

## **APPENDIX 3**

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

**Data protection.**

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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 applications<sup>1</sup> (EFSA, 2019) to support general surveillance of 2020/2021 annual post market environmental monitoring reports. It addresses the review question “Do Bayer GM maize 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 maize products.

The literature search covered the time span 2020 – 2021 and retrieved 412 and 269 hits in SciSearch and CABA databases, respectively, and a total of 60 records in the internet pages of the relevant key organisations. From these, four 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, literature search was conducted for Bayer GM maize products newly authorised during the 2020 -2021 monitoring season, *i.e.* MON 87427 × MON 89034 × MIR162 × MON 87411 and its sub-combinations, MON 87427 × MON 89034 × MIR162 × NK603 and its sub-combinations, MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 and its sub-combinations. The search covered the time span from the adoption of the EFSA opinion till the time of the authorisation (2019 – 2021) and retrieved 420 and 307 hits in SciSearch and CABA databases, respectively, and a total of 15 records in the internet pages of the relevant key organisations. From these, two publications were identified as relevant. The publications did not have any implication on the risk assessment, because no new hazard, modified exposure, or new scientific uncertainty is reported.

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

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<sup>1</sup> Hereafter referred to as 2019 EFSA explanatory note on literature searching

## 1. INTRODUCTION

As part of the general surveillance requirements for Bayer GM maize products authorised in the European Union (EU) market under regulation (EC) No 1829/2003, Bayer Agriculture BV<sup>2</sup> has actively monitored the maize 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 maize 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 maize 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 maize products, derived food/feed products and respective introduced traits (= intervention/exposure), conventional counterpart or non-GM maize (= 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**.

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<sup>2</sup> Hereafter, referenced as Bayer

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

<b>Key elements</b>	<b>Criteria</b>
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 maize but excluding the cultivation of Bayer GM maize products are addressed as general protection goals.
Intervention/exposure	Bayer GM maize 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 maize as a comparator.
Outcomes	Adverse effects on human and animal health and the environment are addressed (taking into consideration the scope of the applications).
<b>Additional key elements</b>	
Stacked events / sub-combinations	The single event(s) addressed in the publication is/are the single event(s) in stacked Bayer GM maize products. Stacked Bayer GM maize products or any of their sub-combinations 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 maize products for all uses as any other maize 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)<sup>3</sup> and the CABA<sup>4</sup> (CAB Abstracts®)<sup>5</sup> 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 catalogue<sup>6</sup>.

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”<sup>4</sup>. 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”<sup>4</sup>. 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<sup>6,7</sup>. 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 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

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

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

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

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

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

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), nine<sup>8</sup> are involved in risk assessment of Bayer GM maize 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 maize 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 common typos of the search terms were considered. Where applicable, the search was also adapted to controlled vocabulary

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<sup>8</sup> Internet pages of the relevant key organisations for Bayer GM maize 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.



(subject indexing). The search terms were designed to give an excellent coverage and retrieve the broadest possible number of articles related to Bayer GM maize 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 I**. The search strings were built following the STN<sup>®</sup> commands (Karlsruhe, 2007) to allow the literature search in the STN<sup>®</sup> 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 I** 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<sup>®</sup> database catalogue for both the selected electronic databases (*see* section 3.1.1). STN<sup>®</sup> enables searching in each electronic database by making use of pre-defined fields, set combinations based on Boolean operators or a combination of both<sup>9</sup>. In STN<sup>®</sup>, the results of the search from each database can be merged and duplicates can be removed by de-duplication.

The STN<sup>®</sup> 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 terms<sup>10</sup>. 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 I**.

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

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<sup>9</sup> STN user guide: [https://www.stn-international.com/sites/default/files/stn\\_training\\_center\\_document/User%20Documentation/mastering\\_stn\\_commands.pdf](https://www.stn-international.com/sites/default/files/stn_training_center_document/User%20Documentation/mastering_stn_commands.pdf) - Accessed on 27 08 2021

<sup>10</sup> 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

### 3.2.4. Time period

The literature searches covered the time span 1 June 2020 - 31 May 2021<sup>11</sup>.

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 search in the electronic databases for the Bayer GM maize products newly authorised during the 2020-2021 monitoring season<sup>11</sup> was conducted on 09 March 2021 and 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 maize products newly authorised during the 2020-2021 monitoring season<sup>11</sup> 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 **0**.

## 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 maize products.

<sup>11</sup> Following the authorisation of MON 87427 × MON 89034 × MIR162 × MON 87411, MON 87427 × MON 89034 × MIR162 × NK603, MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 maizes (Commission Implementing Decisions (EU) 2021/65, 2021/60 and 2021/61, respectively) additional literature search covering the timespan from the adoption of EFSA scientific opinion till the time of the authorisation, *i.e.* January 2019 – January 2021, was performed. In the subsequent literature searches, the newly authorised products have been incorporated in the Bayer GM maize products search as shown in **Annex I** and **Annex I**.

## 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 maize products for all uses as any other maize 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 412 and 269 hits in SciSearch and CABA databases, respectively (*see Annex I*). After de-duplication, the total number resulted in 529 hits.

Additionally, the literature search on the Bayer GM maize products newly authorised during the 2020-2021 monitoring season<sup>11</sup> identified 420 and 307 hits in SciSearch and CABA databases, respectively (*see Annex I*). After de-duplication, the total number resulted in 516 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 for the Bayer GM maize products newly authorised during the 2020-2021 monitoring season<sup>11</sup> 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**. Four 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**. A total of two records were identified as relevant. For the full-text documents of the relevant publications, *see* the references folder within the literature searching folder.

### **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 maize products found no new information that would invalidate the conclusions of the risk assessments for Bayer GM maize 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 maize products, identified no relevant publications that would invalidate the conclusions of the Bayer GM maize products previous risk assessments. Therefore, the conclusions of the risk assessment as presented in the initial applications of the Bayer GM maize products remain unchanged.

## REFERENCES

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

*Copyright protected scientific publications that are cited to support this report shared only with the regulatory authorities involved in the assessment of the report. Therefore, any further distribution of these publications in a manner not specified in the current copyright order, including posting on websites, and without appropriate authorisation, may be an infringement of copyright rules. Therefore, the full text documents of these scientific publications are provided only in the confidential version of the report.*

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 maize products literature search in STN<sup>®</sup> database catalogue

### 1. Free-text search terms for Bayer GM maize 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 <sup>®</sup> database catalogue)
Event names	MON 810 or MON-ØØ81Ø-6 NK603 or MON-ØØ6Ø3-6 MON 88017 or MON-88Ø17-3 MON 89034 or MON-89Ø34-3 MON 87460 or MON 8746Ø-4 MON 87427 or MON-87427-7 MON 87411 or MON-87411-9 MON 87403 or MON-874Ø3-1 TC1507 or 1507 or DAS-Ø15Ø7-1 59122 or DAS-59122-7 T25 or ACS-ZMØØ3-2 MIR162 or SYN-IR162-4 <sup>1</sup>	MON 810? OR MON810? OR MON!810? OR MON 00810? OR MON00810? OR MON!00810? OR MON OO810? OR MONOO810? OR MON!OO810? OR MON EMPTY SETEMPTY SET81EMPTY SET? OR MON!EMPTY SETEMPTY SET81EMPTY SET? OR MONEMPTY SETEMPTY SET81EMPTY SET? OR NK603 OR NK 603  OR MON 00603? OR MON!00603? OR MON00603? OR MON OO603? OR MONOO603? OR MON!OO603? OR MON EMPTY SETEMPTY SET6EMPTY SET3? OR MON!EMPTY SETEMPTY SET6EMPTY SET3? OR MONEMPTY SETEMPTY SET6EMPTY SET3?  OR MON 88017? OR MON!88017? OR MON88017? OR MON 88O17? OR MON!88O17? OR MON88O17? OR MON 88EMPTY SET17? OR MON!88EMPTY SET17? OR MON88EMPTY SET17?  OR MON 89034? OR MON!89034? OR MON89034? OR MON 89O34? OR MON!89O34? OR MON89O34? OR MON 89EMPTY SET34? OR MON!89EMPTY SET34? OR MON89EMPTY SET34?  OR MON 87460? OR MON!87460? OR MON87460? OR MON 8746O? OR MON!8746O? OR MON8746O? OR MON 8746EMPTY SET? OR MON!8746EMPTY SET? OR MON8746EMPTY SET? OR MON 87427? OR MON!87427? OR MON87427? OR 1507 OR 15O7 OR 15EMPTYSET7 OR TC1507 OR TC15O7 OR TC15EMPTYSET7  OR MON 87411? OR MON!87411? OR MON87411?

<sup>1</sup> Highlighted terms correspond to the unique search terms and keywords of the newly authorised products MON 87427 × MON 89034 × MIR162 × NK603 and its sub-combinations, MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 and its sub-combinations and MON 87427 × MON 89034 × MIR162 × MON 87411 and its sub-combinations that have been incorporated in the Bayer GM maize 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 Decisions 2021/60, Commission Implementing Decision 2021/61, Commission Implementing Decision 2021/65, respectively.



		<p>OR MON 87403? OR MON!87403? OR MON87403? OR MON 874O3? OR MON!874O3? OR MON874O3? OR MON 874EMPTY SET3? OR MON!874EMPTY SET3? OR MON874EMPTY SET3?</p> <p>OR DAS 01507? OR DAS!01507? OR DAS01507? OR DAS O1507? OR DAS!O1507? OR DASO1507? OR DAS EMPTY SET15EMPTY SET7? OR DAS!EMPTY SET15EMPTY SET7? OR DASEMPTY SET15EMPTY SET7? OR 59122 OR DAS 59122? OR DAS!59122? OR DAS59122? OR T25</p> <p>OR ACS ZM003? OR ACS!ZM003? OR ACSZM003? OR ACS ZMOO3? OR ACS!ZMOO3? OR ACSZMOO3? OR ACS ZMEMPTY SET EMPTY SET3? OR ACS!ZMEMPTY SET EMPTY SET3? OR ACSZMEMPTY SET EMPTY SET3?</p> <p>OR MIR!162? OR MIR 162? OR MIR162? OR SYN!IR162? OR SYN IR162? OR SYNIR162?<sup>1</sup></p>
Trade name	<p>YieldGard® Corn Borer</p> <p>Roundup Ready® 2</p> <p>YieldGard VT Rootworm/RR2®</p> <p>YieldGard® VT® PRO®</p> <p>DroughtGard® Hybrids</p> <p>Herculex™ I, Herculex™ CB</p> <p>Herculex™ RW</p> <p>Liberty Link™ Maize</p> <p>YieldGard® VT ® Triple®</p> <p>Genuity® VT Triple PRO®</p> <p>Genuity® VT Double PRO™</p> <p>Genuity® PowerCore®</p> <p>SmartStax®</p> <p>Genuity® VT Double Pro® with Roundup® Hybridization System</p>	<p>YIELD GARD? OR YIELDG? OR YIELD!GARD? OR YIELDGARD? OR ROUNDUPREADY? OR ROUND UP READY? OR ROUND!UP!READY? OR ROUND!UP READY? OR ROUNDUP READY? OR RR2? OR RR1? OR VT? PRO? OR VT! PRO OR VT PRO? OR VT!PRO? OR VTPRO? OR DROUGHTGARD? OR DROUGHT GARD? OR HERCULEX?</p> <p>LIBERTY LINK? OR LIBERTYLINK? OR LIBERTY!LINK OR VT? TRIPLE? OR VTTRIPLE? OR VT!TRIPLE? OR VT TRIPLE? OR VT DOUBLE PRO? OR VT DOUBLEPRO? OR VTDDOUBLE PRO? OR VTDDOUBLEPRO? OR VT!DOUBLE PRO? OR VT DOUBLEPRO? OR VT!DOUBLEPRO? OR VT!2!PRO?</p> <p>SMARTSTAX? OR SMART STAX? OR SMART!STAX? OR RHS OR HYBRIDIZATION SYSTEM OR VT 2 PRO? OR POWER CORE? OR POWERCORE? OR AGRISURE? OR VIPTERA? OR TRECEPTA?<sup>1</sup></p>

	VTPRO4® <sup>1</sup> Trecepta™ <sup>1</sup> Agrisure™ Viptera <sup>1</sup>	
Newly expressed proteins	CP4 EPSPS CP4 EPSPS L214P PAT Cry1Ab Cry1A.105 Cry2Ab2 Cry1F Cry3Bb1 Cry34/35Ab1 Cold shock protein B (cspB) ATHB-17 Vip3Aa20 <sup>1</sup>	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 PAT OR PHOSPHINOTHRICIN OR N!ACETYLTRANSFERASE OR N!ACETYL TRANSFERASE OR N!ACETYL!TRANSFERASE OR N ACETYL TRANSFERASE OR N ACETYL!TRANSFERASE OR N ACETYLTRANSFERASE OR CRY1AB OR CRY1 AB OR CRY 1 AB OR CRY 1AB OR CRYIAB OR CRYI AB OR CRY I AB OR CRY IAB 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 CRY1F OR CRY1 F OR CRY 1 F OR CRY 1F OR CRYIF OR CRYI F OR CRY I F OR CRY IF OR CRY3BB? OR CRY3 BB? OR CRY 3 BB? OR CRY 3BB? OR CRYIIIBB? OR CRYIII BB? OR CRY III BB? OR CRY IIIBB? OR CRY34AB1? OR CRY34AB 1? OR CRY 34AB 1? OR CRY 34AB1? OR GPP34AB1? OR GPP34AB 1? OR GPP 34AB 1? OR GPP 34AB1? OR CRY35AB1? OR CRY35AB 1? OR CRY 35AB 1? OR CRY 35AB1? OR TPP35AB1? OR TPP35AB 1? OR TPP 35AB 1? OR TPP 35AB1? OR CSPB OR CSP B OR COLD SHOCK PROTEIN B OR COLD!SHOCKPROTEIN!B OR COLD!SHOCK PROTEIN!B OR COLD!SHOCK!PROTEIN!B OR ATHB17? OR ATHB!17? OR ATHB 17? OR HB17? OR HB!17? OR HB 17? OR VIP3AA20 OR VIP3!AA20 OR VIP3 AA20 <sup>1</sup>
Newly expressed RNA	DvSnf7 RNA	(RNA? OR DSRNA? OR SIRNA?)(5A)(DVSNF7 OR WCR SNF7 OR CRW SNF7 OR DV SNF7 OR DVSNF 7 OR DV SNF 7 OR DV.SNF7 OR SNF7)

Intended traits: Herbicide tolerance traits	Glyphosate/ roundup tolerance, Glufosinate tolerance	(TOLERAN? OR RESISTAN? OR PROTEC?)( 5A)(GL!PHOSATE OR GL!FOSATE OR ROUNDUP? OR ROUND UP? OR ROUND!UP OR GLUFOSINATE OR GLUPHOSINATE OR BASTA OR IGNITE OR LIBERTY)
Intended traits: Insect protection traits	Bt maize (corn) / <i>Bacillus thuringiensis</i> maize (corn) providing Lepidopteran protection or protection against Noctuidae and Crambidae insect pest families or corn/stem borer or European corn borer (ECB) or Mediterranean corn borer (MCB) or Pink stalk borer or West African pink borer or Asian corn borer (ACB) or Spotted stem borer (SSB) or Southwestern corn borer (SWCB) or Sugarcane borer (SCB) or fall armyworm (FAW) or African maize stalk borer (AMSB) or corn earworm or cotton bollworm (CEW; CBW) or Old World bollworm or African bollworm or American cotton bollworm or cotton bollworm or corn earworm (OBW; CBW; CEW) or western bean cutworm (WBC) <sup>1</sup> or <i>Ostrinia nubilalis</i> or <i>Ostrinia furnacalis</i> or <i>Spodoptera frugiperda</i> or <i>Spodoptera exigua</i> <sup>1</sup> or <i>Sesamia nonagrioides</i> or <i>Chilo partellus</i> or <i>Diatraea grandiosella</i> or <i>Diatraea saccharalis</i> or <i>Busseola fusca</i> or <i>Helicoverpa zea</i> or <i>Helicoverpa armigera</i> or <i>Striacosta albicosta</i> or <i>Agrotis ipsilon</i> or <i>Feltia jaculifera</i> or <i>Pseudaletia unipuncta</i> <sup>1</sup>	(BTMAIZE OR BTCORN OR BT MAIZE OR BT CORN OR BT!MAIZE OR BT!CORN OR THURINGIENSIS!MAIZE OR THURINGIENSISMAIZE OR THURINGIENSIS MAIZE OR THURINGIENSIS!CORN OR THURINGIENSISCORN OR THURINGIENSIS CORN)  (TOLERAN? OR RESISTAN? OR PROTEC?)( 5A)(BORER? OR EARWORM? OR BOLLWORM? OR ARMYWORM? OR EAR WORM? OR BOLL WORM? OR ARMY WORM? OR LEPIDOPTERA? OR NOCTUIDAE)  (TOLERAN? OR RESISTAN? OR PROTEC?)( 5A)(CRAMBIDAE OR OSTRINIA OR SESAMIA OR CHILO OR DIATRAEA OR SPODOPTERA OR BUSSEOLA OR HELICOVERPA OR FURNACALIS OR NUBILALIS OR NONAGRIOIDES OR PARTELLUS)  (TOLERAN? OR RESISTAN? OR PROTEC?)( 5A)(GRANDIOSELLA OR SACCHARALIS OR FRUGIPERDA OR FUSCA OR ZEA OR ARMIGERA OR ECB OR MCB OR ACB OR SSB OR SWCB OR SCB OR FAW OR AMSB OR CEW OR CBW OR OBW)  (TOLERAN? OR RESISTAN? OR PROTEC?)(5A)(EXIGUA OR CUTWORM? OR CUT WORM? OR STRIACOSTA OR AGROTIS OR FELTIA OR PSEUDALETIA OR ALBICOSTA OR IPSILON OR JACULIFERA OR UNIPUNCTA OR WBC <sup>1</sup> )
	Bt maize (corn) / <i>Bacillus thuringiensis</i> maize providing Coleopteran protection, or protection against Chrysomel insect pest families or western corn rootworm (WCR / WCRW) or Northern corn rootworm (NCR) or Southern corn rootworm (SCR) or Mexican corn rootworm (MCR) or <i>Diabrotica virgifera virgifera</i> or <i>Diabrotica barberi</i> ( <i>D barberi</i> ) or <i>Diabrotica undecimpunctata</i> ( <i>D undecimpunctata</i> ) or <i>Diabrotica virgifera zea</i> ( <i>D. virgifera zea</i> )	(BTMAIZE OR BTCORN OR BT MAIZE OR BT CORN OR BT!MAIZE OR BT!CORN OR THURINGIENSIS!MAIZE OR THURINGIENSISMAIZE OR THURINGIENSIS MAIZE OR THURINGIENSIS!CORN OR THURINGIENSISCORN OR THURINGIENSIS CORN)  (TOLERAN? OR RESISTAN? OR PROTEC?)(5A)(ROOTWORM? OR ROOT WORM? OR COLEOPTERA? OR CHRYSOMEL? OR DIABROTICA OR VIRGIFERA OR BARBERI OR UNDECIMPUNCTATA OR CRW OR WCR? OR NCR? OR SCR? OR MCR?)

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

Literature search - Bayer maize GM products

Bayer Agriculture BV

Intended traits: Drought tolerance traits	Drought tolerant or water efficient maize	(TOLERAN? OR RESISTAN? OR PROTEC?)(5A)DROUGHT OR (EFFICIEN? OR REDUC? OR LIMIT? OR DECRE? OR LOW?)(5A)WATER
Intended traits: Hybridisation system traits	Glyphosate based hybridization system	HYBRID? OR CROSS? OR POLLEN? OR POLLINAT? OR STERIL?(5A)MALE) AND (GL!PHOSATE OR GL!FOSATE OR ROUNDUP? OR ROUND UP? OR ROUND!UP?
Intended traits: Increased biomass traits	Increased ear biomass	(INCRE? OR ENHANCE?)(5A)(EAR SIZE OR EAR BIOMASS OR EAR GROWTH OR EAR WEIGHT OR EAR MASS OR SINK CAPACITY OR SINK POTENTIAL)
Crop name	maize, corn, <i>Zea mays</i>	MAIZE? OR CORN? OR "ZEA MAYS" OR "Z. MAYS"
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, for Bayer GM Maize 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 maize (corn) / <i>Bacillus thuringiensis</i> maize (corn) providing Lepidopteran protection or protection against Noctuidae and Crambidae insect pest families or corn/stem borer or European corn borer (ECB) or Mediterranean corn borer (MCB) or Pink stalk borer or West African pink borer or Asian corn borer (ACB) or Spotted stemborer (SSB) or Southwestern corn borer (SWCB) or Sugarcane borer (SCB) or fall armyworm (FAW) or African maize stalk borer (AMSB) or corn earworm or cotton bollworm (CEW; CBW) or Old World	(WEED CONTROL+UF,NT/CT OR INSECT CONTROL+UF,NT/CT) AND (LEPIDOPTERA+UF,NT2/CT,ORGN OR COLEOPTERA+UF,NT2/CT,ORGN OR GLYPHOSATE+UF,NT/CT OR GLUFOSINATE+UF,NT/CT)

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Literature search - Bayer maize GM products

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	<p> bollworm or African bollworm or American cotton bollworm or cotton bollworm or corn earworm (OBW; CBW; CEW) or western bean cutworm (WBC)<sup>1</sup> or <i>Ostrinia nubilalis</i> or <i>Ostrinia furnacalis</i> or <i>Spodoptera frugiperda</i> or <i>Spodoptera exigua</i> or <i>Sesamia nonagrioides</i> or <i>Chilo partellus</i> or <i>Diatraea grandiosella</i> or <i>Diatraea saccharalis</i> or <i>Busseola fusca</i> or <i>Helicoverpa zea</i> or <i>Helicoverpa armigera</i> or <i>Striacosta albicosta</i> or <i>Agrotis ipsilon</i> or <i>Feltia jaculifera</i> or <i>Pseudaletia unipuncta</i><sup>1</sup> </p> <p> Bt maize (corn) / <i>Bacillus thuringiensis</i> maize providing Coleopteran protection, or protection against Chrysomel insect pest families or western corn rootworm (WCR / WCRW) or Northern corn rootworm (NCR) or Southern corn rootworm (SCR) or Mexican corn rootworm (MCR) or <i>Diabrotica virgifera virgifera</i> or <i>Diabrotica barberi</i> (<i>D barberi</i>) or <i>Diabrotica undecimpunctata</i> (<i>D undecimpunctata</i>) or <i>Diabrotica virgifera zea</i> (<i>D. virgifera zea</i>) </p> <p> Glyphosate/ roundup tolerance,  Glufosinate tolerance </p>	
Intended traits: Hybridisation system traits	Glyphosate based hybridization system	(HYBRIDIZATION+UF,NT/CT OR CROSSING+UF,NT/CT OR PLANT BREEDING METHODS+UF,NT/CT OR POLLINATION+UF,NT/CT OR MALE STERILITY+UF,NT/CT) AND GLYPHOSATE+UF,NT/CT
Intended traits: Drought tolerance and increased ear biomass traits	Drought tolerance and increased ear biomass	DROUGHT RESISTANCE+UF,NT/CT OR BIOMASS PRODUCTION+UF,NT/CT
Crop name	maize, corn, <i>Zea mays</i>	ZEA MAYS+UF,NT/CT,ORGN OR MAIZE+UF, NT/CT,ORGN
GMO general terms	Genetically modified organism (GMO, GM); Living modified organism (LMO); biotechnology-derived organism (biotech-	GENETIC ENGINEERING+UF,NT/CT OR GENETIC TRANSFORMATION+UF,NT/CT OR GENETICALLY ENGINEERED

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Literature search - Bayer maize GM products

Bayer Agriculture BV

	derived); Genetic engineering (GE); transgenesis (transgene); genetic transformation; genetic manipulation; genetic improvement	FOODS+UF,NT/CT OR GENETICALLY ENGINEERED ORGANISMS+UF,NT/CT OR FOOD BIOTECHNOLOGY+UF,NT/CT
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## **Annex II. The search string used for Bayer GM maize products literature search in SciSearch and CABA databases using STN® database catalogue, and outcomes of the search (2020 - 2021)**

### **Bayer GM Maize products literature search – First quarter (June 2020 - September 2020)**

#### **Translation of query terms into STN search language:**

FILE 'STNGUIDE' ENTERED AT 10:45:09 ON 06 OCT 2020)

L1 QUE SPE=ON ABB=ON PLU=ON MON 810? OR MON810? OR MON!810? OR MON 00810? OR MON00810? OR MON!00810? OR MON 00810? OR MON00810? OR MON!00810? OR MON EMPTY SETEMPTY SET81EMPTY SET? OR MON!EMPTY SETEMPTY SET81EMPTY SET? OR MONEMPTY SETEMPTY SET81EMPTY SET? OR NK603 OR NK 603

L2 QUE SPE=ON ABB=ON PLU=ON MON 00603? OR MON!00603? OR MON00603? OR MON 00603? OR MON00603? OR MON!00603? OR MON EMPTY SETEMPTY SET6EMPTY SET3? OR MON!EMPTY SETEMPTY SET6EMPTY SET3? OR MONEMPTY SETEMPTY SET6EMPTY SET3?

L3 QUE SPE=ON ABB=ON PLU=ON MON 88017? OR MON!88017? OR MON88017? OR MON 88017? OR MON!88017? OR MON88017? OR MON 88EMPTY SET17? OR MON!88EMPTY SET17? OR MON88EMPTY SET17?

L4 QUE SPE=ON ABB=ON PLU=ON MON 89034? OR MON!89034? OR MON89034? OR MON 89034? OR MON!89034? OR MON89034? OR MON 89EMPTY SET34? OR MON!89EMPTY SET34? OR MON89EMPTY SET34?

L5 QUE SPE=ON ABB=ON PLU=ON MON 87460? OR MON!87460? OR MON87460? OR MON 87460? OR MON!87460? OR MON87460? OR MON 8746EMPTY SET? OR MON!8746EMPTY SET? OR MON8746EMPTY SET? OR MON 87427? OR MON!87427? OR MON87427? OR 1507 OR 1507 OR 15EMPTYSET7 OR TC1507 OR TC1507 OR TC15EMPTYSET7

L6 QUE SPE=ON ABB=ON PLU=ON DAS 01507? OR DAS!01507? OR DAS01507? OR DAS 01507? OR DAS!01507? OR DAS01507? OR DAS EMPTY SET15EMPTY SET7? OR DAS!EMPTY SET15EMPTY SET7? OR DASEMPTY SET15EMPTY SET7? OR 59122 OR DAS 59122? OR DAS!59122? OR DAS59122? OR T25

L7 QUE SPE=ON ABB=ON PLU=ON ACS ZM003? OR ACS!ZM003? OR ACSZM003? OR ACS ZMOO3? OR ACS!ZMOO3? OR ACSZMOO3? OR ACS ZMEMPTY SET EMPTY SET3? OR ACS!ZMEMPTY SET EMPTY SET3? OR ACSZMEMPTY SET EMPTY SET3? OR MON 87411? OR MON!87411? OR MON87411?

L8 QUE SPE=ON ABB=ON PLU=ON MON 87403? OR MON!87403? OR MON87403? OR MON 87403? OR MON!87403? OR MON87403? OR MON 874EMPTY SET3? OR MON!874EMPTY SET3? OR MON874EMPTY SET3?

L9 QUE SPE=ON ABB=ON PLU=ON YIELD GARD? OR YIELDG!GARD? OR YIELDGARD? OR ROUNDUPREADY? OR ROUND UP READY? OR ROUND!UP!READY? OR ROUND!UP READY? OR ROUNDUP READY? OR RR2? OR RRII? OR VT? PRO? OR VT! PRO OR VT PRO? OR VT!PRO? OR VTPRO? OR DROUGHTGARD? OR DROUGHT GARD? OR HERCULEX?

L10 QUE SPE=ON ABB=ON PLU=ON LIBERTY LINK? OR LIBERTYLINK? OR LIBERTY!LINK OR VT? TRIPLE? OR VTTRIPLE? OR VT!TRIPLE? OR VT TRIPLE? OR VT DOUBLE PRO? OR VT DOUBLEPRO? OR VTDDOUBLEPRO? OR VT!DOUBLE PRO? OR VT DOUBLEPRO? OR VT!DOUBLEPRO? OR VT!2!PRO?

L11 QUE SPE=ON ABB=ON PLU=ON SMARTSTAX? OR SMART STAX? OR SMART!STAX? OR RHS OR HYBRIDIZATION SYSTEM OR VT 2 PRO? OR POWER CORE? OR POWERCORE?

L12 QUE SPE=ON ABB=ON PLU=ON MAIZE? OR CORN? OR "ZEA MAYS" OR "Z. MAYS"

L13 QUE SPE=ON ABB=ON PLU=ON CP4EPSPS? OR CP4 EPSPS? OR

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Literature search - Bayer maize GM products

Bayer Agriculture BV

	5(W) (ENOLPYRUVYLSHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYLSHIKIMATE OR ENOL!PYRUVYL!SHIKIMATE!) (W) 3 PHOSPHATE SYNTHASE OR PAT OR PHOSPHINOTHRICIN
L14	QUE SPE=ON ABB=ON PLU=ON N!ACETYLTRANSFERASE OR N!ACETYLTRANSFERASE OR N!ACETYL!TRANSFERASE OR N ACETYL TRANSFERASE OR N ACETYL!TRANSFERASE OR N ACETYLTRANSFERASE
L15	QUE SPE=ON ABB=ON PLU=ON CRY1AB OR CRY1 AB OR CRY 1 AB OR CRY 1AB OR CRYIAB OR CRYI AB OR CRY I AB OR CRY IAB OR CRY1A105 OR CRY1A 105 OR CRY 1A 105 OR CRY 1A105 OR CRYA105 OR CRYIA 105 OR CRY IA 105 OR CRY IA105 OR CRY1A.105
L16	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 CRY1F OR CRY1 F OR CRY 1 F OR CRY 1F OR CRYIF OR CRYI F OR CRY I F OR CRY IF
L17	QUE SPE=ON ABB=ON PLU=ON CRY3BB? OR CRY3 BB? OR CRY 3 BB? OR CRY 3BB? OR CRYIIIIBB? OR CRYIII BB? OR CRY III BB? OR CRY IIIBB? OR CRY34AB1? OR CRY34AB 1? OR CRY 34AB 1? OR CRY 34AB1? OR GPP34AB1? OR GPP34AB 1? OR GPP 34AB 1? OR GPP 34AB1?
L18	QUE SPE=ON ABB=ON PLU=ON CRY35AB1? OR CRY35AB 1? OR CRY 35AB 1? OR CRY 35AB1? OR TPP35AB1? OR TPP35AB 1? OR TPP 35AB 1? OR TPP 35AB1?
L19	QUE SPE=ON ABB=ON PLU=ON CSPB OR CSP B OR COLD SHOCK PROTEIN B OR COLD!SHOCKPROTEIN!B OR COLD!SHOCK PROTEIN!B OR COLD!SHOCK!PROTEIN!B OR ATHB17? OR ATHB!17? OR ATHB 17? OR HB17? OR HB!17? OR HB 17?
L20	QUE SPE=ON ABB=ON PLU=ON (RNA? OR DSRNA? OR SIRNA?) (5A) (DVSN F7 OR WCR SNF7 OR CRW SNF7 OR DV SNF7 OR DVSNF 7 OR DV SNF 7 OR DV.SNF7 OR SNF7)
L21	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?))
L22	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 GLUFOSINATE OR GLUPHOSINATE OR BASTA OR IGNITE OR LIBERTY)
L23	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (BORER? OR EARWORM? OR BOLLWORM? OR ARMYWORM? OR EAR WORM? OR BOLL WORM? OR ARMY WORM? OR LEPIDOPTERA? OR NOCTUIDAE)
L24	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (CRAMBIDAE OR OSTRINIA OR SESAMIA OR CHILO OR DIATRAEA OR SPODOPTERA OR BUSSEOLA OR HELICOVERPA OR FURNACALIS OR NUBILALIS OR NONAGRIOIDES OR PARTELLUS)
L25	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (GRANDIOSELLA OR SACCHARALIS OR FRUGIPERDA OR FUSCA OR ZEA OR ARMIGERA OR ECB OR MCB OR ACB OR SSB OR SWCB OR SCB OR FAW OR AMSB OR CEW OR CBW OR OBW)
L26	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (ROOTWORM? OR ROOT WORM? OR COLEOPTERA? OR CHRYSOMEL? OR DIABROTICA OR VIRGIFERA OR BARBERI OR UNDECIMPUNCTATA OR CRW OR WCR? OR NCR? OR SCR? OR MCR?)
L27	QUE SPE=ON ABB=ON PLU=ON (BTMAIZE OR BTCORN OR BT MAIZE OR BT CORN OR BT!MAIZE OR BT!CORN OR THURINGIENSIS!MAIZE OR THURINGIENSISMAIZE OR THURINGIENSIS MAIZE OR THURINGIENSIS!CORN OR THURINGIENSISCORN OR THURINGIENSIS CORN)
L28	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) DROUGHT OR (EFFICIEN? OR REDUC? OR LIMIT? OR DECRE? OR LOW?) (5A) WATER



L29 QUE SPE=ON ABB=ON PLU=ON (HYBRID? OR CROSS? OR POLLEN? OR POLLINAT? OR STERIL?(5A)MALE) AND (GL!PHOSATE OR GL!FOSATE OR ROUNDUP? OR ROUND UP? OR ROUND!UP?)

L30 QUE SPE=ON ABB=ON PLU=ON (INCRE? OR ENHANCE?) (5A) (EAR SIZE OR EAR BIOMASS OR EAR GROWTH OR EAR WEIGHT OR EAR MASS OR SINK CAPACITY OR SINK POTENTIAL)

L31 QUE SPE=ON ABB=ON PLU=ON ZEA MAYS+UF,NT/CT,ORGN OR MAIZE+UF,NT/CT,ORGN

L32 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

L33 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 COLEOPTERA+UF,NT2/CT,ORGN OR GLYPHOSATE+UF,NT/CT OR GLUFOSINATE+UF,NT/CT)

L34 QUE SPE=ON ABB=ON PLU=ON (HYBRIDIZATION+UF,NT/CT OR CROSSING+UF,NT/CT OR PLANT BREEDING METHODS+UF,NT/CT OR POLLINATION+UF,NT/CT OR MALE STERILITY+UF,NT/CT) AND GLYPHOSATE+UF,NT/CT

L35 QUE SPE=ON ABB=ON PLU=ON DROUGHT RESISTANCE+UF,NT/CT OR BIOMASS PRODUCTION+UF,NT/CT

### Search in SciSearch Database:

FILE 'SCISEARCH' ENTERED AT 10:46:02 ON 06 OCT 2020

L36 45 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8) AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L37 201 SEA SPE=ON ABB=ON PLU=ON (L9 OR L10 OR L11) AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L38 9788 SEA SPE=ON ABB=ON PLU=ON L12 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L39 8 SEA SPE=ON ABB=ON PLU=ON L37 AND L38

L40 342 SEA SPE=ON ABB=ON PLU=ON (L13 OR L14) AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L41 48 SEA SPE=ON ABB=ON PLU=ON (L15 OR L16) AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L42 5 SEA SPE=ON ABB=ON PLU=ON (L17 OR L18) AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L43 42 SEA SPE=ON ABB=ON PLU=ON L19 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L44 2 SEA SPE=ON ABB=ON PLU=ON L20 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L45 435 SEA SPE=ON ABB=ON PLU=ON L40 OR L41 OR L42 OR L43 OR L44

L46 9777 SEA SPE=ON ABB=ON PLU=ON L21 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L47 74 SEA SPE=ON ABB=ON PLU=ON L45 AND (L46 OR L38)

L48 98 SEA SPE=ON ABB=ON PLU=ON L22 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L49 110 SEA SPE=ON ABB=ON PLU=ON (L23 OR L24 OR L25) AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L50 777 SEA SPE=ON ABB=ON PLU=ON L26 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L51 40 SEA SPE=ON ABB=ON PLU=ON L27 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

		05 AND PY>=2020			
L52	9738	SEA SPE=ON ABB=ON PLU=ON	L28 AND ED>=20200528 AND ED<=20201005 AND PY>=2020		
L53	32	SEA SPE=ON ABB=ON PLU=ON	L29 AND ED>=20200528 AND ED<=20201005 AND PY>=2020		
L54	8	SEA SPE=ON ABB=ON PLU=ON	L30 AND ED>=20200528 AND ED<=20201005 AND PY>=2020		
L55	10705	SEA SPE=ON ABB=ON PLU=ON	L48 OR L49 OR L50 OR L52 OR L53 OR L54		
L56	45	SEA SPE=ON ABB=ON PLU=ON	L55 AND L46 AND L38		
L57	28	SEA SPE=ON ABB=ON PLU=ON	L51 AND L46		
L58	58	SEA SPE=ON ABB=ON PLU=ON	L57 OR L56		
L59	160	SEA SPE=ON ABB=ON PLU=ON	L36 OR L39 OR L47 OR L58		

## Search in CABA Database:

FILE 'CABA' ENTERED AT 10:47:05 ON 06 OCT 2020

L60	24	SEA SPE=ON ABB=ON PLU=ON	(L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L61	27	SEA SPE=ON ABB=ON PLU=ON	(L9 OR L10 OR L11) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L62	4111	SEA SPE=ON ABB=ON PLU=ON	L12 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L63	2353	SEA SPE=ON ABB=ON PLU=ON	L31 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L64	4113	SEA SPE=ON ABB=ON PLU=ON	L62 OR L63
L65	3	SEA SPE=ON ABB=ON PLU=ON	L61 AND L64
L66	79	SEA SPE=ON ABB=ON PLU=ON	(L13 OR L14) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L67	13	SEA SPE=ON ABB=ON PLU=ON	(L15 OR L16) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L68	0	SEA SPE=ON ABB=ON PLU=ON	(L17 OR L18) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L69	4	SEA SPE=ON ABB=ON PLU=ON	L19 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L70	0	SEA SPE=ON ABB=ON PLU=ON	L20 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L71	96	SEA SPE=ON ABB=ON PLU=ON	L66 OR L67 OR L68 OR L69 OR L70
L72	2457	SEA SPE=ON ABB=ON PLU=ON	L21 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L73	1007	SEA SPE=ON ABB=ON PLU=ON	L32 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L74	2461	SEA SPE=ON ABB=ON PLU=ON	L72 OR L73
L75	26	SEA SPE=ON ABB=ON PLU=ON	L71 AND (L64 OR L74)
L76	64	SEA SPE=ON ABB=ON PLU=ON	L22 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L77	59	SEA SPE=ON ABB=ON PLU=ON	(L23 OR L24 OR L25) AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L78	242	SEA SPE=ON ABB=ON PLU=ON	L26 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L79	8	SEA SPE=ON ABB=ON PLU=ON	L27 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L80	4437	SEA SPE=ON ABB=ON PLU=ON	L28 AND ED>=20200528 AND ED<=20201005 AND PY>=2020

L81	13	SEA SPE=ON	ABB=ON	PLU=ON	L29 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L82	5	SEA SPE=ON	ABB=ON	PLU=ON	L30 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L83	84	SEA SPE=ON	ABB=ON	PLU=ON	L33 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L84	3	SEA SPE=ON	ABB=ON	PLU=ON	L34 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L85	1147	SEA SPE=ON	ABB=ON	PLU=ON	L35 AND ED>=20200528 AND ED<=20201005 AND PY>=2020
L86	5259	SEA SPE=ON	ABB=ON	PLU=ON	L76 OR L77 OR L78 OR L80 OR L81 OR L82 OR L83 OR L84 OR L85
L87	25	SEA SPE=ON	ABB=ON	PLU=ON	L86 AND L74 AND L64
L88	8	SEA SPE=ON	ABB=ON	PLU=ON	L79 AND L74
L89	32	SEA SPE=ON	ABB=ON	PLU=ON	L88 OR L87
L90	76	SEA SPE=ON	ABB=ON	PLU=ON	L60 OR L65 OR L75 OR L89

### Deduplication of Hit-sets from both sources:

FILE 'CABA, SCISEARCH' ENTERED AT 10:48:49 ON 06 OCT 2020  
CHARGED TO COST=SLB76724 REGEU

L91 218 DUP REM L90 L59 (18 DUPLICATES REMOVED)  
ANSWERS '1-76' FROM FILE CABA  
ANSWERS '77-218' FROM FILE SCISEARCH  
D L91 1-218 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 Maize products literature search – Second quarter (October 2020 - January 2021)

### Translation of query terms into STN search language:

(FILE 'STNGUIDE' ENTERED AT 13:24:18 ON 01 FEB 2021)

L1 QUE SPE=ON ABB=ON PLU=ON MON 810? OR MON810? OR MON!810? OR  
MON 00810? OR MON00810? OR MON!00810? OR MON 00810? OR  
MON00810? OR MON!00810? OR MON EMPTY SETEMPTY SET81EMPTY SET?  
OR MON!EMPTY SETEMPTY SET81EMPTY SET? OR MONEMPTY SETEMPTY  
SET81EMPTY SET? OR NK603 OR NK 603

L2 QUE SPE=ON ABB=ON PLU=ON MON 00603? OR MON!00603? OR  
MON00603? OR MON 00603? OR MON!00603? OR MON 00603? OR MON  
EMPTY SETEMPTY SET6EMPTY SET3? OR MON!EMPTY SETEMPTY SET6EMPTY  
SET3? OR MONEMPTY SETEMPTY SET6EMPTY SET3?

L3 QUE SPE=ON ABB=ON PLU=ON MON 88017? OR MON!88017? OR  
MON88017? OR MON 88017? OR MON!88017? OR MON88017? OR MON  
88EMPTY SET17? OR MON!88EMPTY SET17? OR MON88EMPTY SET17?

L4 QUE SPE=ON ABB=ON PLU=ON MON 89034? OR MON!89034? OR  
MON89034? OR MON 89034? OR MON!89034? OR MON89034? OR MON  
89EMPTY SET34? OR MON!89EMPTY SET34? OR MON89EMPTY SET34?

L5 QUE SPE=ON ABB=ON PLU=ON MON 87460? OR MON!87460? OR  
MON87460? OR MON 87460? OR MON!87460? OR MON87460? OR MON  
8746EMPTY SET? OR MON!8746EMPTY SET? OR MON8746EMPTY SET? OR  
MON 87427? OR MON!87427? OR MON87427? OR 1507 OR 1507 OR  
15EMPTYSET7 OR TC1507 OR TC1507 OR TC15EMPTYSET7

L6 QUE SPE=ON ABB=ON PLU=ON DAS 01507? OR DAS!01507? OR  
DAS01507? OR DAS 01507? OR DAS!01507? OR DAS01507? OR DAS  
EMPTY SET15EMPTY SET7? OR DAS!EMPTY SET15EMPTY SET7? OR  
DASEMPTY SET15EMPTY SET7? OR 59122 OR DAS 59122? OR DAS!59122?  
OR DAS59122? OR T25

L7 QUE SPE=ON ABB=ON PLU=ON ACS ZM003? OR ACS!ZM003? OR  
ACSZM003? OR ACS ZM003? OR ACS!ZM003? OR ACSZM003? OR ACS  
ZMEMPTY SET EMPTY SET3? OR ACS!ZMEMPTY SET EMPTY SET3? OR  
ACSZMEMPTY SET EMPTY SET3? OR MON 87411? OR MON!87411? OR  
MON87411?

L8 QUE SPE=ON ABB=ON PLU=ON MON 87403? OR MON!87403? OR  
MON87403? OR MON 87403? OR MON!87403? OR MON87403? OR MON  
874EMPTY SET3? OR MON!874EMPTY SET3? OR MON874EMPTY SET3?

L9 QUE SPE=ON ABB=ON PLU=ON YIELD GARD? OR YIELDG? OR YIELD!GAR  
D? OR YIELDGARD? OR ROUNDUPREADY? OR ROUND UP READY? OR  
ROUND!UP!READY? OR ROUND!UP READY? OR ROUNDUP READY? OR RR2?  
OR RRII? OR VT? PRO? OR VT! PRO OR VT PRO? OR VT!PRO? OR  
VTPRO? OR DROUGHTGARD? OR DROUGHT GARD? OR HERCULEX?

L10 QUE SPE=ON ABB=ON PLU=ON LIBERTY LINK? OR LIBERTYLINK? OR  
LIBERTY!LINK OR VT? TRIPLE? OR VTTRIPLE? OR VT!TRIPLE? OR VT  
TRIPLE? OR VT DOUBLE PRO? OR VT DOUBLEPRO? OR VTDOUBLE PRO? OR  
VTDOUBLEPRO? OR VT!DOUBLE PRO? OR VT DOUBLEPRO? OR VT!DOUBLEPRO  
? OR VT!2!PRO?

L11 QUE SPE=ON ABB=ON PLU=ON SMARTSTAX? OR SMART STAX? OR  
SMART!STAX? OR RHS OR HYBRIDIZATION SYSTEM OR VT 2 PRO? OR  
POWER CORE? OR POWERCORE?

L12 QUE SPE=ON ABB=ON PLU=ON MAIZE? OR CORN? OR "ZEA MAYS" OR  
"Z. MAYS"

L13 QUE SPE=ON ABB=ON PLU=ON CP4EPSPS? OR CP4 EPSPS? OR

5(W) (ENOLPYRUVYLSHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR ENOLPYRUVYL SHIKIMATE OR ENOL PYRUVYLSHIKIMATE OR ENOL!PYRUVYL! SHIKIMATE!) (W) 3 PHOSPHATE SYNTHASE OR PAT OR PHOSPHINOTHRICIN

L14 QUE SPE=ON ABB=ON PLU=ON N!ACETYLTRANSFERASE OR N!ACETYL TRANSFERASE OR N!ACETYL!TRANSFERASE OR N ACETYL TRANSFERASE OR N ACETYL!TRANSFERASE OR N ACETYLTRANSFERASE

L15 QUE SPE=ON ABB=ON PLU=ON CRY1AB OR CRY1 AB OR CRY 1 AB OR CRY 1AB OR CRYIAB OR CRYI AB OR CRY I AB OR CRY IAB 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

L16 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 CRY1F OR CRY1 F OR CRY 1 F OR CRY 1F OR CRYIF OR CRYI F OR CRY I F OR CRY IF

L17 QUE SPE=ON ABB=ON PLU=ON CRY3BB? OR CRY3 BB? OR CRY 3 BB? OR CRY 3BB? OR CRYIIIIBB? OR CRYIII BB? OR CRY III BB? OR CRY IIIBB? OR CRY34AB1? OR CRY34AB 1? OR CRY 34AB 1? OR CRY 34AB1? OR GPP34AB1? OR GPP34AB 1? OR GPP 34AB 1? OR GPP 34AB1?

L18 QUE SPE=ON ABB=ON PLU=ON CRY35AB1? OR CRY35AB 1? OR CRY 35AB 1? OR CRY 35AB1? OR TPP35AB1? OR TPP35AB 1? OR TPP 35AB 1? OR TPP 35AB1?

L19 QUE SPE=ON ABB=ON PLU=ON CSPB OR CSP B OR COLD SHOCK PROTEIN B OR COLD!SHOCKPROTEIN!B OR COLD!SHOCK PROTEIN!B OR COLD!SHOCK!PROTEIN!B OR ATHB17? OR ATHB!17? OR ATHB 17? OR HB17? OR HB!17? OR HB 17?

L20 QUE SPE=ON ABB=ON PLU=ON (RNA? OR DSRNA? OR SIRNA?) (5A) (DVS NF7 OR WCR SNF7 OR CRW SNF7 OR DV SNF7 OR DVS NF 7 OR DV SNF 7 OR DV.SNF7 OR SNF7)

L21 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?))

L22 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 GLUFOSINATE OR GLUPHOSINATE OR BASTA OR IGNITE OR LIBERTY)

L23 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (BORER? OR EARWORM? OR BOLLWORM? OR ARMYWORM? OR EAR WORM? OR BOLL WORM? OR ARMY WORM? OR LEPIDOPTERA? OR NOCTUIDAE)

L24 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (CRAMBIDAE OR OSTRINIA OR SESAMIA OR CHILO OR DIATRAEA OR SPODOPTERA OR BUSSEOLA OR HELICOVERPA OR FURNACALIS OR NUBILALIS OR NONAGRIOIDES OR PARTELLUS)

L25 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (GRANDIOSELLA OR SACCHARALIS OR FRUGIPERDA OR FUSCA OR ZEA OR ARMIGERA OR ECB OR MCB OR ACB OR SSB OR SWCB OR SCB OR FAW OR AMSB OR CEW OR CBW OR OBW)

L26 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (ROOTWORM? OR ROOT WORM? OR COLEOPTERA? OR CHRYSOMEL? OR DIABROTICA OR VIRGIFERA OR BARBERI OR UNDECIMPUNCTATA OR CRW OR WCR? OR NCR? OR SCR? OR MCR?)

L27 QUE SPE=ON ABB=ON PLU=ON (BTMAIZE OR BTCORN OR BT MAIZE OR BT CORN OR BT!MAIZE OR BT!CORN OR THURINGIENSIS!MAIZE OR THURINGIENSISMAIZE OR THURINGIENSIS MAIZE OR THURINGIENSIS!CORN OR THURINGIENSISCORN OR THURINGIENSIS CORN)

L28 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) DROUGHT OR (EFFICIEN? OR REDUC? OR LIMIT? OR DECRE? OR LOW?) (5A) WATER

L29 QUE SPE=ON ABB=ON PLU=ON (HYBRID? OR CROSS? OR POLLEN? OR POLLINAT? OR STERIL?(5A)MALE) AND (GL!PHOSATE OR GL!FOSATE OR ROUNDUP? OR ROUND UP? OR ROUND!UP?)

L30 QUE SPE=ON ABB=ON PLU=ON (INCRE? OR ENHANCE?) (5A) (EAR SIZE OR EAR BIOMASS OR EAR GROWTH OR EAR WEIGHT OR EAR MASS OR SINK CAPACITY OR SINK POTENTIAL)

L31 QUE SPE=ON ABB=ON PLU=ON ZEA MAYS+UF,NT/CT,ORGN OR MAIZE+UF,NT/CT,ORGN

L32 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

L33 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 COLEOPTERA+UF,NT2/CT,ORGN OR GLYPHOSATE+UF,NT/CT OR GLUFOSINATE+UF,NT/CT)

L34 QUE SPE=ON ABB=ON PLU=ON (HYBRIDIZATION+UF,NT/CT OR CROSSING+UF,NT/CT OR PLANT BREEDING METHODS+UF,NT/CT OR POLLINATION+UF,NT/CT OR MALE STERILITY+UF,NT/CT) AND GLYPHOSATE+UF,NT/CT

L35 QUE SPE=ON ABB=ON PLU=ON DROUGHT RESISTANCE+UF,NT/CT OR BIOMASS PRODUCTION+UF,NT/CT

### Search in SciSearch Database:

FILE 'SCISEARCH' ENTERED AT 13:25:17 ON 01 FEB 2021

L36 37 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8) AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L37 184 SEA SPE=ON ABB=ON PLU=ON (L9 OR L10 OR L11) AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L38 8278 SEA SPE=ON ABB=ON PLU=ON L12 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L39 5 SEA SPE=ON ABB=ON PLU=ON L37 AND L38

L40 274 SEA SPE=ON ABB=ON PLU=ON (L13 OR L14) AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L41 38 SEA SPE=ON ABB=ON PLU=ON (L15 OR L16) AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L42 9 SEA SPE=ON ABB=ON PLU=ON (L17 OR L18) AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L43 24 SEA SPE=ON ABB=ON PLU=ON L19 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L44 1 SEA SPE=ON ABB=ON PLU=ON L20 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L45 343 SEA SPE=ON ABB=ON PLU=ON L40 OR L41 OR L42 OR L43 OR L44

L46 8641 SEA SPE=ON ABB=ON PLU=ON L21 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L47 57 SEA SPE=ON ABB=ON PLU=ON L45 AND (L46 OR L38)

L48 76 SEA SPE=ON ABB=ON PLU=ON L22 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L49 92 SEA SPE=ON ABB=ON PLU=ON (L23 OR L24 OR L25) AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L50 743 SEA SPE=ON ABB=ON PLU=ON L26 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

L51 29 SEA SPE=ON ABB=ON PLU=ON L27 AND ED>=20201005 AND ED<=20210126 AND PY>=2020

		26 AND PY>=2020		
L52	8685	SEA SPE=ON ABB=ON PLU=ON	L28 AND ED>=20201005 AND ED<=202101	
		26 AND PY>=2020		
L53	35	SEA SPE=ON ABB=ON PLU=ON	L29 AND ED>=20201005 AND ED<=202101	
		26 AND PY>=2020		
L54	3	SEA SPE=ON ABB=ON PLU=ON	L30 AND ED>=20201005 AND ED<=202101	
		26 AND PY>=2020		
L55	9584	SEA SPE=ON ABB=ON PLU=ON	L48 OR L49 OR L50 OR L52 OR L53 OR	
		L54		
L56	30	SEA SPE=ON ABB=ON PLU=ON	L55 AND L46 AND L38	
L57	22	SEA SPE=ON ABB=ON PLU=ON	L51 AND L46	
L58	41	SEA SPE=ON ABB=ON PLU=ON	L57 OR L56	
L59	116	SEA SPE=ON ABB=ON PLU=ON	L36 OR L39 OR L47 OR L58	

## Search in CABA Database:

FILE 'CABA' ENTERED AT 13:26:35 ON 01 FEB 2021

L60	12	SEA SPE=ON ABB=ON PLU=ON	(L1 OR L2 OR L3 OR L4 OR L5 OR L6
			OR L7 OR L8) AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L61	43	SEA SPE=ON ABB=ON PLU=ON	(L9 OR L10 OR L11) AND ED>=20201005
			AND ED<=20210126 AND PY>=2020
L62	3849	SEA SPE=ON ABB=ON PLU=ON	L12 AND ED>=20201005 AND ED<=202101
			26 AND PY>=2020
L63	2183	SEA SPE=ON ABB=ON PLU=ON	L31 AND ED>=20201005 AND ED<=202101
			26 AND PY>=2020
L64	3851	SEA SPE=ON ABB=ON PLU=ON	L62 OR L63
L65	4	SEA SPE=ON ABB=ON PLU=ON	L61 AND L64
L66	84	SEA SPE=ON ABB=ON PLU=ON	(L13 OR L14) AND ED>=20201005 AND
			ED<=20210126 AND PY>=2020
L67	24	SEA SPE=ON ABB=ON PLU=ON	(L15 OR L16) AND ED>=20201005 AND
			ED<=20210126 AND PY>=2020
L68	3	SEA SPE=ON ABB=ON PLU=ON	(L17 OR L18) AND ED>=20201005 AND
			ED<=20210126 AND PY>=2020
L69	0	SEA SPE=ON ABB=ON PLU=ON	L19 AND ED>=20201005 AND ED<=202101
			26 AND PY>=2020
L70	5	SEA SPE=ON ABB=ON PLU=ON	L20 AND ED>=20201005 AND ED<=202101
			26 AND PY>=2020
L71	114	SEA SPE=ON ABB=ON PLU=ON	L66 OR L67 OR L68 OR L69 OR L70
L72	2546	SEA SPE=ON ABB=ON PLU=ON	L21 AND ED>=20201005 AND ED<=202101
			26 AND PY>=2020
L73	1173	SEA SPE=ON ABB=ON PLU=ON	L32 AND ED>=20201005 AND ED<=202101
			26 AND PY>=2020
L74	2551	SEA SPE=ON ABB=ON PLU=ON	L72 OR L73
L75	45	SEA SPE=ON ABB=ON PLU=ON	L71 AND (L64 OR L74)
L76	62	SEA SPE=ON ABB=ON PLU=ON	L22 AND ED>=20201005 AND ED<=202101
			26 AND PY>=2020
L77	69	SEA SPE=ON ABB=ON PLU=ON	(L23 OR L24 OR L25) AND ED>=2020100
			5 AND ED<=20210126 AND PY>=2020
L78	300	SEA SPE=ON ABB=ON PLU=ON	L26 AND ED>=20201005 AND ED<=202101
			26 AND PY>=2020
L79	17	SEA SPE=ON ABB=ON PLU=ON	L27 AND ED>=20201005 AND ED<=202101
			26 AND PY>=2020
L80	4459	SEA SPE=ON ABB=ON PLU=ON	L28 AND ED>=20201005 AND ED<=202101
			26 AND PY>=2020

L81	22	SEA SPE=ON	ABB=ON	PLU=ON	L29 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L82	7	SEA SPE=ON	ABB=ON	PLU=ON	L30 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L83	92	SEA SPE=ON	ABB=ON	PLU=ON	L33 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L84	2	SEA SPE=ON	ABB=ON	PLU=ON	L34 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L85	1114	SEA SPE=ON	ABB=ON	PLU=ON	L35 AND ED>=20201005 AND ED<=20210126 AND PY>=2020
L86	5321	SEA SPE=ON	ABB=ON	PLU=ON	L76 OR L77 OR L78 OR L80 OR L81 OR L82 OR L83 OR L84 OR L85
L87	25	SEA SPE=ON	ABB=ON	PLU=ON	L86 AND L74 AND L64
L88	17	SEA SPE=ON	ABB=ON	PLU=ON	L79 AND L74
L89	33	SEA SPE=ON	ABB=ON	PLU=ON	L88 OR L87
L90	78	SEA SPE=ON	ABB=ON	PLU=ON	L60 OR L65 OR L75 OR L89

### Deduplication of Hit-sets from both sources:

FILE 'CABA, SCISEARCH' ENTERED AT 13:28:24 ON 01 FEB 2021  
 CHARGED TO COST=SLB76724 REG EU  
 L91 184 DUP REM L90 L59 (10 DUPLICATES REMOVED)  
 ANSWERS '1-78' FROM FILE CABA  
 ANSWERS '79-184' FROM FILE SCISEARCH  
 D L91 1-184 ALL PY

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 Maize products literature search – Third quarter (February 2021 – May 2021)

### Translation of query terms into STN search language:

(FILE 'STNGUIDE' ENTERED AT 11:49:43 ON 01 JUN 2021)

L1 QUE SPE=ON ABB=ON PLU=ON MON 810? OR MON810? OR MON!810? OR  
MON 00810? OR MON00810? OR MON!00810? OR MON 00810? OR  
MON00810? OR MON!00810? OR MON EMPTY SETEMPTY SET81EMPTY SET?  
OR MON!EMPTY SETEMPTY SET81EMPTY SET? OR MONEMPTY SETEMPTY  
SET81EMPTY SET? OR NK603 OR NK 603

L2 QUE SPE=ON ABB=ON PLU=ON MON 00603? OR MON!00603? OR  
MON00603? OR MON 00603? OR MON00603? OR MON!00603? OR MON  
EMPTY SETEMPTY SET6EMPTY SET3? OR MON!EMPTY SETEMPTY SET6EMPTY  
SET3? OR MONEMPTY SETEMPTY SET6EMPTY SET3?

L3 QUE SPE=ON ABB=ON PLU=ON MON 88017? OR MON!88017? OR  
MON88017? OR MON 88017? OR MON!88017? OR MON88017? OR MON  
88EMPTY SET17? OR MON!88EMPTY SET17? OR MON88EMPTY SET17?

L4 QUE SPE=ON ABB=ON PLU=ON MON 89034? OR MON!89034? OR  
MON89034? OR MON 89034? OR MON!89034? OR MON89034? OR MON  
89EMPTY SET34? OR MON!89EMPTY SET34? OR MON89EMPTY SET34?

L5 QUE SPE=ON ABB=ON PLU=ON MON 87460? OR MON!87460? OR  
MON87460? OR MON 87460? OR MON!87460? OR MON87460? OR MON  
8746EMPTY SET? OR MON!8746EMPTY SET? OR MON8746EMPTY SET? OR  
MON 87427? OR MON!87427? OR MON87427? OR 1507 OR 1507 OR  
15EMPTYSET7 OR TC1507 OR TC1507 OR TC15EMPTYSET7

L6 QUE SPE=ON ABB=ON PLU=ON DAS 01507? OR DAS!01507? OR  
DAS01507? OR DAS 01507? OR DAS!01507? OR DAS01507? OR DAS  
EMPTY SET15EMPTY SET7? OR DAS!EMPTY SET15EMPTY SET7? OR  
DASEMPTY SET15EMPTY SET7? OR 59122 OR DAS 59122? OR DAS!59122?  
OR DAS59122? OR T25

L7 QUE SPE=ON ABB=ON PLU=ON ACS ZM003? OR ACS!ZM003? OR  
ACSZM003? OR ACS ZMOO3? OR ACS!ZMOO3? OR ACSZMOO3? OR ACS  
ZMEMPTY SET EMPTY SET3? OR ACS!ZMEMPTY SET EMPTY SET3? OR  
ACSZMEMPTY SET EMPTY SET3? OR MON 87411? OR MON!87411? OR  
MON87411?

L8 QUE SPE=ON ABB=ON PLU=ON MON 87403? OR MON!87403? OR  
MON87403? OR MON 87403? OR MON!87403? OR MON87403? OR MON  
874EMPTY SET3? OR MON!874EMPTY SET3? OR MON874EMPTY SET3?

L9 QUE SPE=ON ABB=ON PLU=ON MIR!162? OR MIR 162? OR MIR162? OR  
SYN!IR162? OR SYN IR162? OR SYNIR162?

L10 QUE SPE=ON ABB=ON PLU=ON YIELD GARD? OR YIELDG? OR YIELD!GAR  
D? OR YIELDGARD? OR ROUNDUPREADY? OR ROUND UP READY? OR  
ROUND!UP!READY? OR ROUND!UP READY? OR ROUNDUP READY? OR RR2?  
OR RRII? OR VT? PRO? OR VT! PRO OR VT PRO? OR VT!PRO? OR  
VTPRO? OR DROUGHTGARD? OR DROUGHT GARD? OR HERCULEX?

L11 QUE SPE=ON ABB=ON PLU=ON LIBERTY LINK? OR LIBERTYLINK? OR  
LIBERTY!LINK OR VT? TRIPLE? OR VTTRIPLE? OR VT!TRIPLE? OR VT  
TRIPLE? OR VT DOUBLE PRO? OR VT DOUBLEPRO? OR VTDOUBLE PRO? OR  
VTDOUBLEPRO? OR VT!DOUBLE PRO? OR VT DOUBLEPRO? OR VT!DOUBLEPRO  
? OR VT!2!PRO?

L12 QUE SPE=ON ABB=ON PLU=ON SMARTSTAX? OR SMART STAX? OR  
SMART!STAX? OR RHS OR HYBRIDIZATION SYSTEM OR VT 2 PRO? OR

	POWER CORE? OR POWERCORE? OR AGRISURE? OR VIPTERA? OR TRECEPTA?
L13	QUE SPE=ON ABB=ON PLU=ON MAIZE? OR CORN? OR "ZEA MAYS" OR "Z. MAYS"
L14	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 OR PAT OR PHOSPHINOTHRICIN
L15	QUE SPE=ON ABB=ON PLU=ON N!ACETYLTRANSFERASE OR N!ACETYL TRANSFERASE OR N!ACETYL!TRANSFERASE OR N ACETYL TRANSFERASE OR N ACETYL!TRANSFERASE OR N ACETYLTRANSFERASE
L16	QUE SPE=ON ABB=ON PLU=ON CRY1AB OR CRY1 AB OR CRY 1 AB OR CRY 1AB OR CRYIAB OR CRYI AB OR CRY I AB OR CRY IAB 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
L17	QUE SPE=ON ABB=ON PLU=ON CRY2AB? OR CRY2 AB? OR CRY 2 AB? OR CRY 2AB? OR CRYIAB? OR CRYII AB? OR CRY II AB? OR CRY IIAB? OR CRY1F OR CRY1 F OR CRY 1 F OR CRY 1F OR CRYIF OR CRYI F OR CRY I F OR CRY IF OR VIP3AA20 OR VIP3!AA20 OR VIP3 AA20
L18	QUE SPE=ON ABB=ON PLU=ON CRY3BB? OR CRY3 BB? OR CRY 3 BB? OR CRY 3BB? OR CRYIIIBB? OR CRYIII BB? OR CRY III BB? OR CRY IIIBB? OR CRY34AB1? OR CRY34AB 1? OR CRY 34AB 1? OR CRY 34AB1? OR GPP34AB1? OR GPP34AB 1? OR GPP 34AB 1? OR GPP 34AB1?
L19	QUE SPE=ON ABB=ON PLU=ON CRY35AB1? OR CRY35AB 1? OR CRY 35AB 1? OR CRY 35AB1? OR TPP35AB1? OR TPP35AB 1? OR TPP 35AB 1? OR TPP 35AB1?
L20	QUE SPE=ON ABB=ON PLU=ON CSPB OR CSP B OR COLD SHOCK PROTEIN B OR COLD!SHOCKPROTEIN!B OR COLD!SHOCK PROTEIN!B OR COLD!SHOCK!PROTEIN!B OR ATHB17? OR ATHB!17? OR ATHB 17? OR HB17? OR HB!17? OR HB 17?
L21	QUE SPE=ON ABB=ON PLU=ON (RNA? OR DSRNA? OR SIRNA?) (5A) (DVS NF7 OR WCR SNF7 OR CRW SNF7 OR DV SNF7 OR DVS NF 7 OR DV SNF 7 OR DV.SNF7 OR SNF7)
L22	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?))
L23	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 GLUFOSINATE OR GLUPHOSINATE OR BASTA OR IGNITE OR LIBERTY)
L24	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (BORER? OR EARWORM? OR BOLLWORM? OR ARMYWORM? OR EAR WORM? OR BOLL WORM? OR ARMY WORM? OR LEPIDOPTERA? OR NOCTUIDAE)
L25	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (CRAMBIDAE OR OSTRINIA OR SESAMIA OR CHILO OR DIATRAEA OR SPODOPTERA OR BUSSEOLA OR HELICOVERPA OR FURNACALIS OR NUBILALIS OR NONAGRIOIDES OR PARTELLUS)
L26	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (GRANDIOSELLA OR SACCHARALIS OR FRUGIPERDA OR FUSCA OR ZEA OR ARMIGERA OR ECB OR MCB OR ACB OR SSB OR SWCB OR SCB OR FAW OR AMSB OR CEW OR CBW OR OBW)
L27	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (EXIGUA OR CUTWORM? OR CUT WORM? OR STRIACOSTA OR AGROTIS OR FELTIA OR PSEUDALETIA OR ALBICOSTA OR IPSILON OR JACULIFERA OR UNIPUNCTA OR WBC)
L28	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (ROOTWORM? OR ROOT WORM? OR COLEOPTERA? OR CHRYSOMEL? OR

DIABROTICA OR VIRGIFERA OR BARBERI OR UNDECIMPUNCTATA OR CRW  
OR WCR? OR NCR? OR SCR? OR MCR?)

L29 QUE SPE=ON ABB=ON PLU=ON (BTMAIZE OR BTCORN OR BT MAIZE OR  
BT CORN OR BT!MAIZE OR BT!CORN OR THURINGIENSIS!MAIZE OR  
THURINGIENSISMAIZE OR THURINGIENSIS MAIZE OR THURINGIENSIS!CORN  
OR THURINGIENSISCORN OR THURINGIENSIS CORN)

L30 QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) DROUGHT OR (EFFICIEN? OR REDUC? OR LIMIT? OR DECRE? OR LOW?) (5A) WATER

L31 QUE SPE=ON ABB=ON PLU=ON (HYBRID? OR CROSS? OR POLLEN? OR POLLINAT? OR STERIL? (5A) MALE) AND (GL!PHOSATE OR GL!FOSATE OR ROUNDUP? OR ROUND UP? OR ROUND!UP?)

L32 QUE SPE=ON ABB=ON PLU=ON (INCRE? OR ENHANCE?) (5A) (EAR SIZE OR EAR BIOMASS OR EAR GROWTH OR EAR WEIGHT OR EAR MASS OR SINK CAPACITY OR SINK POTENTIAL)

L33 QUE SPE=ON ABB=ON PLU=ON ZEA MAYS+UF,NT/CT,ORGN OR MAIZE+UF,NT/CT,ORGN

L34 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

L35 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 COLEOPTERA +UF,NT2/CT,ORGN OR GLYPHOSATE+UF,NT/CT OR GLUFOSINATE+UF,NT/CT)

L36 QUE SPE=ON ABB=ON PLU=ON (HYBRIDIZATION+UF,NT/CT OR CROSSING+UF,NT/CT OR PLANT BREEDING METHODS+UF,NT/CT OR POLLINATION+UF,NT/CT OR MALE STERILITY+UF,NT/CT) AND GLYPHOSATE +UF,NT/CT

L37 QUE SPE=ON ABB=ON PLU=ON DROUGHT RESISTANCE+UF,NT/CT OR BIOMASS PRODUCTION+UF,NT/CT

### Search in SciSearch Database:

FILE 'SCISEARCH' ENTERED AT 11:50:27 ON 01 JUN 2021

L38 48 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8 OR L9) AND ED>=20210126 AND ED<=20210531 AND PY>=2020

L39 179 SEA SPE=ON ABB=ON PLU=ON (L10 OR L11 OR L12) AND ED>=20210126 AND ED<=20210531 AND PY>=2020

L40 9060 SEA SPE=ON ABB=ON PLU=ON L13 AND ED>=20210126 AND ED<=20210531 AND PY>=2020

L41 5 SEA SPE=ON ABB=ON PLU=ON L39 AND L40

L42 317 SEA SPE=ON ABB=ON PLU=ON (L14 OR L15) AND ED>=20210126 AND ED<=20210531 AND PY>=2020

L43 39 SEA SPE=ON ABB=ON PLU=ON (L16 OR L17) AND ED>=20210126 AND ED<=20210531 AND PY>=2020

L44 7 SEA SPE=ON ABB=ON PLU=ON (L18 OR L19) AND ED>=20210126 AND ED<=20210531 AND PY>=2020

L45 31 SEA SPE=ON ABB=ON PLU=ON L20 AND ED>=20210126 AND ED<=20210531 AND PY>=2020

L46 3 SEA SPE=ON ABB=ON PLU=ON L21 AND ED>=20210126 AND ED<=20210531 AND PY>=2020

L47 393 SEA SPE=ON ABB=ON PLU=ON L42 OR L43 OR L44 OR L45 OR L46

L48	9833	SEA SPE=ON	ABB=ON	PLU=ON	L22 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L49	65	SEA SPE=ON	ABB=ON	PLU=ON	L47 AND (L48 OR L40)
L50	98	SEA SPE=ON	ABB=ON	PLU=ON	L23 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L51	119	SEA SPE=ON	ABB=ON	PLU=ON	(L24 OR L25 OR L26 OR L27) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L52	905	SEA SPE=ON	ABB=ON	PLU=ON	L28 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L53	28	SEA SPE=ON	ABB=ON	PLU=ON	L29 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L54	10261	SEA SPE=ON	ABB=ON	PLU=ON	L30 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L55	29	SEA SPE=ON	ABB=ON	PLU=ON	L31 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L56	6	SEA SPE=ON	ABB=ON	PLU=ON	L32 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L57	11351	SEA SPE=ON	ABB=ON	PLU=ON	L50 OR L51 OR L52 OR L54 OR L55 OR L56
L58	32	SEA SPE=ON	ABB=ON	PLU=ON	L57 AND L48 AND L40
L59	17	SEA SPE=ON	ABB=ON	PLU=ON	L53 AND L48
L60	42	SEA SPE=ON	ABB=ON	PLU=ON	L59 OR L58
L61	136	SEA SPE=ON	ABB=ON	PLU=ON	L38 OR L41 OR L49 OR L60

### Search in CABA Database:

FILE 'CABA' ENTERED AT 11:51:41 ON 01 JUN 2021

L62	31	SEA SPE=ON	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8 OR L9) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L63	61	SEA SPE=ON	ABB=ON	PLU=ON	(L10 OR L11 OR L12) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L64	4746	SEA SPE=ON	ABB=ON	PLU=ON	L13 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L65	2888	SEA SPE=ON	ABB=ON	PLU=ON	L33 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L66	4748	SEA SPE=ON	ABB=ON	PLU=ON	L64 OR L65
L67	7	SEA SPE=ON	ABB=ON	PLU=ON	L63 AND L66
L68	134	SEA SPE=ON	ABB=ON	PLU=ON	(L14 OR L15) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L69	38	SEA SPE=ON	ABB=ON	PLU=ON	(L16 OR L17) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L70	4	SEA SPE=ON	ABB=ON	PLU=ON	(L18 OR L19) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L71	0	SEA SPE=ON	ABB=ON	PLU=ON	L20 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L72	4	SEA SPE=ON	ABB=ON	PLU=ON	L21 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L73	174	SEA SPE=ON	ABB=ON	PLU=ON	L68 OR L69 OR L70 OR L71 OR L72
L74	3005	SEA SPE=ON	ABB=ON	PLU=ON	L22 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L75	1244	SEA SPE=ON	ABB=ON	PLU=ON	L34 AND ED>=20210126 AND ED<=20210531 AND PY>=2020

L76	3005	SEA	SPE=ON	ABB=ON	PLU=ON	L74 OR L75
L77	61	SEA	SPE=ON	ABB=ON	PLU=ON	L73 AND (L66 OR L76)
L78	116	SEA	SPE=ON	ABB=ON	PLU=ON	L23 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L79	116	SEA	SPE=ON	ABB=ON	PLU=ON	(L24 OR L25 OR L26 OR L27) AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L80	404	SEA	SPE=ON	ABB=ON	PLU=ON	L28 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L81	22	SEA	SPE=ON	ABB=ON	PLU=ON	L29 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L82	5069	SEA	SPE=ON	ABB=ON	PLU=ON	L30 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L83	28	SEA	SPE=ON	ABB=ON	PLU=ON	L31 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L84	6	SEA	SPE=ON	ABB=ON	PLU=ON	L32 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L85	141	SEA	SPE=ON	ABB=ON	PLU=ON	L35 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L86	5	SEA	SPE=ON	ABB=ON	PLU=ON	L36 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L87	1206	SEA	SPE=ON	ABB=ON	PLU=ON	L37 AND ED>=20210126 AND ED<=20210531 AND PY>=2020
L88	6217	SEA	SPE=ON	ABB=ON	PLU=ON	L78 OR L79 OR L80 OR L82 OR L83 OR L84 OR L85 OR L86 OR L87
L89	32	SEA	SPE=ON	ABB=ON	PLU=ON	L88 AND L76 AND L66
L90	18	SEA	SPE=ON	ABB=ON	PLU=ON	L81 AND L76
L91	38	SEA	SPE=ON	ABB=ON	PLU=ON	L90 OR L89
L92	115	SEA	SPE=ON	ABB=ON	PLU=ON	L62 OR L67 OR L77 OR L91

### Deduplication of Hit-sets from both sources:

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FILE 'CABA, SCISEARCH' ENTERED AT 11:53:26 ON 01 JUN 2021
CHARGED TO COST=SLB76724 REG EU
L93      228 DUP REM L92 L61 (23 DUPLICATES REMOVED)
          ANSWERS '1-115' FROM FILE CABA
          ANSWERS '116-228' FROM FILE SCISEARCH
          D L93 1-228 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 products MON 87427 × MON 89034 × MIR162 × NK603 and its sub-combinations, MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 and its sub-combinations and MON 87427 × MON 89034 × MIR162 × MON 87411 and its sub-combinations covering the timespan from the adoption of EFSA scientific opinion till the time of the authorisation (January 2019 – January 2021)<sup>1</sup>**

## **Translation of query terms into STN search language:**

(FILE 'STNGUIDE' ENTERED AT 11:54:22 ON 09 MAR 2021)

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L1      QUE SPE=ON  ABB=ON  PLU=ON  MON 89034? OR MON89034? OR MON
      89O34? OR MON89O34? OR MON 89EMPTY SET34? OR MON89EMPTY SET34?
      OR MON!89034? OR MON!89O34? OR MON!89EMPTY SET34?
L2      QUE SPE=ON  ABB=ON  PLU=ON  MON 87427? OR MON87427? OR
      MON!87427? OR MON 87411? OR MON87411? OR MON!87411?
L3      QUE SPE=ON  ABB=ON  PLU=ON  MIR 162? OR MIR162? OR MIR!162? OR
      SYN IR162? OR SYNIR162? OR SYN!IR162? OR NK603 OR NK 603
L4      QUE SPE=ON  ABB=ON  PLU=ON  MON 87460? OR MON87460? OR
      MON!87460? OR MON 8746O? OR MON8746O? OR MON!8746O? OR MON
      8746EMPTY SET? OR MON8746EMPTY SET? OR MON!8746EMPTY SET?
L5      QUE SPE=ON  ABB=ON  PLU=ON  MON 00603? OR MON00603? OR
      MON!00603? OR MON 006O3? OR MON006O3? OR MON!006O3? OR MON
      EMPTY SETEMPTY SET6EMPTY SET3? OR MONEMPTY SETEMPTY SET6EMPTY
      SET3? OR MON!EMPTY SETEMPTY SET6EMPTY SET3?
L6      QUE SPE=ON  ABB=ON  PLU=ON  YIELD GARD? OR YIELDG? OR YIELD!GAR
      D? OR VT PRO? OR VT!PRO? OR VTPRO? OR AGRISURE? OR VIPTERA? OR
      ROUNDUPREADY? OR ROUND UP READY? OR ROUND!UP!READY? OR
      ROUND!UP READY? OR ROUNDUP READY? OR RR2? OR RRII? OR DROUGHTGU
      ARD? OR DROUGHT GUARD? OR TRECEPTA?
L7      QUE SPE=ON  ABB=ON  PLU=ON  MAIZE? OR CORN? OR "ZEA MAYS" OR
      "Z. MAYS"
L8      QUE SPE=ON  ABB=ON  PLU=ON  CP4EPSPS OR CP4 EPSPS OR 5(W) (ENOLP
      YRUVYLSHIKIMATE OR ENOL PYRUVYL SHIKIMATE OR ENOLPYRUVYL
      SHIKIMATE OR ENOL PYRUVYLSHIKIMATE OR ENOL!PYRUVYL!SHIKIMATE!) (
      W)3 PHOSPHATE SYNTHASE
L9      QUE SPE=ON  ABB=ON  PLU=ON  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? OR VIP3AA20 OR VIP3!AA20 OR VIP3 AA20
L11     QUE SPE=ON  ABB=ON  PLU=ON  CRY3BB? OR CRYIIIBB? OR CRY3 BB?
      OR CRY 3 BB? OR CRY 3BB? OR CRYIII BB? OR CRY III BB? OR CRY
      IIIBB?
L12     QUE SPE=ON  ABB=ON  PLU=ON  CSPB OR CSP B OR COLD SHOCK
      PROTEIN B OR COLD!SHOCK!PROTEIN B OR COLD!SHOCK PROTEIN B OR

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<sup>1</sup> For the period between February 2021 – May 2021, the literature search for the newly authorised products (MON 87427 × MON 89034 × MIR162 × NK603 and its sub-combinations, MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 and its sub-combinations and MON 87427 × MON 89034 × MIR162 × MON 87411 and its sub-combinations) was covered by the Bayer GM Maize products literature search (third quarter) as the later search was conducted after incorporating the unique keywords of the newly authorised products.

	COLD SHOCK PROTEIN B
L13	QUE SPE=ON ABB=ON PLU=ON (RNA? OR DSRNA? OR SIRNA?) (5A) (DVS NF7 OR WCR SNF7 OR CRW SNF7 OR DV SNF7 OR DVS NF 7 OR DV SNF 7 OR DV.SNF7 OR SNF7)
L14	QUE SPE=ON ABB=ON PLU=ON GMO? OR LMO? OR GM OR GE OR TRANS GEN? 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?)
L16	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (BORER? OR EARWORM? OR BOLLWORM? OR ARMYWORM? OR EAR WORM? OR BOLL WORM? OR ARMY WORM? OR LEPIDOPTERA? OR NOCTUIDAE OR CRAMBIDAE OR OSTRINIA OR SESAMIA)
L17	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (CHILO OR DIATRAEA OR SPODOPTERA OR BUSSEOLA OR HELICOVERPA OR FURNACALIS OR NUBILALIS OR NONAGRIOIDES OR PARTELLUS OR GRANDIOSELLA OR SACCHARALIS OR FRUGIPERDA)
L18	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (FUSCA OR ZEA OR ARMIGERA OR ECB OR MCB OR ACB OR SSB OR SWCB OR SCB OR FAW OR AMSB OR CEW OR CBW OR OBW OR CBW OR CEW OR EXIGUA)
L19	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (CUTWORM? OR CUT WORM? OR STRIACOSTA OR AGROTIS OR FELTIA OR PSEUDALETIA OR ALBICOSTA OR IPSILON OR JACULIFERA OR UNIPUNCTA OR WBC)
L20	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (ROOTWORM? OR ROOT WORM? OR COLEOPTERA? OR CHRYSOMEL? OR DIABROTICA OR VIRGIFERA OR BARBERI OR UNDECIMPUNCTATA)
L21	QUE SPE=ON ABB=ON PLU=ON (TOLERAN? OR RESISTAN? OR PROTEC?) (5A) (CRW OR WCR? OR NCR? OR SCR? OR MCR?)
L22	QUE SPE=ON ABB=ON PLU=ON BTMAIZE OR BTCORN OR BT MAIZE OR BT CORN OR BT!MAIZE OR BT!CORN OR THURINGIENSIS MAIZE OR THURINGIENSIS CORN
L23	QUE SPE=ON ABB=ON PLU=ON ((TOLERAN? OR RESISTAN? OR PROTEC?) (5A) DROUGHT) OR ((EFFICIEN? OR REDUC? OR LIMIT? OR DECRE? OR LOW?) (5A) WATER)
L24	QUE SPE=ON ABB=ON PLU=ON (HYBRID? OR CROSS? OR POLLEN? OR POLLINAT? OR STERIL? (5A) MALE) AND (GL!PHOSATE OR GL!FOSATE OR ROUNDUP? OR ROUND UP? OR ROUND!UP?)
L25	QUE SPE=ON ABB=ON PLU=ON ZEA MAYS+UF,NT/CT,ORGN OR MAIZE+UF,NT/CT,ORGN
L26	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
L27	QUE SPE=ON ABB=ON PLU=ON (WEED CONTROL+UF,NT/CT OR INSECT CONTROL+UF,NT/CT) AND (GLYPHOSATE+UF,NT/CT OR LEPIDOPTERA+UF,NT2/CT,ORGN OR COLEOPTERA+UF,NT2/CT,ORGN)
L28	QUE SPE=ON ABB=ON PLU=ON (HYBRIDIZATION+UF,NT/CT OR CROSSING+UF,NT/CT OR PLANT BREEDING METHODS+UF,NT/CT OR POLLINATION+UF,NT/CT OR MALE STERILITY+UF,NT/CT) AND GLYPHOSATE+UF,NT/CT
L29	QUE SPE=ON ABB=ON PLU=ON DROUGHT RESISTANCE+UF,NT/CT

### Search in SciSearch Database:

FILE 'SCISEARCH' ENTERED AT 11:55:29 ON 09 MAR 2021

L30	37	SEA SPE=ON	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4 OR L5) AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L31	162	SEA SPE=ON	ABB=ON	PLU=ON	L6 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L32	46342	SEA SPE=ON	ABB=ON	PLU=ON	L7 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L33	24	SEA SPE=ON	ABB=ON	PLU=ON	L31 AND L32
L34	100	SEA SPE=ON	ABB=ON	PLU=ON	L8 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L35	77	SEA SPE=ON	ABB=ON	PLU=ON	(L9 OR L10) AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L36	17	SEA SPE=ON	ABB=ON	PLU=ON	L11 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L37	135	SEA SPE=ON	ABB=ON	PLU=ON	L12 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L38	11	SEA SPE=ON	ABB=ON	PLU=ON	L13 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L39	337	SEA SPE=ON	ABB=ON	PLU=ON	L34 OR L35 OR L36 OR L37 OR L38
L40	48763	SEA SPE=ON	ABB=ON	PLU=ON	L14 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L41	127	SEA SPE=ON	ABB=ON	PLU=ON	L39 AND (L40 OR L32)
L42	423	SEA SPE=ON	ABB=ON	PLU=ON	L15 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L43	505	SEA SPE=ON	ABB=ON	PLU=ON	(L16 OR L17 OR L18 OR L19) AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L44	3807	SEA SPE=ON	ABB=ON	PLU=ON	(L20 OR L21) AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L45	168	SEA SPE=ON	ABB=ON	PLU=ON	L22 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L46	47901	SEA SPE=ON	ABB=ON	PLU=ON	L23 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L47	172	SEA SPE=ON	ABB=ON	PLU=ON	L24 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L48	52517	SEA SPE=ON	ABB=ON	PLU=ON	L42 OR L43 OR L44 OR L46 OR L47
L49	224	SEA SPE=ON	ABB=ON	PLU=ON	L48 AND L40 AND L32
L50	121	SEA SPE=ON	ABB=ON	PLU=ON	L45 AND L40
L51	295	SEA SPE=ON	ABB=ON	PLU=ON	L50 OR L49
L52	420	SEA SPE=ON	ABB=ON	PLU=ON	L30 OR L33 OR L41 OR L51

### Search in CABA Database:

FILE 'CABA' ENTERED AT 11:56:15 ON 09 MAR 2021

L53	35	SEA SPE=ON	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4 OR L5) AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L54	109	SEA SPE=ON	ABB=ON	PLU=ON	L6 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L55	22328	SEA SPE=ON	ABB=ON	PLU=ON	L7 AND ED>=20190101 AND ED<=20210126 AND PY>=2019
L56	13194	SEA SPE=ON	ABB=ON	PLU=ON	L25 AND ED>=20190101 AND ED<=20210126 AND PY>=2019



		26 AND PY>=2019		
L57	22342	SEA SPE=ON ABB=ON PLU=ON	L55 OR L56	
L58	25	SEA SPE=ON ABB=ON PLU=ON	L54 AND L57	
L59	67	SEA SPE=ON ABB=ON PLU=ON	L8 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L60	55	SEA SPE=ON ABB=ON PLU=ON	(L9 OR L10) AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L61	9	SEA SPE=ON ABB=ON PLU=ON	L11 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L62	5	SEA SPE=ON ABB=ON PLU=ON	L12 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L63	8	SEA SPE=ON ABB=ON PLU=ON	L13 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L64	143	SEA SPE=ON ABB=ON PLU=ON	L59 OR L60 OR L61 OR L62 OR L63	
L65	14462	SEA SPE=ON ABB=ON PLU=ON	L14 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L66	6666	SEA SPE=ON ABB=ON PLU=ON	L26 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L67	14488	SEA SPE=ON ABB=ON PLU=ON	L65 OR L66	
L68	90	SEA SPE=ON ABB=ON PLU=ON	L64 AND (L67 OR L57)	
L69	321	SEA SPE=ON ABB=ON PLU=ON	L15 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L70	430	SEA SPE=ON ABB=ON PLU=ON	(L16 OR L17 OR L18 OR L19) AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L71	1630	SEA SPE=ON ABB=ON PLU=ON	(L20 OR L21) AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L72	96	SEA SPE=ON ABB=ON PLU=ON	L22 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L73	23702	SEA SPE=ON ABB=ON PLU=ON	L23 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L74	101	SEA SPE=ON ABB=ON PLU=ON	L24 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L75	557	SEA SPE=ON ABB=ON PLU=ON	L27 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L76	14	SEA SPE=ON ABB=ON PLU=ON	L28 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L77	3602	SEA SPE=ON ABB=ON PLU=ON	L29 AND ED>=20190101 AND ED<=20210126 AND PY>=2019	
L78	26358	SEA SPE=ON ABB=ON PLU=ON	L69 OR L70 OR L71 OR L73 OR L74 OR L75 OR L76 OR L77	
L79	157	SEA SPE=ON ABB=ON PLU=ON	L78 AND L67 AND L57	
L80	89	SEA SPE=ON ABB=ON PLU=ON	L72 AND L67	
L81	209	SEA SPE=ON ABB=ON PLU=ON	L80 OR L79	
L82	307	SEA SPE=ON ABB=ON PLU=ON	L53 OR L58 OR L68 OR L81	

### Deduplication of Hit-sets from both sources:

```

FILE 'CABA, SCISEARCH' ENTERED AT 11:57:21 ON 09 MAR 2021
CHARGED TO COST=SLB76724 REG PRO
L83      566 DUP REM L82 L52 (161 DUPLICATES REMOVED)
          ANSWERS '1-306' FROM FILE CABA
          ANSWERS '307-566' FROM FILE SCISEARCH
D L83 1-566 ALL PY

```

FILE SCISEARCH

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

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

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 maize 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.

Castañera P, Farinós G, Ortego F and Andow D. (2016). Sixteen Years of Bt Maize in the EU Hotspot: Why Has Resistance Not Evolved? *Plos One*, 1-13. Farinós GP, Hernández-Crespo P, Ortego F and Castañera P, 2017. Monitoring of *Sesamia nonagrioides* resistance to MON 810 maize in the European Union: lessons from a long-term harmonized plan. *Pest Management Science*, 74, 557-568.

Castillo-Lopez E, Clark KJ, Paz HA, Ramirez HA, Klusmeyer TH, Hartnell GF, Kononoff PJ. (2014). Performance of dairy cows fed silage and grain produced from second-generation insect-protected (*Bacillus thuringiensis*) corn (MON 89034), compared with parental line corn or reference corn. *J. Dairy Sci.*, 97, 3832–3837.

Curran KL, Festa AR, Goddard SD, Harrigan GG, Taylor ML. (2015). Kernel compositions of glyphosate-tolerant and corn rootworm-protected MON 88017 sweet corn and insect-protected MON 89034 sweet corn are equivalent to that of conventional sweet corn (*Zea mays*). *Agricultural and Food Chemistry*, 63, 3046-3052.

Drury SM, Reynolds TL, Ridley WP, Bogdanova N, Riordan S, Nemeth MA, Sorbet R, Trujillo WA, Breeze ML. (2008). Composition of forage and grain from second-generation insect-protected corn MON 89034 is equivalent to that of conventional corn (*Zea mays* L.). *Journal of Agricultural and Food Chemistry*, 56(12), 4623-4630.

Hammond BG, Dudek R, Lemen JK and Nemeth MA. (2006). Results of a 90-day safety assurance study with rats fed grain from corn borer-protected corn. *Food and Chemical Toxicology*, 44, 1092-1099.

Harrigan GG, Ridley WP, Miller KD, Sorbet R, Riordan SG, Nemeth MA, Reeves W, Pestert TA (2009). The forage and grain of MON 87460, a drought-tolerant corn hybrid, are compositionally equivalent to that of conventional corn. *JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY*. Volume: 57, Issue: 20, Pages: 9754-9763, DOI: 10.1021/jf9021515

Healy C, Hammond B, Kirkpatrick J. (2008). Results of a 13-week safety assurance study with rats fed grain from corn rootworm-protected, glyphosate-tolerant MON 88017 corn. *Food and Chemical Toxicology*, 46, 2517-2524.

Heck GR, Armstrong CL, Astwood JD, Behr CF, Bookout JT, Brown SM, Cavato TA, DeBoer DL, Deng MY, George C (2005). Development and characterization of a CP4 EPSPS-based, glyphosate-tolerant corn event. *CROP SCIENCE*. Volume: 45, Issue: 1, Pages: 329-339, DOI: 10.2135/cropsci2005.0329

Hyun Y, Bressner GE, Ellis M, Lewis AJ, Fischer R, Stanisiewski EP, Hartnell GF. (2004). Performance of growing-finishing pigs fed diets containing Roundup Ready corn (event NK603), a nontransgenic genetically similar corn, or conventional corn lines. *JOURNAL OF ANIMAL SCIENCE*. Volume: 82. Issue: 2. Pages: 571-580

Lundry DR, Burns A, Nemeth MA and Riordan SG (2013). Composition of grain and forage from insect-protected and herbicide-tolerant corn, MON 89034 × TC1507 × MON 88017 × DAS-59122 7 (SmartStax), is equivalent to that of conventional corn (*Zea mays* L.). [dx.doi.org/10.1021/jf304005n](https://doi.org/10.1021/jf304005n) | J. AGRIC. FOOD CHEM., 61, 1991–1998

Ridley WP, Hartnell GF, Hammond BG. (2005). Role of composition and animal feeding studies in the safety assessment of biotech crops. NEW DISCOVERIES IN AGROCHEMICALS. Edited by: Clark, JM, Ohkawa, H. Book Series: ACS SYMPOSIUM SERIES. Volume: 892. Pages: 28-39

Ridley WP, Harrigan GG, Breeze ML, Nemeth MA, Sidhu RS, Glenn KC (2011). Evaluation of compositional equivalence for multitrait biotechnology crops. JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY. Volume: 59, Issue: 11, Pages: 5865-5876, DOI: 10.1021/jf103874t

Taylor ML, Hartnell GF, Riordan SG, Nemeth MA, Karunanandaa K, George B, Astwood, JD. (2003). Comparison of broiler performance when fed diets containing grain from Roundup Ready (NK603), YieldGard x Roundup Ready (MON810 x NK603), non-transgenic control, or commercial corn. POULTRY SCIENCE. Volume: 82, Issue: 3, Pages: 443-453, DOI: 10.1093/ps/82.3.443

Taylor M, Hartnell G, Nemeth M, Lucas D, Davis S. (2007). Comparison of broiler performance when fed diets containing grain from second-generation insect-protected and glyphosate-tolerant, conventional control or commercial reference corn. POULTRY SCIENCE, 86(9), 1972-1979, DOI: 10.1093/ps/86.9.1972.

Taylor M, Lucas D, Nemeth M, David S, Hartnell G (2007). Comparison of broiler performance and carcass parameters when fed diets containing combined trait insect-protected and glyphosate-tolerant corn (MON 89034 x NK603), control, or conventional reference corn. POULTRY SCIENCE, 86(9), 1988-1994, DOI: 10.1093/ps/86.9.1988

Thieme T, Buuk C, Gloyne K, Ortego F and Farinós G, (2017). Ten years of MON 810 resistance monitoring of field populations of *Ostrinia nubilalis* in Europe. Journal of Applied Entomology, 00, 1-9.

Venkatesh TV, Breeze ML, Liu K, Harrigan GG, Culler AH (2014). Compositional analysis of grain and forage from MON 87427, an inducible male sterile and tissue selective glyphosate-tolerant maize product for hybrid seed production. JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY. Volume: 62, Issue: 8, Pages: 1964-1973, DOI: 10.1021/jf4041589

Venkatesh TV, Cook K, Liu B, Perez T, Willse A, Tichich R, Feng P, Harrigan GG. (2015). Compositional differences between near-isogenic GM and conventional maize hybrids are associated with backcrossing practices in conventional breeding. PLANT BIOTECHNOLOGY JOURNAL. Volume: 13, Issue: 2, Pages: 200-210, DOI: 10.1111/pbi.12248

Venkatesh TV, Cook K, Liu B, Perez T, Willse A, Tichich R, Feng P, Harrigan G. (2015). Compositional differences between near-isogenic GM and conventional maize hybrids are associated with backcrossing practices in conventional breeding. Plant Biotechnology Journal, 13, 200–210.

Xu Y, Goodacre R, Harrigan GG. (2014). Compositional equivalence of grain from multi-trait drought-tolerant maize hybrids to a conventional comparator: univariate and multivariate assessments. JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY. Volume: 62, Issue: 39, Pages: 9597-9608, DOI: 10.1021/jf5019609

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

Relevant key organisations	Link to the relevant information and summary of the retrieved records
US EPA	<p><a href="https://www.epa.gov/ingredients-used-pesticide-products/current-and-previously-registered-section-3-plant-incorporated">https://www.epa.gov/ingredients-used-pesticide-products/current-and-previously-registered-section-3-plant-incorporated</a> – 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 maize products.</p>
USDA	<p><a href="https://www.aphis.usda.gov/aphis/ourfocus/biotechnology/permits-notifications-petitions/petitions/petition-status">https://www.aphis.usda.gov/aphis/ourfocus/biotechnology/permits-notifications-petitions/petitions/petition-status</a> - 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 maize products.</p>
US FDA	<p><a href="https://www.accessdata.fda.gov/scripts/fdcc/?set=Biocon">https://www.accessdata.fda.gov/scripts/fdcc/?set=Biocon</a> – 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 maize products.</p>

CFIA	<p><a href="https://inspection.canada.ca/industry-guidance/eng/1374161650885/1374161737236?gp=3&amp;gc=25&amp;ga=4#gdr_results">https://inspection.canada.ca/industry-guidance/eng/1374161650885/1374161737236?gp=3&amp;gc=25&amp;ga=4#gdr_results</a> - 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 maize products.</p>
Health Canada	<p><a href="https://www.canada.ca/en/health-canada/services/food-nutrition/genetically-modified-foods-other-novel-foods/approved-products.html">https://www.canada.ca/en/health-canada/services/food-nutrition/genetically-modified-foods-other-novel-foods/approved-products.html</a> - 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 maize products.</p>
FSANZ	<p><a href="http://www.foodstandards.gov.au/consumer/gmfood/applications/Pages/default.aspx">http://www.foodstandards.gov.au/consumer/gmfood/applications/Pages/default.aspx</a> - 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 maize products.</p>
CTNBio	<p><a href="http://ctnbio.mctic.gov.br/liberacao-comercial#/liberacao-comercial/consultar-processo">http://ctnbio.mctic.gov.br/liberacao-comercial#/liberacao-comercial/consultar-processo</a> – 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 maize products.</p>

CONABIA	<p><a href="https://www.argentina.gob.ar/agroindustria/alimentos-y-bioeconomia/ogm-comerciales">https://www.argentina.gob.ar/agroindustria/alimentos-y-bioeconomia/ogm-comerciales</a> – 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 maize products.</p>
MAFF	<p><a href="https://www.maff.go.jp/j/syouan/nouan/carta/torikumi/attach/pdf/index-254.pdf">https://www.maff.go.jp/j/syouan/nouan/carta/torikumi/attach/pdf/index-254.pdf</a> - 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> 03 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 maize products.</p>

**Additional literature search in internet pages of key organisations<sup>1</sup> relevant for the newly authorised products MON 87427 × MON 89034 × MIR162 × MON 87411 and its sub-combinations, MON 87427 × MON 89034 × MIR162 × NK603 and its sub-combinations, MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 and its sub-combinations maizes to cover the timespan from the adoption of EFSA scientific opinion till the time of the authorisation (2019 -2021)<sup>2</sup>**

Relevant key organisations	Link to the relevant information and summary of the retrieved records
US EPA	<p><a href="https://www.epa.gov/ingredients-used-pesticide-products/current-and-previously-registered-section-3-plant-incorporated">https://www.epa.gov/ingredients-used-pesticide-products/current-and-previously-registered-section-3-plant-incorporated</a> – 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><a href="http://ctnbio.mctic.gov.br/liberacao-comercial#/liberacao-comercial/consultar-processo">http://ctnbio.mctic.gov.br/liberacao-comercial#/liberacao-comercial/consultar-processo</a> – 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 87427 × MON 89034 × MIR162 × MON 87411 and its sub-combinations, MON 87427 × MON 89034 × MIR162 × NK603 and its sub-combinations, and MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 and its sub-combinations maizes.</p>

<sup>1</sup> 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)<sup>1</sup> relevant for MON 87427 × MON 89034 × MIR162 × MON 87411 and its sub-combinations, MON 87427 × MON 89034 × MIR162 × NK603 and its sub-combinations, MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 and its sub-combinations maizes.

<sup>2</sup> For the period between 2020-2021, the search was covered by that for the Bayer maize products.



CONABIA	<p><a href="https://www.argentina.gob.ar/agroindustria/alimentos-y-bioeconomia/ogm-comerciales">https://www.argentina.gob.ar/agroindustria/alimentos-y-bioeconomia/ogm-comerciales</a> – 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> Two of the retrieved records are relevant to MON 87427 × MON 89034 × MIR162 × NK603 and its sub-combinations, and MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 and its sub-combinations maizes<sup>3,4</sup>. They do not have any implication on the risk assessment, because no new hazards, modified exposure, or new scientific uncertainties are reported.</p>
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<sup>3</sup> CONABIA, 2019. Resistencia a Lepidópteros y Coleópteros, y tolerancia a glufosinato de amonio y a glifosato. RESOL-2019-61-APN-SAYBI#MPYT - no link to the document is provided

<sup>4</sup> CONABIA, 2019. Resistencia a Lepidópteros y Coleópteros, y tolerancia a glufosinato de amonio y a glifosato. [RESOL-2019-103-APN-SAYBI#MPYT](#) – Accessed on 30 August 2021.

## Annex V. Results of the publication selection process for Bayer GM maize products literature search in SciSearch and CABA databases using STN<sup>®</sup> database catalogue

**Table 1. Results of the publication selection process.**

Review question captured in the search	Number of publications	
	Bayer GM maize products <sup>1</sup>	MON 87427 × MON 89034 × MIR162 × MON 87411, MON 87427 × MON 89034 × MIR162 × NK603 and MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 <sup>2</sup>
Publications identified after searches of the scientific literature in SciSearch and CABA databases (following de-duplication)	529	516
Publications excluded after rapid assessment for relevance	512	513
Publications screened using full-text documents	17	3
Publications excluded after detailed assessment for relevance	12	2
Unobtainable publications	0	0
Unclear publications	1	0
Publications considered relevant	4	1
Publications considered relevant, excluding duplicates	4	

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

<sup>2</sup> The numbers refer to the results of the publication selection process for MON 87427 × MON 89034 × MIR162 × MON 87411 and its sub-combinations, MON 87427 × MON 89034 × MIR162 × NK603 and its sub-combinations, and MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603 and its sub-combinations literature search performed from 1 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 maize products retrieved after detailed assessment of full-text documents for relevance: ordered by category of information.**

Products <sup>1</sup>	Study (author(s) and year)	Title	Source
<b>Food/Feed safety assessment</b>			
Composition			
NK603	(Ben Ali <i>et al.</i> , 2020)	Analysis of transcriptomic differences between NK603 maize and near-isogenic varieties using RNA sequencing and RT-qPCR	Environmental Sciences Europe
Protein expression			
MON 810	(Lohn <i>et al.</i> , 2020)	Transgene behavior in <i>Zea mays L.</i> crosses across different genetic backgrounds: Segregation patterns, cry1Ab transgene expression, insecticidal protein concentration and bioactivity against insect pests	PLoS ONE
Ag/Pheno			
MON 89034 NK603 MON 89034 × NK603	(Clawson <i>et al.</i> , 2019)	Consistent Risk Assessment Outcomes from Agronomic Characterization of GE Maize in Diverse Regions and as Single-Event and Stacked Products	Crop Science
MON 87460	(Fischer <i>et al.</i> , 2020)	Yield component responses of biotechnology - derived drought tolerant maize under controlled environment conditions	Agricultural and Environmental Letters

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

**Table 3. List of publications excluded from the risk assessment after detailed assessment of full-text documents, with the reason(s) for exclusion**

Study authors	Year	Title	Source	Reasons for exclusion based on the eligibility/inclusion criteria
<b>Bayer GM maize products</b>				
Bouwer <i>et al.</i>	2020	A framework for effective <i>Bt</i> maize IRM programs: incorporation of lessons learned from <i>Busseola fusca</i> resistance development	Fronteirs in Bioengineering and Biotechnology	It is not a safety study on Bayer's GM maize products
Vieira <i>et al.</i>	2021	Assessing the effects of an acute exposure to worst-case concentration of cry proteins on zebrafish using the embryotoxicity test and proteomics analysis	Chemosphere	It is not a safety study on Bayer's GM maize products
Lovei <i>et al.</i>	2020	Can the growing of transgenic maize threaten protected Lepidoptera in Europe?	Insect Science	It is not a safety study on Bayer's GM maize products
Garcia-Ruiz <i>et al.</i>	2020	Dynamics of canopy-dwelling arthropods under different weed management options, including glyphosate, in conventional and genetically modified insect-resistant maize	Insect Science	It is not a safety study on Bayer's GM maize products
Pott <i>et al.</i>	2020	Effect of Bt toxin Cry1Ab on two freshwater caddisfly shredders - an attempt to establish dose-effect relationships through food-spiking	Scientific Reports	It is not a safety study on Bayer's GM maize products
Jacques <i>et al.</i>	2021	Intercropped Bt and non-Bt corn with ruzigrass ( <i>Urochloa ruziziensis</i> ) as a tool to resistance management of Spodoptera frugiperda (JE Smith, 1797) ( <i>Lepidoptera: Noctuidae</i> )	Pest Management Science	It is not a safety study on Bayer's GM maize products
Visser <i>et al.</i>	2020	Larval migration behaviour of <i>Busseola fusca</i> ( <i>Lepidoptera: Noctuidae</i> ) on <i>Bt</i> and non- <i>Bt</i> maize under semi-field and field conditions	Insects	It is not a safety study on Bayer's GM maize products
Camargo <i>et al.</i>	2020	Performance of <i>Sesamia nonagrioides</i> on cultivated and wild host plants: Implications for <i>Bt</i> maize resistance management	Pest Management Science	It is not a safety study on Bayer's GM maize products

Study authors	Year	Title	Source	Reasons for exclusion based on the eligibility/ inclusion criteria
Visser <i>et al.</i>	2020	Plant abandonment by <i>Busseola fusca</i> ( <i>Lepidoptera: Noctuidae</i> ) larvae: do <i>Bt</i> toxins have an effect?	Insects	It is not a safety study on Bayer's GM maize products
Krogh <i>et al.</i>	2020	The effect of Bt crops on soil invertebrates: a systematic review and quantitative meta-analysis.	Transgenic Research	It is not a safety study on Bayer's GM maize products
Bialozor <i>et al.</i>	2020	Water in maize whorl enhances the control of <i>Spodoptera frugiperda</i> with insecticides	Pesquisa Agropecuaria Tropical	It is not a safety study on Bayer's GM maize products
Baudrot <i>et al.</i>	2021	When the average hides the risk of <i>Bt</i> - corn pollen on non-target <i>Lepidoptera</i> : application to <i>Aglais io</i> in Catalonia.	Ecotoxicology and Environmental Safety	It is not a safety study on Bayer's GM maize products
<b>MON 87427 × MON 89034 × MIR162 × MON 8741, MON 87427 × MON 89034 × MIR162 × NK603 and MON 87427 × MON 87460 × MON 89034 × MIR162 × NK603</b>				
Mallmann <i>et al.</i>	2019	Influence of mycotoxicological and nutritional quality of maize hybrids on broiler chickens feed cost	Arquivo Brasileiro de Medicina veterinaria e Zootecnica	The study did not use a non-GM comparator
Cappelle <i>et al.</i>	2019	Meta-effect of insect resistant maize on fumonisin B1 in grain estimated by variance-weighted and replication-weighted analyses	World Mycotoxin Journal	Original/primary data were not presented in the publication

**Table 4. List of unclear publications, with explanation why they could not be classified**

<b>Study authors</b>	<b>Year</b>	<b>Title</b>	<b>Source</b>	<b>Explanation of why the publication could not be classified, with a description of methods used to resolve the remaining uncertainty</b>
Macar <i>et al.</i>	2021	A Comparative Assessment of the Unintended Effects of Genetic Modification on <i>Bt</i> corn	Fresenius Environmental Bulletin	Based on the publicly available information, it was not possible to determine whether the event used in the study was a Bayer GM maize.

**Table 5. 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 <sup>1</sup>
<b>Food/Feed Safety assessment</b>		
Composition		
(Ben Ali <i>et al.</i> , 2020)	Not reliable	None, because no new hazards, modified exposure, or new scientific uncertainties are reported
Protein expression		
(Lohn <i>et al.</i> , 2020)	Not reliable	None, because no new hazards, modified exposure, or new scientific uncertainties are reported
Ag/Pheno		
(Clawson <i>et al.</i> , 2019)	High	None, because no new hazards, modified exposure, or new scientific uncertainties are reported
(Fischer <i>et al.</i> , 2020)	High	None, because no new hazards, modified exposure, or new scientific uncertainties are reported

<sup>1</sup> 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.*

- Ben Ali SE, Draxler A, Poelzl D, Agapito-Tenfen S, Hocheegger R, Haslberger AG and Brandes C, 2020. Analysis of transcriptomic differences between NK603 maize and near-isogenic varieties using RNA sequencing and RT-qPCR. *Environ Sci Eur* 32:132, 1-23.
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- Lohn AF, Trtikova M, Hilbeck AC, Van den Berg IJ and du Plessis H, 2020. Transgene behavior in *Zea mays* L. crosses across different genetic backgrounds: Segregation patterns, cry1Ab transgene expression, insecticidal protein concentration and bioactivity against insect pests. *Environmental Toxicology and Chemistry*, 00, 1-9.



## **Annex VI. List of relevant publications retrieved from SciSearch and CABA databases using STN<sup>®</sup> database catalogue (provided in .RIS format)**

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