

# Summary Notification Information Format

## A. General information

### A1. Details of notification

**Notification Number**

B/BE/26/Vx

**Member State**

Belgium

**Date of Acknowledgement**

xx January 2026

**Title of the Project**

Scientific field evaluation of field-specific genes in maize

**Proposed period of release:**

01/05/2026 to 31/07/2026

### A2. Notifier

**Name of the Institute**

VIB

**A3. Is the same GMPt release planned elsewhere in the Community?**

No.

**A4. Has the same GMPt been notified elsewhere by the same notifier?**

No

## B. Information on the genetically modified plant

### B1. Identity of the recipient or parental plant

- |                            |                                 |
|----------------------------|---------------------------------|
| a) family:                 | <i>Poaceae</i>                  |
| b) genus:                  | <i>Zea</i> , section <i>Zea</i> |
| c) species:                | <i>Zea mays</i>                 |
| d) subspecies:             | <i>mays</i>                     |
| e) cultivar/breeding line: | inbred line B104                |
| f) common name:            | maize                           |

### B2. Description of the traits and characteristics which have been introduced or modified, including marker genes and previous modifications

The genetically modified maize plants have been modified in a gene that is highly expressed in the field, but is not expressed at all when plants are grown in a greenhouse. It is not known yet in which processes these genes are involved. It is possible that the genes are involved in the response to an abiotic stress factor that is present in field conditions but not present in

greenhouse conditions. The expression of the genes in the field, and the non-expression of the genes in a greenhouse does not lead to an apparent phenotypical trait.

### B3. Type of genetic modification

There are plants in which the target genes have been mutated using CRISPR-Cas technology. Small mutations have been introduced that result in inactivation of the genes. There are also plants that have been modified by *Agrobacterium tumefaciens* mediated introduction of additional copy(ies) of the genes that are constitutively expressed.

### B4. In case of insertion of genetic material, give the source and intended function of each constituent fragment of the region to be inserted

Element	Function	Origin
pTiT37 RB	T-DNA right border	<i>Agrobacterium tumefaciens</i>
ZmUBIL	Maize ubiquitin promotor	<i>Zea mays</i>
tNOS	Transcription terminator	<i>Agrobacterium tumefaciens</i>
pBdEF1a.2	Promotor	<i>Brachypodium distachyon</i>
pOsAct	Promotor	<i>Oryza sativa</i>
Hyg	Hygromycin phosphotransferase, hygromycin resistance	<i>Escherichia coli</i>
pTiT 37 LB	T-DNA left border	<i>Agrobacterium tumefaciens</i>
t35S	Transcription terminator	<i>Cauliflower Mosaic virus</i>
BdUbi1T	Transcription terminator	<i>Brachypodium distachyon</i>
PvUbi2	Promotor	<i>Panicum virgatum</i>
tG7	Transcription terminator	
Linker	Linker sequence	Synthetisch
Target gene 1	Target gene 1 sequence	<i>Zea mays</i>
Target gene 2	Target gene 2 sequence	<i>Zea mays</i>
Target gene 3	Target gene 3 sequence	<i>Zea mays</i>

### B6. Brief description of the method used for the genetic modification

For the plants that have been modified using CRISPR-Cas technology: a T-DNA construct containing the CAS9 gene and the relevant guide RNAs was introduced into maize plants using *Agrobacterium tumefaciens*. In a next step plants were selected that had relevant mutations. These plants were then back crossed with wild type plants. From the resulting plants, individuals were selected that no longer contained the T-DNA construct. These plants were then selfed resulting in individuals that will be introduced into the field.

For the plants that over-express the target genes: a T-DNA construct containing the target gene(s) under the control of a constitutive promotor was introduced into maize plants using *Agrobacterium tumefaciens*. The T-DNA also contained the gene conferring resistance to hygromycin and transgenic plants were selected on a medium containing hygromycin.

### B7. If the recipient or parental plant is a forest tree species, describe ways and extent of dissemination and specific factors affecting dissemination

Not applicable.

## **C. Experimental Release**

### **C1. Purpose of the release**

The purpose of the release is to decipher the role of the target genes. Plants in which the genes are inactivated and plants in which the genes are constitutively expressed will be tested simultaneously in the field and in a greenhouse. The comparison of the plants in these two different environments is meant to help determine the role and function of these genes.

### **C2. Geographical location of the site**

The field trial will take place on grounds belonging to the ILVO research institute in the municipality of Wetteren.

### **C3. Size of the site (m<sup>2</sup>)**

The trial plot is 90 m<sup>2</sup>, and this plot will be surrounded by a 3 m buffer zone with wild type maize plants.

### **C4. Relevant data regarding previous releases carried out with the same GM-plant, if any, specifically related to the potential environmental and human health impacts from the release**

The plants have not been field tested before.

## **D. Summary of the potential environmental impact from the release of the GMPTs**

The environmental impact from the release is expected to be zero. It is known that the target genes are highly expressed in the field and are not expressed at all in the greenhouse. Both plants originating from the field and from the greenhouse are considered safe and that is also why there is no reason to expect any impact from the modified plants.

## **E. Brief description of any measures taken for the management of risks**

The plants will be harvested and destroyed prior to reaching the reproductive phase. So the plants will neither be producing pollen, nor seeds. This reduces the risk of the dispersal of reproductive material to zero. The non-reproductive plant material – roots, stems, leaves – does not present a risk. This material will be manually harvested and taken to the laboratory for further analysis and destruction.

## **F. Summary of foreseen field trial studies focused to gain new data on environmental and human health impact from the release**

There are no specific studies foreseen to gain new data on the environmental and human health impact from the release other than the study of the plants to decipher the role of the gene of interest in the plants.

## **G. Final report**

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## **H. European Commission administrative information**

To be filled in by the Commission

**I. Consent given by the Competent Authority:**

To be filled in by the Commission.