

Biosafety Clearing-House (BCH)

LIVING MODIFIED ORGANISM (LMO)


BCH-LMO-SCBD-109701-2

[? Decisions on the LMO ? Risk Assessments](#)

LAST UPDATED: 10 FEB 2016

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.



CBD

<https://bch.cbd.int/database/record?documentID=109701>

MON-89Ø34-3 X DAS-Ø15Ø7-1
Insect resistant, herbicide tolerant maize



Read barcode or type above URL into internet browser to access information on this LMO in the Biosafety Clearing-House © SCBD 2012

Name

Insect resistant, herbicide tolerant maize

EN

Transformation event

MON89034 x TC1507

Unique identifier

MON-89Ø34-3 x DAS-Ø15Ø7-1

Developer(s)

- [ORGANIZATION: MONSANTO](#) | [BCH-CON-SCBD-14925-3](#)

ORGANIZATION

Monsanto
800 North Lindbergh Blvd.
St. Louis, MO
63167, United States of America
Phone: + 1 314 694-1000
Fax: +1 314 694-3080
Website: <http://www.monsanto.com>

- [ORGANIZATION: DOW AGROSCIENCES](#) | [BCH-CON-SCBD-14939-1](#)

ORGANIZATION

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

Description

The stacked maize line MON-89Ø34-3 x DAS-Ø15Ø7-1 was obtained through the traditional cross breeding of each of the parental organisms to produce a maize that expresses each of Cry1A.105, Cry2Ab2, Cry1F and PAT. The expression of these genes are expected to confer resistance to Lepidoptera and Coleoptera, and tolerance to glufosinate herbicide.

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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-43773-18](#) LIVING MODIFIED ORGANISM | MON-89Ø34-3 - YIELDGARD™ VT PRO™ |

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

[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

PHI8999A and PV-ZMIR245

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Techniques used for the modification

Cross breeding

Genetic elements construct

[P-35S-CaMV](#)
0.550 kb

[CS-pat-STRVR](#)
0.550 kb

[T-35S-CaMV](#)
0.200 kb

[P-ubi1-MAIZE](#)
1.980 kb

[CS-cry1F-BACTU](#)
1.820 kb

[T-orf25-RHIRD](#)
0.720 kb

[P-34S-FMV](#)
0.560 kb

[I-hsp70-MAIZE](#)
0.800 kb

[TP-rbcS-MAIZE](#)
0.400 kb

[CS-Cry2Ab2-BACTU](#)
1.910 kb

[T-nos-RHIRD](#)
0.250 kb

[P-e35S-CaMV](#)
0.300 kb

[L-cab-WHEAT](#)
0.060 kb

[I-1_act1-ORYSA](#)
0.480 kb

[CS-cry1A_105-SYNTH](#)
3.530 kb

[T-hsp17_3-WHEAT](#)
0.210 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-100287-7](#) CAMV 35S PROMOTER |

Promoter

[BCH-GENE-SCBD-15002-4](#) PHOSPHINOTHRICIN N-ACETYLTRANSFERASE GENE |

Protein coding sequence | Resistance to herbicides (Glufosinate)

[BCH-GENE-SCBD-100290-6](#) CAMV 35S TERMINATOR |

Terminator

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

Promoter

[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-100363-5](#) ORF25 POLYA TERMINATOR SEQUENCE |

Terminator

[BCH-GENE-SCBD-101507-5](#) FMV 34S PROMOTER |

Promoter

[BCH-GENE-SCBD-100359-7](#) HSP70 INTRON | (MAIZE, CORN) |

Intron

[BCH-GENE-SCBD-100360-4](#) TRANSIT PEPTIDE AND FIRST INTRON OF RUBISCO SSU | (MAIZE, CORN) |

Transit signal

[BCH-GENE-SCBD-14988-7](#) CRY2AB2 | BACILLUS THURINGIENSIS - BT, BACILLUS, BACTU |

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

[BCH-GENE-SCBD-100269-8](#) NOPALINE SYNTHASE GENE TERMINATOR |

Terminator

[BCH-GENE-SCBD-100366-6](#) CAMV ENHANCED 35S PROMOTER |

Promoter

[BCH-GENE-SCBD-100354-6](#) 5' UNTRANSLATED LEADER FROM CHLOROPHYLL A/B-BINDING PROTEIN | (WHEAT) |

Leader sequence

[BCH-GENE-SCBD-100355-6](#) RICE ACTIN 1, INTRON | (RICE) |

Intron

[BCH-GENE-SCBD-43771-9](#) CRY1A.105 | BACILLUS THURINGIENSIS - BT, BACILLUS, BACTU |

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

[BCH-GENE-SCBD-100356-6](#) HEAT SHOCK PROTEIN 17.3 TERMINATOR | (WHEAT) |

Terminator

Notes regarding the genetic elements present in this LMO

DNA insert from MON89034 vector PV-ZMIR245

MON89034 contributed the Cry1A.105 and Cry2A(b) coding sequences and their associated regulatory elements. These confer resistance against lepidopteran pests.

DNA insert from TC1507 vector PHI8999A

The TC1507 line contained the Cry1F and PAT coding sequences and regulatory elements. The Cry1F gene produces insecticidal crystal protein that confers resistance against lepidopteran pests and the PAT gene produces Phosphinothricin N-acetyltransferase which confers tolerance to the glufosinate herbicide.

For additional information on this LMO, please refer to the records of the parental LMOs.

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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

Detection method(s)

External link(s)

? [MON-89Ø34-3 - EU Reference Laboratory for GM Food and Feed \(EURL-GMFF\)](#) (*English*)

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

[BCH-LMO-SCBD-109701-2](#)

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.

Secretariat of the Convention on Biological Diversity

413 rue Saint-Jacques, suite 800

Montreal, Québec, H2Y 1N9

Canada

Fax: +1 514 288-6588

Email: secretariat@cbd.int