*Reference Record:[[1]](#footnote-1)* Living Modified Organism (LMO)[[2]](#footnote-2)

*Fields marked with an asterisk (\*) are mandatory.*

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| **Identity of the living modified organism** | |
| 1. LMO name:[[3]](#footnote-3) | <Text entry> |
| 1. Transformation event:[[4]](#footnote-4)\* | <Text entry> |
| 1. Does this LMO have a unique identifier:[[5]](#footnote-5)\* | Yes  └ Enter unique identifier:\* <Text entry>  OR  No |
| 1. Developer(s):\* | *<BCH record number>*  *Please enter the BCH record number(s) of the developer(s) or, if there is no record, attach “Contact” common format(s)[[6]](#footnote-6).* |
| 1. Description:\* | <Text entry> |
| 1. Recipient organism or parental organisms:*[[7]](#footnote-7)*\* | *<BCH record number>*  *Please enter the BCH record number(s) containing this information or, if there is no record, attach “Organism” or “LMO” common format(s)[[8]](#footnote-8).* |
| 1. Point of collection or acquisition of the recipient organism or parental organisms: | <Text entry> |
| 1. Related LMO(s): | *<BCH record number>*  *Please enter the BCH record number(s) containing this information or, if there is no record, attach “LMO” common format(s)[[9]](#footnote-9).* |
| **Characteristics of the modification process** | |
| 1. Vector:\*[[10]](#footnote-10) | <Text entry> |
| 1. Techniques used for the modification:\* | Agrobacterium-mediated DNA transfer  Biolistic / Particle gun  Cell fusion  Cross breeding  *de novo* synthesis  Direct DNA transfer  Electroporation  Heat shock  Microinjection  Osmotic shock  Embryonic stem cell-mediated gene transfer  Gene editing (e.g. CRISPR-Cas, etc.)  Virus-mediated gene transfer  Other (please specify): <Text entry> |

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| 1. Introduced or modified genetic element(s):[[11]](#footnote-11)\* | *<BCH record number>*  *Please enter the BCH record number(s) containing this information or, if there is no record, attach “Genetic element” common format(s)[[12]](#footnote-12).*  Notes regarding the genetic elements present in this LMO:[[13]](#footnote-13)  <Text entry> | |
| **LMO characteristics** | | |
| 1. Modified traits:\* | | |
| **Resistance to <diseases and pests>** | | |
| Bacteria  *Pseudomonas syringae*  Fungi  Insects  Coleoptera (beetles)  Colorado potato beetle (*Leptinotarsa decemlineata*)  Western corn rootworm (*Diabrotica virgifera*)  Northern corn rootworm (*Diabrotica barberi*)  Diptera (flies)  Hessian fly  (*Mayetiola destructor*)  Lepidoptera (butterflies and moths)  Cotton bollworm  (*Helicoverpa* spp.)  European corn borer  (*Ostrinia nubilalis*)  Fall armyworm  (*Spodoptera frugiperda*) | | Nematodes  Beet cyst eelworm  (*Heterodera schachtii*)  Cereal cyst nematode  (*Heterodera* spp.)  Prions  Viroids  Viruses  Beet necrotic yellow virus (BNYV)  Mosaic virus  Cucumber mosaic virus (CMV)  Watermelon mosaic virus-2 (WMV2)  Zucchini yellow mosaic virus (ZYMV)  Papaya ringspot virus (PRV)  Potato leaf roll virus (PLRV)  Potato virus Y (PVY)  Other <Text entry> |
| **Resistance to <herbicides>**  Bromoxynil  Chlorsulfuron  Glufosinate  Glyphosate  Imidazolinone  Sethoxydim  Sulfonylurea  Other <Text entry> | | **Resistance to <antibiotics>**  Ampicillin  Chloramphenicol  Hygromycin  Kanamycin  Neomycin  Streptothricin  Streptomycin  Tetracycline  Other <Text entry>  *This list continues on the next page* |

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| *This list continued from the previous page* | |
| **Tolerance to <abiotic stress>**  Aluminum  Cold / Heat  Drought  Micronutrient deficiency  Nitrogen deficiency  Phosphorus deficiency  Potassium deficiency  Salinity  Other <Text entry> | **Changes in <physiology and/or production>**  Growth rate  Photoperiod response  Reproduction  Genetic use restriction  technology (GURT)  Male sterility  Ripening  Yield  Other <Text entry> |
| **Changes in <quality and/or metabolite content>**  Allergens  Amylose and amylopectin ratio  Antioxidants  Carbohydrates  Cellulose  Flavonoids (e.g. anthocyanin)  Lignin  Lipid and fatty acids  Lysine content  Pigmentation / Coloration  Protein and amino acids  Shelf-life  Vitamins  Other <Text entry> | **Production of <medical or pharmaceutical compounds (human or animal)>**  Antibiotics  Antibodies and antigens  Antithrombin  Human growth hormone  Human serum albumin  Insulin  Organs (xenotransplantation)  Omega-3 fatty acids (e.g. DHA)  Vaccines  Other <Text entry> |
| **Use in <industrial applications>**  Biofuel production  Bioremediation  Other <Text entry> | **Selectable marker genes and reporter genes** |
| **Engineered <gene drive application>**  Population suppression  Population replacement  Other <Text entry> | **Others, please specify:** <Text entry> |

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| 1. Other gene(s) whose expression was affected by the transformation:[[14]](#footnote-14) | *<BCH record number>*  *Please enter the BCH record number(s) containing this information or, if there is no record, attach “Genetic element” common format(s)[[15]](#footnote-15).*  Please describe how the expression of the gene(s) was affected:  <Text entry> |
| 1. Common use(s) of the LMO:[[16]](#footnote-16) | Biocontrol  Biofuel  Bioreactors  Bioremediation  Feed  Fiber/textile  Food  Ornamental  Pharmaceutical  Research  Timber  Vaccine  Other (specify): <Text entry> |
| **Detection method(s)** | |
| 1. Detection method(s): | <Text entry>  *and/or* <URL and website name>  *and/or* <Attachment> |

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| **Timeframe for confirmation or updating of information** | |
| This category of information does not require confirmation or updating. | |
| **Additional information** | |
| 1. Any other relevant information:[[17]](#footnote-17) | <Text entry>  *and/or* <URL and website name>  *and/or* <Attachment> |
| 1. Notes:[[18]](#footnote-18) | <Text entry> |

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| **Record Validation** | |
| Information should be submitted online to the BCH through the Submit page. This offline common format is made available to assist BCH users to gather and organize their records prior to submission to the BCH.  In case of difficulties in submitting this information online, the completed documents should be sent in MS Word format by e-mail to [bch@cbd.int](mailto:bch@cbd.int).  Alternatively, they can be sent by fax to **+1 514 288 6588**.  or postal mail to:  **Secretariat of the Convention on Biological Diversity**  **413 rue Saint-Jacques, suite 800**  **Montreal, Québec, H2Y 1N9**  **Canada**  **Important Notice:** Please note that if this form is going to be sent via fax, postal mail or from an e-mail address that is not registered in the BCH, a copy/scan of this signed page should be attached. A completed “Contact” common format should also be attached if the user is not registered in the BCH. | |
| Date:\* | <YYYY-MM-DD> |
| Name of the person submitting the request:\* | <Text entry> |
| Contact details of the person submitting the request: | *<registered e-mail address>*  *Please enter the e-mail address that is registered in the BCH or, if not registered, attach a “Contact” common format[[19]](#footnote-19).* |
| *I hereby confirm that the above information is correct and request its inclusion in the Biosafety Clearing-House.* | |
| Signature of the person submitting the information:\* |  |

1. Reference records contain information that may be submitted by any registered user. The information will be published in the BCH only after its completeness and accuracy have been validated by the Secretariat. The common formats for reference records can be accessed through the Submit page of the BCH. [↑](#footnote-ref-1)
2. Please note that to complete this form you may also need to download the following common format(s): “Contact”, “Genetic element”, “Organism” as well as additional copies of the “LMO” common format. [↑](#footnote-ref-2)
3. Name commonly used to identify the LMO, such as the commercial name, e.g. Roundup soy, NewLeaf™ potato, etc. [↑](#footnote-ref-3)
4. Name of the transformation event, e.g. MON810. [↑](#footnote-ref-4)
5. The BCH is currently using the Unique Identifier system as set out in the OECD Guidance for the Designation of Unique Identifiers for Transgenic Plants (example MON-ØØ81Ø-6). For more information see <http://bch.cbd.int/database/organisms/uniqueidentifiers/about.shtml>. [↑](#footnote-ref-5)
6. All BCH common formats can be accessed through the Submit page of the BCH. [↑](#footnote-ref-6)
7. 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. [↑](#footnote-ref-7)
8. All BCH common formats can be accessed through the Submit page of the BCH. [↑](#footnote-ref-8)
9. See note 8 above. [↑](#footnote-ref-9)
10. Vectors are used to incorporate a DNA sequence (typically the promoter-gene-terminator construct) to assist its transfer into the recipient organism. Examples: Agrobacterium Ti plasmid and pBIN19. [↑](#footnote-ref-10)
11. Preferably all genetic elements that were introduced into this LMO, such as promoters, protein coding sequences and terminators, must be referenced in this section. At least ALL protein coding sequences are mandatory. [↑](#footnote-ref-11)
12. All BCH common formats can be accessed through the Submit page of the BCH. [↑](#footnote-ref-12)
13. In the field “Notes regarding these genetic elements”, please specify if any of these elements have been modified from the sequence registered in the BCH Genetic Element Registry and how they relate to each other in this LMO, for instance “*epsps* protein coding sequence under control of the *35S* promoter and *nos* terminator”. [↑](#footnote-ref-13)
14. This section should be used to specify changes in the expression of genes other than those that were inserted into the LMO; for example, gene silencing or induction. [↑](#footnote-ref-14)
15. All BCH common formats can be accessed through the Submit page of the BCH. [↑](#footnote-ref-15)
16. Choose as many options as applicable. [↑](#footnote-ref-16)
17. Please use this field to provide any other relevant information that may not have been addressed elsewhere in the record. [↑](#footnote-ref-17)
18. The “Notes” field is for personal use. It can only be seen when the record is being edited but is not visible when the record is published. This field is not meant to be used for confidential information. [↑](#footnote-ref-18)
19. All BCH common formats can be accessed through the Submit page of the BCH. [↑](#footnote-ref-19)