CSA – GTP

Non GMO Module

July 2020

Non-GMO module" associated with the CSA / GTP certification for placing on the market:

- *• Grains in the state or having undergone a simple mechanical operation and other feed materials and agricultural products having undergone a simple mechanical operation for human consumption without GMOs*
- *• Grains and "derived" as it is or having undergone a simple mechanical operation and other feed materials and compound feeds meeting the specifications "fed without GMO (<0.9%)" or derived from animals fed without GMOs (<0.9%)*

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1. Scope

This certification module applies to operators with a valid CSA-GTP certification, who undertake to provide customers who request it:

- Grains or grains having undergone a simple mechanical operation and other raw materials and agricultural products having undergone simple mechanical operations for human consumption without GMOs
- Grain and "middlings" as it is or having undergone a simple mechanical operation and other feed materials and compound feed that cannot be labeled GMO in accordance with Regulation (EC) No. 1829/2003 of September 22, 2003.

French decree No. 2012-128 of January 30, 2012 provides criteria for alleging the absence of GMOs:

- Ingredients of plant origin may be marked "GMO free" if they are derived from feed materials incidentally containing a maximum of 0,1% GMOs.
- The labeling of ingredients of animal origin may highlight an absence of GMOs at the thresholds of 0,9%. In order to ensure that consumers are properly informed, the level of guarantee will be specified in the statement: "from animals fed without GMOs (<0.9%)".

The audit for certification to the "GMO module" is a complementary audit to the certification audit to the CSA-GTP charter.

Certification to the "GMO module" is based on four types of obligations to which operators agree:

- A guaranteed grain supply <0,1% GMOs for human food and ≤ 0,9% GMOs for animal feed.
- A purchase of other raw materials and agricultural products having undergone simple mechanical operations guaranteed <0.1% GMO for human consumption
- A purchase of other feed materials and compound feeds ≤ 0.9% GMOs for animal feed
- The establishment of means to control cross-contamination at a technically unavoidable level.
- The establishment of a traceability system in accordance with Regulation No. 1830-2003 of 22/09/2003
- Analytical monitoring of grains collected, transported and stored, having undergone simple mechanical operations and marketed.

2. Définitions

Raw Materials at Risk (MPR): guaranteed raw materials ≤ 0.1% for human consumption and ≤ 0.9% GMOs for animal feed for which there are GMO varieties authorized for marketing in the Union European, and from production areas where these GMO varieties are authorized for cultivation. → EU corn (excluding FR), third country corn, third country soybeans, third country rapeseed

Sensitive Raw Materials (MPS): guaranteed raw materials ≤ 0.1% for human consumption and ≤ 0.9% GMOs for animal feed for which there are GMO varieties authorized for marketing in the European Union , and from production areas where these GMO varieties are not authorized for cultivation. → FR corn, EU soybeans and EU rapeseed

Cross-contamination (inter-batch transfer in the animal nutrition sector): is defined by the fortuitous presence in a batch of a residual GMO fraction from another batch.

3. Risk management linked to GMO

3.1. Risk analysis on grains and middlings

The operator must carry out a risk analysis taking into account GMOs and, if necessary, identify the MPR and MPS.

The fields covered by the risk analysis must be relevant and will take into account all the events authorized for marketing within the European Union (see European register of authorized GMOs).

In the case of purchase and resale of grains and "middlings" in the state or having undergone simple mechanical operations at risk or sensitive (MPR / MPS), the operator must ensure, at a minimum, that his supplier of MPR / MPS:

a) Has a recognized non-GMO certificate
b) Or has the following from its supplier:
    - The origin of grains/middlings,
    - Risk analysis relating to the management of GMOs,
    - The GMO control and analysis plan, if applicable

The commitment to send it any results that are strictly greater than 0,1% for human food and 0.9% for animal feed. The validity of these commitments is one year.

3.2. Risk analysis on other raw materials and agricultural products that have undergone simple mechanical operations for human food and other feed materials and compound feed

In the case of the purchase and resale in the state of products made from risky or sensitive raw materials (MPR / MPS), the operator must ensure, at a minimum, that his supplier:

a) Has a recognized non-GMO certificate
b) Or has the following from its supplier:
    - The origin of the product,
    - Risk analysis relating to the management of GMOs,
    - The GMO control and analysis plan, if applicable

The commitment to send it any results that are strictly greater than 0,1% for human food and 0,9% for animal feed. The validity of these commitments is one year.

The operator must carry out a risk analysis taking into account GMOs and, if necessary, identify the MPR and MPS.

* In the case of purchase and resale of compound feed for animal feed, suppliers must be STNO certified or equivalent

3.3. Management of cross contamination

For sites in which GM and non-GM grains and “middlings” coexist, the operator defines and implements means to limit the transfer of grains and “from” GM from one batch to another batch at a level fortuitous or technically unavoidable.

1. The operator identifies the risks of cross-contamination from GM grains during collection, transportation, handling, storage and simple mechanical operations;
2. The operator defines and implements rules to limit the transfer of GM grains and “from” one batch to another batch during collection, transport, handling, storage and operations. simple mechanics at an incidental or technically unavoidable level.
3. The operator checks that the rules are applied and records this check.
4. The operator ensures traceability of batch successions and identifies the destination of each batch of grain
5. The operator integrates these means of control specific to GMO grains into the site's quality approach.

3.4. Monitoring plan

Based on a risk analysis, the operator defines a monitoring plan for the agricultural products covered by the certification. The frequency below should be applied. The tonnage corresponds to products marketed as non-GMO.

For MPS, the frequency of analyzes below should be applied:

Tonnage de MPS put on the market/campain	Nb of analysis
< 4 000t	1 per batch
4 000t à 12 000t	1/ 2 000t
12 000t à 50 000t	6
50 000t à 100 000t	7
100 000t à 200 000t	10
200 000t à 300 000t	12
> 300 000t	2 supplementary each 100 000t

Pour les MPR, the frequency of analyzes below should be applied:

Tonnage de MPR put on the market	Nb of analysis
< 4 000t	1 per batch
4 000t à 12 000t	1/ 1 000t
12 000t à 50 000t	12
50 000t à 100 000t	15
100 000t à 200 000t	20
200 000t à 300 000t	25
> 300 000t	5 supplementary each les 100 000t

In the case of analysis results> 0,1% for human food and> 0,9% for animal feed, the operator respects the decision trees in appendix 1 and in particular identifies the causes, sets up the means to limit the risks and implements the labeling in accordance with the regulations in force.

3.5. Monitoring plan on grains and "middlings" that have undergone simple mechanical operations

Based on a risk analysis, the operator defines a monitoring plan for grains and "middlings" that have undergone simple mechanical operations. The frequency below should be applied. The tonnage corresponds to products marketed as non-GMO.

Tool intended for simple mechanical operations dedicated to MPS and / or MPR:

Tonnage of MPS that have undergone simple mechanical operations/campain	Nb of analysis*
> 10 000t	1 per batch
10 000t à 50 000t	2
50 000t à 100 000t	4
100 000t à 200 000t	6
200 000t à 300 000t	8
> 300 000t	2 supplementary each 100 000t

* This analysis plan is not mandatory if an analysis plan has already been carried out upon receipt of the grains and "products" that have undergone simple mechanical operations

Tool intended for simple mechanical operations not dedicated to grains and "middlings" having undergone simple mechanical operations not GM:

Tonnage of MPR that have undergone simple mechanical operations/campain	Nb of analysis*
> 2 000t	1 per batch
2 000t à 5 000t	3
5 000t à 10 000t	5
10 000t à 50 000t	10
50 000t à 100 000t	15
100 000t à 200 000t	20
200 000t à 300 000t	25
> 300 000t	5 supplementary each 100 000t

In the event of analysis results> 0.1% for human food and> 0.9% for animal feed, the operator respects the decision trees in appendix 1 and in particular identifies the causes, sets up the means to limit the risks and implements the labeling in accordance with the regulations in force.

4. Management of samples and analysis

4.1. Laboratories

For molecular methods, the analyzes must be carried out in laboratories accredited by COFRAC. The accreditation covers the following reference methods:

- **NF EN ISO 21569** - Produits alimentaires - Méthodes d'analyse pour la détection des organismes génétiquement modifiés et des produits dérivés - Méthodes qualitatives basées sur l'utilisation des acides nucléiques [*Food products - Methods of analysis for the detection of genetically modified organisms and derived products - Qualitative methods based on the use of nucleic acids*];
- **NF EN ISO 21570** - Produits alimentaires - Méthodes d'analyse pour la détection des organismes génétiquement modifiés et des produits dérivés - Méthodes quantitatives basées sur l'utilisation des acides nucléiques [*Food products - Methods of analysis for the detection of genetically modified organisms and derived products - Quantitative methods based on the use of nucleic acids*] ;
- **NF EN ISO 21571** - Produits alimentaires - Méthodes d'analyse pour la détection des organismes génétiquement modifiés et des produits dérivés - Extraction des acides nucléiques [*Food products - Methods of analysis for the detection of genetically modified organisms and derived products - Extraction of nucleic acids*];
- **NF EN ISO 24276** - Produits alimentaires - Méthodes d'analyse pour la détection des organismes génétiquement modifiés et des produits dérivés - Exigences générales et définitions. [*Food products - Methods of analysis for the detection of genetically modified organisms and derived products - General requirements and definitions*].

4.2. Sample sizes

Each GMO analysis laboratory must define the minimum and / or maximum sample sizes for the different analysis matrices (grains, flour, etc.) according to the specificities of its analysis methods. It is therefore necessary to refer to the laboratory requirements.

Minimum sizes of seed samples (see Annex 1 Regulation (EU) N ° 619/2011):

Vegetal species	Weight corresponding to 10,000 seeds / seeds (in grams)
Corn	3 000
Soya	2 000
Rapeseed	40

4.3. Méthodes of analysis

For MPR, it is possible to use immunological methods (ELISA method, strip test), which are based on the detection of proteins specific to GMOs.

In the event of a positive result, an analysis by molecular methods is required.

For MPS, molecular methods (PCR, Microarrays, isothermal PCR) are required.

For molecular methods, the fields covered by GMO research must be relevant and make it possible to detect all the events authorized for marketing within the European Union.

The minimum requirements for research into GMOs are defined in Annex 2

4.4. Interprétation des résultats

The analytical tolerances are taken into account for the conclusion of conformity of the analysis according to the provisions of Regulation (EC) No. 152/2009:

[GMO content = result of the analysis - analytical uncertainty]

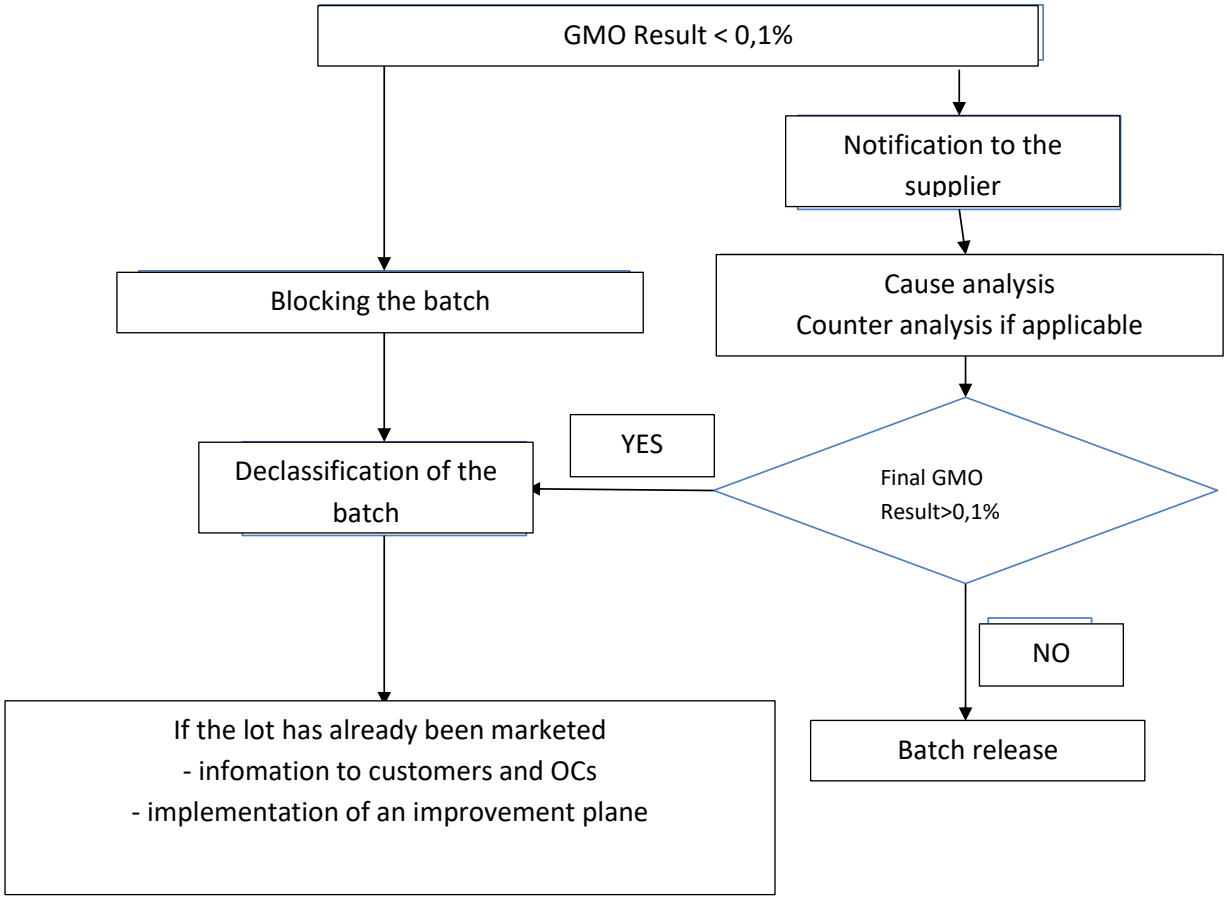
For the interpretation of the results, in the case of gene stacking and taking account of analytical uncertainties in particular, operators can refer to the technical documentation entitled "GMO Analyzes technical guide" published by Coop de France Nutrition Animale and the SNIA for feed materials intended for animal feed

5. Labelling

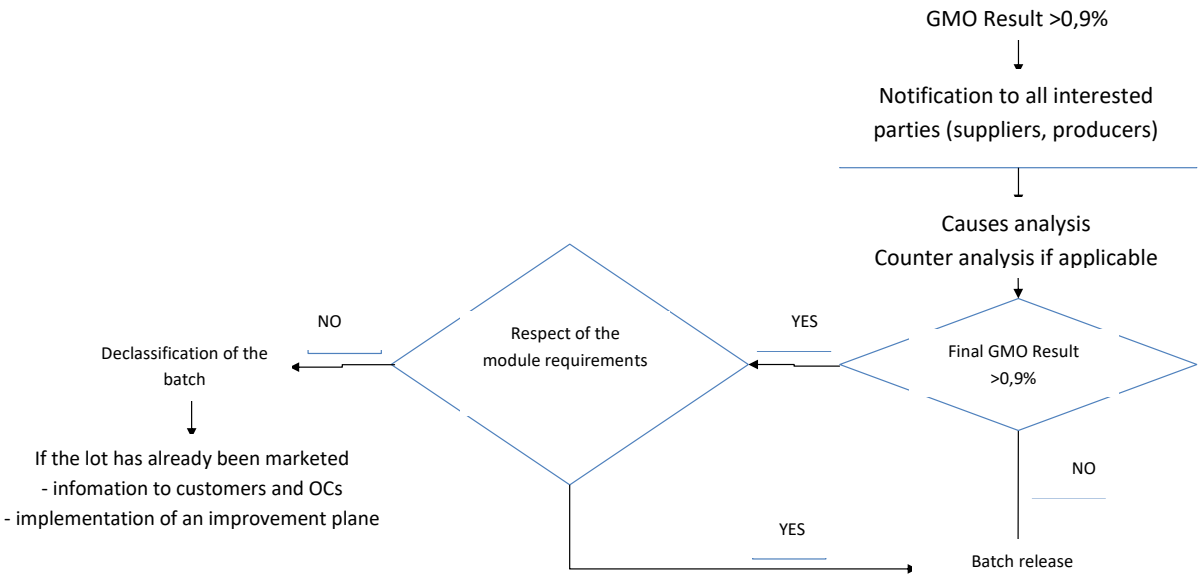
The operator must provide customers who order raw materials and compound feed that cannot be labeled GMO within the meaning of Regulation No. 1829/2003 of September 22, 2003.

ANNEX 1 : Management of non-compliant analysis results

1. Management of positive GMO results for human consumption



2. Management of positive GMO results for animal consumption



* Compliance with the requirements of the "GMO module" consists of ensuring that the 3 requirements below have been met:

1. Compliance with the quality approach specific to the "GMO module"
2. Guarantees "GMO-free ≤ 0.9%" for cereals, oilseeds, protein crops and "resulting" as is or having undergone simple mechanical operations
3. All control plans for cereals, oilseeds, protein crops and "from" as is or having undergone simple mechanical operations comply with this flowchart and the abacus below

Number of analyzes carried out as part of the operator's monitoring plan	Number of results strictly greater than 0.9% GMO beyond which an improvement plan must be put in place
4	**1**
5	**2**
6	**2**
7	**2**
8	**2**
9	**2**
10	**3**
11	**3**
12	**3**
>12	**25% of te number of analyss**

ANNEXE 2 : Minimal requirements for research of GMO

This annex details the minimum requirements applicable to GMO research

Soya

Determination and assessment of the total value of the most relevant soy GMOs:

- Quantification of GTS 40-3-2 (RRS-1)

- Quantification of MON89788 (RRS-2)

- Qualitative detection of A2704-12

If A2704 is detected positively, the content of this GMO can be assessed, for example, by means of a scanner process or a comparable method which guarantees the presence of sufficient DNA of the species. Subsequent quantification should be performed for values greater than 0.1%.

It is also possible to use screening parameters that record at least the GMOs mentioned. For the subsequent identification / quantification of positive results, at least all GMOs mentioned here must be quantified (if the corresponding elements are positive).

Corn

1. Screening on the 35S promoter (p35S) and on the NOS terminator (tNOS).

Other screening elements can be used to limit the presence of GMOs.

2. If positive: analysis of at least NK603, TC1507, MON810, MON89034 + RRS-1.

If one / more of these GM maize varieties can be excluded via the positive screening parameter, an equal number of commercialized GM maize varieties should be sought instead, rather than the GM maize varieties in question.

Positive screening results must be elucidated; if none of the 4 GM maize varieties is positive, the other GM varieties should be tested.

3. Determination of the total value of GMO corn

Identified varieties should be quantified if the estimate of the content, for example using the scanning process or a comparable method ensuring the sufficient presence of the DNA of the species, indicates values greater than 0.1%.

RRS-1 positive: estimate of the mass of soybeans and assessment of the quantity of soybeans determined: are these relevant inputs or minimal traces? If botanical contamination containing GMOs is detected, an assessment should be carried out.

Rapeseed

1. 3rd screening in which all relevant GMO rapeseed varieties are registered (eg tNOS, pat gene (or LibertyLink construct), CTP2-CP4epsps (or pFMV).

2. ID based on positive screening result:

tNOS positive: at least RRS + bar gene due to MS8 / RF3 or directly both

Positive pat / LybertyLink gene: at least T45 rapeseed

CTP2-CP4epsps / pFMV positive: at least GT73

3. Determination of the total value of GMO rapeseed

Identified varieties of GMO rapeseed must be quantified if the estimate of the content, for example using the scanning process or a comparable method ensuring the sufficient presence of the DNA of the species, indicates values greater than 0.1 %.

Positive screening results must be elucidated; if none of the 4 GM maize varieties is positive, the other GM varieties should be tested.

If no GMO rapeseed is detected, the presence of botanical contamination by GMOs from soybeans / corn containing GMOs must be elucidated (estimation and evaluation of masses). Are these relevant entries or minimal traces? If botanical contamination containing GMOs is detected, an assessment should be carried out.