.

Table 17: Commercialisation of sunflower seed - Market shares in volume in 2006- 2008 in Spain

Spain	2006	2007	2008
Syngenta	[40-50%]*	[40-50%]*	[40-50%]*
Monsanto	[5-10%]*	[5-10%]*	[5-10%]*
Combined	[50-60%]*	[40-50%]*	[40-50%]*
Pioneer	[10-20%]*	[10-20%]*	[10-20%]*
Limagrain	[10-20%]*	[10-20%]*	[10-20%]*
Euralis	[10-20%]*	[10-20%]*	[10-20%]*
Maisadour	[0-5%]*	[0-5%]*	[0-5%]*
Others	[5-10%]*	[10-20%]*	[10-20%]*

²²¹ For example, in Spain this model is being followed by Cargill.

²²² Responses to Article 11 letters of the Commission to Customers in sunflower seed – oil crushers Spain question 4.

²²³ Responses to Article 11 letters of the Commission to Customers in sunflower seed – oil crushers Spain question 7.

²²⁴ Responses to Article 11 letters of the Commission to Customers in sunflower seed – oil crushers Spain, question 8.

²²⁵ Responses to Article 11 letters of the Commission to Customers in sunflower seed – oil crushers Spain, question 9.

²²⁶ For example, Syngenta Seeds, one of the two Spanish subsidiaries of the Notifying Party active in the sunflower seed market in Spain, has approximately [...] customers. Koipesol, the other Syngenta subsidiary in Spain, is selling via various oil crushers which themselves sell to [...] customers or directly to farmers (Form CO, p. 117).

²²⁷ Form CO, Annex 7.1-7.3(3).

²²⁸ The Notifying Party submits that it can only provide market share figures in volume concerning its competitors.

Source: Syngenta estimates (Form CO – Annex 7.1.-7.3.- (3) -Seeds)

- (217) The market leader, Syngenta, has seen its market share remain relatively stable over the period 2006-2008. According to the Notifying Party²²⁹, in the last decade Syngenta has been capable of organically growing from a small market position in 2000 to its current leading position. During that period Monsanto has also managed to maintain a position within the top five sunflower seed producers in Spain.
- (218) The main competitors of the merging parties in Spain are Pioneer, Limagrain and Euralis (via its subsidiary Arlesa). Those seed producers have gained a stable market position in Spain over the course of the past decade. Syngenta claims that Pioneer, Limagrain and Euralis are particularly strong and will continue to exercise an important competitive constraint on the merged entity in particular given their strong R&D capabilities. The Notifying Party also submits that Euralis and Limagrain, by having joined their R&D and breeding efforts, are stronger competitors than their individual market shares would suggest and as a result they should together occupy the number two position in the Spanish market. As will be examined below, however, the market investigation has not generally confirmed the arguments of the Notifying Party concerning the strength of its main competitors in the Spanish market. Furthermore, since Limagrain and Euralis independently commercialise their respective production in the Spanish market, those companies' position on that market should be assessed separately.
- (219) Besides the main competitors cited above, the Notifying Party identified other smaller competitors that, according to them, account for [10-20%]* of the market share in Spain. Those smaller competitors are Maribo Seeds (with [0-5%]* market share), Semillas Batlle (with [0-5%]*), Semillas Fitó (with [0-5%]*), Eurosemillas (with [0-5%]*), DAFISA (with [0-5%]*), Semillas Gálvez (with [0-5%]*) and RAGT (with [0-5%]*)²³⁰. The Kleffmann data²³¹ confirms that there are indeed a number of minor market players in Spain. However, the market investigation found no indication that any of those fringe players has been able to grow its market share in recent years so as to pose a significant competitive constraint on the merging parties.
- (220) As to the positioning with regards to the particular sunflower seed segments, Syngenta appears to be particularly strong in the specific segments comprising Orobanche race E, high oleic and linoleic hybrids. While Syngenta is also present in hybrids resistant to Orobanche race F, it has a weaker position in this segment than either Pioneer or Monsanto.²³² As to Monsanto, it was in recent years increasingly present in hybrids resistant to Orobanche race F.
- (221) As to the remaining notable competitors, based on 2008 data, Pioneer, as indicated above, is quite strong in Orobanche F and relatively well positioned in high oleic and linoleic hybrids. Limagrain occupies the second position after Syngenta in high oleic hybrids. It also has hybrids in the Orobanche race F and E segments. Euralis also has

²²⁹ Form CO, p.121-122.

²³⁰ Responses of Syngenta to Article 11 letter of the Commission of 13 July 2010, question 9a.

²³¹ Kleffmann is a market research company which conducts panel studies to investigate different aspects of specific agribusiness markets. The market data produced by Kleffmann is a basic source for companies operating in sunflower seed business. In fact, the Notifying Party builds on Kleffmann data to estimate its competitors market shares.

²³² Responses Article 11 letter to competitors of 22 July 2010, question 43.

both high oleic and linoleic hybrids in its portfolio and is present in the Orobanche race F segment, although with a weaker position than Limagrain. Maisadour is a much smaller player with a market share of only [0-5%]* in volume.

3.1.1.3. The market structure resulting from the notified concentration

- (222) In a market already characterised by a limited number of players, the notified concentration would clearly reinforce the position of the current market leader in Spain by bringing together the number one player and an important market participant.
- (223) As can be seen from Table 17, the merged entity would be by far the largest player on the Spanish market with about [50-60%]* volume share, exceeding more than three times the market share of the next competitor, Pioneer. Measured in value, the merged entity would achieve an even higher market share in the Spanish market for sunflower seed (see Table 18). Based on value data (from 2009 and 2010) submitted by the Notifying Party, the merged entity would achieve a combined market share of [60-70%]* with an increment of [10-20%]* market share in the Spanish market of sunflower seed²³³.

Table 18: Parties' market shares in value in Spain. 2006-2010

	2006	2007	2008	2009	2010
Syngenta	[40-50%]*	[40-50%]*	[40-50%]*	[40-50%]*	[40-50%]*
Monsanto	[5-10%]*	[5-10%]*	[5-10%]*	[10-20%]*	[10-20%]*
Combined	[50-60%]*	[40-50%]*	[50-60%]*	[60-70%]*	[60-70%]*

Source: Data submitted by the Notifying Party and the Target Business estimates (for 2009 and 2010 market shares based on actual sales of Monsanto and Syngenta).

- (224) Third party data on 2007-2009²³⁴ sales confirmed that the Target Business' market share increased significantly between 2006 and 2010, passing from [5-10%]* to [10-20%]* in value. Syngenta's high market share has remained stable in the last three years, while (apart from Monsanto) only Pioneer increased its sales. As regards other competitors, Limagrain lost market share while Euralis' market position remained stable. Maribo Seeds, with a significantly lower share, also saw its market share decrease, while RAGT maintained its relative small market share.
- (225) Therefore, as further outlined in detail below, the data show that the merger would lead to the elimination of a rapidly growing competitor in sunflower seed with a significant potential in the Spanish market.

3.1.2. Closeness of competition

- (226) The sections below will discuss in detail the role Monsanto played on the market, with a particular view on the competitive pressure it exercised on the market leader, Syngenta.
- (227) The Notifying Party submits, in that regard, that the merging parties are not close competitors in Spain since their respective product portfolio of sunflower hybrids are

²³³ The market shares measured in value are based on Syngenta's own estimates as provided in the Form CO, Annex 7.1-7.3(3) and in Syngenta's and Monsanto's response to Article 11 letters of the Commission of 1 June 2010.

²³⁴ Responses to Article 11 letters of the Commission to seed competitors – second phase of 22 July 2010, question 43.

largely complementary. In particular, they submit that the Target Business mainly focuses on the Orobanche-resistant segment, marketing notably hybrids resistant to the latest race of the parasite (race F). The Notifying Party claims that the Target Business is weak or absent in the segment of high oleic and of herbicide tolerant hybrids, where Syngenta is a strong market player. According to the Notifying Party, therefore, Syngenta's hybrids compete more closely with the hybrids of other competitors such as Pioneer, Limagrain or Euralis.

(228) The public data available, the answers of market participants to various questionnaires as well as the internal documents of the merging parties do not confirm the view of the Notifying Party. On the contrary, as further outlined below, individually and in combination, they indicate that the merging parties were competing very closely against each other in the Spanish market for sunflower hybrids.

3.1.2.1. Data extracted from independent market studies highlight that the Target Business was a significant player in the Spanish market with a strong product portfolio

(229) With regard to the top ten hybrids in Spain (a list collected by Kleffmann on an almost yearly basis), it may be concluded that both the Notifying Party and the Target Business play a significant role. As Table 19 and 20 illustrate, in 2008-2009 the Notifying Party owned three hybrids on the list, whereas one of the hybrids was owned by the Target Business. When taken together, the merging parties' top selling hybrids represent [30-40%]* of the Spanish market. Further important market players are Pioneer with two hybrids (ranked fifth and ninth) and Euralis also with two hybrids (ranked fourth and eighth) in the list of the 2009 top ten hybrids in Spain.

Table 19: Top ten hybrids – Spain 2009

Hybrid name	Supplying company	Market share per hybrid 2009
Sanbro/227 (Orobanche E)	Syngenta	[5-10%]*
Transol (Orobanche F)	Monsanto	[5-10%]*
Oleko (Orobanche E)	Syngenta	[5-10%]*
Leila	Euralis	[5-10%]*
PR63A98	Pioneer	[5-10%]*
Peredovick uluchshen	Peredovick	[5-10%]*
Krisol	Syngenta (Koipesol)	[0-5%]*
Toledo 2	Euralis	[0-5%]*
PR64A14	Pioneer	[0-5%]*
Faro	Danisco/Maribo Seeds	[0-5%]*
Focus	Limagrain	[0-5%]*
% Top 10 Varieties		[60-70%]*

Source: Kleffmann

Table 20: Top ten hybrids – Spain 2008

Hybrid name	Supplying company	Market share per hybrid 2008
Sanbro/227 (Orobanche E)	Syngenta	[10-20%]*
NK Califa (Orobanche F)	Syngenta	[0-5%]*
PR64A14	Pioneer	[0-5%]*
PR63A76	Pioneer	[0-5%]*
Megasun	Limagrain	[0-5%]*
Leila	Euralis	[0-5%]*
PR63A98	Pioneer	[0-5%]*
Transol	Monsanto	[0-5%]*
Sarita	Limagrain	[0-5%]*
Peredovick uluchshen	Peredovick	[0-5%]*
% Top 10 Varieties		[40-50%]*

Source: Kleffmann

(230) As Tables 19 and 20 illustrate, Monsanto is a significant rival to Syngenta. In recent years Monsanto has launched commercial hybrids very well adapted to the Spanish market. Monsanto's most successful hybrid is currently Transol. The market share of Monsanto has increased significantly since the launching of that hybrid. As illustrated in Tables 19 and 20, Transol exercises significant competitive pressure on Syngenta's hybrids, namely Sanbro and NK Califa. During 2008 and 2009, sales of Transol increased significantly from [0-5%]* to [5-10%]*, moving from number eight to number two position in the list of top ten hybrids in Spain. During the same period, sales of Syngenta's Sanbro decreased from [10-20%]* to [5-10%]*, whereas NK Califa, which competes in the same segment of hybrids resistant to Orobanche race F as Transol, was removed from the list of top ten varieties in 2009 and replaced as the number two hybrid by Transol.

(231) Moreover, with regard to the positions of the parties and their competitors in the top ten hybrids commercialised in Spain over the last decade (in the period 2000-2009), both merging parties have been able to maintain over time a stable portfolio of strong quality hybrids with which they achieved significant sales in the Spanish market. The Kleffmann rankings show that both Syngenta and the Target Business always had hybrids in the list of the top ten hybrids in Spain. In the last decade, Syngenta has always managed to have the number one and number two top hybrids in Spain. That situation changed only in 2009 when, as indicated, the Target Business' top selling product, Transol, occupied the number two position. Furthermore, the Target Business was a stable and strong market player, always managing to have at least one hybrid in the list of top ten in Spain in the same period.

3.1.2.2. Market participants underline that the Target Business was a significant player in the Spanish market

(232) Respondents during the market investigation indicated that the Target Business was a particularly important player in the Spanish market. In fact, most of the parties' competitors and customers considered that the Target Business was the closest

competitor to Syngenta²³⁵, apart from Pioneer. Respondents indicated that Syngenta and Monsanto, similarly to Pioneer, compete closely with each other in Spain by continuously bringing successful hybrids to the market²³⁶.

- (233) During the market investigation, customers of the merging parties also highlighted that the Target Business has a portfolio of hybrids well adapted to the agro-climatic conditions of Spain²³⁷. In that respect, the Target Business is viewed by a significant number of customers and competitors as having a broad portfolio of good quality and high yielding hybrids with comparable potential to Syngenta's hybrids²³⁸. The Target Business, in its internal documents, also considers itself to perform successfully in Spain. The presentations produced for the Spanish product advancement meetings of Monsanto highlight the considerable strength of the recently developed hybrids of Monsanto in Spain²³⁹.
- (234) Moreover, strengthening the perception that Monsanto was a significant player in the Spanish market, the result of the market investigation shows that, similarly to Syngenta, Monsanto had a strong marketing and local sales force²⁴⁰, aspects identified as key to being considered a good supplier in the seed market²⁴¹. The Notifying Party, in its response to the Commission's decision to open the in-depth market investigation²⁴², emphasised that Monsanto's marketing and sales force was not transferred as part of the notified concentration. However, this does not prevent the Commission from considering Monsanto's sales force when examining that company's market positioning prior to the concentration. Furthermore, as a result of the notified concentration, Syngenta can rely on Monsanto's good reputation and extend its already well functioning and strong sales and marketing force to commercialise Monsanto's hybrids.

3.1.2.3. The Target Business was a significant player in the key segment of the Spanish sunflower seed market

- (235) As mentioned earlier, the soil in Spain is to a large extent affected by Orobanche. Currently, there are two main races present: Orobanche E and Orobanche F. Based on

²³⁵ Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 30.

²³⁶ Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 33.f.

²³⁷ Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, questions 33.a, 33.b, 33.c.

²³⁸ Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 30.a, 33.a, 33.b, 33.c.

²³⁹ Response of Monsanto to Article 11 letters of the Commission of 18 May 2010. Monsanto's internal documents: Spain 2009 Transol and Quisol product advancement meeting; Monsanto product advancement meeting 2008.

²⁴⁰ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 77.a, question 79.a.

²⁴¹ Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 25.

²⁴² Reply of the Notifying Party of 2.7.2010 to the Commission decision of 21 June 2010 initiating proceedings pursuant to Article 6(1)(c) of the Merger Regulation.

the Notifying Party's submission, approximately 60%-70% of the Spanish territory was covered by the Orobanche parasite in Spain in the period from 2008 to 2010.

- (236) In order to protect sunflowers in the infested areas of the Spanish territory, seed companies are continuously bringing to the market hybrids which are resistant to the latest race of Orobanche. Given that Spain is highly infested by the parasite, the hybrids resistant to Orobanche represent by far the most important segment in Spain. When considering Orobanche-resistant hybrids, it is important to note that those resistant to the latest race of Orobanche (F) are also resistant to the previous races of Orobanche. Therefore, hybrids resistant to Orobanche F also represent a competitive constraint to those resistant to the previous race of Orobanche E, but not the other way around.
- (237) The market investigation revealed in that regard that, before the notified concentration, the merging parties were competing fiercely against each other in the segment of Orobanche-resistant hybrids.
- (238) With regard to the portfolio of Syngenta, all of its hybrids commercialised in Spain are resistant to Orobanche E while some of them are resistant to the latest race of Orobanche F, such as NK Califa and Kardan. With regard to market shares and bearing in mind the distinction between hybrids resistant to Orobanche E and hybrids resistant to Orobanche F, Syngenta is a very strong actor in both segments, having a market share of [60-80]% in the segment of Orobanche E and of [30-40]% in the segment of Orobanche F during the period from 2008 to 2010.
- (239) As regards the Target Business, all of its hybrids commercialised currently (in 2010) in Spain, namely Transol and Quisol, are resistant to Orobanche F and therefore also to the previous race of Orobanche, namely Orobanche E²⁴³. Accordingly, the Target Business' hybrids do not only compete against those Syngenta hybrids which are resistant to race F, as the Notifying Party seems to suggest, but also against all the others that are resistant to the previous races of Orobanche.
- (240) The closeness of competition between the parties is also illustrated by the list of top ten hybrids in Spain. Considering the most recent year 2009 (see Table 19), the three best sold hybrids consisted of two Orobanche resistant hybrids of Syngenta and one of the Target Business, showing the closeness of competition in that key segment where Monsanto has been able to rapidly gain market share. Internal documents of Monsanto discussing the strategic positioning of their sunflower seed hybrids show that in many cases a Syngenta hybrid was chosen as a reference for comparisons²⁴⁴.
- (241) Data gathered in the market investigation revealed that the Target Business had been rapidly increasing the sales of the hybrids resistant to Orobanche race F in Spain over the period 2007-2009²⁴⁵. While in 2006 Monsanto had significantly lower sales than

²⁴³ Responses to Article 11 letter of the Commission to the Notifying Party (first phase remedy paper), 4 June 2010.

²⁴⁴ Responses to Article 11 letter of the Commission to Monsanto of 18 May 2010, Question 1. Documents Spain – 2007 Strategy Plan: Sunflower Iberia, Dekalb and Spain Product advancement meeting 2008, Dekalb.

²⁴⁵ Responses to Article 11 letter of the Commission to seed competitors – phase II of 22 June 2010, question 43.

Syngenta in Orobanche race F resistant seeds, it managed to surpass Syngenta in 2009, doubling the sales of Syngenta in that segment in 2009.

- (242) The market investigation also revealed that the only competitor who was also able to compete in the segment of Orobanche race F resistant hybrids, with relatively stable sales over the period 2007-2009, was Pioneer. The remaining players in the segment, namely Limagrain and Euralis, reached significantly lower sales.
- (243) Given the above, the proposed concentration will remove the competitive constraint Monsanto represented in this key segment in Spain and integrate in its portfolio strong varieties which will allow it to improve its positioning in the future development of sunflower hybrids resistant to the latest race of Orobanche. The ability of other seed producers to compete with the merged entity in the segment remains currently rather limited.
- (244) In the segment of herbicide tolerant hybrids, Syngenta is present but not the Target Business²⁴⁶. However, based on the response to the market investigation, that segment represents a rather small part of the Spanish market, amounting to approximately 3%-5% of the overall market²⁴⁷. Thus, the Target Business' absence in that relatively minor segment of the Spanish sunflower seed market does not put in question Monsanto's general strength in the overall sunflower seed market.
- (245) Based on the information received from Monsanto, high oleic hybrids constitute a relatively small part of the Spanish sunflower seed market (about 12%²⁴⁸). Monsanto achieved some sales with one high oleic hybrid variety Lunasol²⁴⁹ in 2007, whereas Syngenta's sales, according to Monsanto's estimates, represented about [40-50%]* of the Spanish high oleic seed market in 2008²⁵⁰. Monsanto had started to commercialise its high oleic hybrid Ultrasol in Spain in [...]*.²⁵¹ [...]*.²⁵²

3.1.2.4. The merger will eliminate a strong innovator

- (246) In addition to the more direct effect of the removal of the competitive constraint represented by the Target Business in the commercialisation of sunflower seed, the merger would also eliminate one of the most important innovators in the sunflower seed market.
- (247) The Notifying Party contests the role played by Monsanto in product development, indicating that the Target Business has not been a strong innovator in sunflower hybrids in Spain and has struggled to remain competitive with regard to the other market players. In its view, sunflower seed has not been a strategic business for

²⁴⁶ Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 30.a.

²⁴⁷ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 42.

²⁴⁸ Responses from Monsanto to Article 11 letters of the Commission 18 May 2010, question 5.

²⁴⁹ Responses to Article 11 letters of the Commission to Monsanto of 11 August 2010 - further clarifications on economic data – segment per variety.

²⁵⁰ Responses from Monsanto to Article 11 letters of the Commission 18 May 2010, question 6.

²⁵¹ Responses to Article 11 letters of the Commission to Monsanto of 18 May 2010. [...]*

²⁵² Responses to Article 11 letters of the Commission to Monsanto of 18 May 2010. [...]*

Monsanto, therefore Monsanto's business in sunflower seed lacked the necessary investment in R&D.

- (248) However, the market investigation does not confirm the view of the Notifying Party. The rapidly growing market presence of Monsanto in sunflower seed in Spain already clearly contradicts that view. Furthermore, evidence gathered from competitors in the market investigation indicates that the Target Business was considered a strong and innovative market player in Spain²⁵³ regularly bringing new improved hybrids on to the market²⁵⁴. In addition, [...] ²⁵⁵.
- (249) The market investigation clearly highlighted that in order to remain competitive in the commercialisation of sunflower hybrids, seed companies need to continuously bring new hybrids to the market. In this respect, the market investigation has revealed that both Syngenta and the Target Business had a very good germplasm portfolio well adapted to the local circumstances, which allowed them, through their breeding activities, to commercialise regularly new hybrids²⁵⁶.
- (250) Admittedly, it is in principle difficult to identify the breeding efforts devoted to a specific Member State since breeding activities are not generally aimed at one specific country. However, the market investigation revealed that the Target Business devoted significant R&D efforts to sunflower breeding adapted to the requirements of the Spanish market. [...] ²⁵⁷, [...] ²⁵⁸.
- (251) The results of the significant breeding efforts of Monsanto are also illustrated by the swift increase in the market share of the Target Business in Spain in the last five years. As confirmed by the market investigation, very few market players have the required technology to breed a hybrid resistant to the latest race of Orobanch (race F)²⁵⁹ and with the introduction of the quite successful hybrid Transol, Monsanto also demonstrated its strong capacity in breeding.
- (252) As a result, the transaction could, by reinforcing Syngenta's capabilities in breeding, lead to the long term strengthening of its market power in the commercialisation of sunflower seed. As such, the broadening of Syngenta's germplasm through the incorporation of Monsanto's and the disappearance of the latter as an independent breeder could lead to the reduction both directly and indirectly of the total number of new hybrids commercialised on the Spanish market. Directly, as Syngenta will "cannibalise" any possible duplications in the germplasm portfolio existing before the

²⁵³ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, questions 38.d.

²⁵⁴ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 79.a 79.b.

²⁵⁵ Form CO p.158; Response to Article 11 Letter of the Commission to Monsanto of 30 March 2010; Management presentation to Syngenta "Monsanto Global Sunflower Business" 19 May 2010.

²⁵⁶ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, questions 24, 23.d and 33.f

²⁵⁷ Response to Article 11 Letter of the Commission to Monsanto of 21 May 2010, question 15.

²⁵⁸ It should also be noted, as highlighted in the Form CO, that Syngenta and Monsanto both had increased their overall R&D costs in the EMEA region (a regional segmentation comprising the EU27) over the period 2006-2009.

²⁵⁹ Response to Article 11 Letter of the Commission to seed competitors – phase II of 22 July 2010, question 43.

concentration by avoiding the commercialisation of competing products and indirectly by creating an "unbeatable" breeder discouraging other competitors from engaging in costly breeding activities.

- (253) Given the above, it is concluded that, as a result of the transaction, Syngenta would remove the competitive constraint Monsanto represented as a strong innovator in Spain thereby ensuring its leading position also in the long run.

3.1.3. Countervailing buyer power

- (254) As outlined above, although the ultimate users of sunflower seed are farmers, who grow sunflowers which will be then sold as a commodity crop, seed companies rarely sell their sunflower seed directly to farmers. Customers of seed companies are usually "middlemen", either cooperatives, distributors or oil crushers. The Notifying Party argues that given the size of those customers, Syngenta's bargaining power in relation to its customers is not very strong. After the transaction that bargaining power would not change or would only change marginally, due to the complementary nature of the customer base between Syngenta and the Target Business in Spain. Furthermore, it argues that the weaker position of Syngenta with respect to other vegetable crops and the ability of the farmers to rotate between crops severely limits the bargaining power of Syngenta.
- (255) However, as the Notifying Party acknowledges, the customer structure for sunflower seed in Spain is fragmented. Syngenta's largest customer (excluding oil crushers) represents only [0-5%]* of its total Spanish sales and none of the remaining larger customers represent more than [0-5%]* of its sales each.²⁶⁰ As regards oil crushers, the market investigation revealed that the largest oil crushers represent approximately [5-10%]* of the purchases of sunflower seed in Spain²⁶¹. The market investigation did not prove that even the largest customers could exercise significant pressure on the market leader. On the contrary, the market investigation revealed that even the largest clients of Syngenta, the oil crushers, have no separate price lists with regard to other types of customers, which would support their limited bargaining power.²⁶²
- (256) Market participants stress that the strong market position of the merging parties in Spain will not be offset by any possible bargaining power of customers. By way of example, in the crucial segment of Orobanche F resistant hybrids, no significant effective substitute to Syngenta and Monsanto exists besides Pioneer. This explains why various customers in the market investigation indicated that the new entity would be able to raise its prices in Spain.²⁶³
- (257) In view of the above it is concluded that customers in Spain do not possess countervailing buyer power such as to offset the potential adverse effects of the merger.

²⁶⁰ Annex 8.6.-(2) – Seeds of Form CO.

²⁶¹ Responses to Article 11 letters of the Commission to Spanish seed oil crushers – second phase of 29 July 2010, question 15.

²⁶² Responses to Article 11 letters of the Commission to sunflower seed competitors– second phase of 22 July 2010, question 51.

²⁶³ Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, question 39.d.

3.1.4. Entry and expansion to a significant scale is unlikely

- (258) The Notifying Party claims that market entry in a particular Member State is easy for seed companies already active in neighbouring Member States. It cites as an example the entry in 2008 of the French company RAGT in the Spanish sunflower seed market. Moreover, according to the Notifying Party, other large seed companies, such as Advanta and Dow, already present in sunflower seed in other geographical locations, could enlarge their presence in the Union and in its national markets.
- (259) However, the market investigation highlighted that, contrary to the Notifying Party's claim, entry in the sunflower seed commercialisation markets for companies with significant presence in sunflower seed outside the Union is difficult if the potential entrant does not have access to a germplasm portfolio adapted to the local agro-climatic conditions²⁶⁴. More specifically, entry would require the potential entrant to acquire a sufficiently large germplasm base from an ongoing breeding programme, as it would not be feasible to compete in the short, medium and even long run starting from public germplasm.²⁶⁵ As mentioned before, the R&D costs involved in breeding are significant and long breeding times are required in order to develop successful hybrids adapted to the local agro-climatic conditions. It would require a significant number of years before a company entering the market for the commercialisation of sunflower seed could develop varieties adapted to the Spanish market. If adequate germplasm is available, a competitive sunflower breeding capability can be built in a period of three to five years, otherwise no less than 10 years are required²⁶⁶. The alternative route to enter the market would be by in-licensing germplasm material (parental lines and hybrids) adapted to the relevant market. However, as revealed by the market investigation, and discussed above, that option would be limited after the merger since Syngenta would be reluctant to license germplasm which would allow third companies to enter the market²⁶⁷. As explained, Pioneer, the remaining major seed company in most markets, has not traditionally been significantly active in the out-licensing of varieties.
- (260) Companies with significant presence in sunflower seed outside the Union, such as Dow AgroSciences or Advanta, seem to be making progress in their plans to enter the Union market in the next few years. Entry into the Spanish market for commercialisation of sunflower hybrids is one of the targets of those sunflower seed companies. The market investigation confirmed the potential entry of those companies into the Union market.²⁶⁸ However, it also revealed that it is unlikely that those seed producers would be able to gain a significant market share in the short to medium term allowing them to exert a competitive constraint on other relevant market players. In this respect, while Dow AgroSciences and Advanta are strong seed producers with good breeding potential outside the Union, it is questionable in which timeframe, if at

²⁶⁴ Responses to Article 11 letter of the Commission to competitors – second phase of 23 July 2010, questions 62 and 63.

²⁶⁵ Responses to Article 11 letter of the Commission to seed competitors of 29 April 2010, questions 25.a, 25.b, 88.a, 88.b.

²⁶⁶ Responses to Article 11 letter of the Commission to seed competitors of 29 April 2010, questions 25.c.

²⁶⁷ Responses to Article 11 letter of the Commission to seed competitors of 29 April 2010.

²⁶⁸ Dow AgroSciences intends to commercialise in the Union its first proprietary hybrids in 2010 while to date no proprietary hybrid of Advanta has been registered in the Union (Responses to Article 11 letters of the Commission to Competitors in sunflower seed – second phase, 22 July 2010, question 43).

all, they can adapt their own germplasm to the requirements of the European markets, and in particular those of the Spanish market, given the fundamental differences between the American and European germplasm pools.

- (261) Although entry from a geographically neighbouring market would be easier given the similarities in certain specific agro-climatic conditions, the market investigation also highlighted that a key barrier for competitors to enter the Spanish sunflower seed market is the specific need to have access to *Orobanche* resistance traits, while to a lesser degree it would also require access to drought and heat tolerance traits.²⁶⁹
- (262) Moreover, even if entrants were to overcome the difficulties deriving from the origin of their germplasm pool, they would still be disadvantaged compared with well established seed companies due to the relevance of having a local sales force.²⁷⁰ In addition, the market investigation indicated the relevance of suppliers' reputation as a factor limiting entry in the sunflower seed market. In particular, these factors are significantly relevant since customers are likely to make repeated purchases from the same seed supplier and given that a purchaser's previous experience with either a particular seed producer or a hybrid are among the most relevant factors for customers to ensure the quality of the hybrids²⁷¹. Furthermore, the requirements that a new entrant faces in terms of registration and marketing presence constitute additional obstacles to entry and expansion in the market for the commercialisation of sunflower seed in Spain.
- (263) As an illustration of the difficulties of entry, the market investigation revealed that no entry leading to sizable competitors has occurred in Spain in the last decade. On the contrary, the last decade has brought an increasing concentration of the main players in the Spanish market for commercialisation of sunflower seed. The only recent entrants in the Spanish market from neighbouring markets, RAGT and Caussade Semences, mentioned by the Notifying Party, have not been able to significantly expand their activities in Spain. Based on data from Kleffmann for the years 2008 and 2009, RAGT and Caussade Semences still have a marginal market presence of [0-5%]* and [0-5%]* respectively of the total sales of hybrids in volume in 2008. RAGT's sales even decreased from 2008 to 2009.²⁷² Therefore, those new entrants cannot be considered to represent a significant competitive constraint in the foreseeable future on other well established market players, such as Syngenta.
- (264) In the light of the above, it is concluded that it is unlikely that new entry will occur in the Spanish sunflower seed market so as to counteract the adverse effects of the merger.

²⁶⁹ Responses to Article 11 letter of the Commission to seed competitors of 29 April 2010, question 19.ii, question 20 and question 88.

²⁷⁰ Responses to Article 11 letter of the Commission to seed competitors of 29 April 2010, question 82.

²⁷¹ Responses to Article 11 letter of the Commission to seed competitors of 29 April 2010, question 77.a. Responses to Article 11 letters of the Commission to customers/distributors of 30 April 2010, question 24, question 25.

²⁷² Responses from RAGT to Article 11 letter of the Commission to Spanish competitors – second phase of 23 July 2010, question 43.

3.1.5. Effects of the transaction in Spain

- (265) About half of the customers that replied to the market investigation²⁷³ expressed concerns about the effects of the transaction on competition²⁷⁴. The concerns relate in particular to possible price increases, reduction in customer choice and decline in innovation²⁷⁵. That view was further supported by a number of competitors, who also expressed concerns about the effects of the transaction on prices and reduction of customer choice²⁷⁶. Competitors emphasised that the transaction could hamper competition by removing one of the major R&D capabilities in sunflower seed, therefore possibly leading to a lower rate of innovation²⁷⁷. At the same time, the majority of the distributors replying to the Commission's questionnaire stated that they would be able to fully pass on the price increase to farmers.²⁷⁸
- (266) The transaction further enhances the already considerable barriers to entry in the Spanish market for the commercialisation of sunflower hybrids. In Spain, the combination of the parties' broad portfolio of hybrids and their already leading position, with market shares above [60-70%]* in value in 2010, suggests that Syngenta will not only have the ability but also the incentive to prevent the entry of new competitors or the expansion of existing ones in sunflower seed. The integration of Monsanto's hybrids in the hands of a single supplier, including some very successful Spanish hybrids, increases the capacity for Syngenta to optimise its portfolio. Acquiring an additional seed producer and all the hybrids belonging to that producer, Syngenta increases its ability to reposition its portfolio and improves its capacity to squeeze any potential entrant in the Spanish-relevant sunflower seed segments. Consequently, the addition of Monsanto's germplasm to Syngenta's already broad portfolio will further increase the barriers to entry in the market for the commercialisation of sunflower seed in Spain.

3.1.6. Overall conclusion on the Spanish market for the commercialisation of sunflower seed

- (267) For the reasons set out above, it is concluded that the notified concentration will significantly impede effective competition on the market for the commercialisation of sunflower seed in Spain.

²⁷³ However none of the oil crushers expressed concerns about the transaction.

²⁷⁴ Responses to Article 11 letters of the Commission to Spanish seed distributors/purchasers of 30 April 2010, questions 39 to 44.

²⁷⁵ Responses to Article 11 letters of the Commission to seed competitors – second phase, 22 July 2010, question 26.b, 26.d, 26.f, 26.g.

²⁷⁶ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, questions 98, 99, 101 and 104 (4 out of 6 of the largest competitors expressed concerns).

²⁷⁷ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, question 100 (4 out of 6 of the largest competitors expressed concerns in this respect).

²⁷⁸ Responses to Article 11 letters of the Commission to customers/distributors of 30 April 2010, question 23.

3.2. The Hungarian market for the commercialisation of sunflower hybrids

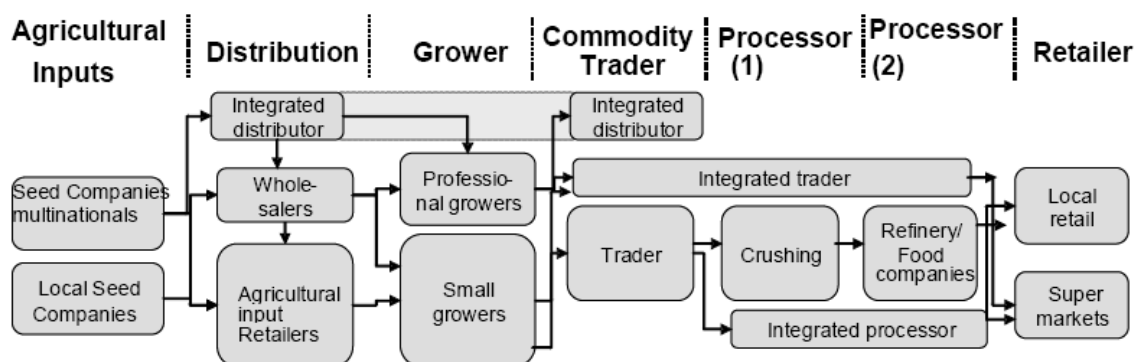
3.2.1. Market structure

(268) Hungary is the second largest sunflower seed market in value in the Union after France with EUR 28 million. In volume, the Hungarian market represents 226.800 units, being the fifth largest market in the Union, after France, Romania, Spain and Bulgaria.

3.2.1.1. The demand side of the market

(269) On the demand side of the market, distributors play the predominant role as customers of seed companies and in contrast to Spain, neither oil crushers nor seed cooperatives are present. Oil crushers purchase sunflower seed ready to crush either from commodity traders or from integrated distributors and occasionally directly from farmers. This is illustrated in Table 24, which shows the value chain structure for sunflower oil in Hungary²⁷⁹.

Table 21: Value chain structure of sunflower business in Hungary



(270) The cooperative institutional model does not exist in Hungary. The role of cooperatives, which is significant in other countries, is played in Hungary partly by the integrated distributors that sell agricultural inputs (in the case at hand hybrid sunflower seed) to sunflower growers and purchase back commercial grain from those growers²⁸⁰.

(271) Compared to Spain, the distribution system is more concentrated in Hungary; the three largest distributors purchase more than half of the total sunflower seed demand. The remaining part of the market is, however, rather atomised. Usually distributors do not purchase only sunflower seed from the parties, but also other crops, such as corn and oilseed rape, and other related products, such as seed treatment insecticides and crop protection products. Usually distributors deal with several suppliers, exclusive distribution contracts being very rare in the industry.

²⁷⁹ Notifying Party's response to Article 11 letter of the Commission of 23 July 2010 "Fifth Set of Questions during the second phase market investigation-request to complete list of contact details for Hungary".

²⁸⁰ Notifying Party's response to Article 11 letter of the Commission of 23 July 2010 "Fifth Set of Questions during the second phase market investigation-request to complete list of contact details for Hungary".

3.2.1.2. The supply side of the market

- (272) On the supply side, the Hungarian sunflower market is rather concentrated; there are five sizeable suppliers, the three largest ones making up more than 70% of the total market.
- (273) Table 23 shows the main suppliers in Hungary and their respective market position (in volume) based on the submission of the Notifying Party. The latter was not able to provide market shares for its competitors based on value sales; therefore Table 22 presents only the market share of the merging parties.
- (274) Based on the submission of the Notifying Party, the transaction was implemented in Hungary on 31 August 2009. Syngenta acquired the Target Business' hybrids and relevant parental lines on 1 September 2009. According to the Notifying Party, the 2009 sale season was still conducted by Monsanto. The sales of 2010 were fully conducted by Syngenta, in any event. It should be noted, in that regard, that several of the hybrids commercialised by the Target Business in 2009 have been phased out or put on stand-by in 2010 by Syngenta²⁸¹. In effect, in 2008, the Target Business commercialised [5-10]* different hybrids in the Hungarian market. In 2009, the number of commercialised hybrids dropped to [5-10]* and in 2010 to [0-5]* hybrids. The disappearance of several hybrids from the Hungarian market has been also indicated by several customers and competitors. Moreover, as will be explained below the market share of the hybrids originating from Monsanto dropped significantly in 2010.
- (275) Considering the above, the reference period for the assessment of the transaction with respect to the Hungarian market should end in 2008 (as also proposed by the Notifying Party) and, at the latest, in 2009.

Table 22: Commercialisation of Sunflower hybrids in Hungary - Value shares 2006-2010

	2006	2007	2008	2009	2010
Syngenta	[40-50%]*	[40-50%]*	[50-60%]*	[50-60%]*	[50-60%]*
Monsanto	[0-5%]*	[0-5%]*	[5-10%]*	[0-5%]*	[0-5%]*
Combined	[40-50%]*	[40-50%]*	[50-60%]*	[50-60%]*	[50-60%]*

Source: Data submitted by the Notifying Party and completed in the course of the market investigation²⁸²

Table 23: Commercialisation of Sunflower hybrids in Hungary - Volume shares 2006-2008

Hungary	2006	2007	2008
Syngenta	[40-50%]*	[40-50%]*	[40-50%]*
Target Business	[0-5%]*	[5-10%]*	[5-10%]*
Combined	[40-50%]*	[40-50%]*	[40-50%]*
Pioneer	[20-30%]*	[20-30%]*	[20-30%]*
Limagrain	[5-10%]*	[0-5%]*	[5-10%]*
KWS	[5-10%]*	[5-10%]*	[0-5%]*
Others (*)	[10-20%]*	[20-30%]*	[10-20%]*

²⁸¹ Form CO p.16-19 and Notifying Party's response to Article 11 letter of the Commission of 6 August 2010, Questions 1, 2 and 3.

²⁸² Form CO, Annex 7.1-7.3-(2).

(*) Others include: GK, TKI, Summit Agro, DATE, RAGT, Saatbau Linz, Saaten Union, Maisadour and Martonvásár

Source: Data submitted by the Notifying Party²⁸³

- (276) As Tables 22 and 23 show, the Hungarian market for sunflower hybrids is highly concentrated. More than 70-75% of the sales can be attributed to the three largest suppliers and more than 80-85% to the largest five suppliers, two of the main three players being the merging parties (based on the sales of 2008).
- (277) With regard to the period from 2006 to 2009, Syngenta, as shown by its market shares, was a clear market leader in Hungary. Independently of the year of reference, the market share of Syngenta (which varies between [40-50%]* and [40-50%]* in volume) is approximately twice that of its closest competitor, Pioneer (with a [20-30%]* market share) and more than five times bigger than the "middle sized competitors", such as the Target Business ([0-5%]*-[5-10%]*), Limagrain ([5-10%]*) and KWS ([5-10%]*-[0-5%]*). The market shares of Syngenta and Pioneer are even more significant based on value sales, whereas those of Limagrain and KWS are probably lower given that they are rather active in the low/middle price segments of sunflower seed²⁸⁴.
- (278) Of those five seed companies, four, namely Syngenta, Monsanto, Pioneer and Limagrain, have their own breeding capabilities. By contrast, KWS does not currently have breeding facilities of its own, but commercialises hybrids originating from the Target Business under a licence agreement²⁸⁵. The licensing agreement between Monsanto and KWS was, however, terminated in [...]*, and unless the latter finds another suitable breeding partner, the market share of KWS is likely to continue to decrease in the near future²⁸⁶. Also, the hybrids currently commercialised by KWS are getting close to the end of their commercial life time, which is illustrated by the declining market share of KWS between 2006 and 2009 (from [0-5%]* to [5-10%]*). The current situation of KWS and its future in the Hungarian market has been also questioned by customers during the market investigation²⁸⁷. Should KWS disappear or be marginalised, there would remain only three significant competitors on the market - the merged entity, Pioneer and Limagrain.
- (279) Furthermore, while there seems to be a large number of small competitors in the market, their individual market presence is rather insignificant in terms of sales and market shares. According to the estimates of the Notifying Party, in 2008 only four market players, that is to say, three public institutes, namely GK, TKI and DATE and one distributor, Summit Agro, achieved market shares above 1% (GK: [0-5%]*, TKI: [0-5%]*, DATE [0-5%]* and Summit Agro: [0-5%]*)²⁸⁸. The other remaining five

²⁸³ Market shares' estimations are the best estimate of the Notifying Party, Form CO, Annex Form CO. Annex 7.1-7.3-(1)-Seed.

²⁸⁴ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010 question 43; [...]*

²⁸⁵ Response to Article 11 letter of the Commission to sunflower seed competitor of 18 May 2010, question 1 and 2.

²⁸⁶ See Footnote 166.

²⁸⁷ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 30.

²⁸⁸ Notifying Party's response to Article 11 letter of the Commission of 13 July 2010: "2nd set of Question during the second phase market investigation on market studies, internal documents and other related issues".

competitors (RAGT, Saatbau Linz, Saaten Union, Maisadour and Martonvasar) had a combined market share of [0-5%]*²⁸⁹. Based on the estimation of the Notifying Party, the combined market share of the small competitors represented [10-20%]* in 2006, [20-30%]* in 2007 and [10-20%]* in 2008 by volume.

- (280) The Commission's market investigation did not confirm the estimates provided by the Notifying Party. It revealed, rather, that the market share of small competitors had been overestimated by Syngenta and, accordingly, the market share of the merging parties had been underestimated. Based on the Kleffmann data, the combined market share of the remaining small competitors would be in a range of [0-5%]*-[5-10%]* for the period of 2006-2009²⁹⁰. Accordingly, the market share of the merged entity would be significantly higher, amounting to [50-60%]* in 2006 and 2007 and to [50-60%]* in 2008. Furthermore, on basis of both the Kleffmann data and the estimations provided by the Notifying Party, the market share of small competitors seems to have declined significantly in recent years, which puts into question the competitive pressure, if any, that they will be able to exercise on the merged entity, as well as on Pioneer and Limagrain, in the future. The result of the market investigation has also highlighted the challenges faced by public institutes in Central and Eastern Europe due to the lack of sufficient funding and the doubts about their future competitiveness in view of the increasing R&D costs associated with breeding in particular biotechnology²⁹¹.
- (281) Due to the proposed concentration, Syngenta will thus reinforce its already high market share in a rather concentrated market. In particular, the merged entity combined market share will be above [50-60%]* in terms of value, exceeding almost three times that of its closest competitor, Pioneer, and more than ten times its second closest competitor, Limagrain. Thus, the only remaining competitors with a sizeable market share are Pioneer and Limagrain and, to a limited extent, KWS, subject to the uncertainty concerning the latter's ability to find a new licensor to replace Monsanto.
- (282) Furthermore, the market investigation assessed in more detail the importance of the different product segments in the Hungarian market and the respective strength of the parties and of their competitors with respect to those different segments.
- (283) Based on the sales figures of 2006 to 2008, Syngenta was market leader in most of the relevant segments²⁹², that is to say, the conventional linoleic segment, the herbicide-tolerant segment (alongside with Pioneer) and the high oleic segment. Its market shares varied between [40-50%]* and [60-70%]* depending on the segment²⁹³. Other

²⁸⁹ Notifying Party's response to Article 11 letter of the Commission of 13 July 2010: "2nd set of Question during the second phase market investigation on market studies, internal documents and other related issues".

²⁹⁰ Kleffmann data years 2006-2009; Market share reconstruction based on responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010.

²⁹¹ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, Agreed minutes of interview of 16 June 2010 with competitor (Novi Sad) and Agreed minutes of interview of 13 July 2010 with competitor (Pioneer). Minutes visit of Pioneer's sunflower breeding station in Montech, 26 August 2010.

²⁹² Considering that Hungary has a more moderate climate than Spain, Orobanche is not so much of a concern in this Member State (Form CO, p.64).

²⁹³ Market share reconstruction based on Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010; Monsanto's response to Article 11 letter of the Commission of 18 May 2010, question 6: Market share estimate for high oleic area (hectares); [...]*; Monsanto's response

market players active throughout the three segments (linoleic, herbicide tolerant and high oleic) with a sizeable market share were Pioneer and Monsanto in 2008²⁹⁴. In 2008, Limagrain was mainly and KWS was only active in the conventional linoleic segment²⁹⁵. The internal documents of the parties only address those five market players. The market investigation indicates that other smaller market players have a rather limited portfolio compared to that of the parties, as they are only present in the declining linoleic segment.

- (284) Based on a price segmentation [...]*, Limagrain and KWS seem to be rather active in the low/medium price segments, whereas Syngenta, Pioneer and Monsanto are active in the most important medium and premium price segments²⁹⁶.

3.2.2. Positioning of the parties and their competitors in the market

- (285) With regard to the main elements of competition in Hungary, the market investigation shows that, for customers, in particular the quality but also the price of the hybrids are crucial selection aspects.²⁹⁷ As competitors also point out, a good supplier needs to provide hybrids with high/very high yield potential.²⁹⁸ The market investigation also highlighted the importance of the product portfolio, covering several key segments such as linoleic, herbicide-tolerant and high oleic hybrids within the different maturity rates. The market investigation also revealed the importance of the reputation of seed companies as well as of good marketing and of a local sales force.²⁹⁹ The testing and promotion (such as visits to farmers, providing discounts and presents etc.) is generally carried out by the local sales force of the seed companies, which seem to play a crucial role in the market. Distributors seem to act rather as "logistics providers". Even when asked about the role they play in advising the clients in their choice of hybrids, distributors indicate that only rarely they exert influence on their clients' choice.³⁰⁰
- (286) With respect to the market leader, Syngenta, respondents indicate that the company has a large portfolio, offering products in all the key segments. Also, the hybrids of

to Article 11 letter of the Commission of 18 May 2010 (Request for submission of internal documents), Annex 1.

²⁹⁴ Syngenta, Pioneer and Monsanto would have a combined market share of approximately [70-80%]* (Syngenta: [50-60%]*, Pioneer: [10-20%]* and Monsanto [5-10%]* respectively). Monsanto's response to the Commission's request for information of 18 May 2010, question 6 Market share estimate for high oleic area (hectares).

²⁹⁵ [...]*; Monsanto's response to Article 11 request for information of 18 May 2010 (Request for submission of internal documents), Annex 1; Response to Article 11 letter of the Commission to sunflower seed competitors of 22 June 2010.

²⁹⁶ [...]*; Monsanto's response to Article 11 request for information of 18 May 2010 (Request for submission of internal documents), Annex 1.

²⁹⁷ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 18-21.

²⁹⁸ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 21.

²⁹⁹ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 20; and Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 78.

³⁰⁰ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 18.

Syngenta are considered as the most expensive ones in the market with the highest yield potential. The majority of customers also indicate that the other suppliers typically follow the price setting of Syngenta.³⁰¹ They also consider that company to be the best performing supplier with a large product portfolio and good service.³⁰² This also explains why Syngenta is considered as a must-have supplier and an unavoidable trading partner in Hungary.³⁰³ Most of the customers indicate, in that regard, that they would lose a significant percentage of their sales should they stop dealing with Syngenta³⁰⁴. In this respect, it should be noted that Syngenta is not only strong in sunflower seed but also in other crops, seed treatment products and crop protection products. Syngenta has recently started offering package deals bundling sunflower hybrids with seed treatment products. These are all products which are sold to the same distributors.

- (287) The Target Business was considered by distributors as a significant player. Some customers perceive the company as the second closest competitor to Syngenta after Pioneer. Monsanto's hybrids were also perceived to be strong/particularly strong, in terms of yield.³⁰⁵ Distributors indicate that Monsanto had some very good quality hybrids with comparable yield potential to Syngenta, even if they did not outperform those of Syngenta, the market leader. In particular, the Target Business was considered to be performing well in the classic linoleic segment³⁰⁶, making up the largest part of the Hungarian market. Monsanto's portfolio was also perceived by some customers as rather complete, covering the main segments.
- (288) While in terms of quality the merging parties' hybrids were – at least in certain segments –comparable, Monsanto priced below the market leader. Most of the distributors considered the Target Business to be less expensive than Syngenta³⁰⁷. This has also been confirmed by price data submitted by the parties from 2003 to 2010. Based on the average list prices, it appears that the hybrids sold by the Target Business in general and within each of the relevant segments were lower priced than those of Syngenta.
- (289) Finally, as customers and competitors indicate, Monsanto had a very well functioning and sizeable local marketing and sales force, which, as indicated, is key to success in the market. Its marketing sales force was even more significant than that of Syngenta in terms of personnel.³⁰⁸

³⁰¹ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 24, d.

³⁰² Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 22.

³⁰³ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 24, a.

³⁰⁴ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 24.

³⁰⁵ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 22.

³⁰⁶ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 22.b.

³⁰⁷ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010, question 25.c.

³⁰⁸ Form CO p.150.

3.2.3. Monsanto was a strong player in the Hungarian market

- (290) The Notifying Party claims that Monsanto did not prove to be a strong competitor in the commercialisation of sunflower hybrids in Hungary and was struggling to remain competitive. The main arguments of the Notifying Party to support the allegedly weak position of Monsanto are the following. First, Monsanto was not a strong innovator³⁰⁹ in Europe, and in particular in the Hungarian market. The company lacked the necessary investment in R&D and production of sunflower seed. Second, Monsanto was not present in the fast growing (newly developing) herbicide-tolerant segment, but targeted the conventional linoleic segment which is in decline in Hungary. Third, one of the Target Business' most performing hybrids (Pikasol) was licensed from Syngenta.
- (291) The market investigation did not confirm the submission of the Notifying Party, but indicates that the Target Business was an important actor in Hungary and had strong potential to reinforce its already significant presence in the Hungarian market. The market investigation assessed each of the arguments put forward by the Notifying Party presented above in detail.

3.2.3.1. Monsanto was a strong innovator

- (292) Given that the sunflower seed industry is particularly R&D oriented, analysing the Target Business' position and potential was one of the main focuses of the market investigation. As will be outlined below, the investigation revealed that the Target Business was a particularly strong innovator and thus had a strong potential to enhance its market presence.

Breeding capability/strength

- (293) The assessment of the breeding capability of the Target Business is particularly relevant for the Hungarian market considering that Monsanto was a relatively new player in Central and Eastern Europe. Monsanto established its breeding centre in Hungary in 2005-2006 to expand its presence in Hungary and in other Central and Eastern European countries³¹⁰. Given the long development cycle of the breeding process, market shares achieved by the Target Business with currently commercialised hybrids in Hungary do not fully capture, and thus underestimate, its actual breeding strength.
- (294) During the market investigation, a number of indicators were identified to assess the relative strength of the Target Business in breeding with respect to the Hungarian market. The main indicators were the R&D expenditure in sunflower breeding and the extent to which the germplasm pool of the Target Business could be considered as particularly adequate for the Hungarian market.

³⁰⁹ Form CO, p. 108.

³¹⁰ Monsanto's response to Article 11 request for information of 18 May 2010, question 11.

R&D expenditure

- (295) It is difficult to estimate the exact R&D expenditure devoted to the Hungarian market given that Monsanto, similarly to other market players, does not generally breed for individual countries. Moreover, part of the sunflower hybrids commercialised by Monsanto in Hungary does not originate from its Hungarian breeding centre but from others, namely the breeding centre located in France (Toulouse), which is the largest centre of Monsanto in the Union.
- (296) Based on the figures submitted by the Target Business, it appears however clearly that Monsanto had concrete plans to reinforce its presence in the Hungarian and other Central and Eastern European markets. First, it set up a breeding centre in Hungary in 2005-2006 with the intention to reinforce its presence in those markets. Moreover, between 2007 and 2009, the Target Business significantly increased its R&D expenditure aimed at developing hybrids targeted at Central and Eastern European countries, including notably Hungary, by approximately [50-60%]*³¹¹. The particular focus of the Hungary-based breeding centre was the traditional linoleic segment which was during that period the largest segment in Central and Eastern European countries. The Target Business devoted almost half of its R&D expenditure to that segment. However, its breeding efforts also focused on other key segments relevant for the Hungarian market, in particular on the newly developing herbicide tolerant segment and on the high oleic segment. In line with the market trend, the Target Business devoted approximately [20-30%]* of its breeding expenditure to the growing herbicide-tolerant segment and [10-20%]* of it to the high oleic segment. For each of those segments relevant to the Hungarian market, the R&D expenditure of the Target Business increased by more than [50-60%]* during the period from 2007 to 2009.

Germplasm pool

- (297) To estimate the current and future success of the Target Business in Hungary, the market investigation also tried to assess the strength of the parties' (and notably Monsanto's) germplasm pool which is particularly well adapted to the Hungarian market. In so doing, several indicators were taken into account, namely (i) the number of elite parental lines used for hybrids commercialised in Hungary between 2000 and 2010 and particularly in the last four years, (ii) the number of elite parental lines used for hybrids to be commercialised in Hungary in the next four years and (iii) the number of elite parental lines developed by segment relevant for Hungary³¹².
- (298) Based on information obtained during the market investigation, Monsanto appears to be a significant breeder with a large germplasm pool well adapted to the Hungarian market. In terms of number of elite parental lines relevant for Hungary, Monsanto had a comparable size to that of Syngenta and Pioneer . Other market players active in Hungary have a more limited breeding capability in terms of elite parental lines³¹³.

³¹¹ Monsanto's response to Article 11 request for information of 18 May 2010, question 15.

³¹² Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, questions 12, 13 and 14.

³¹³ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, questions 12, 13 and 14.

- (299) Regarding the growing herbicide-tolerant segment, Monsanto had [0-5]* herbicide-tolerant parental lines for Hungary and [5-10]* overall for Europe, which indicates its potential to develop in this segment in the near future³¹⁴. [0-5]* of these herbicide-tolerant lines have been reintegrated into the germplasm pool of Syngenta after the implementation of the merger, with the intention to develop hybrids for Hungary in the coming four years³¹⁵, which demonstrates the potential that Syngenta itself attaches to those lines. As outlined above, prior to the merger, Syngenta was already a market leader, together with Pioneer, in this segment in Hungary.
- (300) According to the information submitted by each of the suppliers of the Hungarian market, in the high oleic segment, Monsanto and Syngenta were the most significant players in terms of number of high oleic elite parental lines used for hybrids commercialised in Hungary³¹⁶. This is also illustrated by the high combined market share of the merging parties in the downstream market in the segment of high oleic sunflower seed³¹⁷.
- (301) The market investigation not only revealed the importance of both Monsanto and Syngenta breeding strengths and potential with regard to Hungary, but also highlighted the weakness of other market players, in particular public institutes, in terms of germplasm pool.
- (302) Comparing the seed companies and public institutes, it appears that the germplasm pools of public institutes are significantly less important than those of the parties in terms of elite parental lines. As regards the quality of public institutes' germplasm, the market investigation also revealed that the parental lines of public institutes perform less well than those of the seed companies in terms of yield potential and oil content³¹⁸. In addition, most of the public institutes are completely or to a large extent absent from key segments³¹⁹. To enter a segment without having the relevant parental lines would take between three and eight years³²⁰. The market investigation also indicated that public institutes in general and in particular in Central and Eastern Europe are losing competitiveness due to lack of funding and key personnel leaving to the benefit large seed companies³²¹.
- (303) Based on the above, it appears that Monsanto was an important breeder with a strong potential to develop in the Hungarian market. Furthermore, Monsanto's expansion strategy in the Hungarian market is also reflected by the increase of its market shares

³¹⁴ Notifying Party's response to Article 11 letter of the Commission of 22 July 2010, questions 12, 13 and 14: Annex 13(1)-13(2)

³¹⁵ Notifying Party's response to Article 11 letter of the Commission of 22 July 2010, questions 12, 13 and 14: Annex 13(1)-13(2)

³¹⁶ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, question 14.

³¹⁷ Monsanto's response to Article 11 letter of the Commission of 18 May 2010, question 6.

³¹⁸ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, questions 21, 24 and 28.

³¹⁹ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, questions 13, 14 and 28.

³²⁰ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, questions 39 and 40.

³²¹ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010.

for the commercialisation of hybrids in Hungary. Furthermore, as confirmed by Monsanto itself: "In 2005-2006, the Monsanto marketing team wanted to expand the sunflower seed business in Central and Eastern Europe, in line with the overall market trend."³²²

3.2.3.2. Monsanto's presence and potential in the herbicide-tolerant segment

- (304) The Notifying Party claims that Monsanto was a weak player in Hungary given that it did not have herbicide-tolerant hybrids or any stable herbicide-tolerant pipeline products. The Notifying Party submits that the herbicide segment constitutes the fastest growing segment in Hungary, and according to Syngenta, Monsanto's absence from that segment indicates its weak position in the Hungarian market.
- (305) The market investigation did not confirm the Notifying Party's claim, but on the contrary, indicated that Monsanto would have the potential to develop in this segment in the absence of the notified concentration. Moreover, the arguments of the Notifying Party, according to which the lack of herbicide-tolerant product in the Target Business portfolio at the moment of the notified concentration indicates that Monsanto was a weak competitor in the Hungarian market, cannot be accepted.
- (306) First, while the herbicide-tolerant segment constitutes a growing segment in Hungary, the non-herbicide segments (classical linoleic and high oleic segment), in which Monsanto commercialised several products in Hungary, constituted the largest part of the Hungarian market at the moment of the transaction. Based on the internal documents of Monsanto and Syngenta, the sale of non-herbicide-tolerant hybrids accounted for approximately [70-80%]* of the total market in Hungary in 2008 and more than [60-70%]* of it in 2009³²³.
- (307) Second, Monsanto was one of the few market players to have recently entered the herbicide-tolerant segment in Hungary and gained sizeable market shares, other than the two largest players, Syngenta and Pioneer. Monsanto's herbicide-tolerant hybrid, Flexisol CL, was listed in the top ten hybrids list in Hungary with a market share of [0-5%]* of the total market in 2008³²⁴. Syngenta had [0-5%]* herbicide-tolerant hybrids, [...]*, each of them listed amongst the Top Ten Hybrids with a market share of [5-10%]* and [0-5%]* respectively. Based on the internal documents submitted by Monsanto, the market share of the different market players in Hungary with respect to the herbicide-tolerant segment was the following: Pioneer and Syngenta were market leaders with a market share of [40-50%]* and [40-50%]* respectively, followed by Monsanto with [10-20%]* and Limagrain with [0-5%]*³²⁵. The other market players were not active in this segment and most of them are unlikely to enter the segment in the near future. Based on the results of the market investigation, it would take about

³²² Monsanto's response to Article 11 letter of the Commission of 21 May 2010, question 11.

³²³ Notifying Party's submission of internal documents to Article 11 letter of the Commission of 13 July 2010: Folder 1 Sunflower PRE HPC meeting Budapest-2009, Nov 18th-19th-20th Market update-Hungary; Monsanto's submission of internal documents to Article 11 letter of the Commission of 18 May 2010, Annex 1. [...]*

³²⁴ Form CO, Annex 6.II-(4): Top ten varieties in Hungary in 2008.

³²⁵ Monsanto's submission of internal documents to Article 11 letter of the Commission of 18 May 2010, Annex 1. [...]*

five to seven years to breed a herbicide tolerant hybrid in the absence of herbicide tolerant elite parental lines³²⁶.

Table 24: Market shares in the main sunflower segments in Hungary 2007-2008

2007						
	Total segment	Mon	Syn	Pio	LG	KWS
Linoleic	357 000	[5-10%]*	[50-60%]*	[10-20%]*	[10-20%]*	[5-10%]*
IMI+SU	50 000		[10-20%]*	[80-90%]*	[5-10%]*	
HO	80 000	[0-5%]*	[50-60%]*	[30-40%]*	[0-5%]*	
2008						
	Tot segment	Mon	Syn	Pio	LG	KWS
Linoleic	320 000	[5-10%]*	[50-60%]*	[10-20%]*	[5-10%]*	[0-5%]*
IMI+SU	172 000	[10-20%]*	[40-50%]*	[40-50%]*	[0-5%]*	
HO	28 0000	[5-10%]*	[50-60%]*	[40-50%]*	[0-5%]*	

Source: Internal documents of Monsanto

- (308) Third, the fact that Monsanto withdrew its herbicide-tolerant hybrid, Flexisol CL, from the market ([...])* does not imply that it could not have re-entered that market segment successfully in the near future. It appears that it is not uncommon in the industry that a hybrid has to be withdrawn from the market after its commercialisation. Moreover, the withdrawal of a product does not (necessary) imply that the parental lines of that hybrid are not suitable to develop further hybrids which will perform well on the market³²⁷. Furthermore, the fact that, after the acquisition of Monsanto's Hungarian business, Syngenta did not phase out the parental lines of Flexisol CL, but instead decided to integrate them into its portfolio for the development of new pipeline hybrids indicates the potential of those lines. Moreover, Voltimi, the herbicide-tolerant pipeline product of Syngenta developed on the basis of those parental lines is currently in the late testing and registration process in Hungary and is expected to be commercialised in [...]*³²⁸.
- (309) Finally, based on the internal documents submitted by the Notifying Party, Syngenta had at least [5-10]* herbicide-tolerant pipeline products for Hungary which were using [0-5]* parental lines of Monsanto³²⁹. According to the information submitted by the Notifying Party, those pipeline products have been subject to one or two years of official trials and of registration process in Hungary and/or other countries³³⁰. According to the Notifying Party, Syngenta had already decided to phase out some of those pipeline products before their commercial introduction. However, as Syngenta itself acknowledges, the decision to phase out a product before its commercialisation

³²⁶ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010.

³²⁷ Agreed minutes of interview with competitor.

³²⁸ Notifying Party's response to Article 11 letter of the Commission of 2 August 2010, questions 3, 4, 5 and 6.

³²⁹ Notifying Party's submission of internal documents to Article 11 letter of the Commission; Folder III: [...]*

³³⁰ See footnote 329. [...]* have been under official trial in Hungary. Only [...]* would not have been under official trial in Hungary but has been under official trial in Slovakia, Romania, Ukraine and Russia.

does not imply that the hybrid will not be introduced to the market later on by Syngenta or by other market players should the product be offered for licensing. Indeed, internal documents of Syngenta discussing those pipeline products mention some of those hybrids as envisaged for "delegation" meaning licensing to other market players.

(310) [...] *³³¹.

(311) Based on the above, there seems to be a high likelihood that Monsanto could have re-entered the herbicide-tolerant segment in the absence of the transaction. Considering the limited number of market players remaining (Pioneer, Syngenta and, to a very limited extent Limagrain), the presence of Monsanto in the segment in the past, as well as the number of its pipeline products, the Target Business would have been likely to exercise significant competition pressure on the remaining competitors in this segment.

3.2.3.3. The case of the in-licensed hybrid Pikasol

(312) The Notifying Party claims that Monsanto's market shares in Hungary are actually lower than those considered in the Commission's decision of 21 June 2010 to initiate proceedings. According to Syngenta, Pikasol, a hybrid Monsanto licensed from Syngenta, should not be included in the sales of the Target Business, the licensee, but in the sales of Syngenta, the licensor. Following this proposal the increment in market share brought about by the transaction should be [0-5%]* instead of [5-10%]* (both in term of volume and of value) given that Pikasol represented [60-70%]* of the sales of the Target Business in Hungary in 2009³³². Moreover, the in-licensing strategy of Monsanto in Hungary is, according to the Notifying Party, an indication of the Target Business' weak position in the Hungarian market.

(313) As a matter of principle, in order to assess the competitive interplay in the downstream market, the sales of each of the hybrids should be attributed to the seed company commercialising them and not to the licensor as it is the former that determines the commercial strategy for the specific product. The licensing agreement contains no provisions in that regard.

(314) Furthermore, the fact that one of Monsanto's hybrids was licensed from Syngenta does not put into question the Target Business' current and potential strength in the market. First, licensing of a full hybrid could be construed as an initial commercial move, to demonstrate the intention to quickly enhance the presence on market. The licensing of Pikasol further reinforced the position of the Target Business in the Hungarian market before it brought more (fully own) hybrids to that market. Second, as indicated above, the activities of licensing are common practice in the sunflower industry. Not only the Target Business but also other market players, including Syngenta, are actively licensing from other market players in order to fill gaps in their portfolio or simply to reinforce their presence in a given Member State³³³. However, this does not mean that

³³¹ Monsanto's submission of internal documents to Article 11 request for information of 9 April 2010 and of 6 August 2010, question 9, Annex 6, [...] *.

³³² Form CO.

³³³ Responses to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010, questions 12, 13 and 14.

the company in-licensing the (co-)hybrid does not exercise competitive pressure on the licensor or on other competitors when commercialising it on a given market.

- (315) In addition, the Monsanto had a large portfolio in Hungary. Pikasol, the in-licensed hybrid, was only one hybrid out of several commercialised by Monsanto on that market. Monsanto usually commercialised approximately [5-10]* hybrids each year in the Hungarian market³³⁴. Those hybrids covered several important segments (linoleic, high oleic, herbicide-tolerant and hybrids of different maturity rates) and several price ranges (premium, medium and low price level). In the same segment as Pikasol, Monsanto also had other, although less successful, hybrids such as Rumbasol, Prodisol and Sambasol.³³⁵
- (316) Moreover, while Pikasol represented [60-70%]* of the sales of Monsanto in 2009, such a high percentage is not representative of the general sales of Monsanto over the years but was rather an exception due to some specific circumstances. When Pikasol reached its peak in 2009, the sales of Monsanto had dropped significantly due to the withdrawal of its very well sold hybrid Flexisol CL. In the previous year, 2008, Pikasol represented only [30-40%]* (both in terms of value and volume) of the sales of Monsanto³³⁶. Furthermore, bearing in mind that the acquisition by Syngenta of Monsanto's sunflower business in Hungary occurred in 2009, the sales figures of Monsanto with respect to that last year should be considered at least with caution.
- (317) Finally, even if the logic proposed by the Notifying Party were to be followed and the market share of the hybrids originating from a third party were to be attributed to the licensor instead of the licensee, the picture would not change significantly, if at all. Indeed, since KWS commercialised several hybrids originating from the Target Business in Hungary, those sales, according to Syngenta's proposed methodology, should be added to those of the Target Business. The market shares attributed to KWS' sales between 2007 and 2009 are higher than those attributed to Pikasol³³⁷. Accordingly, following the logic for the attribution of market shares proposed by the Notifying Party, the market shares of Monsanto would be higher than those considered in this Decision.
- (318) Moreover, should the sales of (co-) hybrids be attributed to the licensor as claimed by the Notifying Party, the market share of Syngenta would increase significantly and the market share of one of its competitors would decrease accordingly. In addition to the sales of Pikasol, the sales of Limagrain's best sold hybrids [...] (containing a parental line in-licensed from Syngenta) should also be included in the sales of Syngenta³³⁸. In terms of market share, [...] and Pikasol each have a market share of [0-5%]* in Hungary in terms of volume, in both 2008 and 2009³³⁹.

³³⁴ Form CO-Annex 7.1-7.3-14-Seeds: Target Business: varieties by Member State-sales and price data 2009, 2008, 2007.

³³⁵ Form CO-Annex 7.1-7.3-14-Seeds: Target Business: varieties by Member State-sales and price data 2009, 2008, 2007.

³³⁶ Form CO-Annex 7.1-7.3-14-Seeds: Target Business: varieties by Member State-sales and price data 2008.

³³⁷ Kleffmann data and market share estimation provided by the Notifying Party.

³³⁸ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 17.

³³⁹ Kleffmann data.

3.2.4. Effects of the transaction

- (319) The evidence collected during the market investigation shows that the transaction strongly affects the Hungarian market for commercialisation of sunflower hybrids.
- (320) First, some competitors expressed concerns regarding the impact of the transaction in Hungary. The manifested concerns relate in particular to the possible effects of the transaction in terms of price increases, reduction in customer choice and decline in innovation³⁴⁰. While only a limited number of distributors expressed strong concerns about the transaction, the vast majority of the distributors confirmed that they can fully or at least to a large extent (80-90%) pass on any resulting price increases to farmers.³⁴¹
- (321) Second, competitors expressed concerns that the transaction could hamper competition by removing one of the major R&D capabilities in sunflower seed and therefore possibly lead to a lower rate of innovation³⁴². The transaction is therefore likely to have a negative impact on innovation by eliminating the competitive constraint that the breeding programme and the germplasm of Monsanto exerted on Syngenta and on other competitors to regularly bring new improved varieties into the market.
- (322) Third, the market investigation indicated that the combination of two of the top three industry participants would be expected to lead to product portfolio rationalisation and thus to reduced choice for customers. According to some competitors, "Syngenta may want to harmonise and reduce its offer of hybrids to align Monsanto's offer to its own products. On the downstream market, Syngenta's willingness to recoup a quick pay back on its investment is foreseen and its incentives to eliminate duplicates and to valorise its investment will likely result in a harmonisation of the catalogue and the elimination of some varieties"³⁴³. Internal documents of Syngenta also carefully assess the effects of eventual "cannibalisation of sales" between the hybrids of Syngenta and the Target Business.
- (323) Immediately after the implementation of the transaction, Syngenta phased out several hybrids previously commercialised by Monsanto in the Hungarian market³⁴⁴. In 2008, Monsanto commercialised [5-10]* different hybrids in the Hungarian market. In 2009, the number of commercialised hybrids drooped to [5-10]* and, in 2010, to [0-5]*. The disappearance of several hybrids from the Hungarian market has been also mentioned by several customers and competitors. Similarly for pipeline products, it is uncertain whether Syngenta would maintain all those products or only those which would fit into its already large portfolio and discontinue the others. Moreover, as explained previously, Monsanto's varieties in general and within the different relevant segments have been lower priced than those of Syngenta. Therefore, the replacement of the

³⁴⁰ Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, questions 98, 99, 101 and 104.

³⁴¹ Responses to Article 11 letter of the Commission to Hungarian seed customers of 29 April 2010, question 17.

³⁴² Responses to Article 11 letter of the Commission to sunflower seed competitors of 29 April 2010, question 100.

³⁴³ Response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010.

³⁴⁴ Notifying Party's response to Article 11 letter of the Commission of 6 August 2010.

Target Business' hybrids by those of Syngenta is likely to lead to price increases in Hungary.

- (324) Given the above, it may be concluded that the transaction removed a considerable actual and potential competitive constraint on the market leader, Syngenta, in a market that is already highly concentrated. After the concentration, there would be only three market players with sizeable market shares, namely the merged entity, Pioneer and to some extent Limagrain. The notified concentration would not only remove Monsanto from the Hungarian market, but is also likely to affect the position of KWS in Hungary and other Central European countries as explained in recital (278).

3.2.5. Absence of countervailing buyer power

- (325) According to the Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings³⁴⁵ (hereinafter the "Horizontal Merger Guidelines"), countervailing buyer power should be understood as the bargaining strength that the buyer has compared to the seller in commercial negotiations due to its size, its commercial significance to the seller and its ability to switch to alternative suppliers.
- (326) According to the Notifying Party, customers in Hungary exercise significant buyer power, and this does not change due to the transaction. According to Syngenta's estimates, the three largest customers are significant customers of both Syngenta and the Target Business, and together purchase about half of the total sunflower seed demand in Hungary³⁴⁶.
- (327) The market investigation did not confirm the Notifying Party's submission but indicated that the merging parties' customers do not have significant buyer power.
- (328) First, while the three largest customers in Hungary represent a rather high percentage of the total sunflower seed business of the parties ([70-80%]* for the Target Business and [60-70%]* for Syngenta), the remaining customer base is very fragmented. With the exception of the three largest customers, namely KITE, IKR and Hőgyész Agrokémia Kft, most of the parties' customers are relatively small, representing a share of at most [0-5%]*, but typically below [0-5%]*³⁴⁷. Therefore, those customers are very unlikely to exercise any buyer power compared with the parties. As stated in recital 67 of the Horizontal Merger Guidelines, countervailing buyer power cannot be found to sufficiently off-set potential adverse effects of a merger if it only ensures that a particular segment of customers, with significant bargaining strength, is shielded from significant higher prices or deteriorated conditions after the merger.
- (329) Second, even for the largest customers, the purchases of sunflower seed from Syngenta and the Target Business represent a very high percentage of their total purchases. For instance, the parties' combined sales represent between [50-60%]* and [70-80%]* of the total purchase of sunflower seed of their two largest customers³⁴⁸. Moreover, distributors do not only purchase sunflower seed from the parties but also

³⁴⁵ OJ C 31, 5.2.2004, p. 5.

³⁴⁶ Form CO, p. 116.

³⁴⁷ Form CO, Annex 8.6-(3)-Seeds.

³⁴⁸ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010.

other seed crops, such as corn and oilseed rape, and other products, such as seed treatment insecticide and crop protection. In those markets, Syngenta also has a very significant presence.

- (330) Third, most of the parties' distributors indicate that Syngenta is already an unavoidable trading partner and that they would lose a significant percentage of their sales should they stop dealing with Syngenta³⁴⁹. Moreover, distributors note and Syngenta also explains that it is important for farmers to purchase hybrids from different suppliers in order to mitigate the risk associated with single sourcing. Indeed, relying on hybrids from one single breeding program represents a huge risk for farmers. Thus, distributors usually deal with several suppliers. The disappearance of Monsanto as an independent player significantly reduces the possibility for distributors, and ultimately farmers, to turn to producers other than Syngenta to purchase from different sources. The effect could be even more important considering that there was a significant overlap between the customer basis of Syngenta and Monsanto in the Hungarian market.
- (331) Considering the above, notably the already high market share of Syngenta and the limited number of alternative suppliers with a similar product range, in a market where multi-sourcing is important, the countervailing buyer power of customers appears to be limited. Therefore, it is concluded that there is no buyer power on this market sufficient to off-set the adverse effects of the merger.

3.2.6. Barriers to entry

- (332) According to the Notifying Party, there are several potential entrants to the Hungarian market. Syngenta considers that some small companies, such as Caussade and RAGT already competitive in other markets could reinforce their presence in other national markets, such as Hungary. Moreover, according to Syngenta, other large companies outside Europe, such as Advanta and Dow, could significantly enlarge their presence in the Union and in several national markets.
- (333) The result of the market investigation identified some recent new entrants. Customers indicate that companies, such as RAGT, Saaten Union, Euralis and Caussade have entered the Hungarian market during the last two to four years. However, the market investigation also showed that none of those companies is currently able to exert any significant competitive constraint on the other well established market players, such as Syngenta, Pioneer or Monsanto, nor are they likely to be able to do so in a foreseeable future. This is also illustrated by their rather insignificant market share in the Hungarian market³⁵⁰.
- (334) As regards companies based outside Europe, such as Dow AgroSciences and Advanta, while the market investigation confirmed their potential to enter the Union market in the future, it also revealed that, under the current circumstances, it is unlikely that they would be able to gain any sizable market share in the foreseeable future which would allow them to exert a competitive constraint on the other well established market players. While Dow and Advanta are strong with good breeding potential outside the Union, it is questionable how quickly they can adapt their germplasm to the European

³⁴⁹ Responses to Article 11 letter of the Commission to Hungarian sunflower seed customers of 29 April 2010.

³⁵⁰ Based on Kleffmann data.

market given the fundamental differences between American and European based germplasm pool.

- (335) Moreover, as was explained in the section on the assessment of the market for trading of varieties, after the concentration it would be even more difficult for companies not, or only marginally, present in the Union to gain access to adequate germplasm material, which is key to ensuring a successful presence in any of the Member States. In addition, access to public institute germplasm is not a sufficient alternative in this respect as has been explained by the different market players. Finally, even if those companies were to overcome their difficulties resulting from the fact that their germplasm pool does not originate within Europe, they would still be disadvantaged in relation to well established seed companies due to the importance of brand reputation and customers' loyalty in the market.
- (336) The market investigation also highlighted that the Hungarian market has recently been subject to further consolidation. Customers and competitors indicate that local institutes as well as small seed companies are losing competitiveness and might exit the sunflower market in the near future. Moreover, as explained above, the future of KWS, a rather important market player in Hungary, is uncertain in the long term.
- (337) In the light of the above, it is concluded that it is unlikely that new entry will occur in the Hungarian sunflower seed market so as to counteract the adverse effects of the notified concentration.

3.2.7. Overall conclusion on the Hungarian market for the commercialisation of sunflower seed

- (338) For the reasons set out above, it is concluded that the notified concentration would significantly impede effective competition on the market for the commercialisation of sunflower hybrids in Hungary.

4. SUNFLOWER SEED TREATMENT PRODUCTS– VERTICAL ASPECTS

- (339) Syngenta is active in the upstream markets for sunflower seed treatment fungicides and insecticides. The Target Business does not supply either sunflower seed treatment fungicides or insecticides. Both Syngenta and the Target Business, as explained in previous sections, are present in the downstream markets for the commercialisation of sunflower seed. This section examines the vertical effects brought about by the notified concentration.

4.1. Market for sunflower seed treatment fungicides

- (340) In the market for sunflower seed treatment fungicides, Syngenta is by far the most significant market player in the Union, with a [90-100%]* market share in terms of value and an [80-90%]* market share in terms of volume in 2008, according to the Notifying Party's best estimates³⁵¹. Currently, Syngenta is virtually the only active player in some Member States (notably in Hungary). Syngenta's main sunflower seed treatment fungicide product is Apron XL (based on the active ingredient Metalaxyl-

³⁵¹ Form CO, p. 79-80.

M)³⁵². To a very limited extent, Syngenta's Maxim/Celest (based on Metalaxyl-M and Fludioxonil) is also used on sunflower seed³⁵³. Apron XL is mainly used on sunflowers but also on cotton and on different vegetables. It is registered for sunflowers in Bulgaria, France, Hungary, Italy, Romania, Slovakia and Spain.

- (341) The other suppliers of seed treatment fungicides are mainly generic producers. Generic products are usually based on a relatively old active ingredient, Thiram, and are generally commercialised at a significantly lower price than Syngenta's fungicides. According to the market investigation, one of the suppliers of generic products is the company Chemtura³⁵⁴.

Table 25: Sunflower seed fungicides market shares in value, in 2008

Fungicides 2008/Value	Total market value (EUR millions)	Syngenta
Hungary	1.0	[90-100%]*
Spain	0.4	[90-100%]*
Union	5.5	[90-100%]*

Source: Parties best estimates

4.1.1. Risk of input foreclosure

- (342) Some customers have expressed concerns, during the market investigation, that Syngenta might be tempted to start price discriminating for sunflower seed treatment fungicides between its own seed division and other seed companies with the effect of increasing prices for its competitors on the downstream markets, thus affecting their ability to compete³⁵⁵.
- (343) According to the Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings³⁵⁶ (hereinafter the "Non-Horizontal Merger Guidelines"), a merger is said to result in foreclosure where actual or potential rivals' access to supplies or markets is hampered or eliminated as a result of the merger, thereby reducing these companies' ability and/or incentive to compete. Such foreclosure is regarded as anti-competitive where the merging parties – and, possibly, some of its competitors as well – are as a result able to profitably increase the price charged to consumers.
- (344) In assessing the likelihood of such an anti-competitive input foreclosure scenario, it is necessary to examine whether the new entity would have the ability after the merger to foreclose access to inputs, whether it would have the incentive to do so and whether a

³⁵² Apron XL serves as a solution for the control of soil borne diseases caused by fungi. It controls downy mildew on many crops due to its stemic activity.

³⁵³ According to the best estimates of Syngenta, Maxim/Celest is used less than 10% on sunflower seeds Union-wide. It is not significantly used at all in Hungary or Spain to treat sunflower seeds. See the Notifying Party's response to Article 11 letter of the Commission of 4 August 2010, question 1 a), e).

³⁵⁴ Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, question 5.

³⁵⁵ Responses to Article 11 letter of the Commission to customers of sunflower seed treatment fungicides of 29 April 2010, questions 51, 52 and 53.

³⁵⁶ OJ C 265, 18.10.2008, p. 10, paragraph 29.

foreclosure strategy would have a significant detrimental effect in the downstream market.

- (345) The Non-Horizontal Merger Guidelines identify three conditions which might indicate that the merged entity could have the ability to foreclose its downstream competitors, namely the existence of a significant degree of market power in the upstream market, the importance of the input and the possibility to negatively affect the overall availability of inputs and the absence of timely and effective counter-strategies.³⁵⁷ Those conditions are discussed in the following recitals.
- (346) Syngenta has a very strong position in the supply of sunflower seed treatment fungicides and is by far the most significant supplier overall in the Union. The main purchasers of seed treatment fungicides are mostly seed companies (representing more than 80% of total purchases) and, to a limited extent, large distributors.³⁵⁸
- (347) According to the Notifying Party, the cost of seed treatment fungicide accounts for only a small percentage of the seed price, namely around [0-5%]* to [0-5%]*³⁵⁹, and, therefore, is not a significant cost factor pursuant to the Non-Horizontal Merger Guidelines³⁶⁰. The respondents to the market investigation generally pointed out that the cost of fungicide seed treatment might, however, be higher and accounts for between [5-10%]*-[10-20%]* of the seed price and could therefore represent a non insignificant cost factor relative to the price of the downstream product. In any event, the market investigation indicated that sunflower seed treatment fungicides are "must-have" products³⁶¹ without which sunflower seed cannot be effectively sold on the market³⁶². Indeed, 99,5% of sunflower seed is treated with fungicides.³⁶³ While there is progress being made in genetic resistance of seeds to fungi, this research does not seem to be advanced enough to make seed treatment fungicides redundant in the near future.³⁶⁴
- (348) The market investigation has confirmed that there currently exists no significant competitor to Syngenta for the supply of seed treatment fungicides for sunflower in the Union. However, the market investigation has also confirmed the existence of generic products. The Notifying Party, while acknowledging that those generic products do not, at the moment, provide the same level of protection of the seed as the patented product offered by Syngenta³⁶⁵, submits that the patent on the active

³⁵⁷ Cf. in particular paragraphs 34, 35 and 36 of the Non-Horizontal Merger Guidelines.

³⁵⁸ Notifying Party's response to Article 11 letter of the Commission of 30 April 2010, Annex to question 5 of the additional responses to the 5th set of pre-notification questions.

³⁵⁹ According to the Notifying Party, for example in Hungary the price for Aprox XL/seed treatment fungicide accounts for approximately [0-5%]* of the seed price. See Form CO p. 242.

³⁶⁰ Non-Horizontal Merger Guidelines, paragraph 34.

³⁶¹ Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, questions 31, 32, 33 and 34.

³⁶² Cf. Non-Horizontal Merger Guidelines, paragraph 34.

³⁶³ Form CO, p. 59; and Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, question 12.

³⁶⁴ Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, question 38; Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, question 41.

³⁶⁵ Form CO, p. 80.

ingredient Metalaxyl-M has expired and that the data protection of that active ingredient commercialised in Spain [...] and thus that, in all likelihood, various generic products will be soon launched on the market.³⁶⁶ However, Syngenta owns IP rights on the formulation of seed treatment insecticides (namely for formulations which contain more than 70% of the active form of Metalaxyl-M). According to the Notifying Party, this does not prevent other companies from registering formulations up to a purity of 70%. The market investigation, however, did not clearly confirm that customers would regard those new generics as offering an adequate level of protection, although some customers seem to consider them as a potential alternative to Syngenta's products.³⁶⁷

- (349) There is also a significant number of potential competitors active on neighbouring markets with seed treatment fungicide or insecticide products for other crops or with crop protection products³⁶⁸. As an active ingredient can normally be used on a number of different crops, competitors might, by making adjustments to their specific formulation, seek to enter the market for sunflower seed treatment fungicide if the merged entity were to apply a foreclosure strategy by significantly increasing prices. While the development of the active ingredient is by far the most costly process in developing seed treatment products and it is not crop specific, according to market participants, the registration process for a new formulation for a particular crop may nonetheless be costly and lengthy³⁶⁹.
- (350) On the basis of the above, it cannot be excluded that the merged entity will have the ability to foreclose its downstream competitors. However, for the purposes of this Decision, this question may be left open, since it does not alter the competitive assessment of the transaction, for the reasons set out below.
- (351) Prior to the transaction, Syngenta was already a vertically integrated supplier of seed treatment fungicides and sunflower seed. Despite its significant positioning in the markets for the commercialisation of sunflower seed, Syngenta has traditionally supplied seed treatment fungicides to its competitors downstream, namely other seed companies. According to Syngenta's estimates, [50-60%]* of its production of sunflower seed treatment chemicals is sold externally³⁷⁰. Thus, all of the major competitors of Syngenta were and are still using Syngenta's sunflower seed treatment products. In particular, the Target Business already purchases [90-100%]* its seed treatment fungicides from Syngenta in Europe³⁷¹.
- (352) Pursuant to the Non-Horizontal Merger Guidelines, in its assessment of the likely incentives of the merged firm to carry out an input foreclosure strategy, the Commission may take into account the type of strategies adopted by the merged entity on the market in the past or the content of internal strategic documents.³⁷² In this case,

³⁶⁶ Form CO, p. 240.

³⁶⁷ Responses to Article 11 letter of the Commission to customers of sunflower seed treatment of 23 July 2010, question 5.

³⁶⁸ Cf. Form CO, Annex 7.1-7.3 (7) – Seed Treatment.

³⁶⁹ It can take between 2 to 5 years – Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, question 46.

³⁷⁰ Form CO, p. 240.

³⁷¹ Form CO, p. 239.

³⁷² Non-Horizontal Merger Guidelines, paragraph 45.

there are no indications that Syngenta has stopped supplying its seed treatment fungicide products to any of its competitors downstream during the last few years or otherwise tried to foreclose their access to seed treatment fungicides. Furthermore, neither internal documents nor any other evidence obtained during the market investigation suggested that the merger would provide Syngenta with incentives to change its current behaviour.

- (353) In fact, through the notified concentration, Syngenta would increase its market share in the downstream markets for the commercialisation of seeds by [10-20%]* overall in the Union ([5-10%]* in Hungary and [5-10%]* in Spain) (2008 figures in value)³⁷³. The market investigation did not confirm that, after the merger, Syngenta's increased share on the markets for the commercialisation of seeds would modify the current market structure so as to put that company in a position where a reduction of sales of seed treatment fungicides to downstream competitors, pursuant to a foreclosure strategy, would be compensated by eventual profit gains from increasing its sales of seeds or raising prices to consumers. According to the Notifying Party, its gross margins on its seed treatment fungicides (which range from [...]* to [...]*)³⁷⁴ are considerably higher than those obtained on average by the commercialisation of seeds across the industry ([...]* to [...]*)³⁷⁵. Should Syngenta stop delivering to other seed companies as a consequence of the notified concentration, it would lose the majority of its current sales of sunflower seed treatment fungicides.
- (354) Furthermore, the market investigation showed that most major seed companies negotiate framework contracts at Union level with their suppliers of seed treatment products, in particular with Syngenta for sunflower seed treatment fungicides. In general, those framework contracts include a price formulation which is neither crop nor country-of-use specific. During the negotiations, Syngenta generally does not know where the seeds will be treated or where the treated seeds will be sold. This suggests that price discrimination, or generally an input foreclosure strategy, could not be pursued in only some countries but would have to be undertaken at Union level. Similarly, the framework contracts do not specify on which crops the seed treatment product is to be used. The market investigation indicated that customers of Syngenta's fungicide seed treatment products use them not only for sunflower seed but also for other crops. Approximately [20-30%]* of Syngenta's main sunflower seed treatment product, Apron XL, is bought to be used on other crops.³⁷⁶ As Syngenta cannot know on which crops the customer will use the fungicide seed treatment product, a

³⁷³ Form CO, p. 75.

³⁷⁴ Notifying Party's response to Article 11 letter of the Commission of 04 August 2010, question 3. These margins do not include the R&D costs, which are not crop specific. Syngenta has explained in that regard that most of the costs incurred during the development of the active ingredient are allocated to the corresponding crop protection products. Typically, only after the crop protection product is developed using the new active ingredient the corresponding seed treatment product is developed. Crop protection products are applied to crops with larger production than sunflower, such as cereal, corn or soybeans.

³⁷⁵ Form CO, p. 244.

³⁷⁶ Apron XL is registered for use in several Member States, besides sunflower seeds, for cotton and a number of vegetables, such as red beet, cabbage, lettuce, spinach, sugar beet, aubergine, soya, tomato, peas, carrot, onion, etc. Maxim/Celest is mainly used for cereals, but is applied as well on a diverse array of crops. See the Notifying Party's response to Article 11 letter of the Commission of 4 August 2010, question 1 a), e).

foreclosure strategy would affect its sales of fungicide seed treatment fungicides for all crops³⁷⁷ where Syngenta has a different market position and its incentives differ.

- (355) In addition, there are indications that Syngenta might face the risk of retaliation if it applied a foreclosure strategy. Other seed companies could retaliate by not purchasing Syngenta's seed treatment products for other crops or crop protection products. Taking into account that Syngenta's total sales of seed treatment products for other crops are far larger than its sales of sunflower seed treatment products³⁷⁸ and that those sales are to a significant extent to the same major seed companies which source sunflower seed treatment products, a retaliation strategy does not seem unlikely.
- (356) In summary, the in-depth market investigation did not provide evidence that Syngenta would have the incentive, after the transaction, to pursue an input foreclosure strategy in the market(s) for fungicide seed treatment for sunflowers. Due to the framework contracts that are standard practice in this sector, a foreclosure strategy on the seed treatment fungicides for sunflower seed would affect the entire sales of fungicide treatment of Syngenta in the Union, also in markets where foreclosure is not likely to be profitable. The existing possibility of retaliation is also a factor that argues against an incentive to foreclose. Those findings indicate that Syngenta has little incentive to start a foreclosure strategy after the merger.
- (357) The overall effects of the notified concentration must be assessed in the downstream market. As stated in the Non-Horizontal Merger Guidelines, in general, a merger will raise competition concerns because of input foreclosure when it would lead to increased prices in the downstream market thereby significantly impeding effective competition³⁷⁹.
- (358) In this case, as the merged entity has no incentive to foreclose any of its competitors in the EEA, the notified concentration has no impact in the downstream markets.
- (359) Although Syngenta may have the ability to foreclose the market(s) for seed treatment fungicides for sunflower seed, the market investigation confirmed that Syngenta's incentives to engage into input foreclosure will not change so significantly as to enable it to deviate from its former practice of supplying seed treatment to the market or to increase the product price significantly pursuant to an input foreclosure strategy.
- (360) On the basis of the above, it is concluded that the transaction is not likely to result in input foreclosure on the market(s) for fungicide seed treatment products for sunflower seed.

4.1.2. Risk of customer foreclosure

- (361) In the course of the market investigation, potential entrants in the market for sunflower seed treatment fungicides indicated that the transaction, by eliminating one important customer in the downstream markets for sunflower seed, would deprive them of the

³⁷⁷ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, question 4.

³⁷⁸ Form CO, Annex 7.1-7.3 (7) – Seed Treatment.

³⁷⁹ Paragraph 47.

customer base necessary to be able to compete effectively against Syngenta.³⁸⁰ Additionally, potential entrants and some customers also fear that the transaction will enhance Syngenta's ability to bundle the sale of seeds, seed treatment products and crop protection products, a practice that Syngenta has already followed in Hungary.³⁸¹

- (362) In assessing the likelihood of an anti-competitive customer foreclosure scenario, according to the Non-Horizontal Merger Guidelines, it is necessary to examine, first, whether the merged entity would have the ability to foreclose access to downstream markets by reducing its purchases from its upstream rivals.³⁸²
- (363) The total size of the market for fungicide treatment for sunflower seed is approximately EUR 5,5 million in value in the Union. The market investigation showed that sunflower seeds are nearly all treated with seed treatment fungicides in all Member States. Differences in application between Member States are minimal. Potential competitors have voiced the view that, due to the small overall market size and the irrelevant differences in fungi, commercialisation of seed treatment fungicides would only make sense if applied on a broader level including most of the relevant Member States for sunflower seed. Therefore, it is necessary to focus also on the increment brought about by the notified concentration on the overall Union markets for fungicide seed treatment.
- (364) According to the Non-Horizontal Merger Guidelines, for customer foreclosure to be a concern, the vertical merger must involve a company which is an important customer with a significant degree of market power in the downstream market. Monsanto was already in recent years sourcing its entire sunflower seed treatment fungicides from Syngenta in Europe, as were Syngenta's other major seed competitors. Prior to the notified concentration, Syngenta also had the possibility to offer bundles of its seed treatment products for different crops. The notified concentration crystallises that situation as Monsanto disappears as a potential independent customer and extends to Monsanto's products the possibility of those bundling practices. However, Monsanto's market share on a Union-wide level is approximately [10-20%]* and thus, while significant, it cannot be concluded that Monsanto enjoyed a significant degree of market power in the downstream markets for commercialisation of seeds.
- (365) Moreover, even assuming that, after the transaction, the merged entity would not switch from its own seed treatment fungicide product to a competitor's product³⁸³, even if the latter's would be superior, [50-60%]* of the market on a Union-wide level would still be in principle available for other fungicide seed treatment producers. The notified concentration will lead to a combined market share of [40-50%]* in the downstream market for the commercialisation of seeds, Union wide (2008 figures). Potential entrants in the market for seed treatment fungicides have indicated in the market investigation that they would need a market share of [30-40%]* to make entry

³⁸⁰ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, questions 69 and 70.

³⁸¹ Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, questions 44 and 53; Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, questions 57, 66 and 68.

³⁸² Non-Horizontal Merger Guidelines, paragraph 59.

³⁸³ As explained below, the market investigation has however revealed that, in the case of seed treatment insecticides, Syngenta sources products from a competitor, notwithstanding its significant production of seed treatment insecticides.

economically feasible³⁸⁴. Therefore, it appears that, even after the transaction, the customer base will be broad enough to make entry economically feasible, taking also into account the high margins which are common for seed treatment fungicides.

- (366) In that regard, although the registration of sunflower seed treatment fungicides may sometimes be time consuming and costly – depending on the Member State –³⁸⁵, the market investigation confirmed the Notifying Party's submission that only a relatively minor part of R&D costs are crop specific³⁸⁶. In fact, most of the overall R&D costs incurred in the development of sunflower seed treatment fungicide products relate to the development of the active ingredient which can generally be used on many different crops and not only in seed treatment products but also on crop protection products.³⁸⁷ Therefore, it is unlikely that the notified concentration will discourage potential entrants from investing in the necessary R&D research to develop the necessary active ingredients and additives.
- (367) Taking these considerations into account, it is concluded that Syngenta, in particular when compared with the situation before the notified concentration, would not gain the ability to foreclose potential entrants to the market(s) for seed treatment fungicides for sunflower seed through the notified concentration.
- (368) On the basis of the above, it is concluded that the notified concentration is not likely to result in customer foreclosure on the market(s) for seed treatment fungicide products for sunflower seed.

4.2. Market for sunflower seed treatment insecticides

- (369) As Table 26 shows, in the market for sunflower seed treatment insecticides, Syngenta had a market share of [30-40%]* in value at Union level in 2008. Syngenta's market share in volume in 2008 was [10-20%]*, according to that company's best estimates. Other major suppliers of seed treatment insecticides are BASF and Bayer, with market shares in value of [30-40%]* and [10-20%]*, respectively, in the Union in 2008.
- (370) Under a segmentation following national markets, Syngenta had a market share of [90-100%]* in terms of value and [90-100%]* in terms of volume in 2008 in Hungary. Syngenta's main competitor in Hungary is Bayer, with a market share in terms of value of [5-10%]* in 2008. Syngenta does not have any sales of seed treatment insecticides in Spain, where BASF has a quasi monopoly. Syngenta's seed treatment insecticide is not registered in Spain.

³⁸⁴ Response to Article 11 letter of the Commission to seed treatment competitors of 5 August 2010, question 3.

³⁸⁵ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, questions 43, 44, 45 and 46.

³⁸⁶ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, question 42.

³⁸⁷ See footnote 374.

Table 26: Sunflower seed insecticides market shares in value in 2008

Insecticides 2008/Value	Total market value (EUR millions)	Syngenta	Bayer	BASF	Dow Agro Sciences	FMC	Chemtura
Hungary	[0-5]*	[90-100%]*	[5-10%]*	[0-5%]*	[0-5%]*	[0-5%]*	[0-5%]*
Spain	[0-5]*	[0-5%]*	[0-5%]*	[90-100%]*	[0-5%]*	[0-5%]*	[0-5%]*
Romania	[0-5]*	[10-20%]*	[60-70%]*	[0-5%]*	[0-5%]*	[5-10%]*	[0-5%]*
Bulgaria	[0-5]*	[20-30%]*	[0-5%]*	[0-5%]*	[10-20%]*	[20-30%]*	[5-10%]*
Slovakia	[0-5]*	[90-100%]*	[0-5%]*	[0-5%]*	[0-5%]*	[0-5%]*	[0-5%]*
Union	[0-5]*	[30-40%]*	[10-20%]*	[30-40%]*	[0-5%]*	[0-5%]*	[0-5%]*

Source: Parties' best estimates

(371) In the Union, Syngenta has only one sunflower seed treatment insecticide product, Cruiser 350 ("Cruiser") (based on the active ingredient Thiamethoxam), which is registered in all Member States except Spain, as indicated³⁸⁸. Cruiser is used not only on sunflower seed but also, to a significant extent, on other crops such as corn, cereals, sugar beet, peas and potatoes. BASF's products Cosmos and Regent (based on the active ingredient Fipronil) are sold only in Spain. Bayer is active in the Union with two products: Gaucho (based on the active ingredient Imidacloprid) and Poncho Sol (based on the active ingredient Clothianidin).

(372) In Hungary, Syngenta is active with Cruiser, while Bayer is active with its product Gaucho. Generics are not currently present to a significant extent in Hungary.

4.2.1. Risks of input foreclosure at Union level

(373) Input foreclosure on a potential Union market for insecticide seed treatment products for sunflower seed is unlikely.

(374) First, Syngenta does not have a significant degree of market power in the market for seed treatment insecticides at Union level so as to be expected to have a significant influence on the conditions of competition in this market³⁸⁹. Syngenta has a market share of [30-40%]* for seed treatment insecticides at Union level. Two global companies are also active in that market, namely BASF, which has a [30-40%]* market share, and Bayer, with a [10-20%]* market share. Other companies are also present in the market but play a more limited role, such as Dow, FMC and Chemtura. Therefore, several credible alternatives exist to Syngenta's seed treatment insecticides, in particular the products offered by large market players like BASF and Bayer.

(375) Second, seed treatment insecticides are not a "must-have product", that is to say, a critical component without which sunflower seed could not be produced or effectively sold³⁹⁰. In fact, overall, only 10% of sunflowers seeds sold in the Union are treated with insecticides³⁹¹. In Hungary, approximately 30% of sunflower seeds are currently

³⁸⁸ No sunflower insecticides are sold in France as French authorities decided to ban registration of sunflower seed treatment insecticides due to a potential risk to bees.

³⁸⁹ Non-Horizontal Merger Guidelines, paragraph 35.

³⁹⁰ Non-Horizontal Merger Guidelines, paragraph 34.

³⁹¹ Form CO, p. 70. This has been confirmed by the market investigation: see Responses to Article 11 letters of the Commission to Customers in sunflower seed treatment insecticides, question 13.

treated with insecticides. In France, the authorities have actually banned the registration of sunflower seed treatment insecticides³⁹².

- (376) Third, customers could respond to an input foreclosure by threatening to cease buying other seed treatment or crop protection products from Syngenta, a possibility that was mentioned in the course of the market investigation.
- (377) The above suggests that Syngenta has neither the ability nor the incentive to foreclose an important input for its competitors in the downstream market for sunflower seed.
- (378) It is therefore concluded that the transaction is not likely to result in input foreclosure on a potential Union market for seed treatment insecticide products for sunflower seed.

4.2.2. Risks of customer foreclosure at Union level

- (379) In the course of the market investigation, competitors of Syngenta in Europe voiced concerns about customer foreclosure. According to them, the elimination of one important customer in the downstream market for sunflower seed would deprive them of the customer base necessary to be able to compete effectively against Syngenta in the Union and would be a barrier to entry (by both decreasing the incentive to enter and making it harder to enter successfully).³⁹³ This would ultimately have an impact on customer choice, innovation and prices.³⁹⁴ That concern has also been raised by some customers.³⁹⁵ Additionally, market participants indicated that Syngenta is able to bundle seeds, seed treatment products and crop protection products, which its competitors are not able to do.³⁹⁶
- (380) After the transaction, one potential independent customer will disappear as the merged entity might not be interested in buying its competitors' products. It should however be observed, in that regard, that Syngenta sources sunflower seed treatment insecticides from BASF in Spain. This suggests that the merged entity may still, after the transaction, use its competitors' seed treatment insecticides for sunflowers.
- (381) Furthermore, Syngenta will gain approximately [10-20%]* market share on a Union wide level, leading to a [40-50%]* market share downstream in sunflower seed. Therefore, [50-60%]* of the market would be still available for other insecticide seed treatment producers. The market investigation suggests that this would be enough to provide sufficient incentives to enter the market(s) for insecticide seed treatment as there are a number of competitors active in other Member States which enjoy only moderate market shares in those Member States, for example DOW or FMC in Bulgaria. Additionally, the market structure for sunflower seed treatment insecticides seems to have fluctuated greatly over recent years and indicates that new entrants have

³⁹² Form CO, p. 83.

³⁹³ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, questions 71, 72 and 74.

³⁹⁴ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, question 73.

³⁹⁵ Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, questions 52, 53 and 54.

³⁹⁶ Responses to Article 11 letter to customers of sunflower seed treatment insecticides of 29 April 2010, questions 44, 52, 53 and 54; and Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, questions 59, 71 and 76.

the possibility to gain significant market shares in a very short time frame. This is shown by the entry of Syngenta's Cruiser into the Hungarian market. In that Member State, Bayer's market share between 2006 and 2008 was reduced from [80-90%]* to [5-10%]* to the benefit of Syngenta's sunflower seed treatment insecticide.

- (382) Finally, as in the case of fungicides, apart from registration, only a minor part of R&D costs are crop specific³⁹⁷. Besides Syngenta, two major companies BASF and Bayer, supply the market with sunflower seed treatment insecticides. In addition, there are a significant number of other major players providing seed treatment products insecticides for other crops.
- (383) As a result, it is concluded that Syngenta would have no ability to engage in customer foreclosure after the transaction.
- (384) On the basis of the above, it is concluded that the transaction is not likely to result in customer foreclosure on a potential Union market for insecticide seed treatment products for sunflower seed.

4.2.3. Risks of input foreclosure in Hungary

- (385) Some customers have raised the concern that Syngenta might be tempted to increase the price of its seed treatment insecticide products to foreclose its competitors.³⁹⁸
- (386) Syngenta has a very strong position in a potential market for the supply of sunflower seed treatment insecticides in Hungary.³⁹⁹ The main purchasers of seed treatment insecticides are seed companies (accounting for more than 90% of total purchases) and, to a limited extent, large distributors.⁴⁰⁰ On the downstream market, the merged entity will have a combined market share of [50-60%]* with an increment of [5-10%]* (in value).
- (387) Currently, only up to 30% of sunflower seed in Hungary are treated with seed treatment insecticides. As indicated, seed treatment insecticide is not a critical component without which sunflower seed could not be produced or effectively sold. Therefore, it is doubtful that Syngenta would have the ability to foreclose competitors in the downstream market.
- (388) The competitive assessment shows, in any event, that Syngenta would not have the incentives to foreclose its competitors. Syngenta was already, prior to the transaction, a vertically integrated supplier which sold its seed treatment insecticide product to its competitors downstream. There are no indications that Syngenta has applied or tried to apply an input foreclosure strategy in the past. Neither internal documents nor any other evidence during the market investigation suggested that Syngenta would change

³⁹⁷ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, question 45.

³⁹⁸ Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, questions 52 and 53.

³⁹⁹ Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, question 13; and Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, question 14.

⁴⁰⁰ Notifying Party's response to Article 11 letter of the Commission of 30 April 2010, Annex to question 5 of the additional responses to the 5th set of pre-notification questions.

its current behaviour due to the fact it would gain approximately [5-10%]* market share in the market of sunflower seed downstream in Hungary due to the notified concentration. Furthermore, the in-depth market investigation showed that most major seed companies negotiate framework contracts at Union level with their suppliers of seed treatment products, in particular insecticides. In general, those framework contracts include a price formulation which is neither crop nor country-of-use specific.

- (389) Besides Syngenta, Bayer, a major company with considerable resources, is supplying the market with sunflower seed treatment insecticides in Hungary. While Bayer's current position is significantly smaller than that of Syngenta, it used to be the market leader until 2008. This shows the volatility of shares in the market. There are also other potential competitors successfully active in other Member States with sunflower seed treatment insecticides which could start the registration process in Hungary if Syngenta started a foreclosure strategy, notably BASF and Dow.
- (390) In addition, according to the Notifying Party, the margins on insecticide seed treatment are high (notably if costs of development of the active ingredient, which is used in different crop protection products, are excluded)⁴⁰¹. In particular, gross profit margins for Cruiser are around [...] in Hungary (and [...] overall in the Union)⁴⁰², while the margins obtained on average by the commercialisation of seeds across the industry are around [...] to [...]*, according to the Notifying Party⁴⁰³.
- (391) Furthermore, it was indicated in the market investigation that Syngenta would face the risk of retaliation if it applied a foreclosure strategy. The other seed companies could retaliate by not purchasing Syngenta's seed treatment products for other crops. Taking into account that Syngenta sells significant amounts of seed treatment products for other crops to all the major seed companies, a retaliation strategy does not seem unlikely.
- (392) On the basis of the above, it is concluded that the transaction is not likely to result in input foreclosure on a potential Hungarian market for insecticide seed treatment products for sunflower seed.

4.2.4. Risks of customer foreclosure in Hungary

- (393) In the course of the market investigation, some competitors, potential entrants and customers of Syngenta voiced concerns regarding the Hungarian market, in particular as regards the elimination of an important customer in the downstream market for sunflower seed and the ability of Syngenta to bundle seeds, seed treatment products and crop protection products.⁴⁰⁴
- (394) According to the Non-Horizontal Merger Guidelines, for customer foreclosure to be a concern, the merger must involve a company which is an important customer with a significant degree of market power in the downstream market. Monsanto's market share in Hungary on the market for the commercialisation of seeds is approximately

⁴⁰¹ Notifying Party's response to Article 11 letter of the Commission of 04 August 2010, question 3.

⁴⁰² Notifying Party's response to Article 11 letter of the Commission of 04 August 2010, question 3.

⁴⁰³ Form CO, p. 244.

⁴⁰⁴ Responses to Article 11 letter of the Commission to seed treatment competitors of 29 April 2010, questions 59, 71, 72, 73,74 and 76 and Responses to Article 11 letter of the Commission to seed treatment customers of 29 April 2010, questions 44, 52, 53 and 54.

[5-10%]* and thus, while significant, it cannot be regarded as having a significant degree of market power in the downstream markets. Before the transaction, Syngenta also had the possibility to offer bundles of its seed treatment products for different crops. Therefore there is no merger-specific substantial structural change brought about by the notified concentration in that regard, although the transaction allows Syngenta to extend this practice to Monsanto's products.

- (395) After the transaction, Syngenta would have a [50-60%]* market share in the commercialisation of sunflower seed across the Union. Therefore, [40-50%]* of the market would be still available for other insecticide seed treatment producers. In addition, it is not entirely evident that the merged entity would not use a seed treatment insecticide product from a third party supplier if it was cheaper or of better quality than its own product.⁴⁰⁵
- (396) On the basis of the above, it is concluded that the transaction is not likely to result in customer foreclosure on a potential Hungarian market for insecticide seed treatment products for sunflower seed.

4.3. Conclusion

- (397) It is accordingly concluded that the transaction is not likely to significantly impede effective competition on the markets for seed treatment fungicides and insecticides for sunflower seed.

X. THE REMEDIES PROPOSED BY THE NOTIFYING PARTY

- (398) On 31 May 2010, prior to the Decision of the Commission of 21 June 2010 opening proceedings in this case, the Notifying Party submitted a remedy proposal (hereinafter referred to as "the first remedy package") to address the serious doubts raised by the Commission with regard to the Spanish market for the commercialisation of sunflower hybrids. The first remedy package consisted principally of the exclusive right to commercialise three hybrids in Spain: Quisol of Monsanto and NK Califa and Nostra of Syngenta, as well as the right to create new co-hybrids from the five⁴⁰⁶ parental lines of those hybrids. Those rights were granted exclusively for the Spanish market.
- (399) The Commission concluded that the first remedy package did not remove the serious doubts identified during the course of the first phase procedure for the reasons outlined in detail in its Decision of 21 June 2010 opening proceedings in this case. In particular, the first remedy package only aimed to address competition concerns on one of the markets where the Commission raised serious doubts (namely the Spanish market for commercialisation of sunflower hybrids) and thus not on a number of other markets where serious doubts were identified or could not be excluded at that stage. Furthermore, even for the Spanish market for commercialisation of sunflower hybrids, the first remedy package was considered to be insufficient, as it did not remove the overlap created by the transaction and would not have created a viable and effective business allowing the potential purchaser to compete effectively in the market.

⁴⁰⁵ Indeed, Syngenta is using in Spain the sunflower seed treatment insecticide from BASF while it has its own sunflower seed treatment insecticide, namely Cruiser 350.

⁴⁰⁶ One of the offered parental lines were used for two of the offered hybrids.

(400) On 1 September 2010, in order to remove the competition concerns arising from the notified concentration, the Notifying Party submitted a new remedy proposal, pursuant to Article 8(2) of the Merger Regulation (hereinafter referred to as "the second remedy package"). The Commission then proceeded to market test the second remedy package. The results of the market test showed that the second remedy package needed further improvements. On 17 September 2010, the Notifying Party submitted an improved remedy proposal (hereinafter referred to as "the improved remedy package"), which, as further outlined below, addresses the weaknesses identified during the market test of the second remedy package and ensures that the notified transaction will not significantly impede effective competition in any of the relevant markets.

1. THE CONTENT AND SCOPE OF THE REMEDY PACKAGE

(401) The improved remedy package offered by the Notifying Party can be summarised as follows.⁴⁰⁷

1.1. Commercialised sunflower hybrids

(402) In respect of commercialised sunflower hybrids, Syngenta offers to divest:

- (i) all hybrids commercialised by Monsanto in 2009 and in 2010 in Spain, namely Transol, Quisol, Alhaja, Vanko, Garysol, Ultrasol and Coban (together referred to as "the Spanish Offered Hybrids")⁴⁰⁸;
- (ii) all hybrids commercialised by Monsanto in 2009 in Hungary and all hybrids commercialised by Syngenta in 2010 originating from the germplasm of the Target Business in Hungary, namely Pikasol, Prodisol, Rumbasol, Floyd, Sambasol, Aurasol, Ultrasol and DKF3333, as well as the IMI-tolerant hybrid phased out in 2009 by Monsanto in Hungary, Flexisol CL (together referred to as "the Hungarian Offered Hybrids")⁴⁰⁹.

(403) The Notifying Party includes an "open-ended list mechanism", pursuant to which if any of the Spanish or Hungarian Offered Hybrids have mistakenly not been listed in the relevant Schedules⁴¹⁰, those products would also form part of the improved remedy package, if it becomes clear during the divestiture procedure that those hybrids should have been included.

(404) The purchaser would obtain the right to commercialise, under their registered name, in Spain the Spanish Offered Hybrids and in Hungary the Hungarian Offered Hybrids.

(405) The purchaser would furthermore obtain:

- (i) the "know-how" with respect to the production and commercialisation of those hybrids;

⁴⁰⁷ The main improvements with regard to the second remedy package are explained in Section 4 "The assessment of the remedy package". See as well Section 3 "The results of the market test of the second remedy package".

⁴⁰⁸ Schedule 1 of the commitments.

⁴⁰⁹ Schedule 5 of the commitments.

⁴¹⁰ Schedule 1 for the Spanish Offered Hybrids and Schedule 5 for the Hungarian Offered Hybrids.

- (ii) the right to produce/multiply them in all countries that have legislation complying with the UPOV Convention;
 - (iii) all inventory of commercial seeds related to those hybrids;
 - (iv) the ownership of the respective national registrations;
 - (v) all grower contracts for the production during the 2010 season which target Spain and Hungary; and
 - (vi) the production of those hybrids as a transition service for a period of two years at the request of the purchaser (with a possibility for the purchaser to request an extension of that period by one additional year) and if there is a minimum production at Syngenta of 3 000 units of the respective hybrid (at present this would cover the Spanish Offered Hybrids, [...] and [...] and the Hungarian Offered Hybrids, [...] and [...]).
- (406) Syngenta will maintain the right to commercialise those hybrids in all other countries inside and outside the Union excluding Spain and Hungary, respectively.

1.2. Parental lines and pipeline/future hybrids

- (407) Syngenta offers to divest the Target Business' parental lines and pipeline/future hybrids relevant for Spain and Hungary, consisting of :
- (i) all elite parental lines used to create hybrids commercialised by Monsanto in 2009 and in 2010 in Spain or used to create hybrids under official registration in Spain⁴¹¹;
 - (ii) all elite parental lines used to create hybrids commercialised by Monsanto in 2009 and by Syngenta in 2010 originating from the germplasm of the Target Business in Hungary or used to create hybrids under official registration in Hungary⁴¹²;
 - (iii) all elite parental lines currently undergoing registration in Spain⁴¹³ and Hungary⁴¹⁴;
 - (iv) all pipeline hybrids of Monsanto, currently undergoing registration in Spain⁴¹⁵ and Hungary⁴¹⁶; and
 - (v) all pipeline parental lines, meaning those fixed parental lines which are not yet in the official trialling and testing process, but have been bred with the aim of producing hybrids targeted at Spain⁴¹⁷ and Hungary⁴¹⁸.

⁴¹¹ Schedule 2 of the commitments.

⁴¹² Schedules 6 and 7 of the commitments.

⁴¹³ Schedule 2 of the commitments.

⁴¹⁴ Schedule 6 of the commitments.

⁴¹⁵ According to the Notifying Party, no pipeline/future hybrids are currently undergoing registration in Spain. Schedule 3 of the commitments.

⁴¹⁶ Schedule 7 of the commitments.

⁴¹⁷ Schedule 4 of the commitments.

⁴¹⁸ Schedule 8 of the commitments.

- (408) Those categories of parental lines are hereinafter referred to as "the Spanish Offered Parental Lines" and "the Hungarian Offered Parental Lines" respectively, or together as "the Offered Parental Lines".
- (409) The Notifying Party an "open-ended list mechanism", pursuant to which if any of the Spanish or Hungarian Offered Parental Lines or pipeline hybrids have mistakenly not been listed in the relevant Schedules⁴¹⁹, those products would also form part of the improved remedy package ("divestment business"), if it becomes clear during the divestiture procedure that those varieties should have been included.
- (410) In this respect, the purchaser would obtain:
- (i) the ownership of the national intellectual property:
 - (a) with respect to the material which is IP protected in Spain and/or Hungary, the ownership of the respective IP rights would fully be transferred;
 - (b) with respect to the material for which the IP rights are wider than national, the IP rights would remain with Syngenta and the Notifying Party would provide the purchaser with a broad perpetual non-assert, ensuring that the purchaser has the required freedom to operate with respect to all rights included in the remedy package;
 - (ii) the ownership of the respective national registration;
 - (iii) the physical stock of seeds of the Offered Parental Lines;
 - (iv) the relevant know-how with respect to breeding (pedigree information, key traits, etc.) and production of the Offered Parental Lines;
 - (v) the option to require from the Notifying Party certain transitional services, such as breeding support for a limited period of time not exceeding two years.
- (411) Based on the improved remedy package offer, the purchaser would have the right:
- (i) to cross the Spanish Offered Parental Lines with each other to develop hybrids to be commercialised or to be licensed in Spain;⁴²⁰
 - (ii) to cross the Hungarian Offered Parental Lines with each other to develop hybrids to be commercialised or to be licensed in Hungary;⁴²¹
 - (iii) to cross the Offered Parental Lines with the purchaser's proprietary lines or with third parties' lines to develop co-hybrids to be commercialised or to be licensed in the Union;
 - (iv) to cross the Spanish Offered Parental Lines with the purchaser's proprietary parental lines or with third parties' lines to develop new parental lines⁴²² for the

⁴¹⁹ Schedules 2, 3, 4, 6, 7 and 8, respectively.

⁴²⁰ The ownership of all hybrids derived from crosses among the Spanish Offered Parental Lines for commercialisation in Spain is included in the remedy package regardless of whether or not such hybrids are already commercialised in Spain, are in the registration process or have not yet been applied for registration previously.

⁴²¹ The provision referred to in footnote 420 applies equally for the Hungarian Offered Parental Lines.

⁴²² According to the Notifying Party, the definition of a "new line" should follow the industry-wide accepted UPOV principles, i.e. a line that is not at least "distinct" should not be considered a "new line". Likewise, a line which is genetically very close to the original should be classified as "essentially derived" and should not be regarded as a "new line".

creation of (co-)hybrids and for licensing for the creation of (co-)hybrids to be commercialised or to be licensed in the Union and in Turkey (provided that the identical (co-)hybrid from the new parental lines is already commercialised in the Union);

- (v) to cross the Hungarian Offered Parental Lines with the purchaser's proprietary parental lines or with third parties' lines to develop new parental lines⁴²³ for the creation of (co-)hybrids and for licensing for the creation of (co-)hybrids to be commercialised in the Union and in Russia and Ukraine (provided that the identical (co-)hybrid from the new parental lines is already commercialised in the Union).

- (412) Syngenta would maintain the right to use the Offered Parental Lines globally with the exception of the commercialisation in Spain and Hungary of the hybrids resulting from the crossing of the Spanish and Hungarian Offered Parental Lines among themselves.

2. THE RESULTS OF THE MARKET TEST OF THE REMEDY PACKAGE

- (413) The second remedy package, submitted by the Notifying Party on 1 September 2010, was subject to a market test among competitors and customers on the different relevant markets.

- (414) Spanish and Hungarian distributors of sunflower seeds practically unanimously considered the offered remedies as adequate and suitable to remove the competition concerns identified.⁴²⁴ The public institutes also took a similar position.⁴²⁵ Some seed companies, however, raised a number of concerns with regard to the second remedy package.⁴²⁶ Their main concerns related, in particular, to the scope of the remedy, the stand-alone character of the divestment business and its long-term viability. Some companies already showed interest at that stage in acquiring the divestment business, although often on condition that a number of improvements were introduced in order to address the identified concerns.

- (415) First, some seed companies criticised the scope of the second remedy package, in that not all relevant hybrids and parental lines for Spain and Hungary seemed to have been included. In particular, concerning the Spanish Offered Hybrids, competitors were critical that the Spanish remedy package did not contain any pipeline hybrid⁴²⁷. With respect to the Offered Parental Lines, some seed companies claimed that they lacked certain types of female lines. Certain competitors demanded the extension of the remedy package to the full range of hybrids which are in general successfully commercialised in the respective Member States (thus going beyond the scope of the Target Business) and one competitor explicitly asked that Syngenta add some lines of its own portfolio to the lines of the Target Business. Finally, some competitors

⁴²³ See footnote 422 for the definition of a "new line".

⁴²⁴ Responses to Article 11 letter of the Commission to Spanish and Hungarian sunflower seed customers of 3 September 2010.

⁴²⁵ Responses to Article 11 letter of the Commission to sunflower seed competitors of 3 September 2010.

⁴²⁶ Responses to Article 11 letter of the Commission to sunflower seed competitors of 3 September 2010.

⁴²⁷ See for instance Advanta's and another competitor's responses to Article 11 letter of the Commission to Spanish and Hungarian sunflower seed customers of 3 September 2010.

indicated that the package included hybrids which have already been withdrawn from the market.

- (416) Second, with respect to the stand-alone character of the offered divestment business, seed companies, but also public institutes, underlined that only an existing seed company can be a suitable purchaser, as the proposed remedy lacks a number of necessary assets and the necessary personnel, namely, among others, knowledgeable management, breeders and sales forces, to run the business on a stand-alone basis. They indicated that the development of the offered parental lines requires a company already active in breeding.⁴²⁸
- (417) For example, as KWS submits, "[t]he offered Divestment Business would allow only a seed company with already existing proper breeding activities in sunflower to run the business in a viable, sustainable and competitive fashion."⁴²⁹ As Advanta explains, "...the purchaser should demonstrate its own breeding capacity to ensure that the transferred material will be adequately used in a breeding program. Otherwise, the germplasm base constituted by the transferred lines could be lost if the purchaser was only interested in the commercialization of the transferred hybrids and the use of the transferred lines in the creation of co-hybrids."⁴³⁰
- (418) According to some respondents, the material would be used in the most efficient manner if the purchaser would be able to include it in its own breeding program crossing the Offered Parental Lines with its own parental lines. This is also the general opinion of the public institutes, such as INRA, GK and the Institute of Fundulea. As for example INRA explains "[t]he divestment process could only maintain competition if the purchaser is a competent breeder who knows how to sell the varieties offered, according to their characteristics, and how to use the parental lines in complement with his own. I do not think the material makes a complete base for sunflower breeding."⁴³¹ A few seed companies also requested the inclusion of the commitment to transfer an in-house breeder who knows the transferred germplasm materials well.⁴³² Others, however, were content with the transfer of extensive know-how, provided the purchaser is an existing seed company.⁴³³
- (419) Respondents furthermore drew attention to the importance of production capability as a crucial element to run the business in a viable manner. As one competitor indicated

⁴²⁸ See for instance responses of Advanta, KWS and another competitor to Article 11 letter of the Commission to sunflower seed competitors of 3 September 2010.

⁴²⁹ KWS's responses to questions 29 and 30 of the Article 11 letter of the Commission to sunflower seed competitors of 3 September 2010.

⁴³⁰ Advanta's response to question 10 of the Article 11 letter of the Commission to sunflower seed competitors of 3 September 2010.

⁴³¹ INRA's response to Article 11 letter of the Commission to sunflower seed competitors of 3 September 2010.

⁴³² For instance, see the introduction of Advanta's responses to Article 11 letter of the Commission to sunflower seed competitors of 3 September 2010.

⁴³³ See also response of another competitors to question 5 of the Article 11 letter of the Commission to competitors of 3 September 2010. "L'offre de Syngenta [...] ne peut convenir dans l'hypothèse d'un repreneur ne disposant pas d'une expertise dans le tournesol en Europe." Similarly, Caussade Semences, in its reply to question 14 to of the Article 11 letter of the Commission to sunflower seed competitors of 3 September 2010 indicates: "sans gamme personnelle et sans présence commerciale préalable ce portefeuille est insuffisant".

"Without investing in, or having an, existing production capability and capacity, the feasibility of running a profitable business in the mid-term would be limited for new entrants."⁴³⁴ In this respect, respondents indicated that the offered transitional production agreement, which according to the second remedy package was of two years' duration, should be extended to allow the purchaser to continue to supply the markets without disruption. Finally, respondents, in particular distributors, indicated that the buyer would need to have a sales force in place or be able to set up a sales force in a short time frame. As a competitor submitted: "Without an existing "bolt-on" commercial business, it would be difficult to be an effective competitor with Monsanto's portfolio."⁴³⁵

- (420) Third, in relation to the long-term viability of the offered divestment business, seed companies mainly criticised the territorial restrictions on the hybrids and co-hybrids resulting from the breeding program of the divestment business. In line with the results of the previous market investigation, they stressed that breeding is costly and time intensive. According to the replies of the main competitors of the merging parties, breeding would only be economically viable if were not restricted to one country but focused on broader regions. In that respect, most of the seed companies considered the limitation to the Member States of the commercialisation of hybrids and co-hybrids resulting from the further development of the divested parental lines as too restrictive. In particular, Ukraine and Russia were named as the most important European sunflower seed countries with agro-climatic similarities and similar pests to Hungary while Turkey was considered to have agro-climatic and pest similarities to Spain. According to those respondents, the licence/right to commercialise the (co-)hybrids of the breeding program resulting from the remedy package should be extended beyond Union-wide (as offered by the parties in the second remedy package) to include those countries.
- (421) Additionally, competitors also mentioned the importance of the disclosure of any relevant third party agreements and obligations related to the use of the public parental lines, other traits and trademarks and of the transfer of the relevant know-how, including production data and history on the existing public parental lines and hybrids.⁴³⁶
- (422) Despite the above-listed reservations, several of the seed companies demonstrated interest in acquiring the offered remedy package, although, as indicated, often on condition that a number of improvements were introduced in order to address the identified concerns. A respondent summarises the overall picture in the following manner: "[a]s a complement to an existing business and existing breeding program, this offer could reasonably reinforce the breeding capabilities of a purchaser."⁴³⁷

⁴³⁴ One of the sunflower seed competitors' response to question 5 of the Article 11 letter of the Commission to competitors of 3 September 2010.

⁴³⁵ One of the sunflower seed competitors' response to question 5 of the Article 11 letter of the Commission to competitors of 3 September 2010.

⁴³⁶ Responses to question 11 to Article 11 letter of the Commission to sunflower seed competitors of 3 September 2010.

⁴³⁷ Response to question 12 of the Article 11 letter of the Commission to sunflower seed competitors of 3 September 2010.

3. THE ASSESSMENT OF THE REMEDY PACKAGE

(423) In order to address the concerns raised during the market test of the second remedy package, the Notifying Party submitted the improved remedy package on 17 September 2010. The improved remedy package is assessed in the following recitals.

3.1. The scope of the improved remedy package

(424) With respect to the Spanish and Hungarian markets for commercialisation of sunflower seed, the improved remedy package includes all of Monsanto's relevant hybrids and parental lines. Therefore the improved remedy package can be considered to remove in a clear-cut way the overlaps created by the transaction in those markets. With respect to the Union market for trading of varieties, the improved remedy package covers a substantial part of the Target Business' germplasm portfolio and actually exceeds the number of parental lines currently licensed by the Target Business. In particular, it includes all relevant parental lines for Spain and Hungary.

(425) The concerns expressed by some competitors about the fact that the full portfolio of hybrids covering all key segments in those Member States is not included have to be seen in the light of Monsanto's pre-existing product portfolio and the limitation of the competitive assessment of the transaction to the territory of Spain and Hungary, for the purposes of this Decision. As revealed by the market investigation, those alleged gaps did not prevent Monsanto from playing a significant role in those markets before the merger. Furthermore, any such potential gap will be offset in so far as any potential buyer meeting the adequate buyer requirements will complement the divested germplasm with its own germplasm portfolio. Finally, with respect to the Spanish and Hungarian Offered Hybrids already withdrawn from the market (notably in 2010), the inclusion of those hybrids (and the corresponding parental lines) better reflects the activities of the Target Business before the implementation of the notified concentration⁴³⁸ and broadens the portfolio at the disposal of the purchaser. In fact, although the commercialisation of the withdrawn hybrids might be more difficult than the commercialisation of hybrids currently on the market, their corresponding registered parental lines can be directly crossed with the purchaser's parental lines to produce new hybrids or to market new lines in the medium term.

(426) Moreover, in order to address the concerns expressed by certain seed companies that some relevant hybrids and parental lines may not be included in the Schedules, the improved remedy package introduces an open-ended list mechanism. This means that, if any of the hybrids or parental lines has mistakenly not been listed in the Schedules, those products will also form part of the remedy package, if it becomes clear during the divestiture procedure that those lines should have been included. That mechanism thus ensures that all relevant hybrids and parental lines are included in the improved remedy package and adequately addresses the concerns expressed with respect to the scope of the commitments.

3.2. Stand-alone business

(427) The improved remedy package does not constitute a stand-alone business which could be run independently from day one after the divestiture. In fact, that package

⁴³⁸ In Hungary Syngenta implemented the transaction in 2009, whereas in Spain the commercialisation of hybrids is still run by Monsanto.

constitutes a carve-out of certain assets of the Target Business without including, notably, the breeding centres, production and sales force and key personnel, such as breeders. In that regard, it should be recalled that the notified concentration itself constituted an asset deal and that not all of Monsanto's sunflower seed assets were part of it. In fact, the ultimate purpose of the deal was to acquire the sunflower germplasm of Monsanto excluding crucial assets, such as the breeding centres of Monsanto and the sales force.

- (428) As outlined above, the result of the market test also confirmed that the proposed remedy package does not concern a stand-alone business and that it is important that the acquirer is a company already present in the business, in particular a company with its own breeding program.
- (429) In order to address the issue, the Notifying Party included specific purchaser requirements in the text of the improved remedy package.⁴³⁹ According to the proposed commitments, in order to ensure the immediate restoration of effective competition, the purchaser to be approved by the Commission must be a seed company with sufficient breeding capabilities and activities in order to successfully operate the business and with a sales force in Spain and/or Hungary, respectively, or the possibility of establishing such a sales force in a short time.
- (430) The included purchaser requirements fully address the concerns expressed by market participants. By requiring that a seed company with sufficient breeding capabilities should be the purchaser, it is ensured that the necessary assets, professional experience and industry knowledge are present to continue to run and develop the divestment business. As the market investigation revealed, breeding is the core of the industry. Given the nature of the improved remedy package, the purchaser should be able to include the Offered Parental Lines in its own breeding program to be able to supply the markets with new hybrids and to breed new parental lines. Also, the market investigation showed that an adequate sales force is necessary to market the hybrids in each individual Member State. Therefore, the purchaser either needs to have a sales force in place in Spain and Hungary, respectively, or the possibility and intention of establishing such a sales force in a short time.
- (431) Given that a financial buyer, or, more generally, a company lacking the above-mentioned assets and expertise, would not be able to run the divestment business in a viable and competitive manner, it is concluded that the identified purchaser requirements (namely that the purchaser must be a seed company with sufficient breeding capabilities and activities and with a sales force in Spain and/or Hungary, respectively, or the possibility of establishing it in a short time) are adequate and necessary and address the lack of a stand-alone nature of the divestment business.

3.3. Viability in the short, medium and long term of the divestment business

- (432) Given the very long (normally from seven to twelve years) breeding cycles in the sunflower seed industry, the improved remedy package also aims to ensure the short, medium and long-term viability of the divestment business.
- (433) In the short term (that is to say, within the next two to four years), the acquirer can preserve Monsanto's former commercial business in Spain and Hungary, as the

⁴³⁹ Paragraph 12(d) of the Commitments.

Notifying Party offers to divest all Monsanto hybrids sold in 2009 and 2010 in both Member States. As all of the Spanish and Hungarian Offered Hybrids are already fully developed and registered, there are no further development costs associated with the commercialisation of those hybrids and the purchaser can exploit them from day one after the acquisition.

- (434) The medium-term viability of the divestment business (that is to say, within the next two to eight years) is also ensured, as the purchaser can test and register the Target Business' hybrids in the pipeline (to the extent that they exist) and, more importantly, cross the existing parental lines (which are either registered or in the registration process in Spain and Hungary or which are under development) among themselves or with its own (or in-licensed) parental lines to create the next generation of (co-)hybrids. Given that the development of the parental lines takes at least half of the length of the entire breeding cycle, the already developed parental lines can be regarded as "semi-finished products" which ensure that the purchaser can market new hybrids in the foreseeable future.
- (435) Finally, in the long term (seven years or more), the purchaser will be able to incorporate the Offered Parental Lines into its own breeding program, as it will be able to develop new parental lines from the divested varieties in combination with any other plant material it has access to. Those new parental lines will be owned by the purchaser, can be protected and registered and the resulting hybrids can be commercialised in the Union and beyond in Ukraine and Russia or in Turkey (depending on the origin of the Offered Parental Lines). The possibility to develop new generations of parental lines which can be the basis of new hybrids ensures that the divestment business is run on a sustainable manner in the long term.

3.4. Viability of the divestment business in the light of the geographic limitations included in the improved remedy package

- (436) As indicated already in previous sections of this Decision, breeding efforts are not exclusively targeted at national markets but rather aim to address the particularities of the agro-climatic conditions of the regions in which the seeds will be planted and/or at developing specific desirable characteristics/traits such as oleic content, pest resistance, and herbicide tolerance.⁴⁴⁰ While the importance of segments and diseases vary (sometimes significantly) from one Member State to the other, most of the segments and diseases are present throughout the Union⁴⁴¹. In particular, during the market investigation, the vast majority of seed companies indicated that they do not focus their breeding efforts on any particular Member State but on a broader scale.⁴⁴² While their respective strength often varies depending on the given segment and disease, most of them focus their breeding efforts on several segments and diseases which allow them to cover the entire territory of the Union.
- (437) Given the particular feature of the sunflower seed industry that the research and development activities focus generally on a European-wide scale (including, notably,

⁴⁴⁰ Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, questions 13, 22, 25, 57, 59 and 60 and Article 11 letters of the Commission to seed competitors of 22 July 2010, questions 11, 12, 36 and 37.

⁴⁴¹ As explained in recital 113 of this decision.

⁴⁴² Responses to Article 11 letters of the Commission to seed competitors of 29 April 2010, questions 57, 59, 60.

the product development for the sunflower growing part of the Union and for other very significant sunflower growing countries, such as Turkey, Russia and Ukraine), while the exploitation of the resulting hybrids remains national in scope, the purchaser needs to have rights to exploit the resulting hybrids which are wide enough to compensate proportionally the development risks and resources involved, in particular with regard to the necessary breeding activities. Therefore, the improved remedy package needs to be carefully tailored to focus on the markets where competition concerns are identified while maintaining the long-term viability of the divested business. In order to ensure that the purchaser maintains the incentive to run the divested business in a sustainable manner, depending on the associated risks and costs of the offered products and their use, the improved remedy package provides the purchaser with diverse commercialisation rights with a different geographic scope. As outlined below in detail, the higher the risks and costs are, proportionally, the wider the geographic exploitation scope of a given right is.

3.4.1. The Spanish and Hungarian Offered Hybrids

(438) As described above, the purchaser would obtain the right to commercialise the Spanish Offered Hybrids exclusively in Spain and the Hungarian Offered Hybrids exclusively in Hungary. Given that the Spanish and Hungarian Offered Hybrids are already completely developed products, the purchaser would not need to engage in further costly breeding, testing and registration and could continue marketing them in the relevant national market immediately after the acquisition. Those costs are also not particularly significant with regard to hybrids currently under the official registration process in Hungary (or even in Spain). Therefore, the restriction that the Spanish and Hungarian Offered Hybrids can only be marketed, respectively, in each of the two Member States where competition concerns are identified, namely on the markets for commercialisation sunflower seed in Spain and Hungary, does not put into question the viability of the remedy.

3.4.2. The Offered Parental Lines

(439) With respect to the Offered Parental Lines, the scope of the different rights to commercialise varies. While the hybrids resulting from crossing the Offered Parental Lines among themselves can be commercialised by the purchaser only in Hungary or Spain, respectively, the co-hybrids resulting from crossing the Offered Parental Lines with the purchaser own parental lines (or those of a third party) can be commercialised in the entire Union.

(440) As already outlined above, the development of the parental lines takes at least half of the duration of the entire breeding cycle. Therefore the already developed parental lines are "semi-finished" products. The creation of hybrids based on the developed parental lines, however, requires further crossings, testing, adaptation, registration, etc. With respect to the crossing of the Offered Parental Lines among themselves, the transfer of know-how and the extensive breeding documentation accompanying each of the Offered Parental Lines will guide the purchaser. Therefore it can be expected that their exploitation will require substantially less development efforts than the combination of the Offered Parental Lines with the purchaser's own parental lines (or those of a third party). As many respondents point out, the compatibility of the Offered Parental Lines with the parental lines at the disposal of the purchaser is impossible to predict in advance. Therefore, their exploitation will require a substantially lengthier process of trial and error.

- (441) Those differences justify the restriction of marketing of the hybrids resulting from crossing the Offered Parental Lines among themselves to the territory of Spain and/or Hungary and the extension of the commercialisation rights beyond the territory of those Member States when it comes to co-hybrids based on one of the Offered Parental Lines and one of the purchaser's own parental lines (or with the parental line of a third party). Indeed, as the market test also underlines, for the purchaser to retain the incentive to engage in the development of new co-hybrids, it needs to be able to market the products in a wider geographic territory comprising the whole territory of the Union.
- (442) Finally, the extension of the possibility to grant licenses for co-hybrids to the entire Union is necessary to resolve the competition concerns identified in the upstream market for the trading of varieties, the geographic scope of which, as explained above, is Union-wide.

3.4.3. The new parental lines

- (443) Whereas it usually takes 3 to 4 years for new hybrids developed from already existing parental lines to reach the commercialisation stage, the creation of new hybrids from newly developed parental lines is a lengthier process (generally 7 to 12 years) involving substantial risks and resources. Therefore, the purchaser needs to be able to commercialise (or license) the hybrids originating from new parental lines in a geographic territory which is wide enough to compensate those development risks and costs. To offset the risks and required resources, the Notifying Party offered, in its second remedy package, to allow the resulting (co-)hybrids to be commercialised in the entire Union.
- (444) As already indicated above, in this respect, during the market test of the second remedy package, competitors consistently indicated that even breeding for the entire Union, which in practice means the possibility of marketing the resulting hybrids in the main sunflower growing Member States, would not compensate for the lengthy and costly breeding process and that, therefore, the purchaser should be able to commercialise the hybrids (at least those resulting from the new parental lines) not only in the Union but also in the other major sunflower production countries, namely Russia, Ukraine and Turkey. The general view, as summarised by one of the competitors, was that "The geographic limitations upon the purchaser would leave it in a difficult position in attempting to effectively compete against Syngenta [...]".⁴⁴³
- (445) Almost all seed companies share that view. As Advanta indicated "ADVANTA SEEDS believes that the proposed remedies, which contain the possibility for the purchaser to develop lines in Spain and Hungary, fail to take into consideration the regional aspect of the sunflower seed business and that any purported deal which would fail to include other European territories outside EU-27, such as Russia, Ukraine and Turkey for instance, would be insufficient in scope to prove really attractive. Although the genetic material needs to be adapted to the particular conditions of national markets, there is a regional dimension to the adequate running of a breeding program."⁴⁴⁴

⁴⁴³ One of the competitors' response to question 8 of the Article 11 letter of the Commission to competitors of 3 September 2010.

⁴⁴⁴ Advanta's response to the Article 11 letter of the Commission to competitors of 3 September 2010.

- (446) Another company claimed that "most importantly for a multinational breed, introducing Monsanto germplasm into a breeding program which would be restricted to the EU only will be difficult to manage in the long run. For example, if one of the inbreds becomes a significant contributor to the purchaser's germplasm base, its value would be limited as it could not be used in the combinations in other parts of the world – specifically Ukraine, Russia, Turkey, etc. which are significant markets. Eventually any existing breeder targeting these large markets would need to maintain a segmented (inefficient) breeding program so that the Monsanto germplasm does not become embedded into the overall program."⁴⁴⁵
- (447) Limagrain also submitted a similar view: "[...] the restriction attached to the use of the genetic material (inbred, parental lines and commercial hybrid) are significant and prevent broad utilization of the genetic material on large scale. Indeed, and in order to amortize the expenses of creating a new variety, the company need to use as much as possible the variety and the inbred line which are constituting it. The acquiring company would need to sell the varieties on other significant market. There is a broad range of variety common to numerous market in EU 27 or greater Europe including Russia, Ukraine or Turkey.⁴⁴⁶ [...] Economically, it solely makes sense if the varieties can be sell on other market within the EU or outside the EU."⁴⁴⁷
- (448) Indeed, the market investigation revealed substantial evidence that, to a large extent, the same parental lines are used for the Union and for Russia, Ukraine and Turkey. Competitors consistently indicated during the market investigation that the parental lines relevant for the creation of (co-)hybrids commercialised in the Union (in particular for Spain, Hungary, France, Romania and Bulgaria) are the same as or, to a large extent similar to, the ones commercialised in Turkey, Ukraine and Russia.⁴⁴⁸
- (449) The Notifying Party also consistently supports that view in the Form CO and in its later submissions. As it explains: "[...] parental lines are not developed for a specific country and breeding of parental lines is usually not country specific. [...] Only once a stable parental line has been developed (without being targeted at a specific country) this line and the resulting co-hybrids created out of this line are tested in different agro-climatic conditions [...] the lines that can be used to develop hybrids for commercialisation in Turkey, Ukraine or Russia can usually also be used to develop hybrids for commercialisation in an Member State."⁴⁴⁹
- (450) More specifically, it appears that the agro-climatic conditions of Spain and Turkey are similar. Moreover, the agro-climatic conditions of Hungary show similarities to those of the sunflower growing areas of Ukraine and Russia.

⁴⁴⁵ One of the competitors' response to question 8 of the Article 11 letter of the Commission to competitors of 3 September 2010.

⁴⁴⁶ Limagrain's response to question 2 of the Article 11 letter of the Commission to competitors of 3 September 2010.

⁴⁴⁷ Limagrain's response to question 25 of the Article 11 letter of the Commission to competitors of 3 September 2010.

⁴⁴⁸ Responses to question 11 of Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010.

⁴⁴⁹ Response of the Notifying Party to question 36 of Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010.

- (451) In Spain and Turkey, the climate is Mediterranean, the soil is red, the drought stress is severe or very severe and sclerotinia and phomopsis infection is low, whereas Orobancha F is a major issue. Whilst Downy Mildew is not really present in Spain (except for one area), it is, however, an important issue in Turkey.⁴⁵⁰
- (452) In Hungary and in the sunflower growing areas of Ukraine and Russia, the climate is continental, the soil is black (and also sandy in Hungary), the drought stress is medium or severe and sclerotinia, phomopsis and Downy Mildew are the main pests. Race E of the Orobancha is present in Russia and Ukraine and also occurs in Hungary. It should, however, be noted that the heat stress is higher and the winter is longer in the concerned parts of Russia and Ukraine.⁴⁵¹
- (453) As the Notifying Party explains, "[w]ith respect to Spain it may be stated that once a line is developed that is Orobancha F resistant then this line is usually good for developing hybrids for commercialisation in Spain. However, [...] the lines can sometimes also be used to create hybrids that can be commercialised in other countries, such as Turkey and the Black Sea region which have agro-climatic conditions similar to Spain. Accordingly, Syngenta usually breeds for Spain, Turkey and the Black Sea area."⁴⁵²
- (454) The Notifying Party takes a similar view with respect to the parental lines used in Hungary, Ukraine and Russia: "Lines that are relevant for the creation of (co-)hybrids commercialized in Hungary are mainly similar to the lines that are relevant for the creation of (co-)hybrids commercialised in Russia, Ukraine and – to some extent – France."⁴⁵³
- (455) The same conclusion can be drawn when examining the parental lines included in the improved remedy package. As Table 27 shows, Hungary's relevant parental lines of the improved remedy package are systematically used in Ukraine and/or Russia, whereas Spain's relevant parental lines are, without exception, used in Turkey, but not in Russia and Ukraine.

⁴⁵⁰ Notifying Party's response to Article 11 letter of the Commission of 10 September 2010, question 1 and Target Business' response to Article 11 letter of the Commission of 13 September 2010, question 1.

⁴⁵¹ Notifying Party's response to Article 11 letter of the Commission of 10 September 2010, question 1 and Target Business' response to Article 11 letter of the Commission of 13 September 2010 question 1.

⁴⁵² Notifying Party's answer to question 36 of Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010.

⁴⁵³ Notifying Party's response to Article 11 letter of the Commission to sunflower seed competitors of 22 July 2010.

Table 27: Parental Lines of the Target Business mainly used in Hungary and Spain and their use in Russia, Ukraine and Turkey

Code	Type	SP	HU	UA	RU	TK
[...]*	Female		x	x	x	
[...]*	Female		x	x	x	
[...]*	Female	x				x
[...]*	Female	x				x
[...]*	Public Female	x				x
[...]*	Female	x	x			x
[...]*	Female		x	x		
[...]*	Co Male		x	x	x	
[...]*	Male	x				x
[...]*	Male		x	x	x	
[...]*	Male	x				x
[...]*	Male	x				x
[...]*	Male		x	x		

Source: Notifying Party's answer to question 5 of the Article 11 request for information _ 10 September 2010, Annex 5(1).

(456) Even when examining the hybrids' sales of the parties, it appears that sales in those countries are substantial and not only a number of similar parental lines, but also hybrids, are used across Europe, including sunflower growing countries both inside and outside the Union. With respect to the Target Business, in particular, about [30-40%]*⁴⁵⁴ of its European sales in 2007 and 2008 targeted those countries.⁴⁵⁵ In the period between 2000 and 2010, [50-60%]* of Monsanto's European hybrids were sold across Europe in terms of volume, [30-40%]* only in the Union and the remaining [10-20%]* only outside the Union. Syngenta is even more active outside the Union. In 2007 [50-60%]*, in 2008 [60-70%]* and in 2009 [60-70%]* of its European⁴⁵⁶ sales targeted Ukraine, Russia and Turkey.⁴⁵⁷ With regard to the hybrids, in the period from 2002 to 2010, [80-90%]* of Syngenta's volume sales accounted for hybrids sold in Europe (including the Union and Turkey, Russia and Ukraine), [10-20%]* of its volume sales accounted for hybrids only sold in the Union, whereas only [0-5%]* of the volumes sold correspond to hybrids only sold in Europe outside the Union.⁴⁵⁸ Looking at Syngenta's sales data, there is a clear trend over time: more and more hybrids are being sold across all of Europe including Turkey, Ukraine and Russia. Those data clearly indicate that not only the same parental lines are used across Europe but also the same hybrids.

⁴⁵⁴ The data refer to the sales in the Union and the further three main sunflower growing countries: Russia, Ukraine and Turkey.

⁴⁵⁵ Target Business' response to question 3 of Article 11 letter of the Commission of 13 September 2010.

⁴⁵⁶ The data refer to the sales in the Union and the further three main sunflower growing countries: Russia, Ukraine and Turkey.

⁴⁵⁷ Notifying Party's response to Article 11 letter of the Commission of 10 September 2010, question 4. The data cover EU27 and the further three main sunflower growing countries: Russia, Ukraine and Turkey.

⁴⁵⁸ Notifying Party's response to Article 11 letter of the Commission of 15 July 2010 and Target Business' response to Article 11 letter of the Commission of 15 July 2010.

- (457) In particular, the Target Business sells a large amount of the Hungarian in Ukraine and Russia, but not in Turkey. Similarly, many of the Hungarian hybrids sold by Syngenta in 2007 to 2009 in Hungary were also sold in Ukraine and Russia, but not in Turkey.⁴⁵⁹ Moreover, in the same period a link can be observed with respect to Turkish hybrids sold in Spain.⁴⁶⁰
- (458) Although the Notifying Party explained that "the calculation of the total development costs of one variety⁴⁶¹ and a return per investment calculation per variety is not possible"⁴⁶², there is a clear trend in the industry to try to breed hybrids which can be exploited in the widest geographic area possible including a number of countries. The internal documents of Monsanto also systematically suggest the same trend describing "multi country or pan European products" which aim to serve Eastern and Western markets.⁴⁶³ According to the internal documents "[...] the Business is increasingly focused on the development of pan-regional products. In 2008 roughly [20-30%]* of the total volume sold by the Business was generated by the top five products. In 2009, the Business is expected to generate approximately [30-40%]* of its total volume from the top five products."⁴⁶⁴
- (459) In summary, as the above outlined data and views substantiate, the extension, in the improved remedy package, of the geographic scope of the right to commercialise the (co-)hybrids resulting from new parental lines (developed through the crossing of the Spanish and/or Hungarian Offered Parental Lines with the purchaser's proprietary parental lines or with third party's lines) to Turkey (in the case of the Spanish Offered Lines) and to Russia and Ukraine (in the case of the Hungarian Offered Lines) is adequate and necessary in order to ensure the long-term viability of the divestment business and to guarantee that the purchaser will have and maintain the incentive to invest in and improve the existing germplasm base of the remedy package.
- (460) Finally, the condition attached to the possibility of commercialisation of (co-)hybrids based on the new parental lines outside the Union, namely the requirement that the identical (co-)hybrid is already commercialised in the Union, does not negatively affect the viability of the divestment business and remains a simple safeguard to ensure that the purchaser preserves the incentive to breed new parental lines for the Union markets and does not exclusively use the divestment business to breed for the emerging markets of Russia, Ukraine and Turkey, outside the Union.

⁴⁵⁹ Notifying Party's response to Article 11 letter of the Commission of 10 September 2010, annex to question 4.

⁴⁶⁰ Notifying Party's response to Article 11 letter of the Commission of 10 September 2010, annex to question 4.

⁴⁶¹ Variety in the language used by the Notifying Party means hybrid.

⁴⁶² Notifying Party's response to question 7 of the Article 11 letter of the Commission of 10 September 2010.

⁴⁶³ Monsanto's response to Article 11 letter of the Commission, quote from "Management presentation to Syngenta of 19 May 2009".

⁴⁶⁴ Monsanto's response to Article 11 letter of the Commission, quote from "Global Hybrid Sunflower Seed Business, Overview Opportunity of March 2009 (Morgan Stanley)", p. 9.

3.5. Additional points raised during the market investigation

- (461) Finally, in order to ensure that all necessary third party agreements are adequately acquired, the Notifying Party committed itself in the improved remedy package to assist the purchaser and to carry out all commercially reasonable best efforts to ensure the transfer of those agreements.⁴⁶⁵ Furthermore, with respect to the transfer of the know-how, the Notifying Party modified the text of the remedy package to make clear that the divestment business comprises all relevant know-how related notably to breeding (all breeding information, such as characteristics of lines, key traits, pedigree information, information on crosses that have already been tested, information on compatibility of Spanish Offered Parental Lines), production and commercialisation.⁴⁶⁶

3.6. Conclusions

- (462) The improved remedy package fully addresses the competition concerns identified on the Spanish and Hungarian markets for the commercialisation of sunflower seed and on the upstream market for the trading of sunflower varieties.
- (463) With respect to the Spanish and Hungarian markets for the commercialisation of sunflower seed, the improved remedy package includes all of Monsanto's commercialised hybrids in those Member States (including those discontinued since the implementation of the transaction and the IMI-tolerant hybrid phased out in 2009 by Monsanto in Hungary), the pipeline hybrids under official registration in Hungary (hybrids under official registration in Spain are in principle included as well, but no such hybrids have been identified by the Notifying Party for Spain) and the relevant parental lines (including those under registration in Spain and Hungary and the pipeline parental lines under development which targeted those Member States but are not yet under official registration). As the totality of the relevant hybrids and the relevant parental lines of the Target Business in those two Member States will be divested, the improved remedy package can be considered to remove in a clear-cut way the overlaps created by the transaction in those markets. As outlined in the above recitals, the improved remedy package is attractive to other seed companies and forms a good basis to effectively compete in those markets. In particular it is constructed in such a way that the purchaser can quickly replace Monsanto on those markets in a sustainable manner and compete with the market leader Syngenta.
- (464) Moreover, with respect to the Union market for trading of varieties, the remedy package removes the identified competition concerns. First of all, the purchaser of the divestment business under the improved remedy package – in accordance with the standard industry practice – will have the right to license both existing and newly developed parental lines to third companies throughout the Union, corresponding to the geographic scope of the market. Furthermore, the improved remedy package covers a substantial part of the Target Business' germplasm portfolio and actually exceeds the number of parental lines currently licensed by the Target Business. Therefore it will ensure that the purchaser has the necessary germplasm basis to

⁴⁶⁵ Schedule to Commitment, Paragraph 2(a)xvi in the Description of Divestment Business in Spain and Paragraph 2(a)xvi in the Description of Divestment Business in Hungary.

⁴⁶⁶ Schedule to Commitment, Paragraph 1(a)II, 1(e)I, 2(c)i, in the Description of Divestment Business in Spain and Paragraph 1(a)II, 1(e)I, 2(c)i, in the Description of Divestment Business in Hungary.

significantly engage in licensing activities. Given that the parental lines included in that package are mainly relevant for Spain and Hungary, the germplasm basis is particularly well tailored to address the foreclosure concerns with respect to those two Member States, on which the analysis of the Commission focused.

4. CONDITIONS AND OBLIGATIONS

- (465) Pursuant to the second subparagraph of Article 8(2) of the Merger Regulation, conditions and obligations may be attached to the decision of the Commission to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering the notified concentration compatible with the internal market.
- (466) The fulfilment of the measure that gives rise to the structural change of the market is a condition, whereas the implementing steps which are necessary to achieve that result are generally obligations on the parties. Where a condition is not fulfilled, the decision declaring the concentration compatible with the internal market no longer stands. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 8(6) of the Merger Regulation. The undertakings concerned may also be subject to fines and periodic penalty payments under Article 14(2) and Article 15(1) of the Merger Regulation.
- (467) In accordance with the basic distinction described in recital 466 as regards conditions and obligations, this Decision should be made conditional on full compliance by the Notifying Party with Section B (including all Schedules) of the commitments submitted on 1 September 2010 and modified on 17 September 2010. All other Sections of the commitments should be obligations within the meaning of Article 8(2) of the Merger Regulation. The full text of the commitments is attached as an Annex to this Decision and forms an integral part thereof.

5. CONCLUSION

- (468) In the light of the above, it is concluded that the commitments, as submitted on 1 September 2010 and modified on 17 September 2010, ensure that the notified concentration would not significantly impede effective competition on the Spanish and Hungarian markets for the commercialisation of sunflower seed and on the upstream market for the trading of sunflower varieties.

XI. CONCLUSION

- (469) It is accordingly concluded that the commitments as set out in the Annex to this Decision modify the notified concentration to such an extent that the serious doubts of the Commission as to the compatibility of that concentration with the internal market are removed. The operation should therefore be declared compatible with the internal market and the functioning of the EEA agreement, pursuant to Article 8(2) of the Merger Regulation and Article 57 of the EEA Agreement, subject to compliance with the commitments set out in the Annex,

HAS ADOPTED THIS DECISION:

Article 1

The notified concentration whereby the undertaking Syngenta Crop Protection AG acquires sole control of the global sunflower seed business of Monsanto Company within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004 is hereby declared compatible with the internal market and the EEA Agreement.

Article 2

Article 1 is subject to compliance with the conditions set out in Section B of the Annex.

Article 3

Syngenta Crop Protection AG shall comply with the obligations set out in Sections A and C to F of the Annex.

Article 4

This Decision is addressed to:

Syngenta Crop Protection AG
Schwarzwaldallee 215
Switzerland - 4002 Basel

Done at Brussels, 17.11.2010

For the Commission

Joaquín ALMUNIA
Vice-President

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ANNEX

[...]*

By hand and by fax: 00 32 2 296 4301
European Commission
DG Competition
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non-confidential version

**Case M.5675 – Syngenta Crop Protection AG / Sunflower Seed Business of Monsanto
Company**

COMMITMENTS TO THE EUROPEAN COMMISSION

Pursuant to Article 10(2) of Council Regulation (EC) No 139/2004 (the “**Merger Regulation**”), Syngenta Crop Protection AG (the “**Party**” or “**Syngenta CP**”) hereby provides the following Commitments (the “**Commitments**”) in order to enable the European Commission (the “**Commission**”) to declare the acquisition of Monsanto Company’s sunflower seed business by Syngenta CP compatible with the common market and the EEA Agreement by its decision pursuant to Article 8(2) of the Merger Regulation (the “**Decision**”).

The Commitments shall take effect upon the date of adoption of the Decision.

This text shall be interpreted in the light of the Decision to the extent that the Commitments are attached as conditions and obligations, in the general framework of Community law, in particular in the light of the Merger Regulation, and by reference to the Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004.

Section A. Definitions

For the purpose of the Commitments, the following terms shall have the following meaning:

Affiliated Undertakings: undertakings controlled by the Party and/or by the ultimate parents of the Party, whereby the notion of control shall be interpreted pursuant to Article 3 Merger Regulation and in the light of the Commission Consolidated Jurisdictional Notice under Council Regulation 139/2004 on the control of concentration between undertakings.

Closing: the transfer of the legal title of the Divestment Business to the Purchaser.

Divestment Business: the business or businesses as defined in Section B and the Schedule that the Party commits to divest.

Divestiture Trustee: one or more natural or legal person(s), independent from the Party, who is approved by the Commission and appointed by Syngenta CP and who has received from

Syngenta CP the exclusive Trustee Mandate to sell the Divestment Business to a Purchaser at no minimum price.

Effective Date: the date of adoption of the Decision

First Divestiture Period: the period of [...] months from the Effective Date.

Hold Separate Manager: the person appointed by Syngenta CP for the Divestment Business to manage the day-to-day business under the supervision of the Monitoring Trustee.

Monitoring Trustee: one or more natural or legal person(s), independent from the Party, who is approved by the Commission and appointed by Syngenta CP, and who has the duty to monitor Syngenta CP's compliance with the conditions and obligations attached to the Decision.

Purchaser(s): the entity/entities approved by the Commission as acquirer of the Divestment Business in accordance with the criteria set out in Section D.

Trustee(s): the Monitoring Trustee and the Divestiture Trustee.

Trustee Divestiture Period: the period of [...] months from the end of the First Divestiture Period.

Syngenta CP: Syngenta CP is incorporated under the laws of Switzerland, with its registered office at Basel and registered with the Commercial/Company Register at Kanton Basel-Stadt under number CH-270.3.011.275-4.

Section B. The Divestment Business

Commitment to divest

- [1] In order to restore effective competition, Syngenta CP commits to divest, or procure the divestiture of the Divestment Business by the end of the Trustee Divestiture period as a going concern to a purchaser and on terms of sale approved by the Commission in accordance with the procedure described in paragraph 13. To carry out the divestiture, Syngenta CP commits to find a purchaser and to enter into a final binding sale and purchase agreement for the sale of the Divestment Business within the First Divestiture Period. If Syngenta CP has not entered into such an agreement at the end of the First Divestiture Period, Syngenta CP shall grant the Divestiture Trustee an exclusive mandate to sell the Divestment Business in accordance with the procedure described in paragraph 22 in the Trustee Divestiture Period.
- [2] Syngenta CP shall be deemed to have complied with its commitment if, by the end of the Trustee Divestiture Period, Syngenta CP has entered into a final binding sale and purchase agreement, if the Commission approves the Purchaser and the terms in accordance with the procedure described in paragraph 13 and if the closing of the sale of the Divestment Business takes place within a period not exceeding 3 months after the approval of the purchaser and the terms of sale by the Commission.
- [3] In order to maintain the structural effect of the Commitments, the Party shall, for a period of ten years after the Effective Date, not acquire direct or indirect influence over the whole or part of the Divestment Business, unless the Commission has previously found that the structure of the market has changed to such an extent that the absence of influence over the Divestment Business is no longer necessary to render the proposed concentration compatible with the common market.

Structure and definition of the Divestment Business

- [4] The Divestment Business consists of certain assets and rights pertaining to various parental lines and hybrids as described in detail in the Schedule.

Section C. Related Commitments

Preservation of Viability, Marketability and Competitiveness

- [5] From the Effective Date until Closing, Syngenta CP shall preserve the economic viability, marketability and competitiveness of the Divestment Business, in accordance with good business practice, and shall minimise as far as possible any risk of loss of competitive potential of the Divestment Business. In particular Syngenta CP undertakes:

- (a) not to carry out any act upon its own authority that might have a significant adverse impact on the value, management or competitiveness of the Divestment Business or that might alter the nature and scope of activity, or the industrial or commercial strategy or the investment policy of the Divestment Business;
- (b) to make available sufficient resources for the development of the Divestment Business, on the basis and continuation of the existing business plans;

Hold-separate obligations of Party

- [6] Syngenta CP commits, from the Effective Date until Closing, to keep the Divestment Business separate from the business it is retaining.
- [7] Until Closing, Syngenta CP shall assist the Monitoring Trustee in ensuring that the Divestment Business is managed as a distinct and saleable entity separate from the business retained by the Parties. Syngenta CP shall appoint a Hold Separate Manager who shall be responsible for the management of the Divestment Business, under the supervision of the Monitoring Trustee. The Hold Separate Manager shall manage the Divestment Business independently and in the best interest of the business with a view to ensuring its continued economic viability, marketability and competitiveness and its independence from the business retained by the Parties.

Ring-fencing

- [8] Syngenta CP shall implement all necessary measures to ensure that it does not after the Effective Date obtain any business secrets, know-how, commercial information, or any other information of a confidential or proprietary nature relating to the Divestment Business. In particular, the participation of the Divestment Business in a central information technology network shall be served to the extent possible, without compromising the viability of the Divestment Business. Syngenta CP may obtain information relating to the Divestment Business which is reasonably necessary for the divestiture of the Divestment Business or whose disclosure to Syngenta CP is required by law.

Due Diligence

- [9] In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Business, Syngenta CP shall, subject to customary confidentiality assurances and dependent on the stage of the divestiture process, provide to potential purchasers sufficient information as regards the Divestment Business;

Reporting

- [10] Syngenta CP shall submit written reports in English on potential purchasers of the Divestment Business and developments in the negotiations with such potential

purchaser to the Commission and the Monitoring Trustee no later than 10 days after the end of every month following the Effective Date (or otherwise at the Commission's request).

- [11] The Party shall inform the Commission and the Monitoring Trustee on the preparation of the data room documentation and the due diligence procedure and shall submit a copy of an information memorandum to the Commission and the Monitoring Trustee before sending the memorandum out to the potential purchasers.

Section D. The Purchaser

- [12] In order to ensure the immediate restoration of effective competition, the Purchaser, in order to be approved by the Commission, must:

- (a) Be independent of and unconnected to the Party;
- (b) Have the financial resources, proven expertise and incentive to maintain and develop the Divestment Business as a viable and active competitive force in competition with the Party and the competitors;
- (c) Neither be likely to create, in the light of the information available to the Commission, prima facie competition concerns nor give rise to a risk that the implementation of the Commitments will be delayed, and must, in particular, reasonably be expected to obtain all necessary approvals from the relevant regulatory authorities for the acquisition of the Divestment Business;
- (d) Be a seed company with sufficient breeding capabilities and activities in order to successfully operate the Divestment Business and with a sales force in Spain and/or Hungary, respectively, or the possibility of establishing such a sales force in a short time (the before-mentioned criteria for the purchaser hereafter the "***Purchaser Requirements***").

- [13] The final binding sale and purchase agreement shall be conditional on the Commission's approval. When Syngenta CP has reached an agreement with a purchaser, it shall submit a fully documented and reasoned proposal, including a copy of the final agreement(s), to the Commission and the Monitoring Trustee. Syngenta CP must be able to demonstrate to the Commission that the purchaser meets the Purchaser Requirements and that the Divestment Business is being sold in a manner consistent with the Commitments. For the approval, the Commission shall verify that the purchaser fulfils the Purchaser Requirements and that the Divestment Business is sold in a manner consistent with the Commitments. The Commission may approve the sale of the Divestment Business without one or more Assets, if this does not affect the viability and competitiveness of the Divestment Business after the sale, taking account of the proposed purchaser.

Section E. Trustee

I. Appointment Procedure

- [14] Syngenta CP shall appoint a Monitoring Trustee to carry out the functions specified in the Commitments for a Monitoring Trustee. If Syngenta CP has not entered into a binding sales and purchase agreement one month before the end of the First Divestiture Period or if the Commission has rejected a purchaser proposed by Syngenta CP at that time or thereafter, Syngenta CP shall appoint a Divestiture Trustee to carry out the functions specified in the Commitments for a Divestiture Trustee. The appointment of the Divestiture Trustee shall take effect upon the commencement of the Extended Divestment Period.
- [15] The Trustee shall be independent of the Party, possess the necessary qualifications to carry out its mandate, for example as an investment bank or consultant or auditor, and shall neither have nor become exposed to a conflict of interest. The Trustee shall be remunerated by the Party in a way that does not impede the independent and effective fulfilment of its mandate. In particular, where the remuneration package of a Divestiture Trustee includes a success premium linked to the final sale value of the Divestment Business, the fee shall also be linked to a divestiture within the Trustee Divestiture Period.

Proposal by the Party

- [16] No later than one week after the Effective Date, Syngenta CP shall submit a list of one or more persons whom Syngenta CP proposes to appoint as the Monitoring Trustee to the Commission for approval. No later than one month before the end of the First Divestiture Period, Syngenta CP shall submit a list of one or more persons whom Syngenta CP proposes to appoint as Divestiture Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the proposed Trustee fulfils the requirements set out in paragraph 15 and shall include:
- (a) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Trustee to fulfil its duties under these Commitments;
 - (b) the outline of a work plan which describes how the Trustee intends to carry out its assigned tasks;
 - (c) an indication whether the proposed Trustee is to act as both Monitoring Trustee and Divestiture Trustee or whether different trustees are proposed for the two functions.

Approval or rejection by the Commission

[17] The Commission shall have the discretion to approve or reject the proposed Trustee(s) and to approve the proposed mandate subject to any modifications it deems necessary for the Trustee to fulfil its obligations. If only one name is approved, Syngenta CP shall appoint or cause to be appointed, the individual or institution concerned as Trustee, in accordance with the mandate approved by the Commission. If more than one name is approved, Syngenta CP shall be free to choose the Trustee to be appointed from among the names approved. The Trustee shall be appointed within one week of the Commission's approval, in accordance with the mandate approved by the Commission.

New proposal by the Party

[18] If all the proposed Trustees are rejected, Syngenta CP shall submit the names of at least two more individuals or institutions within one week of being informed of the rejection, in accordance with the requirements and the procedure set out in paragraphs 14 and 17.

Trustee nominated by the Commission

[19] If all further proposed Trustees are rejected by the Commission, the Commission shall nominate a Trustee, whom Syngenta CP shall appoint, or cause to be appointed, in accordance with a trustee mandate approved by the Commission.

II. Functions of the Trustee

[20] The Trustee shall assume its specified duties in order to ensure compliance with the Commitments. The Commission may, on its own initiative or at request of the Trustee or Syngenta CP, give any orders or instructions to the Trustee in order to ensure compliance with the conditions and obligations attached to the Decision.

Duties and obligations of the Monitoring Trustee

[21] The Monitoring Trustee shall:

- (i) propose in its first report to the Commission a detailed work plan describing how it intends to monitor compliance with the obligations and conditions attached to the Decision.
- (ii) oversee the on-going management of the Divestment Business with a view to ensuring its continued economic viability, marketability and competitiveness and monitor compliance by Syngenta CP with the conditions and obligations attached to the Decision. To that end the Monitoring Trustee shall:

- (a) monitor the preservation of the economic viability, marketability and competitiveness of the Divestment Business, and the keeping separate of the Divestment Business from the business retained by the Party, in accordance with paragraphs 5 and 6 of the Commitments;
- (b) supervise the management of the Divestment Business as a distinct and saleable entity, in accordance with paragraph 7 of the Commitments;
- (c) (i) in consultation with Syngenta CP, determine all necessary measures to ensure that Syngenta CP does not after the effective date obtain any business secrets, know-how, commercial information, or any other information of a confidential or proprietary nature relating to the Divestment Business' participation in a central information technology network to the extent possible, without compromising the viability of the Divestment Business, and (ii) decide whether such information may be disclosed to Syngenta CP as the disclosure is reasonably necessary to allow Syngenta CP to carry out the divestiture or as the disclosure is required by law;
- (d) monitor the splitting of assets between the Divestment Business and Syngenta CP or Affiliated Undertakings;
- (iii) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision;
- (iv) propose to Syngenta CP such measures as the Monitoring Trustee considers necessary to ensure Syngenta CP's compliance with the conditions and obligations attached to the Decision, in particular the maintenance of the full economic viability, marketability or competitiveness of the Divestment Business, the holding separate of the Divestment Business and the non-disclosure of competitively sensitive information;
- (v) review and assess potential purchasers as well as the progress of the divestiture process and verify that, dependent on the stage of the divestiture process, potential purchasers receive sufficient information relating to the Divestment Business in particular by reviewing, if available, the data room documentation, the information memorandum and the due diligence process;
- (vi) provide to the Commission, sending Syngenta CP a non-confidential copy at the same time, a written report within 15 days after the end of every month. The report shall cover the operation and management of the Divestment Business so that the Commission can assess whether the business is held in a manner consistent with the Commitments and the progress of the divestiture process as well as potential purchasers. In addition to these reports, the Monitoring Trustee shall promptly report in writing to the Commission, sending Syngenta CP a non-

confidential copy at the same time, if it concludes on reasonable grounds that Syngenta CP is failing to comply with these Commitments;

- (vii) within one week after receipt of the documented proposal referred to in paragraph 13, submit to the Commission a reasoned opinion as to the suitability and independence of the proposed purchaser and the viability of the Divestment Business after the Sale and as to whether the Divestment Business is sold in a manner consistent with the conditions and obligations attached to the Decision, in particular, if relevant, whether the Sale of the Divestment Business without one or more Assets affects the viability of the Divestment Business after the sale, taking account of the proposed purchaser.

Duties and obligations of the Divestiture Trustee

- [22] Within the Trustee Divestiture Period, the Divestiture Trustee shall sell at no minimum price the Divestment Business to a purchaser, provided that the Commission has approved both the purchaser and the final binding sale and purchaser agreement in accordance with the procedure laid down in paragraph 13. The Divestiture Trustee shall include in the sale and purchase agreement such terms and conditions as it considers appropriate for an expedient sale in the Trustee Divestiture Period. In particular, the Divestiture Trustee may include in the sale and purchase agreement such customary representations and warranties and indemnities as are reasonably required to effect the sale. The Divestiture Trustee shall protect the legitimate financial interests of Syngenta CP, subject to the Party's unconditional obligation to divest at no minimum price in the Trustee Divestiture Period.
- [23] In the Trustee Divestiture Period (or otherwise at the Commission's request), the Divestiture Trustee shall provide the Commission with a comprehensive monthly report written in English on the progress of the divestiture process. Such reports shall be submitted within 15 days after the end of every month with a simultaneous copy to the Monitoring Trustee and a non-confidential copy to the Party.

III. Duties and obligations of the Party

- [24] Syngenta CP shall provide and shall cause its advisors to provide the Trustee with all such cooperation, assistance and information as the Trustee may reasonably require to perform its tasks. The Trustee shall have full and complete access to any of Syngenta CP's or the Divestment Business' books, records, documents, management or other personnel, facilities, sites and technical information necessary for fulfilling its duties under the Commitments and Syngenta CP and the Divestment Business shall provide the Trustee upon request with copies of any document. Syngenta CP and the Divestment Business shall make available to the Trustee one or more offices on their premises and shall be available for meetings in order to provide the Trustee with all information necessary for the performance of its tasks.

- [25] Syngenta CP shall provide the Monitoring Trustee with all managerial and administrative support that it may reasonably request of the management of the Divestment Business. This shall include all administrative support functions relating to the Divestment Business which are currently carried out at headquarters level. Syngenta CP shall provide and shall cause its advisors to provide the Monitoring Trustee, on request, with the information submitted to potential purchasers, in particular give the Monitoring Trustee access to the data room documentation and all other information granted to potential purchasers in the due diligence procedure. Syngenta CP shall inform the Monitoring Trustee on possible purchasers, submit a list of potential purchasers, and keep the Monitoring Trustee informed of all developments in the divestiture process.
- [26] Syngenta CP shall grant or procure Affiliated Undertakings to grant comprehensive powers of attorney, duly executed, to the Divestiture Trustee to effect the sale, the Closing and all actions and declarations which the Divestiture Trustee considers necessary or appropriate to achieve the sale and the Closing, including the appointment of advisors to assist with the sale process. Upon request of the Divestiture Trustee, Syngenta CP shall cause the documents required for effecting the sale and the Closing to be duly executed.
- [27] Syngenta CP shall indemnify the Trustee and its employees and agents (each an **“Indemnified Party”**) and hold each Indemnified Party harmless against, and hereby agrees that an Indemnified Party shall have no liability to Syngenta CP for any liabilities arising out of the performance of the Trustee’s duties under the Commitments, except to the extent that such liabilities result from the wilful default, recklessness, gross negligence or bad faith of the Trustee, its employees, agents or advisors.
- [28] At the expense of Syngenta CP, the Trustee may appoint advisors (in particular for corporate finance or legal advice), subject to Syngenta CP’s approval (this approval not to be unreasonably withheld or delayed) if the Trustee considers the appointment of such advisors necessary or appropriate for the performance of its duties and obligations under the Mandate, provided that any fees and other expenses incurred by the Trustee are reasonable. Should Syngenta CP refuse to approve the advisors proposed by the Trustee, the Commission may approve the appointment of such advisors instead, after having heard Syngenta CP. Only the Trustee shall be entitled to issue instructions to the advisors. Paragraph 27 shall apply mutatis mutandis. In the Trustee Divestiture Period, the Divestiture Trustee may use advisors who served Syngenta CP during the Divestiture Period if the Divestiture Trustee considers this in the best interest of an expedient sale.

IV. Replacement, discharge and reappointment of the Trustee

- [29] If the Trustee ceases to perform its functions under the Commitments or for any other good cause, including the exposure of the Trustee to a conflict of interest:
 - (a) the Commission may, after hearing the Trustee, require Syngenta CP to replace the Trustee; or
 - (b) Syngenta CP, with the prior approval of the Commission, may replace the Trustee.

- [30] If the Trustee is removed according to paragraph 29, the Trustee may be required to continue in its function until a new Trustee is in place to whom the Trustee has effected a full hand over of all relevant information. The new Trustee shall be appointed in accordance with the procedure referred to in paragraphs 14-19.

- [31] Beside the removal according to paragraph 29, the Trustee shall cease to act as Trustee only after the Commission has discharged it from its duties after all the Commitments with which the Trustee has been entrusted have been implemented. However, the Commission may at any time require the reappointment of the Monitoring Trustee if it subsequently appears that the relevant remedies might not have been fully and properly implemented.

Section F. The Review Clause

- [32] The Commission may, where appropriate, in response to a request from Syngenta CP showing good cause and accompanied by a report from the Monitoring Trustee:
 - (i) Grant an extension of the time periods foreseen in the Commitments, or
 - (ii) Waive, modify or substitute, in exceptional circumstances, one or more of the undertakings in the Commitments.

Where Syngenta CP seeks an extension of a time period, it shall submit a request to the Commission no later the one month before the expiry of that period, showing good cause. Only in exceptional circumstances shall Syngenta CP be entitled to request an extension within the last month of any period.

duly authorised for and on behalf of Syngenta Crop Protection AG

(signed)	(signed)	(signed)
Ingo Brinker	Petra Linsmeier	Iris Buckenleib

Description of Divestment Business in Spain

- I. Following paragraph [4] of these Commitments, the Divestment Business in Spain comprises:
1. The divestment of all hybrids commercialised by Monsanto in 2009 and 2010 in Spain, *Transol*, *Quisol*, *Alhaja*, *Vanko*, *Garysol*, *Ultrasol* and *Coban* (in the following “Spanish Offered Hybrids”)⁴⁶⁷. In case hybrids have mistakenly not been included but have been commercialised in a material way⁴⁶⁸ by Monsanto in 2009 or 2010 in Spain these hybrids would also be included if it becomes clear within the first divestiture period (or, if relevant, within the Trustee Divestiture Period) that these should have been included. The divestment with regard to the Spanish Offered Hybrids shall include:
 - (a) the following intangible assets with respect to the Spanish Offered Hybrids:
 - i. The exclusive right to commercialise in Spain the Spanish Offered Hybrids under their registered name
 - ii. Know-how with regard to production and commercialisation of the Spanish Offered Hybrids; in this respect, Syngenta would transfer know-how with regard to the production (optimum location of production, certain sensitivities of parental lines if any, flowering dates, sowing dates, production yield, etc.) in order to allow the Purchaser of the Divestment Business to produce the Spanish Offered Hybrids with the highest probability of success. Syngenta would also orchestrate the transfer of know-how with respect to the commercialisation of the Spanish Offered Hybrids (key characteristics of hybrids, price positioning, etc.) – which currently still resides with Monsanto – to the Purchaser of the Divestment Business
 - iii. The right to produce/multiply the Spanish Offered Hybrids without territory restrictions, provided that the country of protection has a legislation complying with the UPOV convention (Act of 1991 International Convention for the Protection of new Varieties of Plants of December 2, 1961, as revised at Geneva on November 10, 1972, on October 23, 1978, and on March 19, 1991)

⁴⁶⁷ For the pedigree of the Spanish Offered Hybrids cf. **Schedule 1**.

⁴⁶⁸ “Material” in this sense is considered to be more than 50 units in any one of the years 2009 and 2010.

- iv. There are no third party rights or obligations associated with the Spanish Offered Hybrids
- (b) the following main tangible assets with respect to the Spanish Offered Hybrids:
- i. All inventory of commercial seeds targeted at Spain which Syngenta and Monsanto currently hold, or which are committed to be produced in the 2010 growing season of the Spanish Offered Hybrids, provided that such inventory is not required by Syngenta to satisfy business of the Spanish Offered Hybrids outside of Spain. In more detail, this would include approximately [...] units of *Quisol* and [...] units of *Transol* (plus approximately [...] units of *Transol* under production contracts in 2010). These are sufficient to continue the business in the ordinary course. However, please note that the exact numbers mentioned above cannot be a commitment at this moment in time, given that there are numerous unknown components such as final production 2010, final sales 2010 and write-offs. Therefore, the numbers provided are the best current estimate. For those of the Spanish Offered Hybrids that have been phased out in 2009 (i.e. *Alhaja*, *Vanko*, *Garysol*, *Ultrasol* and *Coban*), Syngenta cannot commit to any inventory transfer at this moment, however, Syngenta will investigate to what extent saleable inventory for such hybrids would still be available for transfer
- (c) ownership of the Spanish national registration of the Spanish Offered Hybrids as applicable including the right to use the variety denomination; for the avoidance of doubt, no IP rights with respect to the Spanish Offered Hybrids exist
- (d) all grower contracts for the production during the 2010 growing season of the Spanish Offered Hybrids which are targeted at the commercial business in Spain
- (e) the arrangements for the supply with the following products or services by Syngenta CP or Affiliated Undertakings with respect to the Spanish Offered Hybrids:
- i. The supply of relevant know-how associated with the production and commercialisation of the Spanish Offered Hybrids as detailed above under cipher (a) ii.
 - ii. The production of the Spanish Offered Hybrids as a transition service to the Purchaser of the Divestment Business for a period of two years (with a possibility for the Purchaser to request an extension of this period by one additional year), if the Purchaser of the Divestment Business chooses this option and if there is a minimum production at Syngenta of 3,000 units of

the respective hybrid (at present this would cover the Spanish Offered Hybrids [...]*) and [...]*)

2. The divestment of

- all elite parental lines listed in **Schedule 2** which have been transferred from Monsanto to Syngenta as part of business intellectual property and which are targeted at Spain (the “Spanish Elite Parental Lines”), i.e. used to create the hybrids commercialised in 2009 and 2010 in Spain or used to create the hybrids under official registration in Spain (“Hybrids under Registration in Spain”⁴⁶⁹).
- all pipeline parental lines relevant for Spain (the “Spanish Pipeline Parental Lines”), i.e. all fixed parental lines which have been bred with the aim to produce hybrids targeted at Spain and adapted to the agroclimatic conditions in Spain, as listed in **Schedule 4**. Hybrids resulting from the Spanish Pipeline Parental Lines have not yet reached the stage of official registration in Spain.

In case any Spanish Elite Parental Lines or any Hybrids under Registration in Spain or any Spanish Pipeline Parental Lines have mistakenly not been listed in Schedules 2, 3 and 4, respectively, these parental lines or Hybrids under Registration in Spain would also form part of the Divestment Business if it becomes clear within the first divestiture period (or, if relevant, within the Trustee Divestiture Period) that these lines or Hybrids under Registration in Spain should have been included in the schedule.

All lines together are referred to as the “Spanish Offered Parental Lines”. In more detail, the divestment includes:

- (a) the following intangible assets with respect to the Spanish Offered Parental Lines:
 - i. Ownership of national intellectual property (IP) with respect to the Spanish Offered Parental Lines for which IP protection already exists (i.e. the Spanish Elite Parental Lines). With respect to this IP, the following applies:
 - where the IP rights of the material transferred have a territory scope restricted to Spain, i.e. national PVPs, the ownership of such IP rights would be fully transferred to the Purchaser of the Divestment Business as part of the remedy package. This concerns approximately 75% of the Spanish Elite Parental Lines.
 - PVP wider than national (and national PVPs outside of Spain) would remain with Syngenta. However, with respect to IP remaining with

⁴⁶⁹ Hybrids under Registration in Spain and their pedigree are included in **Schedule 3**.

Syngenta, Syngenta would provide the Purchaser of the Divestment Business with a broad perpetual non-assert for Spain, which de facto results in the same freedom-to-operate as if ownership of IP for Spain would be transferred. Accordingly, Syngenta would provide the Purchaser of the Divestment Business with a corresponding non-assert ensuring that the Purchaser has the required freedom to operate with respect to all rights included in the remedy package. The term “non-assert” is intended to describe a perpetual contractual obligation wherein Syngenta commits itself not to enforce its respective community PVP rights against the Purchaser of the Divestment Business in Spain. Accordingly, in case the rights that are part of the remedy package described in more detail below are wider than national and refer to the entire EU, Syngenta commits itself not to enforce its respective community PVP rights against the Purchaser of the Divestment Business in the EU. In practice – just for the sake of explanation – any lawsuit would have to be dismissed by any court as soon as the “non-assert” is submitted by the Purchaser of the Divestment Business. It is a contract which is standard practice, so there is no doubt that the contractual set-up can be structured in a way that the perpetual freedom-to-operate of the Purchaser of the Divestment Business is ensured. In addition, the non-assert could not be terminated by Syngenta.

- Public lines that have been used by the Target Business are freely available to the Purchaser of the Divestment Business from the respective public institutes
- ii. Ownership of the national registration in Spain of the Spanish Offered Parental Lines
 - iii. The right to use in the entire EU the Spanish Offered Parental Lines for breeding without any limitations (in particular breeding of “New Parental Lines” (see below xi.-xiv.), analyzing of all Spanish Offered Parental Lines, genetic fingerprinting, molecular breeding incorporation of new traits, etc.)
 - iv. The right to cross the Spanish Offered Parental Lines among themselves
 - v. Commercialisation of the hybrids resulting from iv. in Spain
 - vi. Ownership of all hybrids which are derived from crosses among the Spanish Offered Parental Lines for commercialisation in Spain. This is regardless of whether or not such hybrids are already commercialised in

Spain, are in the registration process, or have not yet been applied for registration previously

- vii. The right to cross the Spanish Offered Parental Lines with proprietary germplasm of the Purchaser of the Divestment Business or material in-licensed by the Purchaser of the Divestment Business from a third party to create new co-hybrids; for the avoidance of doubt, New Parental Lines as defined in xi. below are considered to be proprietary germplasm of the Purchaser
- viii. The right to commercialise the hybrids resulting from vii. above in the entire EU
- ix. The right to license the Spanish Offered Parental Lines to third parties for the sole purpose of creating co-hybrids by crossing those licensed Spanish Offered Parental Lines with proprietary lines of such third parties and commercialisation of the resulting co-hybrids in the entire EU
- x. The right to produce/multiply the Spanish Offered Parental Lines without territory restrictions, provided that the country of protection has a legislation complying with the UPOV convention (Act of 1991 International Convention for the Protection of new Varieties of Plants of December 2, 1961, as revised at Geneva on November 10, 1972, on October 23, 1978, and on March 19, 1991). The same applies to the production of new co-hybrids derived from vii.
- xi. The right to create New Parental Lines⁴⁷⁰ from the Spanish Offered Parental Lines by means of breeding (cf. iii. above) and to cross all New Parental Lines among each other without territory restrictions
- xii. The right to cross New Parental Lines with proprietary lines of the Purchaser of the Divestment Business, material in-licensed by the Purchaser from a third party or the Spanish Offered Parental Lines to create new co-hybrids
- xiii. The right to commercialise the new (co-)hybrids resulting from xi. and xii. (in the following: “Hybrids from New Parental Lines”) in the entire EU

⁴⁷⁰

The definition of a “New Parental Line” in this context follows the industry-wide accepted UPOV principles, i.e. a line that is not at least “distinct” (acc. to Art. 7 Council Regulation (EC) No 2100/94) shall not be considered a “new line” in this context. Likewise, the principles of the treatment of “essentially derived varieties” shall be applicable (“EDV”; in accordance with Art. 13 Council Regulation (EC) No 2100/94), whereby a line which is genetically very close to the original and would be classified “essentially derived” by EDV standards shall not be regarded as a “new line” in this context, either. In practice, this EDV principle avoids that companies simply “re-breed” an existing line with minimal deviation claiming that it is a new development.

- xiv. The right to commercialise the Hybrids from New Parental Lines in Turkey provided that the identical Hybrid from New Parental Lines is already commercialised in the EU
 - xv. The right to license New Parental Lines to third parties for the purpose of creating co-hybrids by crossing the licensed New Parental Line with proprietary lines of such third parties and commercialisation of the resulting Hybrids from New Parental Lines in the entire EU and in Turkey provided that the identical Hybrid from New Parental Lines is already commercialised in the EU
 - xvi. In the event that any third party agreement should be required to support the commercialisation of the Spanish Offered Hybrids, the Spanish Offered Parental Lines, the new co-(hybrids) and the Hybrids from New Parental Lines (e.g. Syngenta's Clearfield Agreement with BASF), Syngenta CP will use commercially reasonable best efforts to ensure that the Purchaser of the Divestment Business will be provided with the required third party agreements and to cause the respective third party to provide the Purchaser of the Divestment Business with such third party agreements
- (b) the following main tangible assets:
- i. Ownership of a seed bank consisting of physical stock of all Spanish Offered Parental Lines sufficient to carry out breeding in the ordinary course
- (c) the arrangements for the supply with the following products or services by Syngenta CP or Affiliated Undertakings:
- i. The supply of relevant know-how with regard to the use of the Spanish Offered Parental Lines in breeding, production, etc.; the same principles apply to the know-how related to the Spanish Offered Parental Lines as set out above in cipher I.1.(a) ii. in relation to the Spanish Offered Hybrids; in addition, the know-how would comprise breeding information such as characteristics of lines, key traits, pedigree information, information on crosses that have already been tested, information on compatibility of Spanish Offered Parental Lines .
 - ii. The Purchaser of the Divestment Business shall have the option at its sole discretion to require from Syngenta CP certain transition services, particularly including services such as breeding support, for a limited period of time not exceeding two years, in so far as these services are necessary for the Purchaser to operate the Divestment Business.

II. The Divestment Business in Spain shall not include:

Any rights and assets that are not explicitly included according to cipher I. above. In particular, the following is excluded:

- (d) Any rights to use any Syngenta brands/trademarks such as, for instance, the brands “Syngenta”, “Koipesol” or “NK”; any rights to use the variety denominations of the Spanish Offered Hybrids outside of Spain
- (e) The right to commercialise outside of Spain the Spanish Offered Hybrids or any product arising from the crossing of the Spanish Offered Parental Lines among themselves
- (f) Any and all rights outside of the EU except the rights with respect to Turkey mentioned in cipher I.2(a).xiv. and xv.
- (g) Any other assets and know-how than the ones listed under cipher I., in particular the following: breeding assets, production assets, commercial assets, personnel, tools and datasets for genetic mapping and tracking and IT programs and systems
- (h) The right to produce the Spanish Offered Hybrids or new co-hybrids or the Spanish Offered Parental Lines in countries that do not have a legislation complying with the UPOV convention (Act of 1991 International Convention for the Protection of new Varieties of Plants of December 2, 1961, as revised at Geneva on November 10, 1972, on October 23, 1978, and on March 19, 1991)
- (i) A waiver of Syngenta of the rights to use, to license, to breed with, to cross and to commercialise the Spanish Offered Parental Lines, with the exception of:
 - Commercialisation of the Spanish Offered Hybrids in Spain and
 - Commercialisation in Spain of hybrids resulting from crossing the Spanish Offered Parental Lines amongst themselves

For the avoidance of doubt, rights retained by Syngenta would include, without limitation, the right to:

- (1) breeding to create new material, and subsequent creation of parental lines and hybrids and their commercialisation,
- (2) crossing of the Spanish Offered Parental Lines amongst themselves,
- (3) crossing of the Spanish Offered Parental Lines with Syngenta’s proprietary germplasm or any third party material to create new (co-)hybrids,
- (4) commercialisation of the hybrids resulting from (2) globally except in Spain,
- (5) commercialisation of the hybrids resulting from (3) globally, and
- (6) licensing of the Spanish Offered Parental Lines to third parties for the purpose of creating co-hybrids by crossing the licensed Spanish Offered Parental Line

with any third party material and commercialisation of the resulting co-hybrids globally.

Description of Divestment Business in Hungary

I. Following paragraph [4] of these Commitments, the Divestment Business in Hungary comprises:

1. The divestment of all hybrids commercialised by Monsanto in 2009 and 2010 in Hungary, *Pikasol*, *Prodisol*, *Rumbasol*, *Floyd*, *Sambasol*, *Aurasol*, *Ultrasol* and *DKF3333* as well as *Flexisol CL* (in the following “Hungarian Offered Hybrids”)⁴⁷¹. In case hybrids have mistakenly not been included but have been commercialised in a material way⁴⁷² by Monsanto in 2009 or 2010 in Hungary these hybrids would also be included if it becomes clear within the first divestiture period (or, if relevant, within the Trustee Divestiture Period) that these should have been included. The divestment with regard to the Hungarian Offered Hybrids shall include:

- (a) the following intangible assets with respect to the Hungarian Offered Hybrids:
 - i. The exclusive right to commercialise in Hungary the Hungarian Offered Hybrids under their registered name
 - ii. Know-how with regard to production and commercialisation of the Hungarian Offered Hybrids; in this respect, Syngenta would transfer know-how with regard to the production (optimum location of production, certain sensitivities of parental lines if any, flowering dates, sowing dates, production yield, etc.) in order to allow the Purchaser of the Divestment Business to produce the Hungarian Offered Hybrids with the highest probability of success. Syngenta would also orchestrate the transfer of know-how with respect to the commercialisation of the Hungarian Offered Hybrids (key characteristics of hybrids, price positioning, etc.) to the Purchaser of the Divestment Business
 - iii. The right to produce/multiply the Hungarian Offered Hybrids without territory restrictions, provided that the country of protection has a legislation complying with the UPOV convention (Act of 1991 International Convention for the Protection of new Varieties of Plants of December 2, 1961, as revised at Geneva on November 10, 1972, on October 23, 1978, and on March 19, 1991)

⁴⁷¹ For the pedigree of the Hungarian Offered Hybrids cf. **Schedule 5**.

⁴⁷² “Material” in this sense is considered to be more than 50 units in any one of the years 2009 and 2010.

- iv. There are no third party rights or obligations associated with the Hungarian Offered Hybrids
- (b) the following main tangible assets with respect to the Hungarian Offered Hybrids:
- i. All inventory of commercial seeds targeted at Hungary which Syngenta currently holds, or which are committed to be produced in the 2010 growing season of the Hungarian Offered Hybrids, provided that such inventory is not required by Syngenta to satisfy business of the Hungarian Offered Hybrids outside of Hungary. In more detail, this would include approximately [...] units of *Rumbasol*, [...] units of *Prodisol* and [...] units of *Pikasol*. These are sufficient to continue the business in the ordinary course. However, please note that the exact numbers mentioned above cannot be a commitment at this moment in time, given that there are numerous unknown components such as final production 2010, final sales 2010 and write-offs. Therefore, the numbers provided are the best current estimate. For those of the Hungarian Offered Hybrids that have been phased out in 2009 (*Floyd*, *Sambasol*, *Aurasol*, *Ultrasol*, *DKF3333* and *Flexisol CL*), Syngenta cannot commit to any inventory transfer at this moment, however, Syngenta will investigate to what extent saleable inventory would still be available for transfer
- (c) ownership of the Hungarian national registration of the Hungarian Offered Hybrids as applicable including the right to use the variety denomination; for the avoidance of doubt, no IP rights with respect to the Hungarian Offered Hybrids exist
- (d) all grower contracts for the production during the 2010 growing season of the Hungarian Offered Hybrids which are targeted at the commercial business in Hungary
- (e) the arrangements for the supply with the following products or services by Syngenta CP or Affiliated Undertakings with respect to the Hungarian Offered Hybrids:
- i. The supply of relevant know-how associated with the production and commercialisation of the Hungarian Offered Hybrids as detailed above under cipher (a) ii.
 - ii. The production of the Hungarian Offered Hybrids as a transition service to the Purchaser of the Divestment Business for a period of two years (with a possibility for the Purchaser to request an extension of this period by one additional year), if the Purchaser of the Divestment Business chooses this

option and if there is a minimum production at Syngenta of 3,000 units of the respective hybrid (at present this would cover the Hungarian Offered Hybrids [...] and [...])

2. The divestment of

- all elite parental lines listed in **Schedule 6** which have been transferred from Monsanto to Syngenta as part of business intellectual property and which are targeted at Hungary (the “Hungarian Elite Parental Lines”), i.e. used to create the hybrids commercialised in 2009 and 2010 in Hungary or used to create the hybrids under official registration in Hungary (“Hybrids under Registration in Hungary”⁴⁷³).
- all pipeline parental lines relevant for Hungary (the “Hungarian Pipeline Parental Lines”), i.e. all fixed parental lines which have been bred with the aim to produce hybrids targeted at Hungary and adapted to the agroclimatic conditions in Hungary, as listed in **Schedule 8**. Hybrids resulting from the Hungarian Pipeline Parental Lines have not yet reached the stage of official registration in Hungary.

In case any Hungarian Elite Parental Lines or any Hybrids under Registration in Hungary or any Hungarian Pipeline Parental Lines have mistakenly not been listed in Schedules 6, 7 and 8, respectively, these parental lines or Hybrids under Registration in Hungary would also form part of the Divestment Business if it becomes clear within the first divestiture period (or, if relevant, within the Trustee Divestiture Period) that these lines or Hybrids under Registration in Hungary should have been included in the schedule.

All lines together are referred to as the “Hungarian Offered Parental Lines”. In more detail, the divestment includes:

- (a) the following intangible assets with respect to the Hungarian Offered Parental Lines:
 - i. Ownership of national intellectual property (IP) with respect to the Hungarian Offered Parental Lines for which IP protection already exists (i.e. the Hungarian Elite Parental Lines). With respect to this IP, the following applies:
 - where the IP rights of the material transferred have a territory scope restricted to Hungary, i.e. national PVPs, the ownership of such IP rights would be fully transferred to the Purchaser of the Divestment Business as part of the remedy package.

⁴⁷³ Hybrids under Registration in Hungary and their pedigree are included in **Schedule 7**.

- PVP wider than national (and national PVPs outside of Hungary) would remain with Syngenta. However, with respect to IP remaining with Syngenta, Syngenta would provide the Purchaser of the Divestment Business with a broad perpetual non-assert for Hungary, which de facto results in the same freedom-to-operate as if ownership of IP for Hungary would be transferred. Accordingly, Syngenta would provide the Purchaser of the Divestment Business with a corresponding non-assert ensuring that the Purchaser has the required freedom to operate with respect to all rights included in the remedy package. The term “non-assert” is intended to describe a perpetual contractual obligation wherein Syngenta commits itself not to enforce its respective community PVP rights against the Purchaser of the Divestment Business in Hungary. Accordingly, in case the rights that are part of the remedy package described in more detail below are wider than national and refer to the entire EU, Syngenta commits itself not to enforce its respective community PVP rights against the Purchaser of the Divestment Business in the EU. In practice – just for the sake of explanation – any lawsuit would have to be dismissed by any court as soon as the “non-assert” is submitted by the Purchaser of the Divestment Business. It is a contract which is standard practice, so there is no doubt that the contractual set-up can be structured in a way that the perpetual freedom-to-operate of the Purchaser of the Divestment Business is ensured. In addition, the non-assert could not be terminated by Syngenta.
 - Public lines that have been used by the Target Business are freely available to the Purchaser of the Divestment Business from the respective public institutes
- ii. Ownership of the national registration in Hungary of the Hungarian Offered Parental Lines
 - iii. The right to use in the entire EU the Hungarian Offered Parental Lines for breeding without any limitations (in particular breeding of “New Parental Lines” (see below xi.-xiv), analyzing of all Hungarian Offered Parental Lines, genetic fingerprinting, molecular breeding incorporation of new traits, etc.)
 - iv. The right to cross the Hungarian Offered Parental Lines among themselves
 - v. Commercialisation of the hybrids resulting from iv. in Hungary
 - vi. Ownership of all hybrids which are derived from crosses amongst the Hungarian Offered Parental Lines for commercialisation in Hungary. This

is regardless of whether or not such hybrids are already commercialised in Hungary, are in the registration process, or have not yet been applied for registration previously

- vii. The right to cross the Hungarian Offered Parental Lines with proprietary germplasm of the Purchaser of the Divestment Business or material in-licensed by the Purchaser of the Divestment Business from a third party to create new co-hybrids; for the avoidance of doubt, New Parental Lines as defined in xi. below are considered to be proprietary germplasm of the Purchaser
- viii. The right to commercialise the hybrids resulting from vii. above in the entire EU
- ix. The right to license the Hungarian Offered Parental Lines to third parties for the sole purpose of creating co-hybrids by crossing those licensed Hungarian Offered Parental Lines with proprietary lines of such third parties and commercialisation of the resulting co-hybrids in the entire EU
- x. The right to produce/multiply the Hungarian Offered Parental Lines without territory restrictions, provided that the country of protection has a legislation complying with the UPOV convention (Act of 1991 International Convention for the Protection of new Varieties of Plants of December 2, 1961, as revised at Geneva on November 10, 1972, on October 23, 1978, and on March 19, 1991). The same applies to the production of new co-hybrids derived from vii.
- xi. The right to create New Parental Lines⁴⁷⁴ from the Hungarian Offered Parental Lines by means of breeding (cf. iii. above) and to cross all New Parental Lines among each other without territory restrictions
- xii. The right to cross these New Parental Lines with proprietary lines of the Purchaser of the Divestment Business, material in-licensed by the Purchaser from a third party or the Hungarian Offered Parental Lines to create new co-hybrids

⁴⁷⁴

The definition of a “New Parental Line” in this context follows the industry-wide accepted UPOV principles, i.e. a line that is not at least “distinct” (acc. to Art. 7 Council Regulation (EC) No 2100/94) shall not be considered a “new line” in this context. Likewise, the principles of the treatment of “essentially derived varieties” shall be applicable (“EDV”; in accordance with Art. 13 Council Regulation (EC) No 2100/94), whereby a line which is genetically very close to the original and would be classified “essentially derived” by EDV standards shall not be regarded as a “new line” in this context, either. In practice, this EDV principle avoids that companies simply “re-breed” an existing line with minimal deviation claiming that it is a new development.

- xiii. The right to commercialise the new (co-)hybrids resulting from xi. and xii. (in the following: “Hybrids from New Parental Lines”) in the entire EU
 - xiv. The right to commercialise the Hybrids from New Parental Lines in Russia and Ukraine provided that the identical Hybrid from New Parental Lines is already commercialised in the EU
 - xv. The right to license New Parental Lines to third parties for the purpose of creating co-hybrids by crossing the licensed New Parental Line with proprietary lines of such third parties and commercialisation of the resulting Hybrids from New Parental Lines in the entire EU and in Russia and Ukraine provided that the identical Hybrid from New Parental Lines is already commercialised in the EU
 - xvi. In the event that any third party agreement should be required to support the commercialisation of the Hungarian Offered Hybrids, the Hungarian Offered Parental Lines, the new co-(hybrids) and the Hybrids from New Parental Lines (e.g. Syngenta’s Clearfield Agreement with BASF), Syngenta CP will use commercially reasonable best efforts to ensure that the Purchaser of the Divestment Business will be provided with the required third party agreements and to cause the respective third party to provide the Purchaser of the Divestment Business with such third party agreements
- (b) the following main tangible assets:
- i. Ownership of a seed bank consisting of physical stock of all Hungarian Offered Parental Lines sufficient to carry out breeding in the ordinary course
- (c) the arrangements for the supply with the following products or services by Syngenta CP or Affiliated Undertakings:
- i. The supply of relevant know-how with regard to the use of the Hungarian Offered Parental Lines in breeding, production, etc.; the same principles apply to the know-how related to the Hungarian Offered Parental Lines as set out above in cipher (a) ii. in relation to the Hungarian Offered Hybrids; in addition, the know-how would comprise characteristics of lines, key traits, information on crosses that have already been tested, information on compatibility of Hungary Offered Parental Lines.
 - ii. The Purchaser of the Divestment Business shall have the option at its sole discretion to require from Syngenta CP certain transition services, particularly including services such as breeding support, for a limited

period of time not exceeding two years, in so far as these services are necessary for the Purchaser to operate the Divestment Business.

II. The Divestment Business in Hungary shall not include:

Any rights and assets that are not explicitly included according to cipher I. above. In particular, the following is excluded:

- (d) Any rights to use any Syngenta brands/trademarks such as, for instance, the brands “Syngenta”, “Koipesol” or “NK”; any rights to use the variety denominations of the Hungarian Offered Hybrids outside of Hungary
- (e) The right to commercialise outside of Hungary the Hungarian Offered Hybrids or any product arising from the crossing of the Hungarian Offered Parental Lines among themselves
- (f) Any and all rights outside of the EU except the rights with respect to Russia and Ukraine mentioned in cipher I.2.(a)xiv. and xv.
- (g) Any other assets and know-how than the ones listed under cipher I., in particular the following: breeding assets, production assets, commercial assets, personnel, tools and datasets for genetic mapping and tracking and IT programs and systems
- (h) The right for production of the Hungarian Offered Hybrids or of new co-hybrids or of the Hungarian Offered Parental Lines in countries that do not have a legislation complying with the UPOV convention (Act of 1991 International Convention for the Protection of new Varieties of Plants of December 2, 1961, as revised at Geneva on November 10, 1972, on October 23, 1978, and on March 19, 1991)
- (i) A waiver of Syngenta of the rights to use, to license, to breed with, to cross and to commercialise the Hungarian Offered Parental Lines, with the exception of:
 - Commercialisation of the Hungarian Offered Hybrids in Hungary and
 - Commercialisation in Hungary of hybrids resulting from crossing the Hungarian Offered Parental Lines amongst themselves

For the avoidance of doubt, rights retained by Syngenta would include, without limitation, the right to:

- (1) breeding to create new material, and subsequent creation of parental lines and hybrids and their commercialisation,
- (2) crossing of the Hungarian Offered Parental Lines amongst themselves,
- (3) crossing of the Hungarian Offered Parental Lines with Syngenta’s proprietary germplasm or any third party material to create new (co-)hybrids,

- (4) commercialisation of the hybrids resulting from (2) globally except in Hungary,
- (5) commercialisation of the hybrids resulting from (3) globally, and
- (6) licensing of the Hungarian Offered Parental Lines to third parties for the purpose of creating co-hybrids by crossing the licensed Hungarian Offered Parental Line with any third party material and commercialisation of the resulting co-hybrids globally.

Schedule 1

Pedigree of the Spanish Offered Hybrids

country	code	name	female	male
SP	AK8312	COBAN	[...]*	[...]*
SP	MH5121	QUISOL	[...]*	[...]*
SP	MH5222	TRANSOL	[...]*	[...]*
SP	SC529	COBAN	[...]*	[...]*
SP	SC843	VANKO	[...]*	[...]*
SP	MH3121	GARYSOL	[...]*	[...]*
SP	MH5308	ULTRASOL	[...]*	[...]*

 Public line

Schedule 2

Spanish Elite Parental Lines

Country	Line	Year	Gender	Oil Composition	Mildew profile	Broomrape Resistance (specify Race)	IMI	Maturity	Commercial Development with respect to Offered Hybrids
SP	[...]*	[...]*	Female	linoleic	Susc.	Susc.	Susc.	Mid late	
SP	[...]*	[...]*	Female	linoleic	Susc.	Resist.E	Susc.	Mid early	[Offered hybrid 1]
SP	[...]*	[...]*	Female	oleic	Susc.	Susc.	Susc.	Mid late	
SP	[...]*	[...]*	Female	linoleic	Susc.	Susc.	Susc.	Mid early	[Offered hybrid 2]
SP	[...]*	[...]*	Male	linoleic	M1	Susc.	Susc.	Early	
SP	[...]*	[...]*	Female	linoleic	Susc.	Susc.	Susc.	Early	[Offered hybrid 3], [Offered hybrid 4]
SP	[...]*	[...]*	Male	linoleic	M1	Susc.	Susc.	Mid early	
SP	[...]*	[...]*	Male	linoleic	M1	Resist.E	Susc.	Mid early	[Offered hybrid 5]
SP	[...]*	[...]*	Male	linoleic	M4	Resist.E	Susc.	Mid early	
SP	[...]*	[...]*	Male	linoleic	M1	Resist.E	Susc.	Mid early	
SP	[...]*	[...]*	Male	oleic	M1	Resist.E	Susc.	Mid early	
SP	[...]*	[...]*	MALE	linoleic	M1	Resist F	Susc.	Mid early	
SP	[...]*	[...]*	Male	linoleic	M1	Resist.E	Susc.	Mid early	
SP	[...]*	[...]*	Male	linoleic	M1	Resist.E	Susc.	Mid early	[Offered hybrid 4]
SP	[...]*	[...]*	Male	linoleic	M1	Resist.F	Susc.	Mid early	[Offered hybrid 1], [Offered hybrid 3]
SP	[...]*	[...]*	Male	linoleic	M1	Resist.E	Susc.	Mid early	
SP	[...]*	[...]*	Male	linoleic	M1	Resist.E	Susc.	Mid early	
SP	[...]*	[...]*	Male	linoleic	M1	Resist.E	Susc.	Mid early	[Offered hybrid 2], [Offered hybrid 6]
SP	[...]*	[...]*	Male	oleic	M4	Susc.	Susc.	Early	[Offered hybrid 7]
SP	[...]*	[...]*	Female	oleic	Susc.	Susc.	Susc.	Mid late	[Offered hybrid 7]

Offered Hybrids: ALHAJA, COBAN, GARYSOL, QUISOL, TRANSOL, ULTRASOL, VANKO

Note: Parental lines of [Offered Hybrid 5] and [Offered Hybrid 6] are public lines

Schedule 3

Spanish Hybrids under Registration and their Pedigree

There are no hybrids under official registration in Spain

Schedule 4

Spanish Pipeline Parental Lines

Line Code	Short Pedigree	Gender	Oil Composition	Broomrape Race F	Broomrape Race E	Downy Mildew	Imi resistance	Maturity	Detail Pedigree
[...]*	[...]*	Male	Linoleic	Segregation	Segregation	M4	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Susceptible	Susceptible	M4	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	Susceptible	Segregation	M4	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	Susceptible	Resistant	M4	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Susceptible	to be checked	M4	Resistente	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M4	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	Segregation	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	Segregation	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Segregation	Mid Early	[...]*
[...]*	[...]*	Male	High Oleic	to be checked	to be checked	M1	Susceptible	Early	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Susceptible	Susceptible	M1	Segregation	Late	[...]*
[...]*	[...]*	Male	High Oleic	Susceptible	to be checked	M1	Segregation	Late	[...]*
[...]*	[...]*	Male	High Oleic	Susceptible	to be checked	M1	Segregation	Late	[...]*
[...]*	[...]*	Male	Linoleic	Susceptible	to be checked	M1	Segregation	Late	[...]*
[...]*	[...]*	Male	Linoleic	Susceptible	to be checked	M1	Resistant	Late	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M4	Resistente	Late	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M4	Resistant	Late	[...]*
[...]*	[...]*	Male	Linoleic	Susceptible	Resistente	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M1	Segregation	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M1	Segregation	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M1	Segregation	Mid Early	[...]*

[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Early	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Resistant	Resistant	M1	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	to be checked	to be checked	M4	Susceptible	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Suceptible	Segregation	Late	[...]*
[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Suceptible	Segregation	Late	[...]*
[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Suceptible	Susceptible	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Suceptible	Susceptible	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Suceptible	Susceptible	Mid Late	[...]*

Note:




The expression "segregation" in the columns means that the trait was checked but is not fixed in the line yet

The expression "to be checked" in the columns means that the trait may already be inside the line but has not been checked until now

Schedule 5

Pedigree of the Hungarian Offered Hybrids

country	code	name	female	male
HU	AK7101	FLOYD	[...]*	[...]*
HU	MH0211	AURASOL	[...]*	[...]*
HU	MH1310	RUMBASOL	[...]*	[...]*
HU	MH5308	ULTRASOL	[...]*	[...]*
HU	MH5312	PIKASOL	[...]*	[...]*
HU	SC661	PRODISOL	[...]*	[...]*
HU	AK0311	SAMBASOL	[...]*	[...]*
HU	MH4316	FLEXISOL CL	[...]*	[...]*
HU	MH7318	DFK3333	[...]*	[...]*

	Syngenta line
	Public line
	Third party line

Schedule 6

Hungarian Elite Parental Lines

Country	Line	Year	Gender	Oil Composition	Mildew profile	Broomrape Resistance (specify Race)	IMI	Maturity	Commercial Development with respect to Offered Hybrids
HU	[...]*	[...]*	Female	oleic	Susc.	Susc.	Susc.	Mid late	[Offered hybrid 1], [Offered hybrid 2]
HU	[...]*	[...]*	Female	oleic	M3	Susc.	Susc.	Early	
HU	[...]*	[...]*	Female	linoleic	M3	Susc.	Susc.	Early	[Offered hybrid 3]
HU	[...]*	[...]*	Female	linoleic	M3	Susc.	Resist.	Early	
HU	[...]*	[...]*	Female	oleic	M3	Susc.	Susc.	Early	[Offered hybrid 4]
HU	[...]*	[...]*	Female	oleic	M3	Susc.	Resist.	Early	
HU	[...]*	[...]*	Female	linoleic	M3	Susc.	Susc.	Mid early	
HU	[...]*	[...]*	Female	linoleic	Susc.	Susc.	Susc.	Mid late	
HU	[...]*	[...]*	Female	linoleic	M3	Susc.	Susc.	Early	
HU	[...]*	[...]*	Female	linoleic	Susc.	Resist.E	Susc.	Mid early	[Offered hybrid 5]
HU	[...]*	[...]*	Female	linoleic	M3	Resist.E	Susc.	Mid late	
HU	[...]*	[...]*	Female	linoleic	Susc.	Susc.	Susc.	Mid early	
HU	[...]*	[...]*	Female	linoleic	Susc.	Susc.	Susc.	Mid late	
HU	[...]*	[...]*	Female	linoleic	Susc.	Susc.	Susc.	Early	
HU	[...]*	[...]*	Female	linoleic	Susc.	Susc.	Susc.	Mid early	[Offered hybrid 6]
HU	[...]*	[...]*	Female	linoleic	Susc.	Susc.	Susc.	Mid late	
HU	[...]*	[...]*	Female	linoleic	Susc.	Susc.	Resist.	Late	[Offered hybrid 7]
HU	[...]*	[...]*	Male	linoleic	M1	Susc.	Susc.	Mid late	
HU	[...]*	[...]*	Male	linoleic	M1	Susc.	Susc.	Early	[Offered hybrid 3]
HU	[...]*	[...]*	Male	linoleic	M1	Susc.	Susc.	Mid early	
HU	[...]*	[...]*	Male	linoleic	M1	Susc.	Susc.	Mid early	[Offered hybrid 6]

HU	[...]*	[...]*	Male	linoleic	M4	Resist.F	Susc.	Mid early	
HU	[...]*	[...]*	Male	linoleic	M1	Susc.	Susc.	Early	
HU	[...]*	[...]*	Male	linoleic	M1	Resist.E	Susc.	Mid early	
HU	[...]*	[...]*	Male	linoleic	M4	Susc.	Susc.	Mid early	
HU	[...]*	[...]*	Male	linoleic	M4	Susc.	Susc.	Mid early	[Offered hybrid 5], [Offered hybrid 8]
HU	[...]*	[...]*	Male	linoleic	M4	Susc.	Resist.	Mid late	[Offered hybrid 7]
HU	[...]*	[...]*	Male	linoleic	M4	Resist.	Susc.	Mid late	
HU	[...]*	[...]*	Male	linoleic	M4	Susc.	Resist.	Late	
HU	[...]*	[...]*	Male	oleic	M1	Susc.	Susc.	Early	[Offered hybrid 4]
HU	[...]*	[...]*	Male	oleic	M4	Susc.	Susc.	Early	[Offered hybrid 1]
HU	[...]*	[...]*	Male	oleic	M9	Susc.	Susc.	Early	[Offered hybrid 2]
HU	[...]*	[...]*	Male	oleic	M4	Susc.	Resist.	Mid early	
HU	[...]*	[...]*	Male	linoleic	M1	Susc.	Susc.	Early	
HU	[...]*	[...]*	Male	linoleic	M4	Susc.	Resist.	Early	
HU	[...]*	[...]*	Male	oleic	M1	Susc.	Susc.	Mid late	
HU	[...]*	[...]*	Male	linoleic	M1	Susc.	Resist.	Mid late	

Offered Hybrids: PIKASOL, AURASOL, DKF 3333, FLEXISOL CL, FLOYD, PRODISOL, RUMBASOL, SAMBASOL, ULTRASOL

Schedule 7

Hungarian Hybrids under Registration and their Pedigree

country	code	name	female	male
HU	MH 8361	VOLTIMI	[...]*	[...]*
HU	MH 9367	-	[...]*	[...]*
HU	MH 9261	-	[...]*	[...]*
HU	MH 9264	-	[...]*	[...]*

Schedule 8

Hungarian Pipeline Parental Lines

Line Code	Short Pedigree	Gender	Oil composition	Mildew profile	Broomrape resistance Race E	IMI	maturity	Pedigree
[...]*	[...]*	Male	Linoleic	M4	Segregation	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	Segregation	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	Resistant	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	to be checked	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Segregation	to be checked	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	Segregation	to be checked	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M1	to be checked	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	to be checked	Resistant	Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	to be checked	Resistant	Late	[...]*
[...]*	[...]*	Male	Linoleic	M1	to be checked	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M1	Susceptible	Resistant	Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	Susceptible	Resistant	Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	to be checked	Resistant	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M1	to be checked	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M1	to be checked	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	to be checked	Susceptible	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	to be checked	to be checked	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	to be checked	to be checked	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	to be checked	to be checked	Mid Late	[...]*
[...]*	[...]*	Male	Linoleic	M4	to be checked	to be checked	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	M4	Susceptible	Susceptible	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Susceptible	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	Segregation	Susceptible	Susceptible	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	M4	Susceptible	Susceptible	Mid Late	[...]*

[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Susceptible	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Susceptible	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Susceptible	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	M4	Susceptible	Susceptible	Mid Late	[...]*
[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Susceptible	Mid Early	[...]*
[...]*	[...]*	Female	Linoleic	Susceptible	Susceptible	Susceptible	Mid Early	[...]*
[...]*	[...]*	Female	Linoleic	M4	Susceptible	Susceptible	Mid Early	[...]*
[...]*	[...]*	Female	Linoleic	M4	Susceptible	Susceptible	Mid Early	[...]*
[...]*	[...]*	Female	Linoleic	Segregation	Susceptible	Susceptible	Mid Early	[...]*
[...]*	[...]*	Female	High Oleic	Susceptible	Susceptible	Susceptible	Early	[...]*

Note:

The expression "segregation" in the columns means that the trait was checked but is not fixed in the line yet

The expression "to be checked" in the columns means that the trait may already be inside the line but has not been checked until now