

## Risk Assessment of Corn-Bt

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### Risk assessment details

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1. Country Taking Decision: Indonesia
  2. Title: Transgenic *Zea mays*
  3. Contact details: <Standard contact address details: name, function (job title/designation), organization, address, phone, fax, email, website>
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### LMO information

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4. Name and identity of the living modified organism: Transgenic *Zea mays* resistant to the stem borer (*Helicoverpa armigera*)
  5. Unique identification of the living modified organism:
    - Resistant to the stem borer (*Helicoverpa armigera*)
    - The *Bacillus thuringiensis* gene that codes for crystal delta endotoxin protein, Cry1A(b).
  6. Transformation event: Event Mon 810
  7. Introduced or Modified Traits: <Controlled vocabulary with thesaurus - radio button options - Abiotic environmental tolerance, Altered growth, development and product quality, Altered photoperiod sensitivity, Altered ripening or flowering, Animal vaccines, Bacterial resistance, Chemical tolerance, Cold or heat tolerance, Coloration, Development of transplant organs, Drought or water tolerance, Fertility restoration, Fungus resistance, Growth rate or yield, Herbicide tolerance, insect resistance, Male sterility, Medical products, Nematode resistance, Nutritional composition (inc. allergenicity), Other abiotic environmental tolerance, Other chemical tolerance, Other growth, development and product quality, Other pest resistance, Pest resistance, Production of pharmaceuticals, Selectable marker genes and reporter genes, Uptake or degradation of environmental pollutants, Virus resistance > and <text entry for other, not on the list>
  8. Techniques used for modification: The DNA transformations were carried out by using a gene gun.
  9. Description of gene modification: The *Bacillus thuringiensis* gene that codes for crystal delta endotoxin protein, Cry1A(b).
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### Characteristics of modification

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10. Vector characteristics (Annex III.9(c)): The DNA transformations were carried out by using a gene gun. The vector can not integrate to other plants. The plasmids used were PV-ZMBK07 and PV-ZMGT10. The DNA elements inside the plasmid PV-ZMBK07 are S35E, hsp70, Cry1A(b), NOS3', lacZ, ori-pUC and nptII. The DNA elements inside the plasmid PV-ZMGT10 are E35S, Hsp70, CTP2, CP4 EPSPS, CTP1, gox, NOS3', ori-pUC and nptII.
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11. Insert or inserts (Annex III.9(d)): The gene codes for Cry1A(b)

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**Recipient organism or parental organisms (Annex III.9(a)):**

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12. Taxonomic name/status of recipient organism or parental organisms: *Zea mays* varieties Bt Mon 810-1 and Bt Mon 810-2

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13. Common name of recipient organism or parental organisms: *Zea mays*

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14. Point of collection or acquisition of recipient or parental organisms: <Text entry >

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15. Characteristics of recipient organism or parental organisms related to biosafety: <Text entry >

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16. Centre(s) of origin of recipient organism or parental organisms: Mexico

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17. Centres of genetic diversity, if known, of recipient organism or parental organisms: Latin America

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18. Habitats where the recipient organism or parental organisms may persist or proliferate: Subtropic and tropic (latitude 30 and 55°)

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**Donor organism or organisms (Annex III.9(b)):**

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19. Taxonomic name/status of donor organism(s) *Bacillus thuringiensis*

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20. Common name of donor organism(s): *Bacillus* (Bacteria).

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21. Point of collection or acquisition of donor organism(s): <Text entry - the exact location and geographical coordinates>

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22. Characteristics of donor organism(s) related to biosafety: Pathogenic to lepidoptera and is not pathogenic to plants and animals.

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**Intended use and receiving environment**

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23. Intended use of the LMO (Annex III 9(g)): Agriculture/Commercial

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24. Receiving environment (Annex III.9(h)): Land of commercial agriculture

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**Risk assessment summary**

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25. Summary of risk assessment or environmental review: <Text entry>

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26. Detection/Identification method of the LMO (Annex III.9(f)): PCR, Southern blot, immuno assay, serologic assays, functional assay using herbicide.

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27. Evaluation of the likelihood of adverse effects (Annex III.8(b)):

- Plant abnormalities
- *Weediness* characteristics
- Impacts on useful insects

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28. Evaluation of the consequences (Annex III.8(c)):

- Transgenic *Zea mays* Bt does not exhibit any growth or phenotypic abnormalities.
- Transgenic *Zea mays* Bt does not exhibit *weediness* characteristics that have the potential to become weeds and does not exhibit negative impacts on its habitat
- Transgenic *Zea mays* Bt does not exhibit negative impacts on useful insect

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29. Overall risk (Annex III.8(d)): Transgenic *Zea mays* (Bt Mon 810-1 and Bt Mon 810-2) are safe for the environment and biodiversity and the exhibit the same characteristics as the nontransgenic *Zea mays*.

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30. Recommendation (Annex III.8(e)): Transgenic *Zea mays* (Bt Mon 810-1 and Bt Mon 810-2) are safe for agriculture. The use of these transgenic plants is regulated by applicable regulations.

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31. Actions to address uncertainty regarding the level of risk (Annex III.8(f)): Not yet released

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**Additional information**

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32. Availability of detailed risk assessment information: <Text entry - Please indicate whether more details on the risk assessment are available and how they can be accessed>

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| 33. Any other relevant information: | < Text entry - any other information that is relevant to the risk assessment >                                 |
| 34. Attach document:                | <Specific types of entry: option to choose a file from the local source and 'upload' a copy to the BCH server> |
| 35. Notes:                          | <Text entry>   |

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## Secretariat of the Convention on Biological Diversity

393 rue Saint-Jacques, suite 300  
Montreal, Quebec, Canada  
H2Y 1N9  
SCBD: <http://www.biodiv.org>

Tel.: 1 514 288-2220  
Fax: 1 514 288-6588  
Email: [bch@biodiv.org](mailto:bch@biodiv.org)  
BCH: <http://bch.biodiv.org>