

Appendix 3.	Literature search for annual monitoring on the general surveillance of Bayer GM soybean in the EU and GB
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APPENDIX 3

LITERATURE SEARCH TO SUPPORT GENERAL SURVEILLANCE OF 2020/2021 ANNUAL POST MARKET ENVIRONMENTAL MONITORING REPORTS OF BAYER GM SOYBEAN PRODUCTS

Data protection.

This application contains scientific data and other information which are protected in accordance with Art. 31 of Regulation (EC) No 1829/2003.

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SUMMARY

This literature search was conducted in accordance with the 2019 EFSA explanatory note on literature searching conducted in the context of GMO applications¹ (EFSA, 2019) to support general surveillance of 2020/2021 annual post market environmental monitoring reports. It addresses the review question “Do Bayer GM soybean products, derived food/feed products and their respective introduced traits have adverse effects on human and animal health and the environment?”.

In accordance with the 2019 EFSA explanatory note on literature searching (EFSA, 2019), eligibility/inclusion criteria to establish the relevance of retrieved publications was determined. Two electronic bibliographic databases (SciSearch and CABA databases) were selected for the literature search. Search strategies were developed together with an information specialist to perform the searches. In addition, literature searches were conducted in internet pages of relevant key organisations for Bayer GM soybean products.

The literature search covered the time span 2020 – 2021 and retrieved 281 and 229 hits in SciSearch and CABA databases, respectively, and a total of 60 records in the internet pages of the relevant key organisations. From these, six publications were identified as relevant. These publications did not have any implication on the risk assessment, because no new hazard, modified exposure, or new scientific uncertainty is reported.

Additionally, two literature searches were conducted for Bayer GM soybean products newly authorised during the 2020 – 2021 monitoring season, *i.e.* MON 87708 × MON89788 × A5547-12 and MON 87751 × MON 87701 × MON 87708 × MON 89788. The searches covered the time span from the adoption of the EFSA opinion till the time of the authorisation (2019 – 2021). The searches retrieved 155 and 251 hits in SciSearch database and 119 and 208 hits in CABA database, respectively. The searches retrieved in total 15 records in the internet pages of the relevant key organisations. From these, no publication was identified as relevant.

The comprehensive literature search found no new information that would invalidate the conclusions of the risk assessment for Bayer GM soybean products.

¹ Hereafter referred to as 2019 EFSA explanatory note on literature searching

1. INTRODUCTION

As part of the general surveillance requirements for Bayer GM soybean products authorised in the European Union (EU) market under regulation (EC) No 1829/2003, Bayer Agriculture BV² has actively monitored the soybean products by conducting quarterly literature searches covering the time span between June 2020 and May 2021.

The results of the literature search that were analysed in detail according to the relevance for the risk assessment of the Bayer GM soybean products are presented here.

The completed form of EFSA Appendix E completeness checklist (EFSA, 2019) is provided as an attachment to this report.

2. FORMULATING THE REVIEW QUESTION AND CLARIFYING ITS PURPOSE

This literature search has been conducted to address the review question “Do Bayer GM soybean products, derived food/feed products and respective introduced traits have adverse effects on human and animal health and the environment?”

The purpose for undertaking this literature search is to support general surveillance of 2020/2021 annual post market environmental monitoring (PMEM) reports in accordance with the 2019 EFSA explanatory note on literature searching (EFSA, 2019).

Key elements used for the review question are humans, animals, and/or the environment (= population), Bayer GM soybean products, derived food/feed products and respective introduced traits (= intervention/exposure), conventional counterpart or non-GM soybean (= comparator), and adverse effect on human and animal health, and the environment (= outcomes). Accordingly, the eligibility criteria for assessing the relevance of publications for inclusion in the literature review are provided in **Table 1**.

² Hereafter, referenced as Bayer

Table 1. Eligibility/inclusion criteria to establish the relevance of publications

Key elements	Criteria
Population	Humans, animals and the environment (taking into account the scope of the applications) <i>i.e.</i> authorisation for all uses as any other soybean but excluding the cultivation of Bayer GM soybean products are addressed as general protection goals.
Intervention/exposure	Bayer GM soybean products derived food/feed products and corresponding introduced traits addressed in the publication are identical or similar to those under scientific review by the EFSA.
Comparator	In case of a comparative study that uses the GM plant material as test material, eligible publications must report a non-GM soybean as a comparator.
Outcomes	Adverse effects on human and animal health and the environment are addressed (taking into consideration the scope of the applications).
Additional key elements	
Stacked events	The single event(s) addressed in the publication is/are the single event(s) in stacked Bayer GM soybean products. Stacked Bayer GM soybean products is addressed in the study.
Information/ data requirements, including source of publications data	The publication potentially contributes to the knowledge of the risk assessment of Bayer GM soybean products for all uses as any other soybean but excluding cultivation. Original/primary data are presented in the publication.

3. SEARCHING FOR/ IDENTIFYING RELEVANT PUBLICATIONS

In accordance with the 2010 EFSA Guidance on application of systematic review methodology to food and feed safety assessments to support decision making (EFSA, 2010) and the 2019 EFSA explanatory note on literature searching (EFSA, 2019), identification of bibliographic sources and development of search strategies was developed together with an information specialist who subsequently performed the literature search. The approach used to develop the search strategy follows a lumping method and includes a wide range of free-text terms and where available, controlled vocabulary that defines search terms.

3.1. Sources of scientific literature

3.1.1. Electronic bibliographic databases

Bayer selects the SciSearch (Science Citation Index)³ and the CABA⁴ (CAB Abstracts®)⁵ databases to perform the literature search based on the coverage and relevance of the journals included in these databases. The literature search was conducted using the STN® database catalogue⁶.

The SciSearch, produced by from Clarivate Analytics (UK) Limited, includes over 45 million records in Science and technology published since 1974. It includes literatures captured under Science Citation Index Expanded™, a largest multidisciplinary scientific database and an international index covering all scientific topics. It contains also all the records published from the Current Contents series of publications as well as bibliographic information and cited references from over 5 600 scientific, technical and medical journals. In addition, “Records from January 1991 on include abstracts, author keywords, and KeyWords Plus®. Bibliographic information, authors, cited references, and KeyWords Plus® are searchable”⁴. The database is updated on a weekly basis.

The CABA, produced by CAB international (UK), includes over 8.9 million records in agriculture and life sciences published since 1973. The database “covers worldwide literature from all areas of agriculture and related sciences including biotechnology, forestry, and veterinary medicine. Sources for CABA include journals, books, reports, published theses, conference proceedings, and patents. Bibliographic information, indexing terms, abstracts, and CAS Registry Numbers are searchable. An online thesaurus is available for the Con-trolled Term (/CT), the Geographic term (/GT), and the Organism (/ORGN) fields”^{Error! Bookmark not defined.}. The database is updated on a weekly basis.

All journals included in the two databases must go through a verification process and as a minimum requirement, non-English language journals must include English-language bibliographic information (title, abstract, keywords) and be peer-reviewed^{6,7}. In general, English is considered the universal language of science. For this reason, the journals most important to the international research community will publish either full text or a

³ SciSearch: <https://www.stn-international.com/sites/default/files/stn/dbss/SCISEARCH.pdf> - Accessed on 27 August 2021

⁴ CABA: <https://www.stn-international.com/sites/default/files/stn/dbss/CABA.pdf> – Accessed on 27 August 2021

⁵ CAB Abstracts®: <https://www.cabi.org/publishing-products/online-information-resources/cab-abstracts/> - Accessed on 17 August 2021

⁶ STN®: <http://stn-international.de/sites/default/files/STN/brochures/stnfile-kat.pdf> - Accessed on 17 August 2021

⁷ Web of Science group; <https://clarivate.com/webofsciencegroup/solutions/webofscience-core-collection-editorial-selection-process/> - Accessed on 17 August 2021

minimum of bibliographic information in English, which is especially true in the scientific domain of natural sciences. Full text in English is highly desirable if the journal intends to serve an international community of researchers. Therefore, it is expected that even if there is a relevant article for the food and feed safety of GM plants in a language different than English, the article will include title/abstract/keywords in English, which will guarantee the retrievability of these articles when using keywords and keyword combinations in English.

Based on the above, the selected databases are, to our knowledge, comprehensive, multidisciplinary, conservative sources for literature searching and offer the broadest coverage to retrieve a largest breadth of possible relevant publications. Therefore, additional search sources are not deemed necessary.

3.1.2. Internet (world-wide-web) pages of relevant key organisations

In accordance with the 2019 Explanatory note on literature searching for GMO applications (EFSA, 2019), the search in electronic bibliographic databases has been complemented with internet search in webpages of relevant key organisations involved in the risk assessment of GM plants.

Of the 14 key organisations cited in the 2019 Explanatory note on literature searching for GMO applications (EFSA, 2019), nine⁸ are involved in risk assessment of Bayer GM soybean products. Three of the remaining five (CIBIOGEM, Environment and Climate Change Canada and OECD) are not involved in GM risk assessment while the other two (OGTR and GEAC), for the time being, only assess GM cotton and oilseed rape. Therefore, the internet search focused on the nine key organisations relevant for Bayer GM soybean products.

3.2. Search strategy (electronic databases)

3.2.1. Search terms and search strings

The intervention/exposure key elements were defined and translated into search terms. These search terms were identified following the below listed approaches in line with the 2019 EFSA explanatory note on literature searching (EFSA, 2019):

- assessing words in reference publications,
- assessing subject indexing terms,
- searching for synonyms and related terms and
- consulting experts and stakeholders.

Following the aforementioned approaches, possible synonyms, related terms, abbreviations including acronyms and truncations, old and new as well as lay and scientific terminologies, brand and generic names, and spelling variants including

⁸ Internet pages of the relevant key organisations for Bayer GM soybean products:

US EPA (<https://www.epa.gov/environmental-topics/science-topics>) - Accessed on 06 July 21;

USDA (<https://www.usda.gov/media>) - Accessed on 06 July 21;

US FDA (<https://www.fda.gov/>) - Accessed on 06 July 21;

CFIA (<http://www.inspection.gc.ca/eng/1297964599443/1297965645317>) - Accessed on 06 July 21;

Health Canada (<https://www.canada.ca/en/health-canada.html>) - Accessed on 06 July 21;

FSANZ (<http://www.foodstandards.gov.au/Pages/default.aspx>) - Accessed on 06 July 21;

CTNBio (<http://ctnbio.mctic.gov.br/>) - Accessed on 06 July 21;

CONABIA (<https://www.argentina.gob.ar/>) - Accessed on 06 July 21;

Japan MAFF (<http://www.maff.go.jp/e/>) - Accessed on 06 July 21.

common typos of the search terms were considered. Where applicable, the search was also adapted to controlled vocabulary (subject indexing). The search terms were designed to give an excellent coverage and retrieve the broadest possible number of articles related to Bayer GM soybean products.

Annex I presents the translation of the intervention key elements into search terms. The search terms, the fields and the Boolean operators used to combine them were defined as shown in **Annex II**. The search strings were built following the STN[®] commands (Karlsruhe, 2007) to allow the literature search in the STN[®] database catalogue. The free-text search terms, controlled vocabulary and the search strings are updated upon identification of a new search term.

The search sets belonging to each key element as described in **Annex I** and **Annex II** were combined by 'OR' to retrieve all the identified publications excluding duplicates. The separate assessment of these search sets, including those yielding only a small number of publications, was considered not necessary as this would duplicate the literature screening process and alter the consistency and comprehensiveness used in the literature search strategies.

3.2.2. Limits applied

An advanced literature search was conducted using the web-based STN[®] database catalogue for both the selected electronic databases (*see* section 3.1.1). STN[®] enables searching in each electronic database by making use of pre-defined fields, set combinations based on Boolean operators or a combination of both⁹. In STN[®], the results of the search from each database can be merged and duplicates can be removed by de-duplication.

The STN[®] literature search utilised "Basic Index" (None (or /BI)) field which utilises free-text search terms and enables comprehensive searching in different sections (*e.g.* title, abstract, keywords, supplementary terms, controlled terms) within a record (Karlsruhe, 2007; STN, 2018a, 2018b). Where applicable, controlled vocabulary (subject indexes) offered by CABA (controlled terms (CT)) were also included in the search strategy. Controlled vocabulary is assigned by subject specialists to CAB records to represent the content of the source documents. It allows users to use only one term to search for a concept rather than using lots of terms¹⁰. The most relevant, broad and controlled terms in the hierarchy of CAB Thesaurus terms and that were listed as preferred terms by CAB for a search query were selected and added to the search string, as shown in **Annex I** and **Annex II**.

3.2.3. Language

The search terms and their combinations are established in English. Therefore, the search is expected to result in a list of titles, abstracts or keywords written in English, covering also articles written in other languages with at least a title, abstract or keywords in English. Also, as technical terms on proteins names, event codes, trade names and Latin

⁹ STNindex user guide: https://www.stn-international.com/sites/default/files/stn_training_center_document/User%20Documentation/mastering_stn_commands.pdf - Accessed on 27 08 2021

¹⁰ CAB Direct advanced searching of CAB abstracts: <https://www.cabi.org/Uploads/CABI/publishing/training-materials/resources-by-interface/cab-direct-user-guides/advanced-searching-cab-abstracts.pdf> - Accessed on 17 08 2021

names are common in all languages, the search is expected to retrieve articles in all languages.

3.2.4. Time period

The literature searches covered the time span 1 June 2020 - 31 May 2021¹¹.

The literature search in the electronic databases was conducted on a quarterly basis considering the entry dates in the STN[®] database catalogue. **Table 2** shows the search dates and the time span of each search.

Table 2. Description of literature search periods in the electronic databases

Date of the search	Last database update dates	Search period
06 October 2021	SciSearch: 05 October 2020	28 May 2020 – 05 October 2020
	CABA: 30 September 2020	28 May 2020 – 05 October 2020
01 February 2021	SciSearch: 26 January 2021	05 October 2020– 26 January 2021
	CABA: 25 January 2021	05 October 2020– 26 January 2021
01 June 2021	SciSearch: 31 May 2021	26 January 2021– 31 May 2021
	CABA: 26 May 2021	26 January 2021– 31 May 2021

Additionally, the literature searches in the electronic databases for the Bayer GM soybean products newly authorised during the 2020-2021 monitoring season¹¹ were conducted on 08 December 2020 and 09 March 2021, respectively.

- The searches for MON 87708 × MON89788 × A5547-12 soybean covered the timespan 01 January 2019 – 05 October 2020. The entry dates of the databases in the STN[®] database catalogue were 7 December 2020 (SciSearch) and 2 December 2020 (CABA).
- The searches for MON 87751 × MON 87701 × MON 87708 × MON 89788 soybean covered the timespan 01 January 2019 – 26 January 2021. The entry dates of the databases in the STN[®] database catalogue were 8 March 2021 (SciSearch) and 2 March 2021 (CABA).

The literature search in the internet pages of the relevant key organisations was conducted on 06 July 2021. Additional search in the internet pages of the relevant key organisations for the Bayer GM soybean products newly authorised during the 2020-2021 monitoring season¹¹ was also conducted on 26 August 2021.

3.2.5. Reference publications

In accordance with the 2019 EFSA explanatory note on literature searching (EFSA, 2019), a list of reference publications is provided in **Annex I**.

¹¹ Following the authorisation of MON 87708 × MON89788 × A5547-12, MON 87751 × MON 87701 × MON 87708 × MON 89788 soybeans (Commission Implementing Decisions (EU) 2020/1360, 2021/66, respectively) additional literature searches covering the timespan from the adoption of EFSA scientific opinion till the time of the authorisation, *i.e.* January 2019 – October 2020 and January 2019 – January 2021, respectively, were performed. In the subsequent literature searches, the newly authorised products have been incorporated in the Bayer GM soybean products search as shown in **Annex I** and **Annex II**.

3.3. Search strategy (relevant key organisations)

Information regarding the selection process for relevant records in the webpages are shown in **Annex IV**. For the selection of relevant publications, all records concerning GMO applications and approvals published in the webpage of each relevant key organisation were screened based on ‘limits applied’ as described in the **Annex IV**. Afterwards, all the records within the specified limits were assessed for their relevance to Bayer GM soybean products.

4. SELECTING PUBLICATIONS

Publications retrieved from the literature search were screened for their relevance first and then the selected ones were evaluated for their reliability through detailed assessments. Relevance to the search scope and scientific reliability were rigorously assessed by internal and external technical experts.

4.1. Eligibility screening process

The process of selecting relevant publications was undertaken in two stages:

- **Rapid assessment** for the relevance based on information in the title and abstract of the publications, to exclude publications that are obviously irrelevant.
- **Detailed assessment** of full-text document if required. Full-text documents were obtained for those publications not excluded in the rapid assessment and those documents were assessed in detail for their relevance to the review question. Publications not excluded by the detailed assessment were classified as relevant. At this stage, publications must comply with all the eligibility/inclusion criteria and meet all key elements of the review question.

Experts with a solid experience in GM plants risk assessment performed the screening process. Based on the available comprehensive weight of evidence, the experts assessed if the conclusions of the risk assessment are still valid.

4.2. Reviewers

All publications that were identified by the search described in **Section 3** have been screened by three different reviewers (one internal and two external experts) with solid experience in the risk assessment of GM plants. Each reviewer performed its assessment in an independent sequential manner.

The reviewers involved in the publication screening process have adequate expertise and experience in the risk assessment of GM plants as well as in selection of relevant publications in literature searches for GM applications. Retrieved publications are screened by each reviewer independently and assessed against each other to conclude on inclusion or exclusion based on eligibility/relevance criteria. In case of disagreements, the reviewers discuss together considering the eligibility/ inclusion criteria for relevance. If uncertainty remains, the publication is *de facto* included for further consideration.

Internal and external reviewers were in constant communication and met on a regular basis to ensure consistent interpretation and implementation of eligibility/relevance criteria and/or screening process. When necessary, these criteria and/or process may be modified/reviewed as a result of for example new regulatory guidance or novel topics on literature regarding the risk assessment of GM plants.

This approach assures a high-quality process as it allows a harmonised continuous publication screening process across different GM applications in accordance with 2019 EFSA explanatory note on literature searching (EFSA, 2019) and avoids missing publications due to bias towards certain eligibility criteria.

4.3. Classification of publications

Taking account of i) the review question, ii) the scope of the application, *i.e.* authorisation of Bayer GM soybean products for all uses as any other soybean but excluding cultivation in the EU and iii) the eligibility criteria to establish the relevance of retrieved publications, the list of retrieved hits was assessed to conclude whether a certain publication was considered relevant or not. When a publication was considered relevant, the category the publication belongs to is indicated. The following is a non-exhaustive list of categories publications may belong to:

Food/Feed safety assessment

- Molecular characterisation
- Protein expression
- Crop composition
- Agronomic and phenotypic characteristics
- Toxicology - Animal feeding / *In vitro*
- Allergenicity of the protein or the whole food/feed
- Nutrition
- Protein / DNA/ RNA fate in digestive tract

Environmental safety assessment

- Spillage and consequences thereof

It should be noted that the selection criteria are well defined and reassessed annually.

4.4. Quality appraisal of the relevant publications

The relevant publications, if identified, are appraised in terms of reliability in accordance with the 2019 EFSA explanatory note on literature searching (EFSA, 2019) by at least two individuals with technical expertise on the topic using the following steps categorised in two main areas:

Credibility of the publication

1. ***Does the publication include sufficient information to establish the reliability of the research?*** Publications with insufficient information (e.g., incomplete experimental design, publications for which only an abstract is publicly available) are categorised as “**not assignable**”. Others go to step 2.
2. ***Is the publication scientifically sound/reliable?*** Publications that do not contain scientifically sound/reliable information (e.g., inadequate methodology, test/control materials) are categorised as “**not reliable**”. Others go to step 3.

Appropriateness of the publication for the EFSA risk assessment

3. ***What is the relevance level of the publication for the EFSA risk assessment?***
Publications with low relevance for the EFSA risk assessment (e.g. publications dealing with wild relatives or pests not found in the EU) are categorised as “**low reliable**”. Publications with moderate relevance for the EFSA risk assessment (e.g., exploratory studies, research with limited focus on risk assessment) are categorised as “**moderately reliable**”. Whereas publications with high relevance for the EFSA risk assessment (e.g. research based on data collected for regulatory studies) are categorised as “**highly reliable**”.

In cases of disagreements, the evaluators discuss together and collectively determine the reliability of the publication.

5. SUMMARISING AND REPORTING THE DATA, AND CONSIDERING THE IMPLICATIONS OF THE FINDINGS

5.1. Search outcomes

5.1.1. Outcomes of literature search (electronic databases)

The quarterly literature searches identified 281 and 229 hits in SciSearch and CABA databases, respectively (*see Annex II*). After de-duplication, the total number resulted in 384 hits.

Additionally, the literature searches on MON 87708 × MON89788 × A5547-12 and MON 87751 × MON 87701 × MON 87708 × MON 89788 soybeans¹¹ identified the following hits:

- For MON 87708 × MON89788 × A5547-12, the search identified 155 and 119 hits in SciSearch and CABA databases, respectively (*see Annex II*). After de-duplication, the total number resulted in 204 hits.
- For MON 87751 × MON 87701 × MON 87708 × MON 89788, the search identified 251 and 208 hits in SciSearch and CABA databases, respectively (*see Annex II*). After de-duplication, the total number resulted in 315 hits.

5.1.2. Outcomes of literature search (relevant key organisations)

The literature search in the internet pages of the nine relevant key organisations retrieved a total of 60 records. The links to the results of the literature search and the summary of the retrieved data are shown in **Annex IV**.

Additionally, the literature search in the internet pages of the relevant key organisations on the Bayer GM soybean products newly authorised during the 2020-2021 monitoring season¹¹ retrieved a total of 15 records. The links to the results of the literature search and the summary of the retrieved data are shown in **Annex IV**.

5.2. Results of the publication selection process

5.2.1. Results of the publication selection process (electronic databases)

The results of the publication selection process for the retrieved hits from the electronic databases are provided in **Annex V**. Six relevant publications were retrieved after detailed assessment of the full text documents. For bibliographic details regarding these

publications in .RIS format, *see* **Annex VI**. For the full-text documents of the relevant publications, *see* the references folder within the literature searching folder.

5.2.2. Results of the publication selection process (relevant key organisations)

The results of the publication selection process for the retrieved records from the relevant key organisations are provided in **Annex IV**. None of the retrieved documents needed further assessment.

5.3. Implications of the retrieved relevant publications for the risk assessment

The comprehensive literature search relevant to the food, feed, and environmental safety of Bayer GM soybean products found no new information that would invalidate the conclusions of the risk assessments for Bayer GM soybean products.

The relevant publications as well as their reliability and implications for the risk assessment are provided in **Annex V**.

6. CONCLUSION

Taking into consideration all the above, Bayer confirms that this literature search, conducted in accordance with the 2019 EFSA explanatory note on literature searching (EFSA, 2019) to support the general surveillance in the context of 2020/2021 annual PMEM for Bayer GM soybean products, identified no relevant publications that would invalidate the conclusions of the Bayer GM soybean products previous risk assessments. Therefore, the conclusions of the risk assessment as presented in the initial applications of the Bayer GM soybean products remain unchanged.

REFERENCES

References highlighted in grey are EFSA publications. Therefore, their pdfs are not provided.

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EFSA, 2010. Application of systematic review methodology to food and feed safety assessments to support decision making The EFSA Journal, 1637, 1-90.

EFSA, 2019. Explanatory note on literature searching conducted in the context of GMO applications for (renewed) market authorisation and annual post-market environmental monitoring reports on GMOs authorised in the EU market - Note on literature searching to GMO risk assessment guidance. EFSA journal, 2019:EN-1614, 1-62.

Karlsruhe F 2007. Command Summary Chart for bibliographic and full-text databases. 1-26.

STN 2018a. CABA. 1-12.

STN 2018b. SciSearch - Science Citation Index. 1-8.

Annex I. Translation of intervention/exposure key elements into search terms for Bayer GM soybean products literature search in STN[®] database catalogue

1. Free-text search terms for Bayer GM Soybean products

Key elements	Search terms	Synonyms, related terms, abbreviations/ acronyms/ truncations, lay/ scientific terms, brand/ generic names and spelling variants/ typos (adapted for performing search in STN [®] database catalogue)
Event names	40-3-2 or MON-Ø4Ø32-6 MON 89788 or MON-89788-1 MON 87769 or MON-87769-7 MON 87701 or MON-877Ø1-2 MON 87705 or MON-877Ø5-6 MON 87708 or MON-877Ø8-9 MON 87751 or MON-87751-7 A5547-127 or ACS-GMØØ6-4 ¹	40!3!2 OR MON 04032? OR MON04032? OR MON 04032? OR MON04032? OR MON EMPTY SET4EMPTY SET32? OR MONEMPTY SET4EMPTY SET32? OR MON!04032? OR MON!04032? OR MON!EMPTY SET4EMPTY SET32? MON 89788? OR MON89788? OR MON!89788? OR MON 87769? OR MON87769? OR MON!87769? MON87769? OR MON!87769? MON 87701? OR MON87701? OR MON 877O1? OR MON877O1? OR MON 877EMPTY SET1? OR MON877EMPTY SET1? OR MON!87701? OR MON!877O1? OR MON!877EMPTY SET1? MON 87705? OR MON87705? OR MON 877O5? OR MON877O5? OR MON 877EMPTY SET5? OR MON877EMPTY SET5? OR MON!87705? OR MON!877O5? OR MON!877EMPTY SET5? MON 87708? OR MON87708? OR MON 877O8? OR MON877O8? OR MON 877EMPTY SET8? OR MON877EMPTY SET8? OR MON!87708? OR MON!877O8? OR MON!877EMPTY SET8? MON 87751? OR MON87751? OR MON!87751? A5547!127 OR A5547 127 OR ACS!GM006? OR ACS!GMOO6? OR ACS!GMEMPTY SETEMPTY SET6? OR ACS GM006? OR ACS GMOO6? OR

¹ **Highlighted** search terms correspond to the unique search terms and keywords of the newly authorised products MON 87708 × MON 89788 × A5547-127 and MON 87751 × MON 87701 × MON 87708 × MON 89788 that have been incorporated in the Bayer GM soybean products search during the 2020-2021 monitoring period following the approval of the authorisation to place in the market of these products in the EU in accordance with the Commission Implementing Decision 2020/1360, Commission Implementing Decision 2021/66, respectively.

		ACS GMEMPTY SETEMPTY SET6? ¹
Trade names	Roundup Ready® soybean Roundup Ready 2 Yield® soybean Vistive Gold™ soybean Intacta RR2 Pro® soybean Roundup Ready 2 Xtend® soybean Intacta 2 Xtend™ ¹ XtendFlex™ Soybean ¹	ROUNDUPREADY? OR ROUND!UP!READY? OR ROUND!UP READY? OR ROUNDUP READY? OR ROUND UP READY? OR RR2Y? OR RRIIY? OR INTACTA OR RR2 PRO? OR RRII PRO? OR VISTIVE? OR VISTIVE? GOLD? OR XTEND? OR XTENDFLEX? OR XTEND FLEX? ¹
Newly expressed proteins	CP4 EPSPS DMO PAT ¹ Cry1Ac Cry1A.105 Cry2Ab2 Primula juliae Δ6 desaturase (Pj.D6D) and Neurospora crassa Δ15 desaturase (Nc.Fad3)	CP4EPSPS? OR CP4 EPSPS? OR 5(W)(ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR ENOL!PYRUVYL! SHIKIMATE!)(W)3 PHOSPHATE SYNTHASE OR DICAMBA ?OXYGENASE OR DICAMBA ?DEMETHYLASE OR DMO? OR PAT OR PHOSPHINOTHRICIN OR N!ACETYL!TRANSFERASE OR N!ACETYLTRANSFERASE OR N!ACETYL TRANSFERASE OR N ACETYL!TRANSFERASE OR N ACETYLTRANSFERASE OR N ACETYL TRANSFERASE ¹ OR CRY1AC OR CRYIAC OR CRY1 AC OR CRY 1 AC OR CRY 1AC OR CRYI AC OR CRY I AC OR CRY IAC OR OR CRY1A105 OR CRY1A 105 OR CRY 1A 105 OR CRY 1A105 OR CRYIA105 OR CRYIA 105 OR CRY IA 105 OR CRY IA105 OR CRY1A.105 OR CRY2AB? OR CRY2 AB? OR CRY 2 AB? OR CRY 2AB? OR CRYIIAB? OR CRYII AB? OR CRY II AB? OR CRY IIAB? OR OR PJ!D6D OR PJD6D OR PJ D6D OR NC!FAD3 OR NCFAD3 OR NC FAD3 OR NC!FAD 3 OR NCFAD 3 OR NC FAD 3 OR DESATURASE?
Newly expressed RNAs	FATB1-A and FAD2-1A gene segments	(RNA? OR DSRNA? OR SIRNA?)(5A) (FAT! B? OR FAD!2? OR FAT B? OR FAD 2? OR FADB? OR FAD2? OR THIOESTERASE? OR DESATURASE?)

Intended traits: Herbicide tolerance traits	Glyphosate/roundup tolerance Dicamba tolerance Glufosinate tolerance ¹	(TOLERAN? OR RESISTAN? OR PROTEC?)(5A) (GL!PHOSATE OR GL!FOSATE OR ROUNDUP? OR ROUND!UP? OR ROUND UP? OR DICAMBA OR METHOXYBENZOIC ACID OR GLUFOSINATE OR GLUPHOSINATE OR BASTA OR IGNITE OR LIBERTY) ¹
Intended traits: Insect protection traits	Bt soy (soybean)/ <i>Bacillus thuringiensis</i> soybean providing Lepidopteran protection or protection against soybean looper (SBL) or Sunflower looper (SFL) or Black armyworm or corn earworm (CEW) or cotton bollworm (CBW) or soybean podworm or old world bollworm or african bollworm or american bollworm or cotton bollworm or corn earworm (CEW) or sunflower looper or soybean anxil borer or soybean budborer or <i>Anticarsia gemmatalis</i> or <i>Chrysodeixis includens</i> or <i>Pseudoplusia includens</i> or <i>Rachiplusia nu</i> or <i>Spodoptera frugipeda</i> or <i>Helicoverpa zea</i> or <i>Helicoverpa armigera</i> <i>Crocidosema aporema</i> or <i>Epinotia aporema</i>	(BT SOY? OR BT SOY? OR BT!SOY? OR THURINGIENSIS SOY? OR THURINGIENSIS SOY? OR THURINGIENSIS!SOY?) (TOLERAN? OR RESISTAN? OR PROTEC?)(5A)(CATERPILLAR? OR LOOPER? OR BORER? OR BUDBORER? OR LEPIDOPTERA? OR EREBIDAE OR NOCTUIDAE OR TORTRICIDAE OR ANTICARSIA OR GEMMATALIS OR CHRYSODEIXIS OR PSEUDOPUSIA) OR INCLUDENS OR EPINOTIA OR CROCIDOSEMA OR APOREMA OR RACHIPLUSIA OR R. NU OR CHLORIDEA OR VIRESCENS OR VBC OR SBL OR SFL OR ARMYWORM? OR ARMY WORM? OR EARWORM? OR EAR WORM? OR BOLLWORM? OR BOLL WORM? OR PODWORM? OR POD WORM? OR SPODOPTERA OR COSMIOIDES OR FRUGIPERDA OR HELICOVERPA OR ZEA OR ARMIGERA OR FAW OR CEW OR CBW)
Intended traits: improved fatty acid profile	Expression of stearidonic acid (SDA; 18:4) Improved fatty acid profile (high monounsaturated fatty acids and low saturated and polyunsaturated fatty acids)	STEARIDONIC ACID OR SDA OR (HIGH? OR INCRE? OR CHANG?)(5A)(OLEIC OR MONOUNSATURATED OR MONO!UNSATURATED OR MONO UNSATURATED OR MUFA OR FAT?) (LOW? OR DECRE? OR REDUC?)(5A)(SATURATED OR PALMITIC OR STEARIC OR LINOLEIC OR POLYUNSATURATED OR POLY!UNSATURATED OR POLY UNSATURATED OR PUFA)
Crop name	Soybean, Soy, <i>Glycine max</i>	SOYBEAN? OR SOY? OR GLYCINE MAX OR G. MAX OR SOY BEAN
GMO general terms	Genetically modified organism (GMO, GM); Living modified organism (LMO); biotechnology-derived organism (biotech-derived); Genetic engineering (GE); transgenesis (transgene); genetic transformation; genetic manipulation; genetic improvement.	GMO? OR LMO? OR GM OR GE OR TRANSGEN? OR ((GENETIC? OR LIVING OR BIOTECH?)(5A)(MODIF? OR TRANSFORM? OR MANIPULAT? OR IMPROV? OR ENGINEER? OR DERIV?))

2. Controlled vocabulary, if applicable. Bayer GM Soybean products

Key elements	Search terms	Controlled terms offered by CABA (adapted for performing search in STN® database catalogue)
Event name	Not applicable	
Trade name	Not applicable	
Newly expressed proteins	Not applicable	
Intended traits : Insect protection and herbicide tolerance traits	Bt soy (soybean)/ <i>Bacillus thuringiensis</i> soybean providing Lepidopteran protection or protection against soybean looper (SBL) or Sunflower looper (SFL) or Black armyworm or corn earworm (CEW) or cotton bollworm (CBW) or soybean podworm or old world bollworm or african bollworm or american bollworm or cotton bollworm or corn earworm (CEW) or sunflower looper or soybean anxil borer or soybean budborer or <i>Anticarsia gemmatilis</i> or <i>Chrysodeixis includens</i> or <i>Pseudoplusia includens</i> or <i>Rachiplusia nu</i> or <i>Spodoptera frugipeda</i> or <i>Helicoverpa zea</i> or <i>Helicoverpa armigera</i> <i>Crocidosema aporema</i> or <i>Epinotia aporema</i> Glyphosate/roundup tolerance Dicamba tolerance Glufosinate tolerance ¹	WEED CONTROL+UF,NT/CT OR INSECT CONTROL+UF,NT/CT) AND (GLYPHOSATE+UF,NT/CT OR DICAMBA+UF,NT/CT OR GLUFOSINATE+UF,NT/CT ¹ OR LEPIDOPTERA+UF,NT2/CT,ORGN)
Intended traits: Improved fatty acid profile	Improved fatty acid profile	SATURATED FATTY ACIDS+UF,NT/CT OR UNSATURATED FATTY ACIDS+UF,NT/CT
Crop name	Soybean, Soy, <i>Glycine max</i>	SOYABEANS+UF,NT/CT,ORGN
GMO general terms	Genetically modified organism (GMO, GM); Living modified organism (LMO); biotechnology-derived organism (biotech-derived); Genetic engineering (GE); transgenesis (transgene); genetic transformation; genetic manipulation; genetic improvement	GENETIC ENGINEERING+UF,NT/CT OR GENETIC TRANSFORMATION+UF,NT/CT OR GENETICALLY ENGINEERED FOODS+UF,NT/CT OR GENETICALLY ENGINEERED ORGANISMS+UF,NT/CT OR FOOD BIOTECHNOLOGY+UF,NT/CT

Annex II. The search string used for Bayer GM soybean products literature search in SciSearch and CABA databases using STN® database catalogue, and outcomes of the search (2020-2021)

Bayer GM Soybean products literature search – First quarter (June 2020 - September 2020)

Translation of query terms into STN search language:

(FILE 'STNGUIDE' ENTERED AT 11:07:36 ON 06 OCT 2020)

L1 QUE SPE=ON ABB=ON PLU=ON 40!3!2 OR MON 04032? OR MON04032?
OR MON 04032? OR MON04032? OR MON EMPTY SET4EMPTY SET32? OR
MONEMPTY SET4EMPTY SET32? OR MON!04032? OR MON!04032? OR
MON!EMPTY SET4EMPTY SET32?

L2 QUE SPE=ON ABB=ON PLU=ON MON 89788? OR MON89788? OR
MON!89788? OR MON 87769? OR MON87769? OR MON!87769?

L3 QUE SPE=ON ABB=ON PLU=ON MON 87701? OR MON87701? OR MON
87701? OR MON87701? OR MON 877EMPTY SET1? OR MON877EMPTY SET1?
OR MON!87701? OR MON!87701? OR MON!877EMPTY SET1?

L4 QUE SPE=ON ABB=ON PLU=ON MON 87705? OR MON87705? OR MON
87705? OR MON87705? OR MON 877EMPTY SET5? OR MON877EMPTY SET5?
OR MON!87705? OR MON!87705? OR MON!877EMPTY SET5?

L5 QUE SPE=ON ABB=ON PLU=ON MON 87708? OR MON87708? OR MON
87708? OR MON87708? OR MON 877EMPTY SET8? OR MON877EMPTY SET8?
OR MON!87708? OR MON!87708? OR MON!877EMPTY SET8?

L6 QUE SPE=ON ABB=ON PLU=ON MON 87751? OR MON87751? OR
MON!87751?

L7 QUE SPE=ON ABB=ON PLU=ON ROUNDUPREADY? OR ROUND!UP!READY?
OR ROUND!UP READY? OR ROUNDUP READY? OR ROUND UP READY? OR
RR2Y? OR RRIIY? OR INTACTA OR RR2 PRO? OR RRII PRO? OR
VISTIVE? OR VISTIVE? GOLD? OR XTEND?

L8 QUE SPE=ON ABB=ON PLU=ON SOYBEAN? OR SOY? OR GLYCINE MAX OR
G. MAX OR SOY BEAN

L9 QUE SPE=ON ABB=ON PLU=ON CP4EPSPS? OR CP4 EPSPS? OR
5(W) (ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR
ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR ENOL!PYRUVYL!
SHIKIMATE!) (W) 3 PHOSPHATE SYNTHASE

L10 QUE SPE=ON ABB=ON PLU=ON CRY1AC OR CRYIAC OR CRY1 AC OR CRY
1 AC OR CRY 1AC OR CRYI AC OR CRY I AC OR CRY IAC OR CRY1A105
OR CRY1A 105 OR CRY 1A 105 OR CRY 1A105 OR CRYIA105 OR CRYIA
105 OR CRY IA 105 OR CRY IA105 OR CRY1A.105

L11 QUE SPE=ON ABB=ON PLU=ON CRY2AB? OR CRY2 AB? OR CRY 2 AB?
OR CRY 2AB? OR CRYIIAB? OR CRYII AB? OR CRY II AB? OR CRY
IIAB? OR DICAMBA(W)?OXYGENASE OR DICAMBA(W)?DEMETHYLASE OR
DMO?

L12 QUE SPE=ON ABB=ON PLU=ON PJ!D6D OR PJD6D OR PJ D6D OR
NC!FAD3 OR NCFAD3 OR NC FAD3 OR NC!FAD 3 OR NCFAD 3 OR NC FAD
3 OR DESATURASE?

L13 QUE SPE=ON ABB=ON PLU=ON (RNA? OR DSRNA? OR SIRNA?) (5A) (FAT!
B? OR FAD!2? OR FAT B? OR FAD 2? OR FADB? OR FAD2? OR THIOESTER
ASE? OR DESATURASE?)

L14 QUE SPE=ON ABB=ON PLU=ON GMO? OR LMO? OR GM OR GE OR
TRANSGEN? OR ((GENETIC? OR LIVING OR BIOTECH?) (5A) (MODIF? OR
TRANSFORM? OR MANIPULAT? OR IMPROV? OR ENGINEER? OR DERIV?))

L15 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (GL!PHOSATE OR GL!FOSATE OR ROUNDUP? OR ROUND!UP? OR ROUND
UP? OR DICAMBA OR METHOXYBENZOIC ACID)

L16 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (CATERPILLAR? OR LOOPER? OR BORER? OR BUDBORER? OR LEPIDOPTERA? OR EREBIDAE OR NOCTUIDAE OR TORTRICIDAE OR ANTICARSIA OR

Appendix 3 – Annual general surveillance report in 2020/2021 season

Literature search – Bayer soybean GM products

Bayer Agriculture BV

L17 GEMMATALIS OR CHRYSODEIXIS OR PSEUDOPUSIA)
 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (INCLUDENS OR EPINOTIA OR CROCIDOSEMA OR APOREMA OR RACHIPLUSIA OR R. NU OR CHLORIDEA OR VIRESCENS OR VBC OR SBL OR SFL OR ARMYWORM? OR ARMY WORM? OR EARWORM? OR EAR WORM?)

L18 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (BOLLWORM? OR BOLL WORM? OR PODWORM? OR POD WORM? OR SPODOPTERA OR COSMIOIDES OR FRUGIPERDA OR HELICOVERPA OR ZEA OR ARMIGERA OR FAW OR CEW OR CBW)

L19 QUE SPE=ON ABB=ON PLU=ON (BT SOY? OR BT!SOY? OR BT!SOY? OR THURINGIENSIS SOY? OR THURINGIENSIS!SOY? OR THURINGIENSIS!SOY?)

L20 QUE SPE=ON ABB=ON PLU=ON STEARIDONIC ACID OR SDA OR (HIGH? OR INCRE? OR CHANG?) (5A) (OLEIC OR MONOUNSATURATED OR MONO!UNSATURATED OR MONO UNSATURATED OR MUFA OR FAT?)

L21 QUE SPE=ON ABB=ON PLU=ON (LOW? OR DECRE? OR REDUC?) (5A) (SATURATED OR PALMITIC OR STEARIC OR LINOLEIC OR POLYUNSATURATED OR POLY!UNSATURATED OR POLY UNSATURATED OR PUFA)

L22 QUE SPE=ON ABB=ON PLU=ON SOYABEANS+UF,NT/CT,ORGN

L23 QUE SPE=ON ABB=ON PLU=ON GENETIC ENGINEERING+UF,NT/CT OR GENETIC TRANSFORMATION+UF,NT/CT OR GENETICALLY ENGINEERED FOODS+UF,NT/CT OR GENETICALLY ENGINEERED ORGANISMS+UF,NT/CT OR FOOD BIOTECHNOLOGY+UF,NT/CT

L24 QUE SPE=ON ABB=ON PLU=ON (WEED CONTROL+UF,NT/CT OR INSECT CONTROL+UF,NT/CT) AND (LEPIDOPTERA+UF,NT2/CT,ORGN OR GLYPHOSATE+UF,NT/CT OR DICAMBA+UF,NT/CT)

L25 QUE SPE=ON ABB=ON PLU=ON SATURATED FATTY ACIDS+UF,NT/CT OR UNSATURATED FATTY ACIDS+UF,NT/CT

Search in SciSearch Database:

FILE 'SCISEARCH' ENTERED AT 11:08:18 ON 06 OCT 2020

L26 7 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5 OR L6) AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L27 13 SEA SPE=ON ABB=ON PLU=ON L7 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L28 3042 SEA SPE=ON ABB=ON PLU=ON L8 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L29 5 SEA SPE=ON ABB=ON PLU=ON L27 AND L28

L30 17 SEA SPE=ON ABB=ON PLU=ON L9 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L31 162 SEA SPE=ON ABB=ON PLU=ON (L10 OR L11) AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L32 274 SEA SPE=ON ABB=ON PLU=ON L12 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L33 4 SEA SPE=ON ABB=ON PLU=ON L13 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L34 455 SEA SPE=ON ABB=ON PLU=ON L30 OR L31 OR L32 OR L33

L35 9777 SEA SPE=ON ABB=ON PLU=ON L14 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L36 88 SEA SPE=ON ABB=ON PLU=ON L34 AND (L35 OR L28)

L37 92 SEA SPE=ON ABB=ON PLU=ON L15 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L38 102 SEA SPE=ON ABB=ON PLU=ON (L16 OR L17 OR L18) AND ED>=2020052

		8 AND ED<=20201005 AND PY>=2020	
L39	3	SEA SPE=ON ABB=ON PLU=ON	L19 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L40	6637	SEA SPE=ON ABB=ON PLU=ON	(L20 OR L21) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L41	6828	SEA SPE=ON ABB=ON PLU=ON	L37 OR L38 OR L40
L42	13	SEA SPE=ON ABB=ON PLU=ON	L41 AND L35 AND L28
L43	2	SEA SPE=ON ABB=ON PLU=ON	L39 AND L35
L44	14	SEA SPE=ON ABB=ON PLU=ON	L42 OR L43
L45	107	SEA SPE=ON ABB=ON PLU=ON	L26 OR L29 OR L36 OR L44

Search in CABA Database:

FILE 'CABA' ENTERED AT 11:09:00 ON 06 OCT 2020

L46	4	SEA SPE=ON ABB=ON PLU=ON	(L1 OR L2 OR L3 OR L4 OR L5 OR L6) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L47	5	SEA SPE=ON ABB=ON PLU=ON	L7 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L48	2088	SEA SPE=ON ABB=ON PLU=ON	L8 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L49	1366	SEA SPE=ON ABB=ON PLU=ON	L22 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L50	2088	SEA SPE=ON ABB=ON PLU=ON	L48 OR L49
L51	3	SEA SPE=ON ABB=ON PLU=ON	L47 AND L50
L52	6	SEA SPE=ON ABB=ON PLU=ON	L9 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L53	47	SEA SPE=ON ABB=ON PLU=ON	(L10 OR L11) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L54	103	SEA SPE=ON ABB=ON PLU=ON	L12 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L55	5	SEA SPE=ON ABB=ON PLU=ON	L13 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L56	160	SEA SPE=ON ABB=ON PLU=ON	L52 OR L53 OR L54 OR L55
L57	2457	SEA SPE=ON ABB=ON PLU=ON	L14 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L58	1007	SEA SPE=ON ABB=ON PLU=ON	L23 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L59	2461	SEA SPE=ON ABB=ON PLU=ON	L57 OR L58
L60	26	SEA SPE=ON ABB=ON PLU=ON	L56 AND (L50 OR L59)
L61	63	SEA SPE=ON ABB=ON PLU=ON	L15 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L62	54	SEA SPE=ON ABB=ON PLU=ON	(L16 OR L17 OR L18) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L63	1	SEA SPE=ON ABB=ON PLU=ON	L19 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L64	2724	SEA SPE=ON ABB=ON PLU=ON	(L20 OR L21) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L65	1786	SEA SPE=ON ABB=ON PLU=ON	(L24 OR L25) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L66	3918	SEA SPE=ON ABB=ON PLU=ON	L61 OR L62 OR L64 OR L65
L67	9	SEA SPE=ON ABB=ON PLU=ON	L66 AND L59 AND L50
L68	1	SEA SPE=ON ABB=ON PLU=ON	L63 AND L59
L69	10	SEA SPE=ON ABB=ON PLU=ON	L68 OR L67

L70 41 SEA SPE=ON ABB=ON PLU=ON L46 OR L51 OR L60 OR L69

Deduplication of Hit-sets from both sources:

FILE 'CABA, SCISEARCH' ENTERED AT 11:10:07 ON 06 OCT 2020
CHARGED TO COST=SLB76724REGEU
L71 139 DUP REM L70 L45 (9 DUPLICATES REMOVED)
 ANSWERS '1-41' FROM FILE CABA
 ANSWERS '42-139' FROM FILE SCISEARCH
 D L71 1-139 ALL PY

FILE SCISEARCH

FILE COVERS 1974 TO 5 Oct 2020 (20201005/ED)

To bring you the most up-to-date SciSearch information,
SciSearch SDIs now run on Mondays.

FILE CABA

FILE LAST UPDATED: 30 SEP 2020 <20200930/UP>
FILE COVERS 1973 TO DATE

Bayer GM Soybean products literature search – Second quarter (October 2020 - January 2021)

Translation of query terms into STN search language:

(FILE 'STNGUIDE' ENTERED AT 13:16:39 ON 01 FEB 2021)

L1 QUE SPE=ON ABB=ON PLU=ON 40!3!2 OR MON 04032? OR MON04032?
OR MON 04032? OR MON04032? OR MON EMPTY SET4EMPTY SET32? OR
MONEMPTY SET4EMPTY SET32? OR MON!04032? OR MON!04032? OR
MON!EMPTY SET4EMPTY SET32?

L2 QUE SPE=ON ABB=ON PLU=ON MON 89788? OR MON89788? OR
MON!89788? OR MON 87769? OR MON87769? OR MON!87769?

L3 QUE SPE=ON ABB=ON PLU=ON MON 87701? OR MON87701? OR MON
87701? OR MON87701? OR MON 877EMPTY SET1? OR MON877EMPTY SET1?
OR MON!87701? OR MON!87701? OR MON!877EMPTY SET1?

L4 QUE SPE=ON ABB=ON PLU=ON MON 87705? OR MON87705? OR MON
87705? OR MON87705? OR MON 877EMPTY SET5? OR MON877EMPTY SET5?
OR MON!87705? OR MON!87705? OR MON!877EMPTY SET5?

L5 QUE SPE=ON ABB=ON PLU=ON MON 87708? OR MON87708? OR MON
87708? OR MON87708? OR MON 877EMPTY SET8? OR MON877EMPTY SET8?
OR MON!87708? OR MON!87708? OR MON!877EMPTY SET8?

L6 QUE SPE=ON ABB=ON PLU=ON MON 87751? OR MON87751? OR
MON!87751?

L7 QUE SPE=ON ABB=ON PLU=ON A5547!127 OR A5547 127 OR ACS!GM006
? OR ACS!GMO06? OR ACS!GMEMPTY SETEMPTY SET6? OR ACS GM006? OR
ACS GMO06? OR ACS GGMEMPTY SETEMPTY SET6?

L8 QUE SPE=ON ABB=ON PLU=ON ROUNDUPREADY? OR ROUND!UP!READY?
OR ROUND!UP READY? OR ROUNDUP READY? OR ROUND UP READY? OR
RR2Y? OR RRIIY? OR INTACTA OR RR2 PRO? OR RRII PRO? OR
VISTIVE? OR VISTIVE? GOLD? OR XTEND? OR XTENDFLEX? OR XTEND
FLEX?

L9 QUE SPE=ON ABB=ON PLU=ON SOYBEAN? OR SOY? OR GLYCINE MAX OR
G. MAX OR SOY BEAN

L10 QUE SPE=ON ABB=ON PLU=ON CP4EPSPS? OR CP4 EPSPS? OR
5(W) (ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR
ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR ENOL!PYRUVYL!
SHIKIMATE!) (W) 3 PHOSPHATE SYNTHASE

L11 QUE SPE=ON ABB=ON PLU=ON DICAMBA ?OXYGENASE OR DICAMBA
?DEMETHYLASE OR DMO? PAT OR PHOSPHINOTHRICIN OR N!ACETYL!TRANSF
ERASE OR N!ACETYLTRANSFERASE OR N!ACETYL TRANSFERASE OR N
ACETYL!TRANSFERASE OR N ACETYLTRANSFERASE OR N ACETYL TRANSFERA
SE

L12 QUE SPE=ON ABB=ON PLU=ON CRY1AC OR CRYIAC OR CRY1 AC OR CRY
1 AC OR CRY 1AC OR CRYI AC OR CRY I AC OR CRY IAC OR CRY1A105
OR CRY1A 105 OR CRY 1A 105 OR CRY 1A105 OR CRYIA105 OR CRYIA
105 OR CRY IA 105 OR CRY IA105 OR CRY1A.105

L13 QUE SPE=ON ABB=ON PLU=ON CRY2AB? OR CRY2 AB? OR CRY 2 AB?
OR CRY 2AB? OR CRYIIAB? OR CRYII AB? OR CRY II AB? OR CRY
IIAB?

L14 QUE SPE=ON ABB=ON PLU=ON PJ!D6D OR PJD6D OR PJ D6D OR
NC!FAD3 OR NCFAD3 OR NC FAD3 OR NC!FAD 3 OR NCFAD 3 OR NC FAD
3 OR DESATURASE?

L15 QUE SPE=ON ABB=ON PLU=ON (RNA? OR DSRNA? OR SIRNA?) (5A) (FAT!
B? OR FAD!2? OR FAT B? OR FAD 2? OR FADB? OR FAD2? OR THIOESTER
ASE? OR DESATURASE?)

L16 QUE SPE=ON ABB=ON PLU=ON GMO? OR LMO? OR GM OR GE OR

TRANSGEN? OR ((GENETIC? OR LIVING OR BIOTECH?) (5A) (MODIF? OR TRANSFORM? OR MANIPULAT? OR IMPROV? OR ENGINEER? OR DERIV?))

L17 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (GL!PHOSATE OR GL!FOSATE OR ROUNDUP? OR ROUND!UP? OR ROUNDUP? OR DICAMBA OR METHOXYBENZOIC ACID OR GLUFOSINATE OR GLUPHOSINATE OR BASTA OR IGNITE OR LIBERTY)

L18 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (CATERPILLAR? OR LOOPER? OR BORER? OR BUDBORER? OR LEPIDOPTERA? OR EREBIDAE OR NOCTUIDAE OR TORTRICIDAE OR ANTICARSIA OR GEMMATALIS OR CHRYSODEIXIS OR PSEUDOPUSIA)

L19 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (INCLUDENS OR EPINOTIA OR CROCIDOSEMA OR APOREMA OR RACHIPLUSIA OR R. NU OR CHLORIDEA OR VIRESCENS OR VBC OR SBL OR SFL OR ARMYWORM? OR ARMY WORM? OR EARWORM? OR EAR WORM?)

L20 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (BOLLWORM? OR BOLL WORM? OR PODWORM? OR POD WORM? OR SPODOPTERA OR COSMIOIDES OR FRUGIPERDA OR HELICOVERPA OR ZEA OR ARMIGERA OR FAW OR CEW OR CBW)

L21 QUE SPE=ON ABB=ON PLU=ON (BT SOY? OR BT SOY? OR BT!SOY? OR THURINGIENSIS SOY? OR THURINGIENSIS SOY? OR THURINGIENSIS!SOY?)

L22 QUE SPE=ON ABB=ON PLU=ON STEARIDONIC ACID OR SDA OR (HIGH? OR INCRE? OR CHANG?) (5A) (OLEIC OR MONOUNSATURATED OR MONO!UNSATURATED OR MONO UNSATURATED OR MUFA OR FAT?)

L23 QUE SPE=ON ABB=ON PLU=ON (LOW? OR DECRE? OR REDUC?) (5A) (SATURATED OR PALMITIC OR STEARIC OR LINOLEIC OR POLYUNSATURATED OR POLY!UNSATURATED OR POLY UNSATURATED OR PUFA)

L24 QUE SPE=ON ABB=ON PLU=ON SOYABEANS+UF,NT/CT,ORGN

L25 QUE SPE=ON ABB=ON PLU=ON GENETIC ENGINEERING+UF,NT/CT OR GENETIC TRANSFORMATION+UF,NT/CT OR GENETICALLY ENGINEERED FOODS+UF,NT/CT OR GENETICALLY ENGINEERED ORGANISMS+UF,NT/CT OR FOOD BIOTECHNOLOGY+UF,NT/CT

L26 QUE SPE=ON ABB=ON PLU=ON (WEED CONTROL+UF,NT/CT OR INSECT CONTROL+UF,NT/CT) AND (GLYPHOSATE+UF,NT/CT OR DICAMBA+UF,NT/CT OR GLUFOSINATE+UF,NT/CT OR LEPIDOPTERA+UF,NT/CT,ORGN)

L27 QUE SPE=ON ABB=ON PLU=ON SATURATED FATTY ACIDS+UF,NT/CT OR UNSATURATED FATTY ACIDS+UF,NT/CT

Search in SciSearch Database:

FILE 'SCISEARCH' ENTERED AT 13:17:36 ON 01 FEB 2021

L28 2 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7) AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L29 12 SEA SPE=ON ABB=ON PLU=ON L8 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L30 2725 SEA SPE=ON ABB=ON PLU=ON L9 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L31 5 SEA SPE=ON ABB=ON PLU=ON L29 AND L30

L32 81 SEA SPE=ON ABB=ON PLU=ON (L10 OR L11) AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L33 38 SEA SPE=ON ABB=ON PLU=ON (L12 OR L13) AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L34 275 SEA SPE=ON ABB=ON PLU=ON L14 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L35	4	SEA SPE=ON	ABB=ON	PLU=ON	L15 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L36	390	SEA SPE=ON	ABB=ON	PLU=ON	L32 OR L33 OR L34 OR L35
L37	8641	SEA SPE=ON	ABB=ON	PLU=ON	L16 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L38	77	SEA SPE=ON	ABB=ON	PLU=ON	L36 AND (L37 OR L30)
L39	84	SEA SPE=ON	ABB=ON	PLU=ON	L17 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L40	74	SEA SPE=ON	ABB=ON	PLU=ON	(L18 OR L19 OR L20) AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L41	2	SEA SPE=ON	ABB=ON	PLU=ON	L21 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L42	6009	SEA SPE=ON	ABB=ON	PLU=ON	(L22 OR L23) AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L43	6162	SEA SPE=ON	ABB=ON	PLU=ON	L39 OR L40 OR L42
L44	9	SEA SPE=ON	ABB=ON	PLU=ON	L43 AND L37 AND L30
L45	2	SEA SPE=ON	ABB=ON	PLU=ON	L41 AND L37
L46	10	SEA SPE=ON	ABB=ON	PLU=ON	L44 OR L45
L47	91	SEA SPE=ON	ABB=ON	PLU=ON	L28 OR L31 OR L38 OR L46

Search in CABA Database:

FILE 'CABA' ENTERED AT 13:18:31 ON 01 FEB 2021

L48	2	SEA SPE=ON	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7) AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L49	10	SEA SPE=ON	ABB=ON	PLU=ON	L8 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L50	2009	SEA SPE=ON	ABB=ON	PLU=ON	L9 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L51	1353	SEA SPE=ON	ABB=ON	PLU=ON	L24 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L52	2009	SEA SPE=ON	ABB=ON	PLU=ON	L50 OR L51
L53	5	SEA SPE=ON	ABB=ON	PLU=ON	L49 AND L52
L54	42	SEA SPE=ON	ABB=ON	PLU=ON	(L10 OR L11) AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L55	27	SEA SPE=ON	ABB=ON	PLU=ON	(L12 OR L13) AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L56	130	SEA SPE=ON	ABB=ON	PLU=ON	L14 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L57	1	SEA SPE=ON	ABB=ON	PLU=ON	L15 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L58	196	SEA SPE=ON	ABB=ON	PLU=ON	L54 OR L55 OR L56 OR L57
L59	2546	SEA SPE=ON	ABB=ON	PLU=ON	L16 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L60	1173	SEA SPE=ON	ABB=ON	PLU=ON	L25 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L61	2551	SEA SPE=ON	ABB=ON	PLU=ON	L59 OR L60
L62	61	SEA SPE=ON	ABB=ON	PLU=ON	L58 AND (L52 OR L61)
L63	71	SEA SPE=ON	ABB=ON	PLU=ON	L17 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L64	66	SEA SPE=ON	ABB=ON	PLU=ON	(L18 OR L19 OR L20) AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L65	3	SEA SPE=ON	ABB=ON	PLU=ON	L21 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

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                26 AND PY>=2020
L66          2567 SEA SPE=ON  ABB=ON  PLU=ON  (L22 OR L23) AND ED>=20201005 AND
                ED<=20210126 AND PY>=2020
L67          1840 SEA SPE=ON  ABB=ON  PLU=ON  (L26 OR L27) AND ED>=20201005 AND
                ED<=20210126 AND PY>=2020
L68          3866 SEA SPE=ON  ABB=ON  PLU=ON  L63 OR L64 OR L66 OR L67
L69          14 SEA SPE=ON  ABB=ON  PLU=ON  L68 AND L61 AND L52
L70          3 SEA SPE=ON  ABB=ON  PLU=ON  L65 AND L61
L71          16 SEA SPE=ON  ABB=ON  PLU=ON  L70 OR L69
L72          77 SEA SPE=ON  ABB=ON  PLU=ON  L48 OR L53 OR L62 OR L71

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Deduplication of Hit-sets from both sources:

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FILE 'CABA, SCISEARCH' ENTERED AT 13:19:52 ON 01 FEB 2021
CHARGED TO COST=SLB76724 REG EU
L73          157 DUP REM L72 L47 (11 DUPLICATES REMOVED)
                ANSWERS '1-77' FROM FILE CABA
                ANSWERS '78-157' FROM FILE SCISEARCH
                D L73 1-157 ALL PY

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FILE SCISEARCH

FILE COVERS 1974 TO 26 Jan 2021 (20210126/ED)

To bring you the most up-to-date SciSearch information,
SciSearch SDIs now run on Mondays.

FILE CABA

FILE LAST UPDATED: 25 JAN 2021 <20210125/UP>
FILE COVERS 1973 TO DATE

Bayer GM Soybean products literature search – Third quarter (February 2021 – May 2021)

Translation of query terms into STN search language:

(FILE 'STNGUIDE' ENTERED AT 12:05:39 ON 01 JUN 2021)

L1 QUE SPE=ON ABB=ON PLU=ON 40!3!2 OR MON 04032? OR MON04032?
OR MON 04032? OR MON04032? OR MON EMPTY SET4EMPTY SET32? OR
MONEMPTY SET4EMPTY SET32? OR MON!04032? OR MON!04032? OR
MON!EMPTY SET4EMPTY SET32?

L2 QUE SPE=ON ABB=ON PLU=ON MON 89788? OR MON89788? OR
MON!89788? OR MON 87769? OR MON87769? OR MON!87769?

L3 QUE SPE=ON ABB=ON PLU=ON MON 87701? OR MON87701? OR MON
87701? OR MON87701? OR MON 877EMPTY SET1? OR MON877EMPTY SET1?
OR MON!87701? OR MON!87701? OR MON!877EMPTY SET1?

L4 QUE SPE=ON ABB=ON PLU=ON MON 87705? OR MON87705? OR MON
87705? OR MON87705? OR MON 877EMPTY SET5? OR MON877EMPTY SET5?
OR MON!87705? OR MON!87705? OR MON!877EMPTY SET5?

L5 QUE SPE=ON ABB=ON PLU=ON MON 87708? OR MON87708? OR MON
87708? OR MON87708? OR MON 877EMPTY SET8? OR MON877EMPTY SET8?
OR MON!87708? OR MON!87708? OR MON!877EMPTY SET8?

L6 QUE SPE=ON ABB=ON PLU=ON MON 87751? OR MON87751? OR
MON!87751?

L7 QUE SPE=ON ABB=ON PLU=ON A5547!127 OR A5547 127 OR ACS!GM006
? OR ACS!GMO06? OR ACS!GMEMPTY SETEMPTY SET6? OR ACS GM006? OR
ACS GMO06? OR ACS GGMEMPTY SETEMPTY SET6?

L8 QUE SPE=ON ABB=ON PLU=ON ROUNDUPREADY? OR ROUND!UP!READY?
OR ROUND!UP READY? OR ROUNDUP READY? OR ROUND UP READY? OR
RR2Y? OR RRIIY? OR INTACTA OR RR2 PRO? OR RRII PRO? OR
VISTIVE? OR VISTIVE? GOLD? OR XTEND? OR XTENDFLEX? OR XTEND
FLEX?

L9 QUE SPE=ON ABB=ON PLU=ON SOYBEAN? OR SOY? OR GLYCINE MAX OR
G. MAX OR SOY BEAN

L10 QUE SPE=ON ABB=ON PLU=ON CP4EPSPS? OR CP4 EPSPS? OR
5(W) (ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR
ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR ENOL!PYRUVYL!
SHIKIMATE!) (W) 3 PHOSPHATE SYNTHASE

L11 QUE SPE=ON ABB=ON PLU=ON DICAMBA ?OXYGENASE OR DICAMBA
?DEMETHYLASE OR DMO? PAT OR PHOSPHINOTHRICIN OR N!ACETYL!TRANSF
ERASE OR N!ACETYLTRANSFERASE OR N!ACETYL TRANSFERASE OR N
ACETYL!TRANSFERASE OR N ACETYLTRANSFERASE OR N ACETYL TRANSFERA
SE

L12 QUE SPE=ON ABB=ON PLU=ON CRY1AC OR CRYIAC OR CRY1 AC OR CRY
1 AC OR CRY 1AC OR CRYI AC OR CRY I AC OR CRY IAC OR CRY1A105
OR CRY1A 105 OR CRY 1A 105 OR CRY 1A105 OR CRYIA105 OR CRYIA
105 OR CRY IA 105 OR CRY IA105 OR CRY1A.105

L13 QUE SPE=ON ABB=ON PLU=ON CRY2AB? OR CRY2 AB? OR CRY 2 AB?
OR CRY 2AB? OR CRYIIAB? OR CRYII AB? OR CRY II AB? OR CRY
IIAB?

L14 QUE SPE=ON ABB=ON PLU=ON PJ!D6D OR PJD6D OR PJ D6D OR
NC!FAD3 OR NCFAD3 OR NC FAD3 OR NC!FAD 3 OR NCFAD 3 OR NC FAD
3 OR DESATURASE?

L15 QUE SPE=ON ABB=ON PLU=ON (RNA? OR DSRNA? OR SIRNA?) (5A) (FAT!
B? OR FAD!2? OR FAT B? OR FAD 2? OR FADB? OR FAD2? OR THIOESTER
ASE? OR DESATURASE?)

L16 QUE SPE=ON ABB=ON PLU=ON GMO? OR LMO? OR GM OR GE OR

TRANSGEN? OR ((GENETIC? OR LIVING OR BIOTECH?) (5A) (MODIF? OR TRANSFORM? OR MANIPULAT? OR IMPROV? OR ENGINEER? OR DERIV?))
 L17 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (GL!PHOSATE OR GL!FOSATE OR ROUNDUP? OR ROUND!UP? OR ROUNDUP? OR DICAMBA OR METHOXYBENZOIC ACID OR GLUFOSINATE OR GLUPHOSINATE OR BASTA OR IGNITE OR LIBERTY)
 L18 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (CATERPILLAR? OR LOOPER? OR BORER? OR BUDBORER? OR LEPIDOPTERA? OR EREBIDAE OR NOCTUIDAE OR TORTRICIDAE OR ANTICARSIA OR GEMMATALIS OR CHRYSODEIXIS OR PSEUDOPUSIA)
 L19 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (INCLUDENS OR EPINOTIA OR CROCIDOSEMA OR APOREMA OR RACHIPLUSIA OR R. NU OR CHLORIDEA OR VIRESCENS OR VBC OR SBL OR SFL OR ARMYWORM? OR ARMY WORM? OR EARWORM? OR EAR WORM?)
 L20 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (BOLLWORM? OR BOLL WORM? OR PODWORM? OR POD WORM? OR SPODOPTERA OR COSMIOIDES OR FRUGIPERDA OR HELICOVERPA OR ZEA OR ARMIGERA OR FAW OR CEW OR CBW)
 L21 QUE SPE=ON ABB=ON PLU=ON (BT SOY? OR BT SOY? OR BT!SOY? OR THURINGIENSIS SOY? OR THURINGIENSIS SOY? OR THURINGIENSIS!SOY?)
 L22 QUE SPE=ON ABB=ON PLU=ON STEARIDONIC ACID OR SDA OR (HIGH? OR INCRE? OR CHANG?) (5A) (OLEIC OR MONOUNSATURATED OR MONO!UNSATURATED OR MONO UNSATURATED OR MUFA OR FAT?)
 L23 QUE SPE=ON ABB=ON PLU=ON (LOW? OR DECRE? OR REDUC?) (5A) (SATURATED OR PALMITIC OR STEARIC OR LINOLEIC OR POLYUNSATURATED OR POLY!UNSATURATED OR POLY UNSATURATED OR PUFA)
 L24 QUE SPE=ON ABB=ON PLU=ON SOYABEANS+UF,NT/CT,ORGN
 L25 QUE SPE=ON ABB=ON PLU=ON GENETIC ENGINEERING+UF,NT/CT OR GENETIC TRANSFORMATION+UF,NT/CT OR GENETICALLY ENGINEERED FOODS+UF,NT/CT OR GENETICALLY ENGINEERED ORGANISMS+UF,NT/CT OR FOOD BIOTECHNOLOGY+UF,NT/CT
 L26 QUE SPE=ON ABB=ON PLU=ON (WEED CONTROL+UF,NT/CT OR INSECT CONTROL+UF,NT/CT) AND (GLYPHOSATE+UF,NT/CT OR DICAMBA+UF,NT/CT OR GLUFOSINATE+UF,NT/CT OR LEPIDOPTERA+UF,NT/CT,ORGN)
 L27 QUE SPE=ON ABB=ON PLU=ON SATURATED FATTY ACIDS+UF,NT/CT OR UNSATURATED FATTY ACIDS+UF,NT/CT

Search in SciSearch Database:

FILE 'SCISEARCH' ENTERED AT 12:06:22 ON 01 JUN 2021

L28 2 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
 L29 8 SEA SPE=ON ABB=ON PLU=ON L8 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
 L30 2827 SEA SPE=ON ABB=ON PLU=ON L9 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
 L31 2 SEA SPE=ON ABB=ON PLU=ON L29 AND L30
 L32 102 SEA SPE=ON ABB=ON PLU=ON (L10 OR L11) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
 L33 37 SEA SPE=ON ABB=ON PLU=ON (L12 OR L13) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
 L34 239 SEA SPE=ON ABB=ON PLU=ON L14 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
 L35 1 SEA SPE=ON ABB=ON PLU=ON L15 AND ED>=20210126 AND ED<=20210531 AND PY>=2020

	31 AND PY>=2020		
L36	375 SEA SPE=ON ABB=ON PLU=ON	L32 OR L33 OR L34 OR L35	
L37	9833 SEA SPE=ON ABB=ON PLU=ON	L16 AND ED>=20210126 AND ED<=20210531 AND PY>=2020	
L38	65 SEA SPE=ON ABB=ON PLU=ON	L36 AND (L37 OR L30)	
L39	104 SEA SPE=ON ABB=ON PLU=ON	L17 AND ED>=20210126 AND ED<=20210531 AND PY>=2020	
L40	98 SEA SPE=ON ABB=ON PLU=ON	(L18 OR L19 OR L20) AND ED>=20210126 AND ED<=20210531 AND PY>=2020	
L41	1 SEA SPE=ON ABB=ON PLU=ON	L21 AND ED>=20210126 AND ED<=20210531 AND PY>=2020	
L42	6613 SEA SPE=ON ABB=ON PLU=ON	(L22 OR L23) AND ED>=20210126 AND ED<=20210531 AND PY>=2020	
L43	6813 SEA SPE=ON ABB=ON PLU=ON	L39 OR L40 OR L42	
L44	21 SEA SPE=ON ABB=ON PLU=ON	L43 AND L37 AND L30	
L45	1 SEA SPE=ON ABB=ON PLU=ON	L41 AND L37	
L46	21 SEA SPE=ON ABB=ON PLU=ON	L44 OR L45	
L47	83 SEA SPE=ON ABB=ON PLU=ON	L28 OR L31 OR L38 OR L46	

Search in CABA Database:

FILE 'CABA' ENTERED AT 12:07:09 ON 01 JUN 2021

L48	5 SEA SPE=ON ABB=ON PLU=ON	(L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L49	20 SEA SPE=ON ABB=ON PLU=ON	L8 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L50	2663 SEA SPE=ON ABB=ON PLU=ON	L9 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L51	1933 SEA SPE=ON ABB=ON PLU=ON	L24 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L52	2663 SEA SPE=ON ABB=ON PLU=ON	L50 OR L51
L53	14 SEA SPE=ON ABB=ON PLU=ON	L49 AND L52
L54	71 SEA SPE=ON ABB=ON PLU=ON	(L10 OR L11) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L55	40 SEA SPE=ON ABB=ON PLU=ON	(L12 OR L13) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L56	119 SEA SPE=ON ABB=ON PLU=ON	L14 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L57	3 SEA SPE=ON ABB=ON PLU=ON	L15 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L58	227 SEA SPE=ON ABB=ON PLU=ON	L54 OR L55 OR L56 OR L57
L59	3005 SEA SPE=ON ABB=ON PLU=ON	L16 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L60	1244 SEA SPE=ON ABB=ON PLU=ON	L25 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L61	3005 SEA SPE=ON ABB=ON PLU=ON	L59 OR L60
L62	77 SEA SPE=ON ABB=ON PLU=ON	L58 AND (L52 OR L61)
L63	128 SEA SPE=ON ABB=ON PLU=ON	L17 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L64	110 SEA SPE=ON ABB=ON PLU=ON	(L18 OR L19 OR L20) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L65	6 SEA SPE=ON ABB=ON PLU=ON	L21 AND ED>=20210126 AND ED<=20210531 AND PY>=2020

L66	2947	SEA	SPE=ON	ABB=ON	PLU=ON	(L22 OR L23) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L67	2034	SEA	SPE=ON	ABB=ON	PLU=ON	(L26 OR L27) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L68	4448	SEA	SPE=ON	ABB=ON	PLU=ON	L63 OR L64 OR L66 OR L67
L69	31	SEA	SPE=ON	ABB=ON	PLU=ON	L68 AND L61 AND L52
L70	6	SEA	SPE=ON	ABB=ON	PLU=ON	L65 AND L61
L71	33	SEA	SPE=ON	ABB=ON	PLU=ON	L70 OR L69
L72	111	SEA	SPE=ON	ABB=ON	PLU=ON	L48 OR L53 OR L62 OR L71

Deduplication of Hit-sets from both sources:

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FILE 'CABA, SCISEARCH' ENTERED AT 12:08:13 ON 01 JUN 2021
CHARGED TO COST=SLB76724 REG EU
L73      179 DUP REM L72 L47 (15 DUPLICATES REMOVED)
          ANSWERS '1-111' FROM FILE CABA
          ANSWERS '112-179' FROM FILE SCISEARCH
          D L73 1-179 ALL PY

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FILE SCISEARCH

FILE COVERS 1974 TO 31 May 2021 (20210531/ED)

To bring you the most up-to-date SciSearch information,
SciSearch SDIs now run on Mondays.

FILE CABA

FILE LAST UPDATED: 26 MAY 2021 <20210526/UP>
FILE COVERS 1973 TO DATE

Literature search for the newly authorised product MON 87708 × MON 89788 × A5547-127 covering the timespan from the adoption of EFSA scientific opinion till the time of the authorisation (January 2019 – October 2020)¹

Translation of query terms into STN search language:

(FILE 'STNGUIDE' ENTERED AT 11:34:57 ON 08 DEC 2020)

L1 QUE SPE=ON ABB=ON PLU=ON MON 87708? OR MON87708? OR MON
87708? OR MON87708? OR MON 877EMPTY SET8? OR MON877EMPTY SET8?
OR MON!87708? OR MON!87708? OR MON!877EMPTY SET8?
L2 QUE SPE=ON ABB=ON PLU=ON MON 89788? OR MON89788? OR
MON!89788? OR A5547!127 OR A557 127
L3 QUE SPE=ON ABB=ON PLU=ON ACS!GM006? OR ACS!GMO06? OR
ACS!GMEMPTY SETEMPTY SET6? OR ACS GM006? OR ACS GMO06? OR ACS
GMEMPTY SETEMPTY SET6?
L4 QUE SPE=ON ABB=ON PLU=ON XTENDFLEX? OR XTEND FLEX?
L5 QUE SPE=ON ABB=ON PLU=ON SOYBEAN? OR SOY? OR GLYCINE MAX OR
G. MAX OR SOY BEAN
L6 QUE SPE=ON ABB=ON PLU=ON DICAMBA ?OXYGENASE OR DICAMBA
?DEMETHYLASE OR DMO? OR CP4EPSPS? OR CP4 EPSPS?
L7 QUE SPE=ON ABB=ON PLU=ON 5(W) (ENOLPYRUVYLSHIKIMATE OR ENOL
PYRUVYL SHIKIMATE OR ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYLSHIKI
MATE OR ENOL!PYRUVYL!SHIKIMATE!) (W)3 PHOSPHATE SYNTHASE
L8 QUE SPE=ON ABB=ON PLU=ON PAT OR PHOSPHINOTHRICIN OR
N!ACETYL!TRANSFERASE OR N!ACETYLTRANSFERASE OR N!ACETYL
TRANSFERASE OR N ACETYL!TRANSFERASE OR N ACETYLTRANSFERASE OR
N ACETYL TRANSFERASE
L9 QUE SPE=ON ABB=ON PLU=ON GMO? OR LMO? OR GM OR GE OR
TRANSGEN? OR ((GENETIC? OR LIVING OR BIOTECH?) (5A) (MODIF? OR
TRANSFORM? OR MANIPULAT? OR IMPROV? OR ENGINEER? OR DERIV?))
L10 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (DICAMBA OR METHOXYBENZOIC ACID OR GL!PHOSATE OR GL!FOSATE
OR ROUNDUP? OR ROUND UP? OR ROUND!UP? OR GLUFOSINATE OR
GLUFOSINATE OR BASTA OR IGNITE OR LIBERTY)
L11 QUE SPE=ON ABB=ON PLU=ON SOYABEANS+UF,NT/CT,ORGN
L12 QUE SPE=ON ABB=ON PLU=ON GENETIC ENGINEERING+UF,NT/CT OR
GENETIC TRANSFORMATION+UF,NT/CT OR GENETICALLY ENGINEERED
FOODS+UF,NT/CT OR GENETICALLY ENGINEERED ORGANISMS+UF,NT/CT OR
FOOD BIOTECHNOLOGY+UF,NT/CT
L13 QUE SPE=ON ABB=ON PLU=ON WEED CONTROL+UF,NT/CT AND (DICAMBA+
UF,NT/CT OR GLYPHOSATE+UF,NT/CT OR GLUFOSINATE+UF,NT/CT)

Search in SciSearch Database:

FILE 'SCISEARCH' ENTERED AT 11:35:34 ON 08 DEC 2020

¹ For the period between October 2020 – May 2021, the literature search for the newly authorised product (MON 87708 × MON 89788 × A5547-127) was covered by the Bayer GM soybean products literature search (second and third quarters) as the later searches were conducted after incorporating the unique keywords of the newly authorised product.

L14 16 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3) AND ED>=20190101
AND ED<=20201005 AND PY>=2019

L15 1 SEA SPE=ON ABB=ON PLU=ON L4 AND ED>=20190101 AND ED<=2020100
5 AND PY>=2019

L16 12255 SEA SPE=ON ABB=ON PLU=ON L5 AND ED>=20190101 AND ED<=2020100
5 AND PY>=2019

L17 1 SEA SPE=ON ABB=ON PLU=ON L15 AND L16

L18 1864 SEA SPE=ON ABB=ON PLU=ON (L6 OR L7 OR L8) AND ED>=20190101
AND ED<=20201005 AND PY>=2019

L19 40658 SEA SPE=ON ABB=ON PLU=ON L9 AND ED>=20190101 AND ED<=2020100
5 AND PY>=2019

L20 117 SEA SPE=ON ABB=ON PLU=ON L18 AND (L19 OR L16)

L21 410 SEA SPE=ON ABB=ON PLU=ON L10 AND ED>=20190101 AND ED<=202010
05 AND PY>=2019

L22 33 SEA SPE=ON ABB=ON PLU=ON L21 AND L19 AND L16

L23 155 SEA SPE=ON ABB=ON PLU=ON L14 OR L17 OR L20 OR L22

Search in CABA Database:

FILE 'CABA' ENTERED AT 11:35:50 ON 08 DEC 2020

L24 9 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3) AND ED>=20190101
AND ED<=20201005 AND PY>=2019

L25 2 SEA SPE=ON ABB=ON PLU=ON L4 AND ED>=20190101 AND ED<=2020100
5 AND PY>=2019

L26 8860 SEA SPE=ON ABB=ON PLU=ON L5 AND ED>=20190101 AND ED<=2020100
5 AND PY>=2019

L27 5880 SEA SPE=ON ABB=ON PLU=ON L11 AND ED>=20190101 AND ED<=202010
05 AND PY>=2019

L28 8860 SEA SPE=ON ABB=ON PLU=ON L26 OR L27

L29 2 SEA SPE=ON ABB=ON PLU=ON L25 AND L28

L30 509 SEA SPE=ON ABB=ON PLU=ON (L6 OR L7 OR L8) AND ED>=20190101
AND ED<=20201005 AND PY>=2019

L31 11176 SEA SPE=ON ABB=ON PLU=ON L9 AND ED>=20190101 AND ED<=2020100
5 AND PY>=2019

L32 5148 SEA SPE=ON ABB=ON PLU=ON L12 AND ED>=20190101 AND ED<=202010
05 AND PY>=2019

L33 11195 SEA SPE=ON ABB=ON PLU=ON L31 OR L32

L34 91 SEA SPE=ON ABB=ON PLU=ON L30 AND (L33 OR L28)

L35 281 SEA SPE=ON ABB=ON PLU=ON L10 AND ED>=20190101 AND ED<=202010
05 AND PY>=2019

L36 236 SEA SPE=ON ABB=ON PLU=ON L13 AND ED>=20190101 AND ED<=202010
05 AND PY>=2019

L37 456 SEA SPE=ON ABB=ON PLU=ON L35 OR L36

L38 28 SEA SPE=ON ABB=ON PLU=ON L37 AND L33 AND L28

L39 119 SEA SPE=ON ABB=ON PLU=ON L24 OR L29 OR L34 OR L38

Deduplication of Hit-sets from both sources:

FILE 'CABA, SCISEARCH' ENTERED AT 11:36:19 ON 08 DEC 2020

CHARGED TO COST=SLB76724 REG EU

L40 224 DUP REM L39 L23 (50 DUPLICATES REMOVED)

ANSWERS '1-118' FROM FILE CABA
ANSWERS '119-224' FROM FILE SCISEARCH

FILE SCISEARCH

FILE COVERS 1974 TO 7 Dec 2020 (20201207/ED)

To bring you the most up-to-date SciSearch information,
SciSearch SDIs now run on Mondays.

FILE CABA

FILE LAST UPDATED: 2 DEC 2020 <20201202/UP>
FILE COVERS 1973 TO DATE

Literature search for the newly authorised product MON 87751 × MON 87701 × MON 87708 × MON 89788 covering the timespan from the adoption of EFSA scientific opinion till the time of the authorisation (January 2019 – January 2021)²

Translation of query terms into STN search language:

```
(FILE 'STNGUIDE' ENTERED AT 12:28:23 ON 09 MAR 2021)
CHARGED TO COST=SLB76724 REG PRO
DEL HIS Y
L1      QUE SPE=ON  ABB=ON  PLU=ON  MON 89788? OR MON89788? OR
        MON!89788?
L2      QUE SPE=ON  ABB=ON  PLU=ON  MON 87701? OR MON87701? OR MON
        87701? OR MON87701? OR MON 877EMPTY SET1? OR MON877EMPTY SET1?
        OR MON!87701? OR MON!87701? OR MON!877EMPTY SET1?
L3      QUE SPE=ON  ABB=ON  PLU=ON  MON 87708? OR MON87708? OR MON
        87708? OR MON87708? OR MON 877EMPTY SET8? OR MON877EMPTY SET8?
        OR MON!87708? OR MON!87708? OR MON!877EMPTY SET8?
L4      QUE SPE=ON  ABB=ON  PLU=ON  MON 87751? OR MON87751? OR
        MON!87751?
L5      QUE SPE=ON  ABB=ON  PLU=ON  INTACTA OR XTEND?
L6      QUE SPE=ON  ABB=ON  PLU=ON  SOYBEAN? OR SOY? OR GLYCINE MAX OR
        G. MAX OR SOY BEAN
L7      QUE SPE=ON  ABB=ON  PLU=ON  CP4EPSPS? OR CP4 EPSPS? OR
        5(W) (ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR
        ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR ENOL!PYRUVYL!
        SHIKIMATE!) (W) 3 PHOSPHATE SYNTHASE
L8      QUE SPE=ON  ABB=ON  PLU=ON  DICAMBA ?OXYGENASE OR DICAMBA
        ?DEMETHYLASE OR DMO?
L9      QUE SPE=ON  ABB=ON  PLU=ON  CRY1AC OR CRYIAC OR CRY1 AC OR CRY
        1 AC OR CRY 1AC OR CRYI AC OR CRY I AC OR CRY IAC OR CRY1A105
        OR CRY1A 105 OR CRY 1A 105 OR CRY 1A105 OR CRYIA105 OR CRYIA
        105 OR CRY IA 105 OR CRY IA105 OR CRY1A.105
L10     QUE SPE=ON  ABB=ON  PLU=ON  CRY2AB? OR CRY2 AB? OR CRY 2 AB?
        OR CRY 2AB? OR CRYIIAB? OR CRYII AB? OR CRY II AB? OR CRY
        IIAB?
L11     QUE SPE=ON  ABB=ON  PLU=ON  GMO? OR LMO? OR GM OR GE OR
        TRANSGEN? OR ((GENETIC? OR LIVING OR BIOTECH?) (5A) (MODIF? OR
        TRANSFORM? OR MANIPULAT? OR IMPROV? OR ENGINEER? OR DERIV?))
L12     QUE SPE=ON  ABB=ON  PLU=ON  (TOLERAN? OR RESISTAN? OR PROTEC?) (
        5A) (DICAMBA OR METHOXYBENZOIC ACID OR GL!PHOSATE OR GL!FOSATE
        OR ROUNDUP? OR ROUND UP? OR ROUND!UP?)
L13     QUE SPE=ON  ABB=ON  PLU=ON  (TOLERAN? OR RESISTAN? OR PROTEC?) (
        5A) (CATERPILLAR? OR LOOPER? OR BORER? OR BUDBORER? OR LEPIDOPTE
        RA? OR EREBIDAE OR NOCTUIDAE OR TORTRICIDAE OR ANTICARSIA OR
        GEMMATALIS OR CHRYSODEIXIS OR PSEUDOPLUSIA)
L14     QUE SPE=ON  ABB=ON  PLU=ON  (TOLERAN? OR RESISTAN? OR PROTEC?) (
        5A) (INCLUDENS OR EPINOTIA OR CROCIDOSEMA OR APOREMA OR
        RACHIPLUSIA OR R. NU OR CHLORIDEA OR VIRESCENS OR VBC OR SBL
        OR SFL OR ARMYWORM? OR ARMY WORM? OR EARWORM? OR EAR WORM?)
```

² For the period between January 2021 – May 2021, the literature search for the newly authorised product (MON 87751 × MON 87701 × MON 87708 × MON 89788) was covered by the Bayer GM soybean products literature search (third quarter) as the later search was conducted after incorporating the unique search terms of the newly authorised product.

L15 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (BOLLWORM? OR BOLL WORM? OR PODWORM? OR POD WORM? OR SPODOPTERA OR COSMIOIDES OR FRUGIPERDA OR HELICOVERPA OR ZEA OR ARMIGERA OR FAW OR CEW OR CBW)

L16 QUE SPE=ON ABB=ON PLU=ON (BT SOY? OR BT SOY? OR BT!SOY? OR THURINGIENSIS SOY? OR THURINGIENSIS SOY? OR THURINGIENSIS!SOY?)

L17 QUE SPE=ON ABB=ON PLU=ON SOYABEANS+UF,NT/CT,ORGN

L18 QUE SPE=ON ABB=ON PLU=ON GENETIC ENGINEERING+UF,NT/CT OR GENETIC TRANSFORMATION+UF,NT/CT OR GENETICALLY ENGINEERED FOODS+UF,NT/CT OR GENETICALLY ENGINEERED ORGANISMS+UF,NT/CT OR FOOD BIOTECHNOLOGY+UF,NT/CT

L19 QUE SPE=ON ABB=ON PLU=ON (WEED CONTROL+UF,NT/CT OR INSECT CONTROL+UF,NT/CT) AND (GLYPHOSATE+UF,NT/CT OR DICAMBA+UF,NT/CT OR LEPIDOPTERA+UF,NT2/CT,ORGN)

Search in SciSearch Database:

FILE 'SCISEARCH' ENTERED AT 12:29:09 ON 09 MAR 2021
CHARGED TO COST=SLB76724 REG PRO

L20 21 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4) AND ED>=20190101 AND ED<=20210126 AND PY>=2019

L21 29 SEA SPE=ON ABB=ON PLU=ON L5 AND ED>=20190101 AND ED<=20210126 AND PY>=2019

L22 14838 SEA SPE=ON ABB=ON PLU=ON L6 AND ED>=20190101 AND ED<=20210126 AND PY>=2019

L23 3 SEA SPE=ON ABB=ON PLU=ON L21 AND L22

L24 663 SEA SPE=ON ABB=ON PLU=ON (L7 OR L8) AND ED>=20190101 AND ED<=20210126 AND PY>=2019

L25 240 SEA SPE=ON ABB=ON PLU=ON (L9 OR L10) AND ED>=20190101 AND ED<=20210126 AND PY>=2019

L26 896 SEA SPE=ON ABB=ON PLU=ON L24 OR L25

L27 48763 SEA SPE=ON ABB=ON PLU=ON L11 AND ED>=20190101 AND ED<=20210126 AND PY>=2019

L28 201 SEA SPE=ON ABB=ON PLU=ON L26 AND (L27 OR L22)

L29 456 SEA SPE=ON ABB=ON PLU=ON L12 AND ED>=20190101 AND ED<=20210126 AND PY>=2019

L30 439 SEA SPE=ON ABB=ON PLU=ON (L13 OR L14 OR L15) AND ED>=20190101 AND ED<=20210126 AND PY>=2019

L31 9 SEA SPE=ON ABB=ON PLU=ON L16 AND ED>=20190101 AND ED<=20210126 AND PY>=2019

L32 888 SEA SPE=ON ABB=ON PLU=ON L29 OR L30

L33 43 SEA SPE=ON ABB=ON PLU=ON L32 AND L27 AND L22

L34 6 SEA SPE=ON ABB=ON PLU=ON L31 AND L27

L35 46 SEA SPE=ON ABB=ON PLU=ON L33 OR L34

L36 251 SEA SPE=ON ABB=ON PLU=ON L20 OR L23 OR L28 OR L35

Search in CABA Database:

FILE 'CABA' ENTERED AT 12:29:40 ON 09 MAR 2021
CHARGED TO COST=SLB76724 REG PRO

L37 12 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4) AND ED>=20190101 AND ED<=20210126 AND PY>=2019

L38 28 SEA SPE=ON ABB=ON PLU=ON L5 AND ED>=20190101 AND ED<=20210126 AND PY>=2019

		6 AND PY>=2019		
L39	11546	SEA SPE=ON ABB=ON PLU=ON	L6 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L40	7761	SEA SPE=ON ABB=ON PLU=ON	L17 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L41	11546	SEA SPE=ON ABB=ON PLU=ON	L39 OR L40	
L42	12	SEA SPE=ON ABB=ON PLU=ON	L38 AND L41	
L43	200	SEA SPE=ON ABB=ON PLU=ON	(L7 OR L8) AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L44	157	SEA SPE=ON ABB=ON PLU=ON	(L9 OR L10) AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L45	352	SEA SPE=ON ABB=ON PLU=ON	L43 OR L44	
L46	14462	SEA SPE=ON ABB=ON PLU=ON	L11 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L47	6666	SEA SPE=ON ABB=ON PLU=ON	L18 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L48	14488	SEA SPE=ON ABB=ON PLU=ON	L46 OR L47	
L49	150	SEA SPE=ON ABB=ON PLU=ON	L45 AND (L41 OR L48)	
L50	354	SEA SPE=ON ABB=ON PLU=ON	L12 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L51	400	SEA SPE=ON ABB=ON PLU=ON	(L13 OR L14 OR L15) AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L52	5	SEA SPE=ON ABB=ON PLU=ON	L16 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L53	448	SEA SPE=ON ABB=ON PLU=ON	L19 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L54	1107	SEA SPE=ON ABB=ON PLU=ON	L50 OR L51 OR L53	
L55	45	SEA SPE=ON ABB=ON PLU=ON	L54 AND L48 AND L41	
L56	5	SEA SPE=ON ABB=ON PLU=ON	L52 AND L48	
L57	49	SEA SPE=ON ABB=ON PLU=ON	L55 OR L56	
L58	208	SEA SPE=ON ABB=ON PLU=ON	L37 OR L42 OR L49 OR L57	

Deduplication of Hit-sets from both sources:

FILE 'CABA, SCISEARCH' ENTERED AT 12:30:26 ON 09 MAR 2021
 CHARGED TO COST=SLB76724 REG PRO
 L59 342 DUP REM L58 L36 (117 DUPLICATES REMOVED)
 ANSWERS '1-206' FROM FILE CABA
 ANSWERS '207-342' FROM FILE SCISEARCH
 D L59 1-342 ALL PY

FILE SCISEARCH

FILE COVERS 1974 TO 8 Mar 2021 (20210308/ED)

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FILE CABA

FILE LAST UPDATED: 2 MAR 2021 <20210302/UP>
 FILE COVERS 1973 TO DATE

Annex III. List of reference publications used in identifying search terms and in validating the literature search strategy for Bayer GM soybean products literature search

The list below includes reference publications used for each relevant key element, namely event name, trade name, newly expressed proteins and intended traits. For GMO general and crop name search terms, given the breadth of the terms and as they are used to focus the search to GM crops, reference publications were considered not applicable.

Berman KH, Harrigan GG, Riordan SG, Nemeth MA, Hanson C, Smith M, Sorbet R, Zhu E, Ridley WP. (2009). Compositions of seed, forage, and processed fractions from insect-protected soybean MON 87701 are equivalent to those of conventional soybean. *Journal of Agricultural and Food Chemistry*, 57, 11360-11369.

Berman KH, Harrigan GG, Riordan SG, Nemeth MA, Hanson C, Smith M, Sorbet R, Zhu E, Ridley WP. (2010) Compositions of forage and seed from second-generation glyphosate-tolerant soybean MON 89788 and insect-protected soybean MON 87701 from Brazil are equivalent to those of conventional soybean (*Glycine max*). *Journal of Agricultural and Food Chemistry*, 58, 6270-6276.

Berman KH, Harrigan GG, Riordan SG, Nemeth MA, Oliveira W, Tagliaferro F and Berger GU, (2011). Compositional equivalence of insect-protected glyphosate-tolerant soybean, MON 87701 x MON 89788, to conventional soybean extends across different world regions and multiple growing seasons. *Journal of Agricultural and Food Chemistry*, 59, 11643-11651.

Harrigan GG, Ridley WP, Riordan SG, Nemeth MA, Sorbet R, Trujillo WA, Breeze ML, Schneider RW. (2007). Chemical composition of glyphosate-tolerant soybean 40-3-2 grown in Europe remains equivalent with that of conventional soybean (*Glycine max* L.). *Journal of Agricultural and Food Chemistry*, 55, 6160-6168.

Horak MJ, Rosenbaum EW, Kendrick DL, Sammons B, Phillips SL, Nickson TE, Dobert RC, Perez T. (2015) Plant characterization of Roundup Ready 2 Yield® soybean, MON 89788, for use in ecological risk assessment. *TRANSGENIC RESEARCH*, 24, 213-225

Lundry DR, Ridley WP, Meyer JJ, Riordan SG, Nemeth MA, Trujillo WA, Breeze ML, Sorbet R. (2008) Composition of grain, forage, and processed fractions from second-generation glyphosate-tolerant soybean, MON 89788, is equivalent to that of conventional soybean (*Glycine max* L.). *Journal of Agricultural and Food Chemistry*, 56, 4611-4622.

McCann MC, Liu K, Trujillo WA, Dobert RC. (2005). Glyphosate-tolerant soybeans remain compositionally equivalent to conventional soybeans (*Glycine max* L.) during three years of field testing. *Journal of Agricultural and Food Chemistry*, 53, 5331-5335.

Taylor NB, Fuchs RL, MacDonald J, Shariff AR, Padgett SR. (1999). Compositional analysis of glyphosate-tolerant soybeans treated with glyphosate. *Journal of Agricultural and Food Chemistry*, 47, 4469- 4473.

Taylor M, Bickel A, Mannion R, Bell E, Harrigan GG. (2017). Dicamba-tolerant soybeans (*Glycine max* L.) MON 87708 and MON 87708 x MON 89788 are compositionally equivalent to conventional soybean. *Journal of Agricultural and Food Chemistry*, 65, 8037–8045.

Vries BD, Fehr WR. (2011) Impact of the MON89788 event for glyphosate tolerance on agronomic and seed traits of soybean. *Crop Science*, 51, 1023-1027.

Zhou J, Harrigan GG, Berman KH, Webb EG, Klusmeyer TH, Nemeth MA. (2011). Stability in the composition equivalence of grain from insect-protected maize and seed from glyphosate-tolerant soybean to conventional counterparts over multiple seasons, locations, and breeding germplasms. *Journal of Agricultural and Food Chemistry*, 59, 8822-8828.

Annex IV. Literature search in internet pages of relevant key organisations for Bayer GM soybean products covering time span 2020 – 2021

Relevant key organisations	Link to the relevant information and summary of the retrieved records
US EPA	<p>https://www.epa.gov/ingredients-used-pesticide-products/current-and-previously-registered-section-3-plant-incorporated – Accessed on 06 July 2021. The webpage dedicated to PIP registrations was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> 14 July 2020</p> <p><i>Limits applied:</i> The list of PIP active ingredients registered was sorted by ‘Year Registered’ and those registered starting from 2020 were assessed.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> “1”.</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved record is not relevant to Bayer GM soybean products.</p>
USDA	<p>https://www.aphis.usda.gov/aphis/ourfocus/biotechnology/permits-notifications-petitions/petitions/petition-status - Accessed on 06 July 2021. The webpage dedicated to petitions for determination of nonregulated status was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> 24 June 2021</p> <p><i>Limits applied:</i> The list of the petitions was sorted by ‘Effective Date’ and those completed/ released starting from 01/01/2020 were assessed.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> “4”.</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved records are not relevant to Bayer GM soybean products.</p>
US FDA	<p>https://www.accessdata.fda.gov/scripts/fdcc/?set=Biocon – Accessed on 06 July 2021. The webpage dedicated to biotechnology consultations on food from GE plant varieties was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> 16 March 2021</p> <p><i>Limits applied:</i> The list of the consultations starting from the ‘FDA Letter Date’ of 01 01, 2020 was assessed.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> “2”.</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved records are not relevant to Bayer GM soybean products.</p>

CFIA	<p>https://inspection.canada.ca/industry-guidance/eng/1374161650885/1374161737236?gp=3&gc=25&ga=4#gdr_results - Accessed on 06 July 2021. The webpage dedicated to repository documents referring to plants with novel traits was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> not clear</p> <p><i>Limits applied:</i> The list of repository documents referring to plants with novel traits starting from 'Date modified' of 2020-01-01 was assessed.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> "21".</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved records are not relevant to Bayer GM soybean products.</p>
Health Canada	<p>https://www.canada.ca/en/health-canada/services/food-nutrition/genetically-modified-foods-other-novel-foods/approved-products.html - Accessed on 06 July 2021. The webpage dedicated to approved products of genetically modified (GM) foods and other novel foods was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> 29 June 2021</p> <p><i>Limits applied:</i> The list of novel food decisions starting from the 'Decision Date (20YY/MM/DD)' of 2020/01/01 was assessed.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> "12".</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved records are not relevant to Bayer GM soybean products.</p>
FSANZ	<p>http://www.foodstandards.gov.au/consumer/gmfood/applications/Pages/default.aspx - Accessed on 06 July 2021. The webpage dedicated to current GM applications and approvals was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> June 2021</p> <p><i>Limits applied:</i> The list for GM applications and approvals with 'Status' approved or under assessment starting from 2020 was assessed.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> "7".</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved records are not relevant to Bayer GM soybean products.</p>
CTNBio	<p>http://ctnbio.mctic.gov.br/liberacao-comercial#/liberacao-comercial/consultar-processo - Accessed on 06 July 2021. The webpage dedicated to commercial releases (= Liberações Comerciais) was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> Not clear (several dates mentioned)</p> <p><i>Limits applied:</i> The list of commercial releases for plants (= plantas) starting from 2020 was assessed.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> "2".</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved records are not relevant to Bayer GM soybean products.</p>

CONABIA	<p>https://www.argentina.gob.ar/agroindustria/alimentos-y-bioeconomia/ogm-comerciales – Accessed on 06 July 2021. The webpage of the national advisory commission on agricultural biotechnology (= Comisión Nacional Asesora de Biotecnología Agropecuaria) was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> Not available</p> <p><i>Limits applied:</i> The list of events with commercial authorisation (= Eventos con autorización comercial) starting from 2020 were checked.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> “1”.</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved record is not relevant to Bayer GM soybean products.</p>
MAFF	<p>https://www.maff.go.jp/j/syouan/nouan/carta/torikumi/attach/pdf/index-254.pdf - Accessed on 06 July 2021. The weblink dedicated to list of approved genetically modified agricultural crops was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> 3 March 2021</p> <p><i>Limits applied:</i> The list of GM agricultural crops with approval date (‘承認日’) starting from 01 01, 2020 was assessed.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> “10”.</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved records are not relevant to Bayer GM soybean products.</p>

Additional literature search in internet pages of key organisations¹ relevant for the newly authorised products MON 87708 × MON 89788 × A5547-127 and MON 87751 × MON 87701 × MON 87708 × MON 89788 soybeans to cover the timespan from the adoption of EFSA scientific opinion till the time of the authorisation (2019 -2021)²

Relevant key organisations	Link to the relevant information and summary of the retrieved records
US EPA	<p>https://www.epa.gov/ingredients-used-pesticide-products/current-and-previously-registered-section-3-plant-incorporated – Accessed on 26 August 2021. The webpage dedicated to PIP registrations was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> 14 July 2020</p> <p><i>Limits applied:</i> The list of PIP active ingredients registered was sorted by ‘Year Registered’ and those registered in 2019 were assessed.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> “0”.</p> <p><i>Number of relevant records or full-text documents retrieved:</i> No records were retrieved.</p>
CTNBio	<p>http://ctnbio.mctic.gov.br/liberacao-comercial#/liberacao-comercial/consultar-processo – Accessed on 26 August 2021. The webpage dedicated to commercial releases (= Liberações Comerciais) was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> Not clear (several dates mentioned)</p> <p><i>Limits applied:</i> The list of commercial releases for plants (= plantas) in 2019 was assessed.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> “6”.</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved records are not relevant to MON 87708 × MON 89788 × A5547-127 and MON 87751 × MON 87701 × MON 87708 × MON 89788 soybeans.</p>

¹ Of the 14 key organisations cited in the 2019 Explanatory note on literature searching for GMO applications (EFSA, 2019), three (Environment and Climate Change Canada, CIBIOGEM and OECD) are not involved in the risk assessment of GM plants. Six (USDA, FDA, CFIA, Health Canada, FSANZ and MAFF) do not regulate stack products. Two (OGTR and GEAC), for the time being, only assess cotton and oilseed rape. From the remaining three, US EPA regulates only stacks with Plant-Incorporated Protectants (PIP) combinations while CTNBio and CONABIA regulate stack products. Therefore, the internet search focused on the last three organisations (US EPA, CTNBio and CONABIA) ¹ relevant for MON 87708 × MON 89788 × A5547-127 and MON 87751 × MON 87701 × MON 87708 × MON 89788 soybeans.

² For the period between 2020-2021, the search was covered by that for the Bayer soybean products.

CONABIA	<p>https://www.argentina.gob.ar/agroindustria/alimentos-y-bioeconomia/ogm-comerciales – Accessed on 26 August 2021. The webpage of the national advisory commission on agricultural biotechnology (= Comisión Nacional Asesora de Biotecnología Agropecuaria) was checked.</p> <p><i>Date of the most recent website update at the time of the search:</i> Not available</p> <p><i>Limits applied:</i> The list of events with commercial authorisation (= Eventos con autorización comercial) in 2019 were checked.</p> <p><i>Number of records retrieved matching the abovementioned criteria:</i> “9”.</p> <p><i>Number of relevant records or full-text documents retrieved:</i> The retrieved records are not relevant to MON 87708 × MON 89788 × A5547-127 and MON 87751 × MON 87701 × MON 87708 × MON 89788 soybeans.</p>
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Annex V. Results of the publication selection process for Bayer GM soybean products literature search in SciSearch and CABA databases using STN[®] database catalogue

Table 1. Results of the publication selection process.

Review question captured in the search	Number of publications		
	Bayer GM soybean products ¹	MON 87708 × MON89788 × A5547-12 ²	MON 87751 × MON 87701 × MON 87708 × MON 89788 ³
Publications identified after searches of the scientific literature in SciSearch and CABA databases (following de-duplication)	384	204	315
Publications excluded after rapid assessment for relevance	366	204	314
Publications screened using full-text documents	8	0	0
Publications excluded after detailed assessment for relevance	0	0	0
Unobtainable publications	0	0	0
Unclear publications	2	0	0
Publications considered relevant	6	0	1
Publications considered relevant, excluding duplicates	6		

¹ The numbers refer to the results of the publication selection process for the Bayer GM soybean products literature search performed covering the time span of 1 June 2020 - 31 May 2021.

² The numbers refer to the results of the publication selection process for MON 87708 × MON89788 × A5547-12 literature search performed from 01 January 2019 to 05 October 2020, covering the time span from the adoption of EFSA scientific opinion till the time of the authorisation.

³ The numbers refer to the results of the publication selection process for MON 87751 × MON 87701 × MON 87708 × MON 89788 literature search performed from 01 January 2019 to 26 January 2021, covering the time span from the adoption of EFSA scientific opinion till the time of the authorisation.

Table 2. List of all relevant publications for Bayer GM soybean products retrieved after detailed assessment of full-text documents for relevance: ordered by category of information.

Products ¹	Study (author(s) and year)	Title	Source
Food/Feed safety assessment			
Composition			
40-3-2	(Qian <i>et al.</i> , 2021)	Analysis of physiochemical composition and antioxidant properties between hulls of the genetically modified glyphosate - tolerant soybean and northeast soybean	Food Science and Biotechnology
40-3-2	(da Costa <i>et al.</i> , 2021)	Ionomics and lipidomics for evaluating the transgenic (cp4-EPSPS gene) and non- transgenic soybean seed generations	Microchemical Journal
Ag/Pheno			
MON 87701 MON 89788 MON 87708 MON 87751 MON 87701 × MON 89788 MON 87708 × MON 89788 MON 87751 × MON 87708 × MON 87701 × MON 89788	(Jose <i>et al.</i> , 2020)	Comparing agronomic and phenotypic plant characteristics between single and stacked events in soybean, maize, and cotton	PLOS ONE
Ag/Pheno/Composition			
40-3-2	(Petineli <i>et al.</i> , 2020)	Conventional and transgenic soybeans: physiological and nutritional differences in productivity under sulfur fertilization	Communications in Soil Science and Plant Analysis

40-3-2	(Chen <i>et al.</i> , 2020a)	Registration of 'S14-9017GT' soybean cultivar with high yield, resistance to multiple diseases, and high seed oil content	Journal of Plant Registrations
40-3-2	(Chen <i>et al.</i> , 2020b)	Registration of 'S14-15146GT' soybean, a high-yielding RR1 cultivar with high oil content and broad disease resistance and adaptation	Journal of Plant Registrations

¹ Products not listed above don't have relevant publication retrieved in this monitoring season.

Table 3. List of unclear publications, with explanation why they could not be classified

Study authors	Year	Title	Source	Explanation of why the publication could not be classified, with a description of methods used to resolve the remaining uncertainty
Damaziak <i>et al.</i>	2021	Effects of replacement genetically modified soybean meal by a mixture of linseed cake, sunflower cake, guar meal and linseed oil in laying hens' diet. Production results and eggs quality	Animal Feed Science and Technology	Based on the publicly available information, it was not possible to determine whether the event used in the study was a Bayer GM soybean event
Munoz <i>et al.</i>	2020	Stearidonic-Enriched Soybean Oil Modulates Obesity, Glucose Metabolism, and Fatty Acid Profiles Independently of <i>Akkermansia muciniphila</i>	Molecular Nutrition and Food Research	Based on the publicly available information, the equivalence of the soybean event assessed in the study and a Bayer GM soybean event (MON 87769) could not be determined

Table 4. Report of the reliability and implications for the risk assessment of the relevant publication retrieved after detailed assessment of full-text document for relevance.

Study author(s) and year	Reliability appraisal	Implications for the risk assessment ¹
Food/Feed Safety assessment		
Composition		
(Qian <i>et al.</i> , 2021)	Low	None, because no new hazards, modified exposure, or new scientific uncertainties are reported
(da Costa <i>et al.</i> , 2021)	Low	None, because no new hazards, modified exposure, or new scientific uncertainties are reported
Ag/Pheno		
(Jose <i>et al.</i> , 2020)	High	None, because no new hazards, modified exposure, or new scientific uncertainties are reported
Ag/Pheno/Composition		
(Petineli <i>et al.</i> , 2020)	Low	None, because no new hazards, modified exposure, or new scientific uncertainties are reported
(Chen <i>et al.</i> , 2020a)	Low	None, because no new hazards, modified exposure, or new scientific uncertainties are reported
(Chen <i>et al.</i> , 2020b)	Moderate	None, because no new hazards, modified exposure, or new scientific uncertainties are reported

¹ Identification of a new hazard, modified exposure, or new scientific uncertainty requiring further consideration in the risk assessment; **None**, because no new hazards, modified exposure, or new scientific uncertainties are reported; **None**, because the findings reported in the study are not reliable; Implications for risk assessment were previously considered by EFSA and/or its GMO Panel, and are therefore not addressed further here (EFSA, 2019).

REFERENCES:

References highlighted in grey are EFSA publications. Therefore, their pdfs are not provided.

- Chen P, Shannon G, Ali ML, Scaboo A, Crisel M, Smothers S, Clubb M, Selves S, Vieira CC, Mitchum MG, Nguyen HT, Li Z, Bond J, Meinhardt C, Usovsky M, Li S, Mengistu A and Robbins RT, 2020a. Registration of 'S14-9017GT' soybean cultivar with high yield, resistance to multiple diseases, and high seed oil content. J. Plant Regist. , 14, 347-356.
- Chen P, Shannon G, Scaboo A, Crisel M, Smothers S, Clubb M, Selves S, Vieira CC, Ali ML, Mitchum MG, Nguyen H, Li Z, Bond J, Meinhardt C, Klepadlo M, Li S, Mengistu A and Robbins RT, 2020b. Registration of 'S14-15146GT' soybean , a high-yielding RR1 cultivar with high oil content and broad disease resistance and adaptation. Journal of Plant Registrations, 14, 35-42.
- da Costa LF, Tormena CF and Zezzi Arruda MA, 2021. Ionomics and lipidomics for evaluating the transgenic (cp4-EPSPS gene) and non- transgenic soybean seed generations. Microchemical Journal, 165, 1-8.
- EFSA, 2019. Explanatory note on literature searching conducted in the context of GMO applications for (renewed) market authorisation and annual post-market environmental monitoring reports on GMOs authorised in the EU market - Note on literature searching to GMO risk assessment guidance. EFSA journal, 2019:EN-1614, 1-62.
- Jose M, Vertuan H, Soares DJ, Sordi D, Bellini LF, Kotsubo R and Berger GU, 2020. Comparing agronomic and phenotypic plant characteristics between single and stacked events in soybean, maize, and cotton. Plos One, 1-13.
- Petineli R, Moraes LAC, Heinrichs R, Moretti LG and Moreira A, 2020. Conventional and transgenic soybeans : physiological and nutritional differences in productivity under sulfur fertilization. Communications in soil science and plant analysis, 51, 2045-2053.
- Qian B, Huang L, Zhao J and Zhu J, 2021. Analysis of physiochemical composition and antioxidant properties between hulls of the genetically modified glyphosate - tolerant soybean and northeast soybean. Food Sci Biotechnol 30(4), 505-512.

Annex VI. List of relevant publications retrieved from SciSearch and CABA databases using STN[®] database catalogue (provided in .RIS format)

The list of the relevant publications is enclosed with this report (*see Soybean.txt file*).