

G-TWYST

GM PLANTS TWO YEAR SAFETY TESTING



Stakeholder Forum Dialogue II

2e regel

WP2. FEED PRODUCTION AND PLANT ANALYSIS



WP2. feed production and plant analysis

OBJECTIVES

- 2.1. Ensure the supply of plant and feed material throughout the project
- 2.2. Provide control of the plant and feed quality
- 2.3. Comparison of the *omics* characteristics of the crop plant material with those of other GM and conventional maize crops

WP2. feed production and plant analysis

TASKS

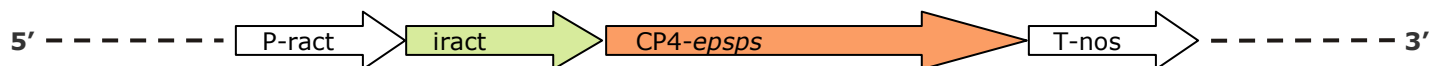
2.1. Logistics for feed materials

2.2. Analyses of plant material

2.3. Data collation and bioinformatic analysis

NK603 maize is tolerant to herbicide

constitutive expression of a synthetic gene encoding CP4-EPSPS protein from *Agrobacterium tumefaciens*

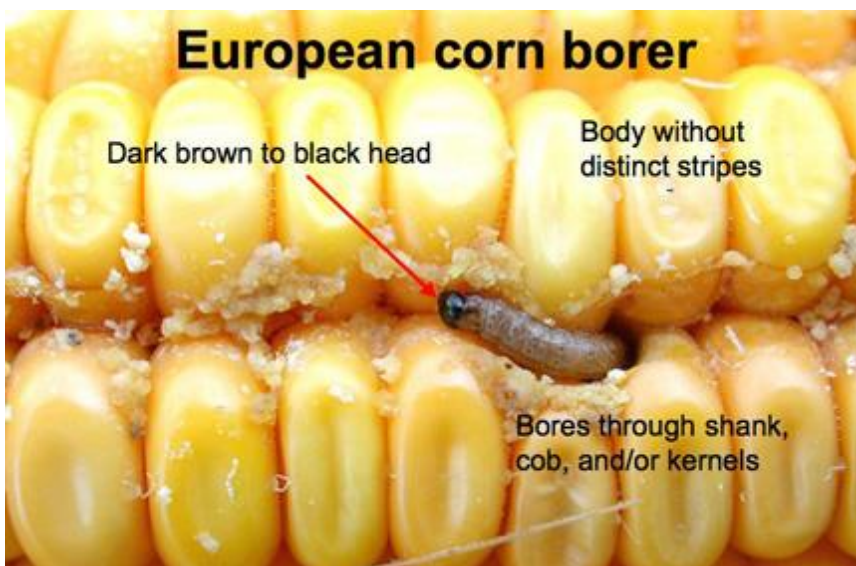
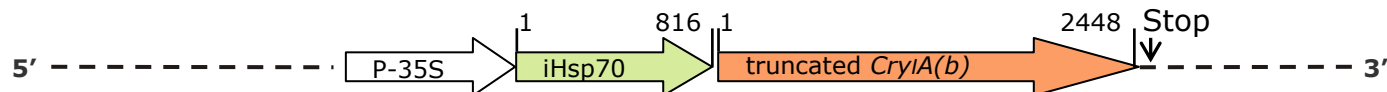


2.1. Logistics for feed materials

GM maize **NK603** and its near-isogenic conventional counterpart → cropped and bought in Northern America (Ralf)

MON810 maize is resistant to corn borer

constitutive expression of a synthetic gene encoding insecticidal protein CryIA(b) from *Bacillus thuringiensis*



2.1. Logistics for feed materials

GM maize **MON810** and its near-isogenic conventional counterpart → cropped in Spain



site 1



site 2



2.1. Logistics for feed materials

GM maize **MON810** and its near-isogenic conventional counterpart →

- harvesting only the inner parts of each variety
- immediate drying in a biological commercial dryer (<60°C)
- deliver to storage facility

4 tons DKC6667-YG
4 tons DKC6666
2 tons SY-NEPAL



2.2. Analyses of plant material

Transcriptome, proteome and metabolome analyses of the GM crop plant materials and conventional counterparts will be performed.

2.3. Data collation and bioinformatic analysis

The data obtained will be analyzed by well-established bioinformatic tools:

In silico identification of genes, proteins or metabolites present at altered levels in the GM plant versus the conventional near-isogenic counterpart; *in silico* elucidation of possible alterations in the plant physiology

Correlation of the *omics* data with the outcome of the compositional analysis in GM and conventional material

2.3. Data collation and bioinformatic analysis

Comparison of the *omics* data with those of previous studies that were performed to identify unintended effects of genetic modifications

The database CADIMA will compile the results obtained in safety assessment studies

Final evaluation of the data, together with those of the feeding trials by all partners