Adviesraad voor Bioveiligheid
Conseil consultatif de Biosécurité

Advice of the Belgian Biosafety Advisory Council on application EFSA-GMO-NL-2012-109 (oilseed rape 73496) from Pioneer under Regulation (EC) No. 1829/2003

16 September 2021
Ref. SC/1510/BAC/2021_0875

Context

Application EFSA-GMO-NL-2012-109 was submitted by Pioneer for the authorisation for the marketing of genetically modified (GM) oilseed rape 73496 for food and feed uses, import and processing (excluding cultivation) within the European Union, within the framework of Regulation (EC) No. 1829/2003[1].

Oilseed rape 73496 expresses the GAT4621 protein, conferring tolerance to glyphosate.

The application was validated by EFSA on 4 December 2012 and a formal three-month consultation period of the Member States was started, lasting until 4 March 2013, in accordance with Articles 6.4 and 18.4 of Regulation (EC) No. 1829/2003 (consultation of national Competent Authorities within the meaning of Directive 2001/18/EC designated by each Member State in the case of genetically modified organisms being part of the products).

Within the framework of this consultation, the Belgian Biosafety Advisory Council (BAC), under the supervision of a coordinator and with the assistance of its Secretariat, contacted experts to evaluate the dossier, chosen from the common list of experts drawn up by the BAC and the Service Biosafety and Biotechnology (SBB). Nine experts answered positively to this request, and formulated a number of comments to the dossier. See Annex I for an overview of all the comments and the comments sent to EFSA on 4 March 2013.

The opinion of the EFSA Scientific Panel on GMOs was published on 17 June 2021 (EFSA Journal 2021;19(6):6610[2]) together with the responses from the EFSA GMO Panel to comments submitted by the Member States during the three-month consultation period. Those documents were forwarded to the experts on 18 June 2021, with an invitation to react if needed.

In delivering the present advice, the BAC considered in particular the comments formulated by the experts on application EFSA-GMO-NL-2012-109 and the opinion of EFSA.

[1] Regulation (EC) No 1829/2003 of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed (OJ L 268, 18.10.2003, p.1).
[2] See https://doi.org/10.2903/j.efsa.2013.3252

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Scientific evaluation

1. Molecular characterisation

With regard to the molecular characterisation, the Biosafety Advisory Council is of the opinion that the information provided is sufficient and does not raise safety concerns.

2. Assessment of food/feed safety and nutritional value

2.1. Assessment of compositional analysis

The Biosafety Advisory Council agrees with the GMO panel of EFSA that the compositional data of GM oilseed rape 73496, in comparison with its conventional counterpart, do not raise safety concerns.

2.2. Assessment of toxicity

After careful assessment of the presented toxicological data, and taking into account the Compound Specific Assessment Factor based safety assessment of N-acetylaspartate, the Biosafety Advisory Council agrees with the GMO Panel of EFSA that exposure to GM oilseed rape 73496 through consumption is unlikely to result in a negative impact on human and animal health.

2.3. Assessment of allergenicity

The Biosafety Advisory Council agrees with the GMO panel of EFSA that the available data on the allergenicity of GM oilseed rape 73496, in comparison with its conventional counterpart, does not raise safety concerns.

2.4. Nutritional value

The Biosafety Advisory Council is of the opinion that the information provided is sufficient to conclude that the nutritional characteristics of oilseed rape 73496-derived food and feed are not expected to differ from those of conventional oilseed rape varieties.

3. Environmental risk assessment

The Biosafety Advisory Council is of the opinion that it is unlikely that the accidental release of oilseed rape 73496 (i.e. during transport and/or processing) into the European environment[3] will lead to environmental harm.

4. Monitoring

With regard to monitoring, the Biosafety Advisory Council is of the opinion that the information provided is sufficient.

Conclusion

Based on the whole set of data on oilseed rape 73496 provided by the applicant, the scientific assessment of the dossier done by the Belgian experts, the opinion and complementing statement of EFSA, and the answers of the EFSA GMO panel to the questions raised by the Belgian experts, the Biosafety Advisory Council:

[3] As the application doesn't imply cultivation of the GM crop in the EU, a full environmental assessment, as in the case of a cultivation dossier, is not warranted.

1) Agrees with the GMO panel of EFSA that the potential environmental release of oilseed rape 73496 is unlikely to pose any threat to the European environment;
2) Agrees with the GMO panel of EFSA that in the context of its proposed uses, oilseed rape 73496 is unlikely to pose any risk to human and animal health;

Dr. ir. Geert Angenon
President of the Belgian Biosafety Advisory Council

Annex : Outcome of the assessment of the application and comments sent to EFSA

Annex : Outcome of the assessment of application EFSA-GMO-NL-2012-109 by the Biosafety Advisory Council during the formal consultation of the Member States (3-month commenting period in accordance with Articles 6.4 and 18.4 of Regulation (EC) No 1829/2003) and feedback from the EFSA GMO Panel

Coordinator: René Custers
Experts: Armand Christophe (UGent), Leo Fiems (ILVO), Johan Grooten (UGent), Jean-Luc Hofs (CIRAD), Birgit Mertens (WIV-ISP), Peter Smet (Consultant), Jan Van Doorsselaere (KATHO Roeselaere), Hadewijch Vanhooren (KUL), Michel Van Koninckxloo (Hainaut Développement territorial – CARAH)

SBB: Didier Breyer, Adinda De Schrijver, Martine Goossens, Philippe Herman, Katia Pauwels

♦ INTRODUCTION

Dossier **EFSA/GMO/NL/2012/109** concerns an application submitted by the company **Pioneer** for authorisation to place on the market genetically modified **Oilseed rape 073496** in the European Union, according to Regulation (EC) No 1829/2003 on genetically modified food and feed.
The application has been officially acknowledged by EFSA on 4 December 2012.
The scope of the application is:
(a) GM food
☒ Food containing or consisting of GM plants
☒ Food produced from GM plants or containing ingredients produced from GM plants
(b) GM feed
☒ Feed containing or consisting of GM plants
☒ Feed produced from GM plants
(c) GM plants for food or feed use
☒ Products other than food and feed containing of consisting of GM plants with the exception of cultivation
☐ Seeds and plant propagating material for cultivation in the EU

Depending on their expertise, the experts were asked to evaluate the genetically modified plant considered in the application on its 1) molecular, 2) environmental, 3) allergenicity, 4) toxicity and/or 5) food and feed aspects. It was expected that the expert should evaluate if the information provided in the application is sufficient in order to state that the marketing of the genetically modified plant for its intended uses, will not raise any problems for the environment or human or animal health. If information is lacking, the expert was asked to indicate which information should be provided and what the scientifically reasoning is behind this demand.

The comments are structured as in the "Guidance for risk assessment of food and feed from GM plants (EFSA Journal (2011, 9(5) :2150).
It should be noted that all the comments received from the experts are considered in the evaluation of this dossier and in formulating the final advice of the Biosafety Advisory Council. Comments sent to ESFA are indicated in grey.

GENERAL COMMENTS

Comments/Questions of the expert

Comment 1
ERA presented by the applicant follows EFSA recommendations published in EFSA guidelines. No major comment rise from the examination of the report. Minor comments were made about plant/feral persistence and HACCP plan in the PMM Plan.
The information provided by the applicant is sufficient for both issues above mentioned.

Comment 2
In conclusion, the potential risk of DP-Ø73496-4 rapeseed is limited. However, caution is required as long as the biochemical function served by NAA in the central nervous system is not fully understood, and because of the significant differences between DP-Ø73496-4 and the conventional rapeseed for some major components. Consequently, the general surveillance of DP-Ø73496-4 rapeseed will be very important.

A. HAZARD IDENTIFICATION AND CHARACTERISATION

A.1. INFORMATION RELATED TO THE RECEPIENT OR (WHERE APPROPRIATE) THE PARENTAL PLANT

Comments/Questions of the expert

Comment 1
Contradictory statements are made in this part of the application (e.g. Part II, page 33 (unprocessed oilseed rape has no food or feed use), page 38 (…include foods for human consumption, e.g. swede (B. napus)…, page 38 (refined oil is the only oilseed rape product that is consumed by humans).

Coordinator comment: It is true that swede, which is also a *B.napus*, is consumed by humans, but swede is not oilseed rape.

Comment 2
The information provided in the application is sufficient.

Comment 3
No comment

A.2. MOLECULAR CHARACTERISATION

A.2.1. INFORMATION RELATING TO THE GENETIC MODIFICATION Including:
- Description of the methods used for the genetic modification
- Source and characterization of nucleic acid used for transformation
- Nature and source of vector(s) used

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

Comment 2
No comment

A.2.2. INFORMATION RELATING TO THE GM PLANT Including:

- Description of the trait(s) and characteristics which have been introduced or modified
- Information on the sequences actually inserted or deleted
- Information on the expression of the insert
- Genetic stability of the inserted/modified sequence and phenotypic stability of the GM plant

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

Comment 2
2.2.2.e
P61 line 6: 86% is not “low identity”

P60 and following: figure A.2.13: according to the figure, the insertion occurred just behind the last exon of the tpt gene; is this correct? So can it than be concluded that the insertion of the PHP28181A occurred behind the stop codon, in the 3’ end region? And that this event has an effect on PG-tpt mRNA abundance? This could be described more clearer.

No further comments

Coordinator comment: The conclusion is that the *tpt* gene is disrupted by the insert. Whether or not the insert is present behind the stop codon is not that very relevant.

A.3. COMPARATIVE ASSESSMENT

A.3.1. CRITERIA FOR THE SELECTION OF COMPARATOR(S)

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

Comment 2
No comments

A.3.2. FIELD TRIALS: EXPERIMENTAL DESIGN AND STATISTICAL ANALYSIS

Comments/Questions of the expert

Comment 1

The information provided in the application is sufficient.

A.3.3. COMPOSITIONAL ANALYSIS

Comments/Questions of the expert

Comment 1
Questions
1) Can intake by humans of the rape itself or of other rape products than the oil be excluded? The composition of rapes appears in food tables (e.g. NUBEL 2009; 5th edition, page 48) indicating that rapes are consumed in Europe as such. If so, I am of the opinion that at least the anti-nutritional/toxic compounds of oilseed rape 73496 (rape itself) should be evaluated. Furthermore, I am aware of one study where the biological value of oilseed rape protein has been determined in humans (Bos et al., 2007).

Feedback from the EFSA GMO Panel: The GMO Panel took note of the questions. The risk assessment of oilseed rape 73496 took into account all possible uses in the context of the scope of the application (food and feed). Please see the Scientific Opinion for details.

2) Is the root of oilseed rapes never used as feed?

SBB comment: This comment was already made for application EFSA/2011/101, and was transmitted to EFSA.

Minor comment: In addition to the anti-nutritional components which were analysed, FAO (http://www.fao.org/ag/Aga/AGAP/FRG/afris/Data/724.htm) considers rape mucilage as an "anti-quality" factor. As rape foliage is seldom consumed by domesticated animals (but sometimes by wild animals; http://www.oilseedrape.org.uk/html/toxicity.htlm) and not expected to be imported in Europe, determination of this component in imported rape is of minor importance.

SBB comment: This comment was already made for application EFSA/2011/101, but was not transmitted to EFSA.

Comment 2
Concerning the anti-nutrients and secondary metabolites there seem to be no major differences between the event and its comparator or reference lines.

Comment 3
The information provided in the application is sufficient.

Comment 4
DP-Ø73496-4 rapeseed has been extensively analyzed (130 components). Although Part II of the dossier with the scientific information stated that the nutrient composition of DP-Ø73496-4 rapeseed is comparable to that of processed products from conventional rapeseed, significant differences between DP-Ø73496-4 and the conventional rapeseed occurred for major components (Annex 14; PHI-2010-006): crude protein ($P<0.05$) and ash ($P<0.10$) are decreased; C18:1 ($P<0.01$) and C18:3 ($P<0.05$) are also decreased, while C18:2 ($P<0.001$) was increased. Concentrations of lysine and methionine, the

most important essential amino acids, were not modified. Some concentrations of minerals and trace elements (phosphorus: P<0.05; Magnesium: P<0.01; zinc: P<0.10) were reduced. Phytic acid, an antinutritive factor, is also reduced (P<0.01), which may compensate for the lower phosphorus concentrations in monogastric diets. On the other hand, total glucosinolate content is increased (P<0.10). However, the glucosinolate concentration in rapeseed meal is not clearly mentioned.
Furthermore, increased concentrations of NAA, NAG and NAT in DP-Ø73496-4 rapeseed meal were reported.

A.3.4. AGRONOMIC AND PHENOTYPIC CHARACTERISTICS

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

A.3.5. EFFECTS OF PROCESSING

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

A.4. TOXICOLOGICAL ASSESSMENT

A.4.1. METHODOLOGY USED FOR TOXICITY TESTS

Comments/Questions of the expert

Comment 1
No further comments / questions

Comment 2
The applicant performed a toxicological assessment of i) the newly expressed GAT4621 protein, ii) the natural food and feed constituents N-acetylaspartate, N-acetylglutamate, N-acetylthreonine since their concentration has been unintentionally elevated beyond normal variation and iii) the whole diet prepared from 73496 oilseed rape.

Comment 3
The toxicity of DP-Ø73496-4 rapeseed has been extensively investigated, using 17 toxicity tests.

A.4.2. ASSESSMENT OF NEWLY EXPRESSED PROTEINS including:

- Molecular and biochemical characterisation of the newly expressed proteins
- Up-to-date bioinformatic search for homology
- Information on the stability of the protein under the relevant processing and storage conditions for the food and feed derived from the GM plant

- Data concerning the resistance of the newly expressed protein to proteolytic enzymes
- Repeated dose toxicity studies using laboratory animals

Comments/Questions of the expert

Comment 1

No further comments/questions. The information provided is satisfactory.

The safety of the GAT4621 protein is demonstrated by molecular and biochemical characterisation, and a sequence similarity search. The protein does not share significant sequence similarity with known protein toxins as demonstrated in an up-to-date bioinformatic search for homology. The *in vitro* digestion experiments demonstrated that the GAT4621 protein is degraded by digestive enzymes (SGF, SIF). The rapid denaturation and degradation of the GAT4621 protein was confirmed by analysis of the GAT4621 protein concentration in processed 73496 oilseed rape de-hulled seed (diet in the 90-day rat whole feed study). Additionally, the equivalence of the GAT4621 protein derived from a microbial expression system and the GAT4621 protein derived from 73496 oilseed rape tissue was demonstrated. Acute and repeated dose 28-day oral toxicity studies in mice were carried out with the GAT4621 protein. The results obtained confirmed that the GAT4621 protein expressed in 73496 oilseed rape is not acutely toxic.

In conclusion, the results obtained from all these studies confirm that there is no cause for concern with regard to any potential toxicity of the GAT4621 protein expressed in 73496 oilseed rape.

Comment 2

The mice repeated dose toxicity study (Part II, page152 ssq.) was construed to find out whether mice fed a diet enriched with the GAT4621 protein reacted differently from mice fed control diets. When significant differences were found, arguments were sought to conclude that these differences were not due to GAT4621 protein enrichment (which may or may not be so).

Question: Have alternative hypotheses been considered? For instance whether it could be possible that the significant differences observed only in females in a certain period of their life fed a diet enriched with the GAT4621 protein compared to the control groups (not supplemented and BSA-enriched) may be due to female hormone levels (not in males) and changes thereof (only in a certain period)?

Comment: Note that carcinogens are formed when refined rapeseed oil is heated during cooking in excess of 200°C. In this respect, rapeseed oil appears to be more hazardous to health than most other cooking oils (http://www.oilseedrape.org.uk/html/toxicity.htlm). No comparison was made between the thermal/oxidative stability of the refined oil of the GM rape and its conventional comparator. Factors affecting the oxidative stability of rapeseed oil have been published (e.g. Tynek et al., 2012).

Note that in its final report on MON 87705, EFSA mentioned that the oil derived from MON 87705 is not suited for commercial frying. It is suggested that EFSA should mention the same for oil derived from 73496 oilseed.

Coordinator comment: Is there any reason to suspect an effect on the oil composition resulting from the modification with the GAT4621 protein? Compositional analyses have not shown any differences in the oil composition beyond the natural variation. So I see no real reason to compare the thermal/oxidative stability of the oil. The MON87705 case is different, because in that case the oil composition was deliberately altered.

Comment 3

a) Degradation of the protein in simulated gastric fluid (SGF-Annex 23, PHI-2006-120).

The GAT4621 protein was digested very rapidly in simulated digestive fluid. The GAT4621 protein was digested within 30 seconds in SGS containing pepsin. Two low molecular weight bands were visible near the dye front on the gel that was near the 3 kDa protein molecular weight marker through the 2 minute time point in SGF, and the lower of the two bands persisted through 60 minutes.

What is meant by a putative dimer of GAT4621? This structure seems to be resistant towards degradation. Is it correct to say that this dimer is not formed during intestinal degradation or otherwise rapidly degraded?

Feedback from the EFSA GMO Panel: The GMO Panel took into account the comments from Belgium. The assessment of the new protein was based, among other elements, on a 28-day repeated dose toxicity study that did not show adverse effects in the test species at high doses.

b) Degradation of the protein in simulated intestinal fluid (SIF- Annex 24_PHI-2006-122).

The GAT4621 protein was digested within two minutes.

c) GAT4621: Acute Oral Toxicity Study in Mice (annex 25).

Microscopic findings:

Initial histopathologic examination revealed 2 males from the 1000 mg/kg of body weight/day test substance group with bony malformation and associated cartilaginous joint degeneration of the sternum suggesting that this tissue be considered a potential target organ. This finding was not observed in either control group from both sexes, any of the test substance treated female groups, or in the 100 or 500 mg/kg of body weight/day test substance group males.

Two out of five cases in a single test substance group seem to be more than coincidence, although the events only occur in male animals. Furthermore, in the 90 day rat study, one male animal (test substance group) was diagnosed with osteoarthritis (see further).

Feedback from the EFSA GMO Panel: The findings in the acute studies were considered the expression of a background condition of animals of this species/strain. The GMO Panel considers the acute toxicity studies on limited relevance for the toxicological assessment of newly expressed proteins in GMOs (EFSA GMO Panel, 2011).

Details on the GMO interpretation of findings in the 90-day study on the whole food and feed are detailed in the Scientific Opinion. The individual instance of osteoarthritis was considered incidental.

Coordinator comment: EFSA uses the fact that in the lower doses and in females no effects were seen and the fact that in the 28 day repeated dose no adverse effects were shown, to conclude that the findings in the acute studies are probably related to the expression of a background condition of the animals used. It also is of the opinion that the fact that one animal in the 90 day study showed osteoarthritis to be an incidental finding. I agree with this.

d) GAT4621: Assessment of Amino Acid Sequence Homology with Known Toxins. (Krauss, 2012 (appendix 2)).

To summarize, there were no significant alignments returned between the GAT4621 protein and any proteins exerting a normal metabolic or structural function.

Comment 4

Protein used for safety assessment

The inserted sequence in 73496 oilseed rape encodes for a new protein, e.g. a glyphosate acetyltransferase that has been optimized from a N-acetyltransferase by gene shuffling. The GAT4621 protein differs from its native form in 29 amino acid plus the addition of alanine as the second residue and is therefore considered as a novel protein to the food and feed supply chain. In order to have sufficient amounts of GAT4621 protein for safety testing, the applicant produced the protein in *E. Coli* strain BL21(DE3) RIPL. Bacterially produced GAT4621 and plant-expressed GAT4621 protein were equivalent with respect to structure. Given the inactivation of the enzyme during purification from plant material, the enzymatic activity of both proteins could not be compared. However, the enzymatic activity and substrate specificity of the microbially produced GAT4621 protein were consistent with the expected activity for the GAT4621 protein.

Toxicological assessment of the expressed novel GAT4621 protein

The novel protein was characterized both molecularly and biochemically and information on the enzyme activity was provided by the applicant.

Bioinformatic searches did not reveal significant alignments between the GAT4621 protein and proteins exerting a normal metabolic or structural function nor between the GAT4621 protein and known toxins and antinutrients. Information on the stability of the protein during processing was provided. Processing of oilseed rape (in particular steam-treatment and electronic cooker) involves the application of different temperature, pH and atmospheric pressure regimes which result in a denaturation and degradation of the protein content of the seeds. The resistance of GAT4621 against proteolytic enzymes was also evaluated.

Acute oral toxicity

An acute oral toxicity study was performed in Crl:CD1(ICR)BR mice dosed with 2000 mg GAT4621 protein/kg body weight which corresponds to 1558 mg/kg of body weight/day actually administered dose. No effects related to administration of GAT4621 protein were noted on clinical observations, gross necropsy and mortality 14 days after the administration.

28-day repeat study in rats

The applicant provided the results of a 28-day repeated dose feeding study in which groups of 5 Crl:CD1(ICR) mice of each sex were given a diet formulated to supply 0, 100, 500 and 1000 mg GAT4621 protein per kilogram body weight per day. An additional group of five male and five female mice received diets containing bovine serum albumin (BSA) formulated to supply 1000 mg/kg bw/day to serve as a protein control group. There were no treatment-related effects on any of the studied parameters including cage-side and clinical observations, ophthalmic examinations, body weights, feed consumption, haematology, clinical chemistry, and gross and histopathologic examinations. Consequently, the no-observed-effect level (NOEL) for systemic toxicity from dietary exposure to recombinant GAT4621 protein is considered to be at least 1000 mg/kg body weight which corresponds to an actual dose of 833 mg/kg of body weight/day for males and 1034 mg/kg of body weight/day for females.

A.4.3. ASSESSMENT OF NEW CONSTITUENTS OTHER THAN PROTEINS

Comments/Questions of the expert

Comment 1
No further comments / questions

Comment 2
As non-GM rape cannot be treated with glyphosate whereas 73496 oilseed rapes can, acetylated glyphosate and its metabolites may be present in the latter.
Questions:
1) Are other metabolites formed from acetylated glyphosphate than from glyphosphate? If so is anything known about their toxicity?
2) Does the newly expressed GAT4621 protein N-acetylate anti-nutritional/toxic compounds such as progoitrin, sinapine, glucobrassicin and if so, is anything known about the toxicity of their N-acetylated compounds?

Above comment rephrased and completed by the coordinator:
Does the newly expressed GAT4621 protein N-acetylate and if so, is anything known about the toxicity of their N-acetylated compounds?
Even though this may not be within the scope of the GMO legislation we raise the question whether or not from acetylated glyphosate other breakdown products / metabolites are formed than from glyphosate, and if so, what is known about their toxicity. This question should of course be looked at within the proper legislative framework. And most importantly, it should be prevented that this issue would be overlooked as a result of a regulatory gap.

Feedback from the EFSA GMO Panel: Unintended N-acetylation of amino acids was addressed by the GMO Panel via a thorough risk characterisation (see Scientific Opinion for details). The assessment of pesticides and their metabolites is out of the GMO Panel remit.

Comment 3
The genetic modification in 73496 oilseed rape does not give rise to the expression of any new constituents other than the GAT4621 protein.

A.4.4. ASSESSMENT OF ALTERED LEVELS OF FOOD AND FEED CONSTITUENTS

Comments/Questions of the expert

Comment 1
Elevated concentrations of the N-acetylated amino acids NAA (x 500!), NAG, NAT.
The N-acetylated amino acids were tested extensively: acute, repeated dose 28-day toxicity testing, genotoxicity testing (*in vitro* Ames test, *in vivo* micronucleus test). In addition, repeated dose 90-days toxicity testing and reprotoxicity testing (2-generation test) was done for NAA.
The N-acetylated amino acids NAA, NAG, NAT were found negative in the *in vitro* Ames test and the *in vivo* micronucleus test. NAA did not affect the reproductive parameters in the 2-generation reproduction study.

<u>NO(A)Elssystemic NAA</u>
28-d rat study: NOAEL = 852.3 mg/kg bw/d
90-d rat study: NOAEL = 451.6 mg/kg bw/d, NOEL = 229.5 mg/kg bw/d (based on hypertrophy in acinar cells of salivary glands in m/f in the 500 mg/kg bw/d group)

2-generation reproduction rat study: NOAEL = 471.2 mg/kg bw/d, NOEL = 231.8 mg/kg bw/d (based on hypertrophy in acinar cells of salivary glands in F1 and F2 in the 500 mg/kg bw/d group, decreased motor activity in 1 specific subset of the F2 generation).

Comment 2

Acute Dose Toxicity Study with NAA

When NAA was administered at the highest dose level (5000 mg/kg of body weight), four out of five female rats died within 1-2 days following exposure. One female rat survived and there were no mortalities in males at the higher dose of 5000 mg/kg of body weight. However, clinical signs of toxicity were recorded in males at this high dose.

No adverse effects were observed in rats (5 males and 5 females) when administered with NAA at a dose of 2000 mg/kg of body weight.

28-Day Repeated Dose Toxicity Study with NAA

The no-observed-adverse-effect-level (NOAEL) for systemic toxicity from repeated dose dietary exposure to NAA is considered to be greater than 1000 mg/kg/day.

Bacterial Reverse Mutation Test

It was concluded that the test substance was negative in this *in vitro* test.

Mouse Bone Marrow Erythrocyte Micronucleus Test

The test substance was concluded to be negative in this *in vivo* mutagenicity study.

Subchronic Oral (Diet) Repeated Dose 90-Day Toxicity Study

All male and female rats survived until scheduled sacrifice. Dietary exposure to NAA at target doses as high as 500 mg/kg bw/day for 90 consecutive days did not result in any adverse clinical signs, differences in body weights, feed consumption values, any of the response variables evaluated during the detailed clinical observations, functional observation battery (FOB) and motor activity evaluations, the ophthalmologic examination or the urinalysis performed at the end of exposure period for both male and female rats. There were no test substance-related adverse gross lesions observed at necropsy, effects on the organ weights, hematology or clinical chemistry changes or adverse findings at necropsy that were attributed to exposure to the test substance.

Oral (Diet) Two-Generation Reproduction Study

Regular observations of P1, F1 and F2 animals did not reveal clinically relevant effects on growth parameters. Organ weight determinations, macroscopic and microscopic examinations at necropsy did not show relevant differences between groups. Neurohistopathological evaluation provided no evidence that NAA had any effects on brain development.

Delivery or litter observations for the P1 or F1 generation females were not affected as well as no signs of reproductive effects on the P1 or F1 generation males or females or effects on the viability and growth in the F1 or F2 generation offspring were observed.

However, treatment related hypertrophy in acinar cells of salivary glands in both male and female rats in the F1 generation and male rats from the F2 generation from the 500 mg/kg of bw/day of NAA group was observed. This finding was not considered to be an adverse effect because: 1) this finding represents an increased incidence/degree of hypertrophy of the secretory cells of the salivary glands that can be seen in controls, including controls of this study; 2) the degree of hypertrophy was minimal

in nature; and 3) there was no evidence of injury or cytotoxicity to the salivary glands such as inflammation, degeneration, necrosis, or hyperplasia.

Is NAA present in food or feed? If so, in what quantity? What quantities are consumed?

Feedback from the EFSA GMO Panel: See comment above.
SBB comment: see under A.4.3.

Comment 3
The information provided in the application is sufficient.

Comment 4
The GAT4621 protein was shown to acetylate aspartic acid, glutamic acid, serine, threonine and glycine albeit with relatively low efficiency. Although this resulted in increased concentrations of N-acetylaspartate (NAA), N-acetylglutamate (NAG) and N-acetylthreonine (NAT) with 500-fold, 30-fold and 4-fold in 73496 oilseed rape, the concentrations of N-acetylserine (NAS) and N-acetylglycine (NAGly) remained comparable to those in conventional counterpart and non-GM commercial reference lines.

The safety of the elevated presence of these N-acetylated amino acids was discussed considering i) their physiological functions based on available scientific literature, ii) their anticipated intake, and iii) the results of toxicological studies.

N-acetylaspartate (NAA)
In the central nervous system, NAA has been reported to have a critical role in the myelination of neurons. Several additional biological roles have been proposed for NAA within the CNS. To date, no biological functions of NAA outside the CNS have however been identified. Given that exogenously administered NAA does not enter the CNS of laboratory animals, the applicant assumes that increased dietary exposure to NAA will not result in increased concentrations of NAA in the CNS but will be metabolically converted to aspartic acid within the kidney.

In an acute dose toxicity study, no adverse effects were observed in rats when NAA was administered in a dose of 2000 mg/kg of body weight. Based on the result of the 28-day repeat study, the no-observed-adverse-effect level (NOAEL) for systemic toxicity was considered to be greater than 1000 mg/kg/day, which corresponds to an actual average dose of 852.3 mg/kg/day for males and 890.1 mg/kg/day for females. Furthermore, NAA was considered not genotoxic as it was negative in the Ames test and in the *in vivo* micronucleus test. A 90-day study only revealed a significantly increased incidence and degree of hypertrophy of acinar cells in the salivary glands of both male and female rats in the 500 mg of NAA/kg body weight exposure group (i.e. the highest dose group). The applicant considered this finding not as adverse but rather as a compensatory mechanism or adaptive response as no evidence of injury or cytotoxicity was observed. Therefore, the NOAEL for systemic toxicity produced by dietary exposure to NAA was considered to be the highest dose administered, corresponding to an actual average dose of 451.6 mg/kg bw/day for male and 490.8 mg/kg bw/day for female rats whereas the NOEL was considered to be the mid dose administered, corresponding to an actual average dose of 229.5 mg/kg bw/day for male and 253.2 mg/kg bw/day for female rat. Finally, no adverse effects were observed in the oral (diet) two-generation reproduction study.

N-acetyglutamate (NAG)

NAG has two distinct functions in living organisms: in plants, fungi, green algae and prokaryotes, it is the first intermediate in the biosynthesis of arginine, while in ureotelic vertebrates, it is an allosteric cofactor in the urea cycle. However, since NAG is rapidly hydrolysed to free glutamate by aminoacylase, the nutritional impact of dietary NAG is considered to be approximately the same as that observed in diets supplemented with glutamate.

Both NAG and NAT were investigated for adverse effects in the acute oral toxicity study, the 28-day repeated dose toxicity study and in two genotoxicity studies (Ames test and in vivo micronucleus test). No adverse effects were observed.

Comment
Information on the physiological role of NAT was not provided.

Comment 5

GAT4621 has been inserted in genetically modified maize and tested for toxicity in rats during 13 weeks of dietary exposure (Appenzeller et al., 2009). No adverse health effects were detected, and it is assumed that this may confirm the safety of DP-Ø73496-4 rapeseed.
As mentioned by Delaney et al. (2008), NAA was not considered acutely toxic following oral exposure of Sprague–Dawley rats to 2000 mg/kg and the no-observed-adverse-effect-level for systemic toxicity from repeated dose dietary exposure to NAA was 1000 mg/kg/day. However, caution is required as long as the biochemical functions served by NAA in the central nervous system development and activity is not fully understood, and as long as possible additional functions are likely to be discovered (Moffett et al., 2007).
Is there any chance that a dietary NAA dose level higher than 1000 mg/kg/day can be obtained by the combination of different foods/feeds with high NAA concentrations than simulated on P. 170 of Part II of the dossier with the scientific information?
Although no brain lesions were reported, but because of the possible effect on brain, and the importance of brain modifications, the general surveillance on DP-Ø73496-4 rapeseed may be very important.

Feedback from the EFSA GMO Panel: See comment above.
SBB comment: see under A.4.3.
Coordinator comment: Yes, see page 21 of the EFSA opinion. And there has been a thorough risk characterisation performed, based on the toxicological studies that have been performed with NAA (see page 18-27 of the EFSA opinion).

A.4.5. ASSESSMENT OF THE WHOLE FOOD AND/OR FEED DERIVED FROM GM PLANTS

Comments/Questions of the expert

Comment 1
A poultry feeding study and 90-day rat feeding study were provided. These studies were well-conducted.
Diet rats: de-hulled, defatted toasted oilseed rape meal (± 20%) and refined, bleached, deodorized oilseed rape oil (± 2%). Concentration NAA: 41.722 mg/kg bw/d in the feed.
Diet broilers: meal prepared of un-hulled F2 seeds (10% in starter, 20% in grower diets). Concentration NAA: 41.766 mg/kg bw/d in the feed.

The results from these studies provided confirmation that 73496 oilseed rape is (nutritionally) equivalent to control oilseed rape with comparable genetic background and to commercial maize. The elevated levels of the acetylated amino acids NAA, NAG, and NAT observed in 73496 oilseed rape have not altered the nutritional value of 73496 oilseed rape in any significant way in the performed studies.

Comment 2
Question: How were the calculations made to conclude that the oil content of the rat diet was a magnitude greater than anticipated human intake (Part II, page 171, paragraph 7)? Missing data?

Coordinator comment: The applicant refers to WHO/GEMS Food data.

Comment 3
a) 42-day feeding study in broiler chickens (annex 46)
No statistical differences were observed between broilers consuming diets produced with 73496 or 73496+Gly canola meal and those consuming diets produced with near-isogenic control canola meal.

b) GAT4621: 90-Day rat feeding study (annex 44).
Clinical observations:
One male in the 73496 group was observed with swollen forelimbs and abnormal gait, due to osteoarthritis.

In the 73496 group one male with osteoarthritis (= degenerative joint disease) was observed. In the 28 day oral toxicity mice study, two (out of five) male mice in the 1000 mg/kg of body weight/day test substance group were observed with bony malformation and associated cartilaginous joint degeneration of the sternum.
This should be further investigated.

Feedback from the EFSA GMO Panel: The findings indicated were assessed by considered by the GMO Panel as the expression of a background conditions of the test systems and not related to the treatment with the test items. It is highlighted that the test item in a 28- days is the new protein as such, in the 90-day the test item is the defatted toasted meal, i.e. a combination of multiple substances; moreover due to heat treatment the new protein is likely to be denatured/degraded.

Comment 4
The information provided in the application is sufficient.

Comment 5
A 90-day rodent feeding study was performed according to the OECD TG 408 and following Good laboratory Practices regulations. The aim of the study was to establish if food and feed derived from 73496 oilseed rape is as safe (and nutritious) as that derived of its conventional counterpart control oilseed rape and commercial reference oilseed rape entries. In order to be able to incorporate high levels of oilseed rape in the animal feed without nutritional distortion of their diet, a partial de-hulling process of the seeds was applied. As a result, inclusion levels up to 24% (w/w) on the bases of meal could be achieved. Under the conditions of the study, no toxicologically significant difference were observed in rats fed a diet containing either the CHT or GT 73496 oilseed rape fractions compared with rats fed diets containing non-transgenic near-isogenic oilseed rape fractions or commercial oilseed rape fractions.

Minor comment

In the report the applicant states that CHT and GT 73496 oilseed rape fractions were used with CHT being conventional herbicide-treated (CHT) 73496 oilseed rape and GT 73496 being glyphosate-treated (GT) 73496 oilseed rape. However, in the annex 44 it is stated that oilseed rape fractions with the new event, either unsprayed or sprayed with glyphosate were used.

In general, the toxicological information provided by the applicant indicate that food and feed containing 73496 oilseed rape are safe.

Coordinator comment: It is true that also unsprayed 73496 was used, but it was compared with four reference varieties, which will have been sprayed with conventional herbicides.

A.5. ALLERGENICITY ASSESSMENT

A.5.1. ASSESSMENT OF ALLERGENICITY OF THE NEWLY EXPRESSED PROTEIN including:

- Amino acid sequence homology comparison between the newly expressed protein and known allergens using a comprehensive database
- Specific serum screening
- Pepsin resistance and in vitro digestibility tests
- Additional tests

Comments/Questions of the expert

Comment 1

The potential for allergenicity of the newly expressed GAT4621 glyphosate acetyltransferase protein has been addressed according to the recommendations from the EFSA. None of the required parameters indicate an increased risk for allergenicity. The lack of allergenicity of the source organism in spite of its wide distribution in nature are further in support of this conclusion. No further comments or questions.

A.5.2. ASSESSMENT OF ALLERGENICITY OF THE WHOLE GM PLANT

Comments/Questions of the expert

Comment 1

Based on the data provided, I agree with the conclusion of the applicant that it is unlikely that the foods derived from 73496 oilseed rape are more allergenic than foods derived from conventional oilseed rapes.

Comment: note that food sensitisation with oilseed rape has been described in children with atopic dermatitis (Poikonen et al.; 2008)

Comment 2

The potentially most worrisome feature with respect to potential allergenicity appears here to be the off-target enzymatic activities of the GAT4621 newly expressed protein. Besides a potential impact on toxicology, increased and aberrant acetylation of proteins may have negative consequences for allergenicity of the whole GM plant. It is however my understanding from the dossier that only highly refined oilseed rape oil and derived products are intended for human consumption and no other

derivatives of the plant. Considering the refinement process, I agree that for this specific product and its derivatives the risk for increased allergenicity is extremely low.

A (probably unintended) by-product of the GM plant will undoubtedly be honey collected from the pollen of 73496 oilseed rape fields. Here, the likelihood of increased allergenicity due to off-target GAT4621 enzymatic activity cannot be excluded on the basis of the analyses performed by the applicants. A comparative 2-D gel electrophoresis would allow to verify to what extend pollen from the GM plant differ from pollen from the parent plant in protein composition and protein acetylation. Such analyses or similar approaches seem imperative to me in order to fully exclude that besides the refined oil also this product for human consumption (honey from 73496 oilseed rape fields) will not pose a risk for allergenicity.

Above comment as rephrased by the coordinator:
Off-target GAT4621 enzymatic activity may lead to acetylation of different substances in the plant. Can the applicant substantiate that off-target acetylation is unlikely to increase the allergenicity of the plant or parts of the plants, such as pollen?

Feedback from the EFSA GMO Panel: Substrate specificity of the GAT4621 has been studied by the applicant. Please see an assessment of such information on Section 3.1.3 of the GMO Panel Scientific Opinion. As described, the substrate specificity of the *E. coli*-produced GAT4621 protein has been tested on a range of twenty-one different agrochemicals, twenty-one amino acids and ten antibiotics under in vitro conditions (Annex 22_PHI-2006-184/017). GAT4621 protein has been shown to acetylate certain amino acids, such are aspartate, glutamate and threonine, none of these known as allergens.

Coordinator comment: GAT4621 acetylates aspartate, glutamate and threonine. NAA and NAG are produced by the mammalian metabolism and are normal constituents of many foods and feedstuff (page 21 of the EFSA opinion). It is in my opinion therefore unlikely that the fact that GAT4621 acetylates these AAs would lead to an increase to any allergenicity of these compounds. There is also no mention or indication that these acetylated AAs could elicit allergenicity.

Comment 3
A series of tests were conducted to assess allergenicity. Based on this holistic approach it can be assumed that it is unlikely that DP-Ø73496-4 rapeseed will be allergenic.

A.5.3. ADJUVANTICITY

Comments/Questions of the expert

Comment 1
No indications here for an increased risk for adjuvant activity.

A.6. NUTRITIONAL ASSESSMENT

A.6.1. NUTRITIONAL ASSESSMENT OF FOOD DERIVED FROM GM PLANTS

Comments/Questions of the expert

Comment 1
Based on the arguments given by the applicant it can be concluded that foods derived from 73496 oilseed rape is as nutritious as similar foods derived from conventional oilseed rapes.

Minor remark: there is a difference in the reported values in the oil content of the diet fed in the repeated dose 90 day rat study (Part II, page 171, paragraph 7 and page 191, paragraph 1 versus page 178, paragraph 3; 1.46% vs 1.96%).

Feedback from the EFSA GMO Panel: The GMO Panel took note of the comment.

Comment 2
The information provided in the application is sufficient.

A.6.2. NUTRITIONAL ASSESSMENT OF FEED DERIVED FROM GM PLANTS

Comments/Questions of the expert

Comment 1
No questions

Comment 2
The information provided in the application is sufficient.

Comment 3
Glucosinolates are undesirable substances in animal feed (EFSA, 2008). They are hydrolyzed by myrosinase, present in the rumen, generating a range of biologically active compounds, which are converted to derivates with a natural thyreostatic action. Glucosinolates may result in the formation of thiouracil, which is a thyreostatic drug in cattle husbandry (Vanden Bussche et al., 2011).

Feedback from the EFSA GMO Panel: The GMO Panel thanks Belgium for the comment.

B. EXPOSURE ASSESSMENT - ANTICIPATED INTAKE/EXTENT OF USE

Comments/Questions of the expert

Comment 1
GAT4621 protein
No further comments/questions concerning the GAT4621 protein. The exposure of humans and animals to the GAT4621 protein through consumption of oil and meal is negligible as discussed in the protein expression study (seeds and processed toasted meal tested).

N-acetylated amino acids
No further comments/questions for NAG, NAT.
Comments for NAA:
Feed: meal and oil
Canola seed meal is used in feed for various livestock species: e.g. cattle, dairy cows, pigs, and is also a source of protein for poultry, lambs...

Using a conservative approach (all oilseed rape meal in the feed is from 73496 oilseed rape), the highest daily dietary exposure (DDE) to NAA is for poultry: 43.90 mg/kg bw/d for turkeys (meal from 73496 oilseed rape seed with hulls).
As estimated by Pioneer: Based on the actual average doses consumed, and the NOAEL (28-d rat study NAA) of 852.3 mg/kg bw/d, the margin of exposure (MOE) for turkeys is 19, the MOE for cattle is 60 (this is the highest MOE).
Nevertheless, as we discuss a life-time exposure, the NO(A)EL of the 90-d rat study of NAA (NOAEL 451.6 mg/kg bw/d, NOEL 229.5 mg/kg bw/d) or the 2-generation study of NAA (NOAEL 471.2 mg/kg bw/d, NOEL 231.8 mg/kg bw/d) should be used for estimating the MOE. MOE turkey (using 90-d study) is 10 – 5, MOE turkey (using 2-generation study) is 11 – 5. A MOE should be ≥ 100. Even using the NOAEL from the 28-day rat study we only have a MOE of 19, the highest MOE was estimated for cattle: MOE is still only 60!
We agree that in practice livestock animal dietary exposure to NAA is likely to be lower due to mixing of seed and meal derived from 73496 oilseed rape with seed and meal from existing commercial varieties. However, also GM soybean and GM maize (containing the GAT4621 protein and increased NAA levels) can be mixed in the meal used for livestock feed.
Although there were no adverse effects observed in the feeding studies in rat and broiler chickens (NAA concentrations in the same range as the DDE), we have to conclude that using a conservative intake assessment, the estimated increase is of concern (using the NO(A)EL of the 90-d rat and 2-generation study with NAA, but also using the NOAEL of the 28-d rat study with NAA), the estimated MOEs are of concern for livestock.

Feedback from the EFSA GMO Panel: The GMO Panel thanks Belgium for the comment. Unintended N-acetylation of amino acids was addressed by the GMO Panel via a thorough risk characterisation (see Scientific Opinion for details).

Food: oil
Of no concern, the oil prepared from 73496 oilseed rape contains neither the GAT4621 protein nor N-acetylated amino acids: agreed.

Comment 2
Question: Are there intake data on oilseed rapes (rapes as such) and on oilseed rape proteins in Europe? (see above; A.3.3.)

Comment 3
The information provided in the application is sufficient.

C. RISK CHARACTERISATION

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

D. POST MARKET MONITORING (PMM) OF FOOD AND FEED DERIVED FROM GM PLANTS

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

E. ENVIRONMENTAL RISK ASSESSMENT

E.1. INTRODUCTION

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

E.2. GENERAL APPROACH OF THE ERA

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

E.3. SPECIFIC AREAS OF RISK

As stated in the EFSA guidance on the environmental risk assessment of genetically modified plants (EFSA Journal 2010, 8(11):1879) the objective of the ERA is on a case-by-case basis to identify and evaluate potential adverse effects of the GM plant, direct and indirect, immediate or delayed (including cumulative long-term effects) on the receiving environment(s) where the GM plant will be released. For each specific risk the ERA consists of the six steps described in Directive 2001/18/EC:
1. Problem formulation including hazard identification,
2. Hazard characterisation,
3. Exposure characterisation,
4. Risk characterisation,
5. Risk management strategies,
6. Overall risk evaluation and conclusions.

E.3.1. PERSISTENCE AND INVASIVENESS INCLUDING PLANT-TO-PLANT GENE FLOW

Comments/Questions of the expert

Comment 1
Step 2 : Hazard characterisation.
(b) Characteristics associated with weediness and invasiveness.

Production of allelochemicals

The applicant states that oilseed rape is not known to produce allelochemicals. This should have been substantiated. Asanuma et al (2011) monitored the allelochemical production of seven GE oilseed rapes containing pat and bar gene in comparison with conventional lines. Results showed no differences between GE and conventional lines.

According to ERA experience, events using pat or bar genes don't show altered concentrations in N-acetylated Amino Acid. This metabolic shift observed in Oilseed rape 073496 could raise uncertainties about secondary metabolic compounds. However GE soybean expressing a GAT gene also presented huge concentrations of N-acetylated Amino Acids but did not express additional proteins or allelochemicals (USDA/APHIS, 2007). Given these evidences, it can be reasonably assumed that the risk for Oilseed rape 073496 to produce allelochemicals is low.

Stress tolerance

The high stress (for a temperate crop) of 4 mm/day of evaporative demand as described in Jensen et al. (1996) resulted only in an 8 to 17% yield decrease. In that case water stress is not a major limiting factor to seed production and therefore doesn't represent a strong evidence. In addition, Berglund et al. (2007) do not quantify yield losses.

Feedback from the EFSA GMO Panel: The GMO Panel thanks Belgium for this comment. The GMO Panel considered that it is unlikely that the intended trait of oilseed rape 73496 will provide a selective advantage to oilseed rape plants, except when they are exposed to glyphosate-containing herbicides. Should these plants be exposed to such herbicides, their abundance may increase locally, allowing the establishment of transient populations. However, the likelihood of such an event will be restricted to managed environments, which may occasionally be treated with such herbicides. Moreover, this fitness advantage will not allow oilseed rape 73496 to overcome other biological and abiotic factors limiting plant's persistence and invasiveness.

Comment 2
The information provided in the application is sufficient.

E.3.2. PLANT TO MICRO-ORGANISMS GENE TRANSFER

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

E.3.3. INTERACTION BETWEEN THE GM PLANT AND TARGET ORGANISMS

Comments/Questions of the expert

Comment 1
This is not an issue in the case of Oilseed rape 073496.

Comment 2
Not applicable

E.3.4. INTERACTION BETWEEN THE GM PLANT AND NON-TARGET ORGANISMS (NTOS)

Comments/Questions of the expert

Comment 1
This is not an issue in the case of Oilseed rape 073496.

Comment 2
Not applicable

E.3.5. Impacts of specific cultivation and management and harvesting techniques

Comments/Questions of the expert

Comment 1
This is not an issue and doesn't fall in the case of Oilseed rape 073496.

Comment 2
Not applicable

E.3.6. Effects on biogeochemical processes

Comments/Questions of the expert

Comment 1
Not applicable

E.3.7. Effects on human and animal health

Comments/Questions of the expert

Comment 1
Feeding modified maize with the insertion of the GAT4621 did not affect performance and egg quality of laying hens (McNaughton et al., 2011) and broiler performance and carcass characteristics (McNaughton et al., 2008), so that it can be assumed that similar results can be obtained with DP-Ø73496-4 rapeseed.

E.3.8. Overall risk evaluation and conclusions

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

E.4. Post Market Environmental Monitoring plan

E.4.1. INTERPLAY BETWEEN ENVIRONMENTAL RISK ASSESSMENT AND MONITORING

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

E.4.2. CASE-SPECIFIC GM PLANT MONITORING

Comments/Questions of the expert

Comment 1
No potential risks requiring the set up of a CSMP are identified in the Oilseed rape 073496 ERA. No specific risk management is needed including for feral populations (Devos et al., 2012) .

Comment 2
Not applicable

E.4.3. GENERAL SURVEILLANCE FOR UNANTICIPATED ADVERSE EFFECTS

Comments/Questions of the expert

Comment 1
The applicant should clearly notify that operators involved in the Oilseed rape 073496 handling, despite recommendation about limiting losses (page 227) should identify any critical points of seed spillage on each way of importation and processing.

Feedback from the EFSA GMO Panel: Monitoring is related to risk management, and thus a final adoption of the PMEM plan falls outside the mandate of EFSA. However, the GMO Panel gives its opinion on the scientific rationale of the PMEM plan provided by the applicant. The GMO Panel considered that the scope of the PMEM plan provided by the applicant is consistent with the intended uses of oilseed rape 73496.

Comment 2
The information provided in the application is sufficient.

Comment 3
As long as the biochemical function served by NAA in the central nervous system is not fully understood, and because of the significant differences between DP-Ø73496-4 and the conventional rapeseed for some major components, the general surveillance of DP-Ø73496-4 rapeseed will be very important.

Feedback from the EFSA GMO Panel: Unintended N-acetylation of amino acids was addressed by the GMO Panel via a thorough risk characterisation (see Scientific Opinion for details). Based on this, the GMO Panel was in the position of concluding on the safety of this genetically modified soybean in the context of the scope of this application. In accordance with Article 6(5)(e) of Regulation (EC) No

1829/2003, based on the outcome of the risk assessment of oilseed rape 73496 and, in particular, on the safety assessment of N-acetylated amino acids, the GMO Panel recommends to implement a PMM plan (see Scientific Opinion for details).

E.4.4. REPORTING THE RESULTS OF MONITORING

Comments/Questions of the expert

Comment 1
The information provided in the application is sufficient.

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