



Department
for Environment
Food & Rural Affairs

The Rt Hon Robert Goodwill MP
Minister of State for Agriculture, Fisheries and Food

Seacole Building
2 Marsham Street
London SW1P 4DF

T 03459 335577
defra.helpline@defra.gsi.gov.uk
www.gov.uk/defra

John Innes Centre
Colney Lane
Norwich
NR4 7UH

9 April 2019

Dear Sirs

**ENVIRONMENTAL PROTECTION ACT 1990, SECTION 111: CONSENT
TO RELEASE GENETICALLY MODIFIED ORGANISMS. REFERENCE:
19/R52/02**

1. Pursuant to section 111 of the Environmental Protection Act 1990, I grant consent to the John Innes Centre for the release of the genetically modified organisms described in **paragraph 2**, in accordance with the particulars set out in **paragraph 3** and subject to the conditions set out in the **Schedule** attached.
2. Genetically Modified Organism to be released:

The genetically modified organisms (GMOs) are wheat *Triticum aestivum* plants that have been transformed with DNA sequence encoding an iron transporter (vacuolar iron transporter II; *Ta VIT2*) from wheat. They may also contain antibiotic resistance marker genes: *hygromycin phosphotransferase* from the bacterium *Escherichia coli* (which includes a CAT-1 intron from the plant, *Ricinus communis*) and *neomycin phosphotransferase I* from the bacterium *Escherichia coli*.

3. Particulars of the consent to release:

Maximum size of the release: The trial site must not exceed 2 000 square metres

- (a) Purpose of the release:

The purpose of this trial is to investigate the ectopic over-expression of the wheat vacuolar iron transporter gene (*TaVIT2-D*) in the endosperm of wheat grains and to determine its effect on micronutrient accumulation and agronomic performance in the field.

(b) Location of the release (“trial site”):

The release must be conducted at the John Innes Centre at map grid reference TG 179 075)

(c) Dates of the release period:

The release may only take place between 1 March 2019 and 31 December 2022.

4. Before granting this consent, I have: -

(a) taken advice from the Advisory Committee on Releases to the Environment and Natural England and

(b) agreed the terms, limitations and conditions of this consent with the Food Standards Agency and, insofar as they relate to the protection of human health and safety, with the Health and Safety Executive.

Yours faithfully

ROBERT GOODWILL MP

Schedule to the Letter of Consent to release Genetically Modified Organisms Reference 19/R52/02

References in the letter of consent and in this Schedule to:

- (a) “GMO” means the genetically modified organism set out in **paragraph 2** of the letter of consent;
- (b) “volunteer” means plants growing from seed remaining in the soil after harvest;
- (c) “holder of the consent” means the party named in **paragraph 1** of the letter of consent or such other or additional party who has been approved by the Secretary of State;
- (d) “letter of consent” means the letter granting consent to release the GMO which is subject to these limitations and conditions and “consent” in this schedule shall be construed accordingly;
- (e) “release” means planting the GMO within the boundaries of the trial site during the release period;
- (f) “release period” means the period specified in **paragraph 3(c)** of the letter of consent.
- (g) “termination of the trial” means the completion of the trial period as more particularly described in **Condition 11**;
- (h) “trial period” means the period from the first release of the GMO until the termination of the trial;
- (i) “trial site” means the area of land to be used for the trial as more particularly described in **Condition 4** below and situated at the location set out in **paragraph 3(b)** of the letter of consent;
- (j) “trial” means the release of the GMOs and management of that release in accordance with the limitations and conditions of this consent;

CONDITIONS OF CONSENT

Condition 1. The holder of the consent must, during the trial period:

- (1) restrict human access to the trial site to personnel who have been informed of the limitations and conditions of the consent, and
- (2) allow the GM Inspectorate access to the trial site on request.

Condition 2. The holder of the consent must apply to the Secretary of State in writing for any variation to the consent **prior to sowing or transplanting** of the GMOs in any year during the release period.

Condition 3. Where the holder of the consent enters into any agreement with a person or persons who will perform the whole or any part of the trial on the holder's behalf, then:

- (1) such an agreement must be in writing and it must incorporate the limitations and conditions of this consent as may be varied by the Secretary of State from time to time in accordance with article 111(10) of the Environmental Protection Act 1990 and regulation 22 of the Genetically Modified Organisms (Deliberate Release) Regulations 2002; and
- (2) the release of the GMOs in any year of the trial must not take place until that agreement or variation of that agreement has received the written approval of the Secretary of State.

Size and description of the trial sites

Condition 4. The consent holder must ensure that:

- (1) a wheat pollen barrier of at least 2 metres width surrounding the GMOs is sown or transplanted on the same day as the GMOs, at the same or greater density as the GMOs and using a variety or varieties that flower(s) at the same time as the GMOs within the perimeter of the trial site;
- (2) during the release period, cereals, other than plants comprising the wheat pollen barrier referred to in condition 4 (1), are not grown in an area of at least 20 metres width of the plots on which the GMOs are planted and that if this area is cropped, it is cropped with a non cereal crop.

Condition 5. The consent holder must provide to the Secretary of State

- (1) the six figure grid reference of the plots within the trial site;
- (2) a plan showing the location of the trial site; and
- (3) details of the GM wheat to be planted

at least one week before the GMOs are sown or transplanted. Any deviation from the plan referred to in sub-paragraph (2) must be notified to the Secretary of State in writing as soon as practicable and in any event before planting of the GMO takes place.

Management of the site

Condition 6.

The consent holder must:

- (1) ensure that suitable measures are in place to keep pigeons and other large birds out of the plots during and after sowing and at the first signs of emergence of wheat ears
- (2) control *Elytrigia repens* (common couch grass) before flowering both within plots in which the GMOs are planted and in the surrounding area of at least 20m width referred to in condition 4(2) (“the 20m border”) either by hand pulling or application of a glyphosate herbicide between 1st May and 30th September in each year of the trial.
- (3) harvest non-GM wheat grain after harvesting GM wheat grain on each plot; clean the combine on the plot from which the material is harvested after each plot is harvested but before the next plot is harvested;
- (4) clean all machinery (including wheels and tyres) used on the trial site thoroughly and over plastic sheeting on the trial site before leaving the trial site;
- (5) ensure that all personnel entering the trial site take appropriate steps to eliminate transfer of GMOs via clothing and vehicles from the trial site.
- (6) ensure that all material (including straw) dislodged during cleaning is removed from the trial site immediately and ensure that it is transferred for contained use or disposal in accordance with **Condition 7**;
- (7) when GM and non-GM grain is harvested on a plot, immediately remove this material from the trial site and store it securely until it is transferred for contained use or disposal in accordance with **Condition 7**. In the autumn of the same year, lightly till that plot to a depth of approximately 5cm. The area should be left fallow over the following winter and lightly tilled to a depth of approximately 5cm in the spring.
- (8) when GM and non-GM grain is harvested on a plot, following the harvest, inspect that plot and the 20m border for volunteers at

least once a week until the end of November of the relevant year and then once a month from 1 March until 31 August in the following two years. Record the number of volunteers detected in each month (approximately if necessary) before they are controlled in accordance with **Condition 6(9)(b)** below.

- (9) during the two years following harvest of the GM and non-GM grain from a plot within the trial site:
 - a. leave the plot fallow;
 - b. treat all volunteers on the plot and the 20m border, including volunteers from non GMOs, with an application of glyphosate herbicide or by hand-pulling prior to inflorescence formation;
- (10) refrain from cultivating cereal crops intended to enter the food and/or feed chain on the trial site until monitoring of the plots for volunteers has ended.

Material removed from the trial site

Condition 7. The consent holder must ensure that **all** harvested grain and material collected during cleaning of machinery removed from the trial site under condition 6 is placed in sealed, labelled bags or containers for transfer to conditions under which the Genetically Modified (Contained Use) Regulations 2000 (SI 2000/2831), as amended, apply or to an authorised waste disposal facility for disposal by deep burial or incineration.

General monitoring requirements

Condition 8. The consent holder must:

- (1) Inspect the entire trial site and the 20m border during the period of cultivation of GMOs at least once a week to ensure that the limitations and conditions of this consent are being met.
- (2) maintain raw data and reports of inspections and provide this information to the Secretary of State on request as soon as possible.

Reports

Condition 9. The holder of the consent must, within two months of harvesting or terminating the GMOs within the trial site, submit a report to the Secretary of State in the format outlined in the Annex to Commission Decision 2003/701/EC (O.J. L254, 08/10/2003, p.21). Such report or reports must also include the following information:

- (1) an assessment of any risks or actual or potential adverse effects to human health or the environment from the GMO,

- (2) whether the release on that particular plot progressed as planned and if it did not:
 - i) what occurred;
 - ii) any additional measures that were taken;
 - iii) any additional measures that will be taken; and
 - iv) why these measures were taken.

Condition 10. After submission of the first report, in accordance with Condition 9, the consent holder must submit a report in each of the following years for the duration of the release period, subject to Condition 11. These must be submitted to the Secretary of State by December 31st in each year and in the format specified in the Annex to Decision 2003/701/EC. Each report must include the following information:

- (1) an assessment of the effectiveness of measures to control volunteers, including details of the number of volunteers detected each month in the trial site and the 20m borders
- (2) the re-evaluation of monitoring requirements, including whether or not the consent holder proposes to continue monitoring and the reasons for this decision,
- (3) any additional precautions considered necessary to minimise the dispersal of the GMO outside of the trial site.

Condition 11. The consent holder must continue to submit the reports referred to in **Condition 10** until the Secretary of State has agreed in writing that the trial site and where appropriate, the 20m borders have been controlled in accordance with Conditions 6(9)(b) and 6(11)(b), and that the trial is therefore terminated.

Emergency action

Condition 12. In the event of an emergency, the consent holder must:

- (1) take immediate and appropriate preventative and remedial action;
- (2) notify the Secretary of State of the emergency as soon as practicable and in any event within thirty-six hours of the matter constituting the emergency, detailing the nature of the emergency and any action that has been taken; and
- (3) submit a plan to the Secretary of State for his approval as soon as practicable and in any event within forty-eight hours of the matter constituting the emergency, detailing any continued or further action that he proposes to take to restrict the dispersal of the GMO from the trial site.

Condition 13. For the purposes of **Condition 12**, an emergency includes vandalism or any other unauthorised interference with the trial site

Condition 14. None of the provisions of **Condition 12** shall prevent the Secretary of State from taking such action as he reasonably believes is necessary to prevent, reduce or remedy any risk of harm to human health or of damage to the environment.

Note: The Environmental Protection Act 1990 also requires the consent holder to comply with implied general conditions for consents to release GMOs as set out in section 112(5) and section 112(7) of that Act. These implied conditions have effect subject to the conditions imposed above.