

**FORMAT FOR THE PRESENTATION OF THE RESULT OF  
DELIBERATE RELEASE INTO THE ENVIRONMENT OF  
GENETICALLY MODIFIED HIGHER PLANTS  
IN ACCORDANCE WITH ARTICLE 10 OF DIRECTIVE 2001/18/EC**

**1 GENERAL INFORMATION**

**1.1 European notification number:** B/ES/06/31

**1.2 Member State of notification:** Spain

**1.3 Date of consent and consent number:** April 6<sup>th</sup> 2006.

**2 REPORT STATUS**

**2.1 Please indicate whether, according to Article 3 of the present Decision, the current report is:**

- the final report

- ~~a post-release monitoring report~~

——— ~~final~~ ——— ~~intermediary~~

**3 CHARACTERISTICS OF THE RELEASE**

**3.1 Scientific name of the recipient organism:** *Zea mays*

**3.2 Transformation event(s) (acronym(s) or vectors<sup>1</sup> used (if transformation event identity not available):** 1507x59122

**3.3 Unique identifier, if available :** DAS-Ø15Ø7-1xDAS-59122-7

**3.4 Please provide the following information as well as the field(s) layout:**

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<sup>1</sup> In the case of small-scale field trials where several lines may be tested, the vectors used should be mentioned, which gives insight into the introduced traits and/or genetic elements. In the case of larger-scale trials, the number of events notified is limited to only one or a few events.

Geographical location(s) (administrative region and, where appropriate, grid reference)	Size of the release site(s) ( <sup>2</sup> ) (m <sup>2</sup> )	Identity ( <sup>3</sup> ) and approximate number of GM higher plants per event actually released (number of seeds/plants per m <sup>2</sup> )	Duration of the release(s) (from ... (day/month/year... until... (d/m/y)
Gurrea de Gállego Huesca (Aragón)	Total surface of the release: 3654 m <sup>2</sup> - 1507x59122 maize area: 18 m <sup>2</sup>	Hybrids1507x59122: ~ 8.5 plants/m <sup>2</sup>	From: 6/06/06 To: 30/11/06
Pelabravo Salamanca (Castilla León)	Total surface of the release: 2754 m <sup>2</sup> - 1507x59122 maize area: 18 m <sup>2</sup>	Hybrids1507x59122: ~ 8 plants/m <sup>2</sup>	From: 24/05/06 To: 15/11/06
Llamas de la Ribera León (Castilla León)	Total surface of the release: 4140 m <sup>2</sup> - 1507x59122 maize area: 36 m <sup>2</sup>	Hybrids1507x59122: ~ 8 plants/m <sup>2</sup>	From: 1/06/06 To: 20/12/06
Santa Uxía de Ribeira La Coruña (Galicia)	Total surface of the release: 1620 m <sup>2</sup> - 1507x59122 maize area: 18 m <sup>2</sup>	Hybrids1507x59122: ~ 8 plants/m <sup>2</sup>	From: 25/05/06 To: 1/11/06
Mesía La Coruña (Galicia)	Total surface of the release: 1620 m <sup>2</sup> - 1507x59122 maize area: 18 m <sup>2</sup>	Hybrids1507x59122: ~ 8 plants/m <sup>2</sup>	From: 25/05/06 To: 2/11/06

(<sup>2</sup>) Specify the size of the GM area and, where appropriate, the size of the non-GM area (e.g. non-GM border)

(<sup>3</sup>) Vectors used

See the trial layout in Annex 1.

#### 4 ANY KIND OF PRODUCT THAT THE NOTIFIER INTENDS TO NOTIFY AT A LATER STAGE

4.1 Does the notifier intend to notify the released transformation event(s) as product(s) for placing on the market under Community legislation(s) at a later stage ?

YES (by another juridical entity of the group)     NO     Unknown to date

If yes, indicate the country(ies) of notification: via EFSA (the European Food Safety Authority)

If yes, specify for which use(s):

- Import
- Cultivation (eg ; seed/planting material production)
- Food
- Feed
- Pharmaceutical use (or processing for pharmaceutical use)

- Processing for
  - Food use
  - Feed use
  - Industrial use
- Others (specify) : It will be used like any commercial maize
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## 5 TYPE(S) OF DELIBERATE RELEASE(S)

Please select the main type(s) (in boxes) as well as subtype(s) of the release(s). In the case of multi-sites, multi-events and/or multi-annual release(s), please provide a general overview of the type(s) of deliberate release(s) which has/have been carried out for the full duration of the consent. Please tick the appropriate type(s):

**5.1 Deliberate release(s) for research purposes**

**5.2 Deliberate release(s) for development purposes**

- Event screening
- Proof of concept <sup>2</sup>
- Agronomic performances (e.g. efficiency/selectivity of plant protection product, yield capacity, germination capacity, crop establishment, plant vigour, plant height, susceptibility to climatic factors/diseases, etc.) (specify)
- Altered agronomic properties (e.g. disease/pest/drought/frost-resistance, etc.) (specify)
- Altered qualitative properties (prolonged shelf-life, enhanced nutritional value, modified composition, etc.) (specify)
- Stability of the expression
- Multiplication of lines
- Hybrid vigour study
- Molecular farming<sup>3</sup>
- Phyto-remediation
- Others : (specify)

**5.3 Official testing**

- Variety registration on a national variety catalogue
  - DUS (=Distinctness, Uniformity and Stability)
  - VCU (=Value of Cultivation and Use)
- Others : (specify) : .....

**5.4 Herbicide authorization**

**5.5 Deliberate release(s) for demonstration purposes**

<sup>2</sup> For example, testing the new trait under environmental conditions.

<sup>3</sup> « Molecular farming » means the production of substances (for instance, proteins, pharmaceuticals) by plants, which have been genetically modified for a particular trait. “Molecular farming” could be defined as well as the production of plant-synthesized pharmaceuticals, plant-made pharmaceuticals, plant-based proteins production, etc.

**5.6 Seeds multiplication**

**5.7 Deliberate release(s) for biosafety/risk assessment research**

- Vertical gene transfer studies
  - Out-crossing with conventional crops
  - Out-crossing with wild relatives
- Horizontal gene transfer studies (gene transfer to micro-organisms)
- Management of volunteers
- Potential changes in persistence or dispersal
- Potential invasiveness
- Potential effects on target organisms
- Potential effects on non-target organisms
- Observation of resistant relatives
- Observation of resistant insects
- Others : (describe) .....

**5.8 Other(s) type(s) of deliberate release(s) :**

(Describe) : .....

## **6 METHOD(S), RESULT(S) OF THE RELEASE, MANAGEMENT AND MONITORING MEASURE(S) IN RESPECT OF ANY RISK TO HUMAN HEALTH OR THE ENVIRONMENT**

### **6.1 Risk management measure(s)**

*Please report the risk-management measures, which have been used to avoid or minimize the spread of the GMO(s) outside the site(s) of release, and in particular those measures:*

- *Which were not originally notified in the application,*
- *Which were applied in addition to the conditions in the consent,*
- *Which the consent required only under certain conditions (e.g. dry periods, flooding),*
- *For which the consent allowed the notifier a choice among different measures.*

*Tick the examples where appropriate:*

#### *6.1.1 Before the sowing/planting:*

- Clear labeling of the GM seeds (distinct from other seeds/tubers/etc.) (describe)  
Seeds were packed in small paper bags which remained closed until planting. Each paper bag was clearly labeled with the test entry code comparable to the codes in the protocol. Each small paper bag contained the seed for one plot.
- Segregation during the processing and transport of the seed/planting material (describe the method involved; provide example(s) of containment to prevent spillage during the processing and transport)  
Transport of the seed to the field is done during the planting date, in the envelopes where the seed was received, ordered according with the trial design, and inside conveniently closed boxes. No process to the seed is done before planting.
- Destruction of superfluous seeds/planting material (describe the method involved).  
. All the GM seeds were planted. There were not any remaining seed.

- Temporal isolation (specify)
- Rotation (specify the previous crop)
- Other(s): (specify): It was checked that the isolation of the plot was longer than established in the authorization (at least 200 m to any other maize crop) .....

#### 6.1.2 During the sowing/planting activities:

- Method of sowing/planting (describe)
 

Seeds were planted with a special sowing machine designed for micro-plot testing which allows an easy cleaning of the remaining seeds and avoids any mixture of seeds.
- Emptying and cleaning of the sowing machinery on the field of release.
 

At the end of the individual plot sowing, the remaining seeds in the machine (if any) were sown at the end of the plot. That way, all the seeds intended to be planted in that plot, were planted in the surface limited for that purpose. Once the sowing was finished in every location the planting equipment was carefully cleaned, to avoid that any seed could go out of the plot where the trials were sown.
- Segregation during the sowing (provide example of containment to prevent spillage during the sowing/planting).
 

As the seeds came to the field in individual envelopes per plot, it did not occur any seed mixing, and each envelope was opened only after the previous plot was planted and the machine was cleaned.
- Other(s) : (specify) Nobody out of the company got access to the experimental seeds and no seed returned to the facilities, as all the seeds were sown in the field

#### 6.1.3 During the period of release

- Isolation distance (x meters)
  - From sexually compatible commercial plant species – We kept an isolation with more than 200 m from any other maize crops..
  - ~~From sexually compatible wild relatives~~
- Border rows (with the same crop or a different one, with a non-transgenic crop, x meters, etc)
 

At least four border rows were seeded around the whole trial. The seed used as a border was a non-transgenic commercially available hybrid of similar relative maturity. At the end of the release, these non-GM rows were destroyed like the rest of the plants in the trial.
- Cage/net/fence/signpost (specify).
- Pollen trap (specify): At least four border rows were seeded around the whole trial, with a non-transgenic commercially available hybrid of similar relative maturity to create a pollen trap. At the end of the release, these non-GM rows were destroyed like the rest of the trial.
- Removal of GM inflorescences before flowering (indicate the frequency of removal)
- Other(s) : (specify)

#### 6.1.4 At the end of the release

In the locations of Gurrea de Gállego (Huesca), and Pelabravo (Salamanca) each micro-plot in the trial was harvested using an special combine designed to harvest micro-plots trials, that provides the yield and the percentage of moisture of the grain for each individual plot. The grain, as all the remaining plant materials were destroyed by breaking up, and incorporated in the soil. The crop remaining material were

destroyed by several chopping, and incorporated into the soil by deep plough. All the remaining plant waste material was incorporated into the soil.

In the locations of Llamas de la Ribera (León), Santa Uxía de Ribeira (La Coruña) and Mesía (La Coruña), each individual plot in the trials was hand harvested, and threshed with a special trialing threshing equipment powered by a tractor. The grain, and all the threshing remaining material was buried in a ditch made with an excavator in the soil, deeper than 75 cm, and the remaining plant material was destroyed by breaking up, and incorporated into the soil. The crop remaining material were destroyed by several chopping, and incorporated into the soil by deep plough

- Harvest / destruction before the ripeness of the seeds
- Effective removal of plant parts
- Segregated storage and transport of crop/waste (provide examples of containment to prevent spillage of collected seeds/crops/wastes)
- Clean up of machinery on the release site. All the machinery used was cleaned on the release site.
- Destination of the waste, treatment of waste/ surplus yield/plant residues (describe)  
Waste plants were discarded at the trial area for naturally composting.
- Post-harvest treatment and cultivation measures on the release site (describe the method for preparing and managing the release site at the end of the release, including cultivation practices)  
Trials area has been chopped several times to destroy the plant material and then ploughed to incorporate all the plant waste into the soil
- Other(s) : (describe): A representative of the “Ministerio de Agricultura Pesca y Alimentación” attended to the final destruction in the locations Gurrea de Gállego (Huesca), Santa Uxía de Ribeira (La Coruña) and Mesía (La Coruña), and he wrote a minute where the correct field destruction was certified.

#### 6.1.5 *Post-harvest measures:*

Please indicate which measures were taken on the release site after harvest:

Frequency of visits (average) Approximately every two months

- Subsequent crop (specify)  
The following crop will be any crop different from commercial maize
- Crop rotation (specify)  
The following year will be any crop different from commercial maize
- Fallow/no crop (specify)
- Superficial soil work / no deep ploughing
- False-sowing beds
- Control of volunteers (specify intervals and duration).  
The release site will be visited during the next season, and, as the main concerns are to do a proper control of the volunteers in the plot, and being sure that the farmer will not sow commercial maize on that site, the visits will be done during the months close to the maize sowing time in each area (mid-February, soil preparation; mid-May, maize sowing time). Later, during the second half of June another visit will be done in order to check the control of volunteers. If needed, any undesired plant emerged would be destroyed by means of machines or by a herbicide treatment (other than glufosinate or glyphosate).
- Appropriate chemical treatment(s) (specify)

- Appropriate soil treatment(s) (specify)
- Other(s) (specify)

6.1.6 *Other(s) measure(s): (describe)*

6.1.7 *Emergency plan(s)*

Indicate :

- a) If the release proceeded as planned :
  - Yes
  - ~~No (describe for which reason, e.g. vandalism, climatic conditions, etc.)~~
- b) If measures according to the emergency plan(s) (Article 6(2)(a)(vi) and Annex III.B of Directive 2001/18/EC) had to be taken
  - No
  - ~~Yes (describe)~~

## 6.2 Post-release monitoring measures

*Due to the fact that the current report format can be used for the final and post-release monitoring report(s), the notifier is asked to clearly make the difference between both types of report through this section 2 of Chapter 6. Please indicate whether*

- ***The post-release monitoring plan will start*** (in the case of a final report, after the last harvest of the GM higher plants),
- ***The post-release monitoring plan is ongoing*** (in the case of an intermediary post-release monitoring report),
- ***The post-release monitoring plan has been completed*** (in the case of the final post-release monitoring report)
- ***No post-release monitoring plan has to be fulfilled.***

*The results of this monitoring are meant to confirm or invalidate earlier assumptions in the risk assessment.*

*According to the aforementioned cases, please indicate which monitoring measure(s) will be/are/were taken and where (on the release site/near the site (e.g. on field edges)). Please be aware that all post-release monitoring measures taken during the whole post-release period shall be indicated here.*

The destruction of the trial was made on September 19<sup>th</sup> in La Rinconada (Sevilla), September 25<sup>th</sup> in Marchena (Sevilla), October 17<sup>th</sup> in Zuera (zaragoza), November 30<sup>th</sup> in Gurrea de Gállego (Huesca), October 19<sup>th</sup> in Alguaire (Lérida), October 11<sup>th</sup> in San Martín de la Vega (Madrid), December 14<sup>th</sup> in Alpera (Albacete), November 15<sup>th</sup> in Pelabravo (Salamanca), December 20<sup>th</sup> in Llamas de la Ribera (León), November 1<sup>st</sup> in Santa Uxía de Ribeira (La Coruña), and November 2<sup>nd</sup> in Mesía (La Coruña). The monitoring plan after the release is in progress. Until December 2006 the trial site will be visited regularly in order to check the presence of volunteers. In that case, they would be controlled by means of machines or a herbicide treatment (other than glufosinate or glyphosate). There were not volunteers in the trial site so far. No commercial maize will be sown in that site during 2007.

Specify:

- Monitoring measures within site

Duration: from December 2006 to December 2007

Frequency of visits (average): approximately every two months

- ~~Observation of resistant relatives~~
- ~~Observation of resistant insects~~
- Control of volunteers (specify intervals and duration) Regular visits, more frequent if some volunteers are detected and destroyed.
- ~~Monitoring of gene flow (specify)~~
- ~~Appropriate chemical treatment(s) and/or soil treatment(s)~~
- Others (specify)

- Monitoring measures of adjacent areas: Not applicable

Duration

Frequency of visits (average):

Area monitored:

- Observation of resistant relatives
- Observation of resistant insects
- Control of volunteers and/or monitoring of feral populations (specify intervals and duration)
- Monitoring of gene flow (specify)
- Appropriate chemical treatment(s) and/or soil treatment(s)
- Others (specify)

### 6.3 Plan for observation(s)/methods(s) involved

*In this section the observation plan and the methods used to collect the effects which have to be reported under the next section (section 6.4) need to be specified. Any amendments or modifications to the plan as proposed in the application and the SNIF<sup>4</sup> part B need to be specified in detail.*

*During the time between the notification and the final report submission, new scientific insights or methods may be developed which cause a change in the methods used. In particular these modifications need to be specified under this section.*

The observations were and will be done visually.

### 6.4 Observed effect(s)

#### 6.4.1 Explanatory note

*All results of the deliberate release(s) in respect of any risk for human health or the environment shall be stated, without prejudice to whether the results indicate that any risk is increased, reduced or remains unchanged.*

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<sup>4</sup> Summary notification information format (=SNIF)



*The main objectives of the information given in this section are:*

- *To confirm or invalidate any assumption regarding the occurrence and impact of potential effect(s) of the GMO(s) which was/were identified in the environmental risk assessment,*
- *To identify effect(s) of the GMO(s) which was/were not anticipated in the environmental risk assessment.*

*The observed **effect(s)/interaction(s)** of the GMO(s)*

- *with respect to any risk to human health,*
- *with respect to any risk to the environment*

*shall be reported under this section.*

*Particular attention shall be drawn to unexpected and unintended effect(s).*

*Indications as regards the effects, that the notifier may have to report, are provided hereunder. The effects have obviously to be considered in the light of the crop, the new trait, the receiving environment as well as the conclusions of the environmental risk assessment, which is carried out on a case-by-case basis.*

*In order to structure the information and to facilitate and efficient search within the given information, the notifier shall use, as far as possible, specific keywords to fill in the text fields under Chapter 6, especially sections 6.4.2, 6.4.3 and 6.4.4. A most updated list of those specific keywords is available on the Internet at : <http://gmoinfo.jrc.it>.*

#### *6.4.2 Expected effect(s)*

*This section concerns « expected effects », that is to say, potential effects which were already identified in the environmental risk assessment of the notification and could therefore be anticipated.*

*Notifiers should supply data from the deliberate release(s) which validate the assumptions made in the environmental risk assessment.*

The potential reduction in the control of certain lepidopteran insects, such as the European corn borer (*Ostrinia nubilalis*) and certain coleopteran insects, such as the Western corn rootworm (*Diabrotica virgifera virgifera*), if the target insect pests develop resistance to the insecticidal proteins as expressed in the genetically modified 1507x59122 maize, has been identified in the environmental risk assessment of the notification, as the only potential risk resulting from the interaction between the genetically modified maize and the target organisms.

In the trial carried out, no loss of efficacy of 1507x59122 maize plants on European corn borer was detected. Concretely, no damages caused by the European corn borer were observed on 1507x59122 maize plants, which lead to the conclusion that there was no developed resistance in the target lepidopteran insects. This confirms that, in the case of the trial carried out, the likelihood of the occurrence of this potential identified adverse effect was negligible, taking into account the small surface occupied by the trial. The presence of the target coleopteran insects, *Diabrotica*, has not been recorded to date, thus no development of resistance in the target insects was detected in the case of the trial carried out.

### 6.4.3 *Unexpected effect(s)*<sup>5</sup>

*“Unexpected effects” refer to effects on human health or the environment which were not foreseen or identified in the environmental risk assessment of the notification. This part of the report should contain any information with regard to unexpected effects or observations relevant for the initial environmental risk assessment. In case of any observed unexpected effects or observations, this section should be as detailed as possible to allow a proper interpretation of the data.*

Neither damage nor any kind of negative effects on human health or environment were observed.

### 6.4.4 *Other information*

*Notifiers are encouraged to supply information, which is outside the scope of the notification but which might be relevant to the field trials in question. This may also include observations of beneficial effects.*

None

## 7 CONCLUSION

*In this chapter, the notifier should specify the conclusions drawn and the measures taken or to be taken on the basis of the results of the release with regard to further release(s) and where appropriate, make reference to any kind of product the notifier intends to notify at a later stage.*

In this chapter, the notifier should specify the conclusions drawn and the measures taken or to be taken on the basis of the results of the release with regard to further release(s) and where appropriate, make reference to any kind of product the notifier intends to notify at a later stage.

In the case of the release, all the control measures were taken to avoid the spreading of pollen and grains of the genetically modified maize plants.

No negative effect of any kind has been observed that has or could have effects on the human health or the environment.

No risk for the human health or the environment has been identified as a result of the deliberate release of the genetically modified maize in these trials.

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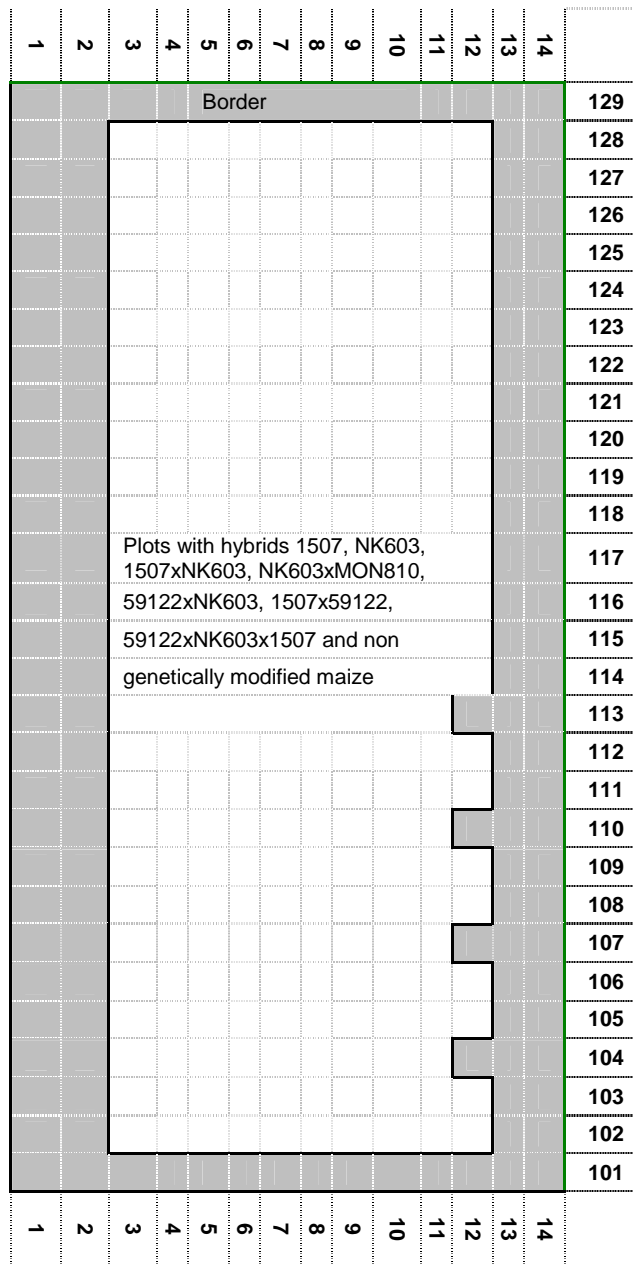
<sup>5</sup> Without prejudice to Article 8 of Directive 2001/18/EC as regards handling of modifications or new information.

The proposed measures in the notification and the control measures taken seem to be consistent with the aim of assuring the environment and human health safety.

DATE : January 9<sup>th</sup>, 2007

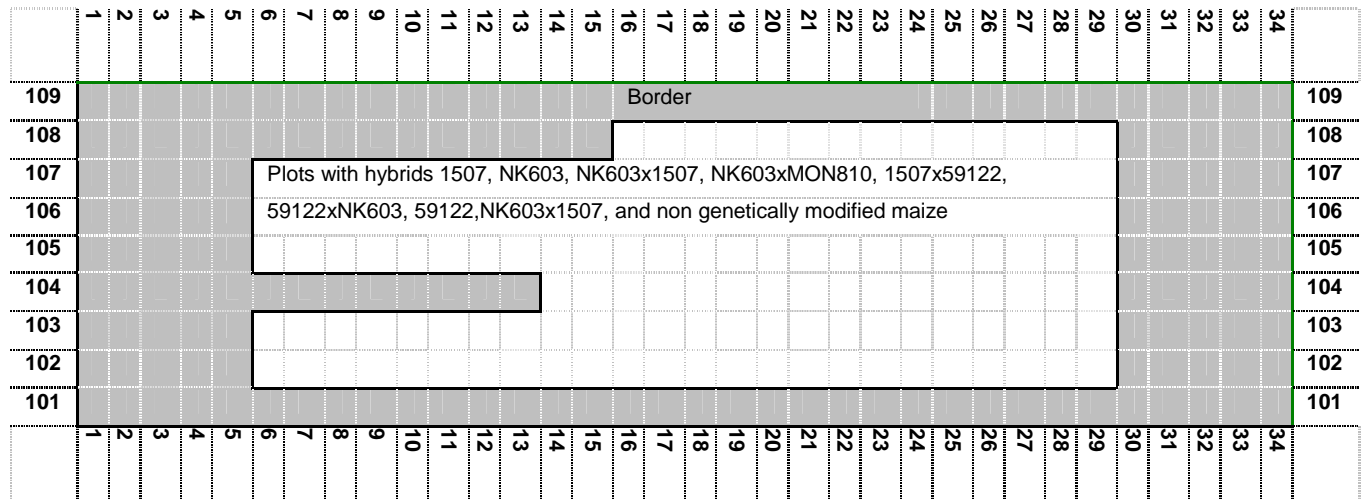
# ANNEX 1: Field Layout

Location: Gurrea de Gállego (Huesca)



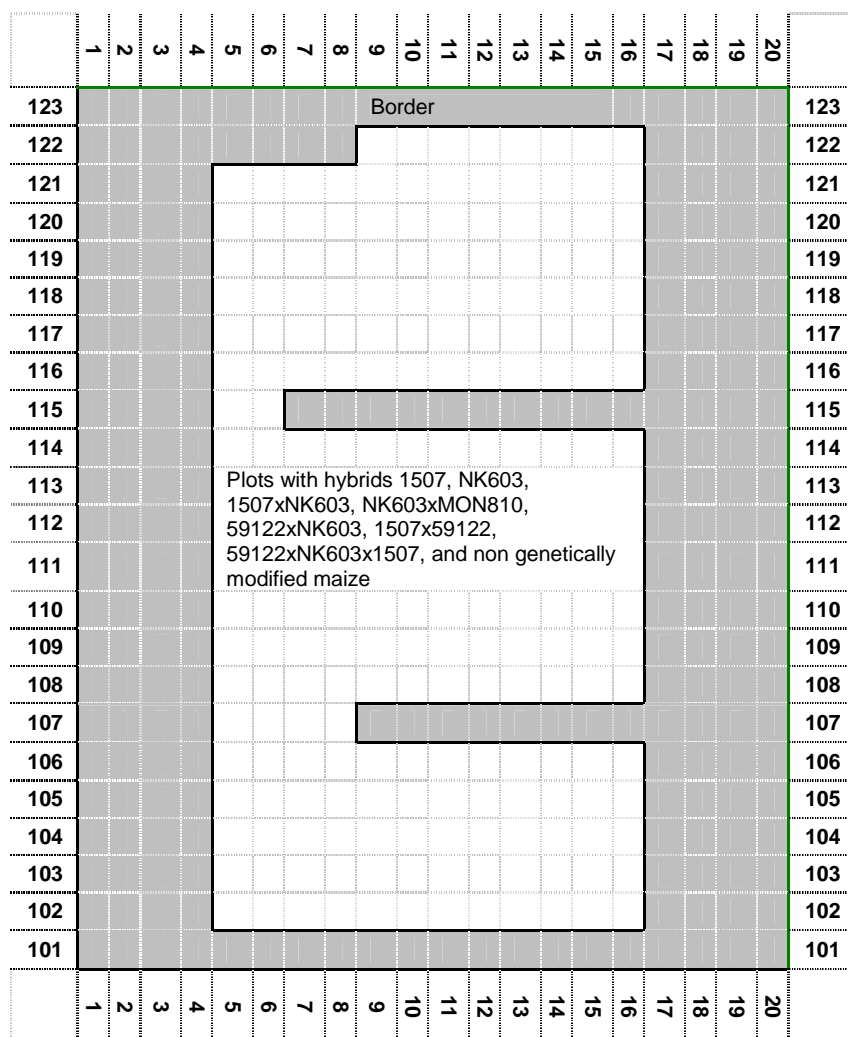
# ANNEX 1....Field Layout

Location: Pelabravo (Salamanca)



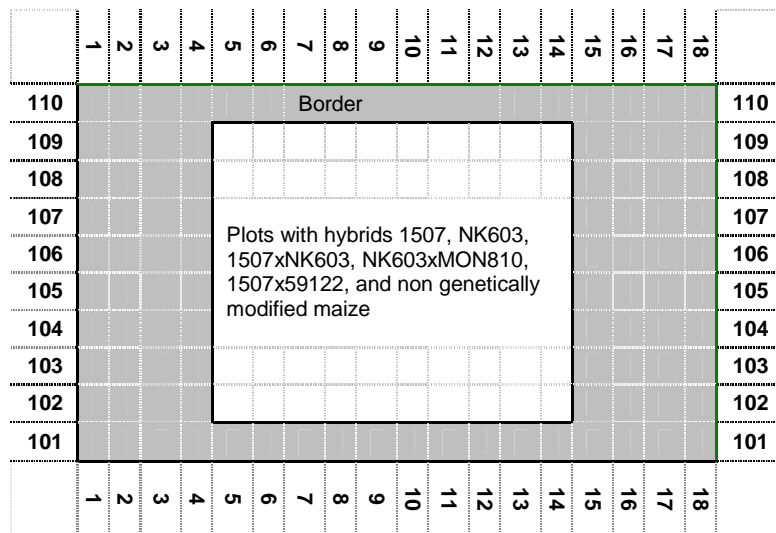
ANNEX 1....Field layout

Location: Llamas de la Ribera (León)



ANNEX 1....Field Layout

Location: Santa Uxía de Ribeira (La Coruña)



ANNEX 1....Field Layout

Location: Mesía (La Coruña)

