LIVING MODIFIED ORGANISM (LMO)

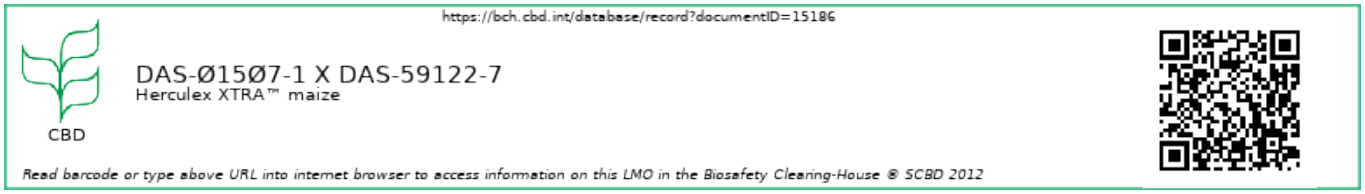
BCH-LMO-SCBD-15186-6

? Decisions on the LMO ? Risk Assessments

LAST UPDATED: 24 JUL 2013

Living Modified Organism identity

The image below identifies the LMO through its unique identifier, trade name and a link to this page of the BCH. Click on it to download a larger image on your computer. For help on how to use it go to the LMO quick-links page.



Name

Herculex XTRA™ maize | EN

Transformation event

TC1507 x DAS-59122

Unique identifier

DAS-Ø15Ø7-1 x DAS-59122-7

Developer(s)

- ORGANIZATION: DOW AGROSCIENCES | BCH-CON-SCBD-14939-1

ORGANIZATION

Dow AgroSciences
Website: http://www.dowagro.com/homepage/index.htm

- ORGANIZATION: PIONEER HI-BRED INTERNATIONAL INC. | BCH-CON-SCBD-14931-2

ORGANIZATION

Pioneer Hi-Bred International Inc.
Private sector (business and industry)
7100 NW 62nd Avenue PO Box 1000
Johnston, Iowa
50131, United States of America
Phone: +1 515 535-3200
Website: www.pioneer.com/

Description

A stacked insect-resistant and herbicide-tolerant maize derived from conventional cross-breeding of DAS-Ø15Ø7-1 with DAS-59122-7. Insect resistance is conferred by the cryIF, cry34Ab1 and cry35Ab1 genes from the common soil bacterium Bacillus thuringiensis, and glufosinate herbicide tolerance through the pat gene from Streptomyces viridochromogenes. EN

Recipient Organism or Parental Organisms

The term “Recipient organism” refers to an organism (either already modified or non-modified) that was subjected to genetic modification, whereas “Parental organisms” refers to those that were involved in cross breeding or cell fusion.

BCH-ORGA-SCBD-246-6 ORGANISM | ZEA MAYS (MAIZE, CORN, MAIZE)

Crops

BCH-LMO-SCBD-15165-13 LIVING MODIFIED ORGANISM | DAS-59122-7 - HERCULEX™ RW ROOTWORM PROTECTION MAIZE

Pioneer Hi-Bred International Inc. | Resistance to diseases and pests (Insects, Coleoptera (beetles)), Resistance to herbicides (Glufosinate)

BCH-LMO-SCBD-14841-13 LIVING MODIFIED ORGANISM | DAS-Ø15Ø7-1 - HERCULEX™ I MAIZE

Resistance to diseases and pests (Insects, Lepidoptera (butterflies and moths)), Resistance to herbicides (Glufosinate)

Characteristics of the modification process

Vector

PHP17662 and PHI8999A EN

Techniques used for the modification

Cross breeding

Genetic elements construct

P-ubi1-MAIZE 0.000 kb	CS-cry34Ab1-BACTU 0.000 kb	T-pinII-SOLTU 0.000 kb
P-pox-WHEAT 0.000 kb	CS-cry35Ab1-BACTU 0.000 kb	T-pinII-SOLTU 0.000 kb
P-35S-CaMV 0.000 kb	CS-pat-STRVR 0.000 kb	T-35S-CaMV 0.000 kb
P-ubi1-MAIZE 1.980 kb	CS-cry1F-BACTU 1.820 kb	T-orf25-RHIRD 0.720 kb
P-35S-CaMV 0.550 kb	CS-pat-STRVR 0.550 kb	T-35S-CaMV 0.200 kb

Introduced or modified genetic element(s)

Some of these genetic elements may be present as fragments or truncated forms. Please see notes below, where applicable.

BCH-GENE-SCBD-14987-8 CRY1F | BACILLUS THURINGIENSIS - BT, BACILLUS, BACTU

Protein coding sequence | Resistance to diseases and pests (Insects, Lepidoptera (butterflies and moths))

BCH-GENE-SCBD-15002-4 PHOSPHINOTHRICIN N-ACETYLTRANSFERASE GENE

Protein coding sequence | Resistance to herbicides (Glufosinate)

BCH-GENE-SCBD-14994-9 CRY34AB1 | BACILLUS THURINGIENSIS - BT, BACILLUS, BACTU

Protein coding sequence | Resistance to diseases and pests (Insects, Coleoptera (beetles))

BCH-GENE-SCBD-14995-8 CRY35AB1 | BACILLUS THURINGIENSIS - BT, BACILLUS, BACTU

Protein coding sequence | Resistance to diseases and pests (Insects, Coleoptera (beetles))

BCH-GENE-SCBD-100362-7 UBIQUITIN GENE PROMOTER | (MAIZE, CORN)

Promoter

BCH-GENE-SCBD-100367-4 PROTEINASE INHIBITOR II GENE TERMINATOR | (POTATO)

Terminator

BCH-GENE-SCBD-100368-6 PEROXIDASE GENE PROMOTER | (WHEAT)

Promoter

BCH-GENE-SCBD-100287-7 CAMV 35S PROMOTER

Promoter

BCH-GENE-SCBD-100290-6 CAMV 35S TERMINATOR

Terminator

BCH-GENE-SCBD-100363-5 ORF25 POLYA TERMINATOR SEQUENCE

Terminator

LMO characteristics

Modified traits

Resistance to diseases and pests
- Insects
  - Coleoptera (beetles)
  - Lepidoptera (butterflies and moths)

Resistance to herbicides
- Glufosinate

Common use(s) of the LMO

Food
Feed
Biofuel

Detection method(s)

External link(s)

? DAS-Ø15Ø7-1 - EU Reference Laboratory for GM Food and Feed (EURL-GMFF) *(English)*

? DAS-59122-7 - EU Reference Laboratory for GM Food and Feed (EURL-GMFF) *(English)*

Additional Information

Additional Information

Maize line TC1507 x DAS-59122 contains the cryIF gene from Bacillus thuringiensis subsp. kurstaki, which codes for a Bt-toxin, which protects the plant against the european corn borer (Ostrinia nubilalis) and other lepidopterans such as the pink borer (Sesamia spp.), fall armyworm (Spodoptera frugiperda), black cutworm (Agrotis ipsilon) and southwestern corn borer (Diatraea grandiosella), as well as cry34Ab1 and cry35Ab1 genes from Bacillus thuringiensis which protect the plant from the Coleopteran insects western corn rootworm (Diabrotica virgifera), northern corn rootworm (D. barberi), and Mexican corn rootworm (D. virgifera zeae).

This line also contains stacked tolerance to glufosinate ammonium containing herbicides, through incorporation of the pat gene from the soil bacterium Streptomyces viridochromogenes, which codes for the enzyme Phosphinothricin-Acetyltransferase (PAT) and leads to increased tolerance to glufosinate-containing herbicides.

This plant is a product of traditional plant breeding, and therefore is not automatically subject to regulation in all jurisdictions as are transgenic plants resulting from recombinant DNA technologies. Certain jurisdictions may request notification in advance of the release of a stacked hybrid, or may request information to conduct an environmental and food safety assessment.

Other relevant website addresses and/or attached documents

TC1507 x DAS-59122-7 - CERA *(English)*

BCH-LMO-SCBD-15186-6

Further Information

Questions about the Cartagena Protocol on Biosafety or the operation of the Biosafety Clearing-House may be directed to the Secretariat of the Convention on Biological Diversity.

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