



Annual report on Activities Performed by the UK NRL for GMOs in Feed and Food

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for Genetically Modified
Organisms in feed and food

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Glossary

CRM - Certified Reference Material

DNA - Deoxyribonucleic acid

EFSA - European Food Safety Authority

ENGL - European Network of GMO Laboratories

EURL - EU Reference Laboratory for GMOs in feed and food

FSA - Food Standards Agency

FVO - European Commission Food and Veterinary Office

GeMMA - genetically modified materials analysis

GMO - Genetically Modified Organism

IRMM - Institute for Reference Materials and Measurements

JRC – Joint Research Centre (Italy, Ispra)

NRL - National Reference Laboratory (nominated under Regulation (EC) 882/2004)

nrl - national reference laboratory (under Regulation (EC) 1829/2003)

OCL - Official Control Laboratory

PA - Public Analyst

PAFF - Standing Committee on Plants, Animals, Food and Feed

PASS - Public Analyst Scientific Services

PCR - Polymerase Chain Reaction

PSP - Pre-Spotted Plate

SASA - Science and Advice for Scottish Agriculture

SC – Steering Committee

WG – Working Group



Role of the National Reference Laboratory

Commission Regulation (EC) 882/2004 was introduced to remove variation in the way European Community legislation is implemented in different Member States. This regulation relates to official controls designed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules. The aim is to create an integrated and more comprehensive, risk-based, 'farm to fork' approach to official controls. The objective is to improve the consistency and effectiveness of controls across the EU and, as a consequence, raise standards of food safety and consumer protection.

The Regulation sets out the general approach that must be taken and the principles that must be adopted by the authorities in EU Member States with responsibility for monitoring and enforcing feed and food law. These include the competent authorities organising and undertaking official controls. The various central Government agencies and local authorities that are responsible for organising and undertaking official controls constitute the competent authorities and include (for food and feed) the Food Standards Agency, the Health and Safety Executive and the Department of Environment, Food and Rural Affairs (Defra).

Regulation (EC) No 882/2004 also specifies requirements for certain specialised laboratories to provide the science that underpins regulation:

- Official Control Laboratories (OCLs): Central competent authorities designate official laboratories for the purposes of chemical analysis or microbiological examination of feed or food samples taken by enforcement practitioners (in the UK they are Public Analysts (PAs) and Agricultural Analysts (AAs)).
- Reference Laboratories (RLs): In order to provide technical and scientific support for the official control framework, the European Commission has created a network of National Reference Laboratories (NRLs) co-ordinated by European Union Reference Laboratories (EURLs) formerly known as Community Reference Laboratories (CRLs).
 - EURLs are appointed by the European Commission. They provide the Commission with scientific and technical assistance. They are responsible for providing NRLs with details of analytical or diagnostic methods, including reference methods, and co-ordinating their application (in particular by organising comparative testing). They conduct training courses for NRL staff and keep them up to date in their field of expertise. They also coordinate practical arrangements needed to apply new analytical/diagnostic methods.
 - NRLs: Each Member State must designate an NRL to correspond to each EURL. NRLs must collaborate with the EURLs in their particular area of expertise and disseminate nationally information provided by the EURLs. They are responsible for co-ordinating the activities of OCLs and should, where appropriate, organise comparative tests between them. In addition, they provide scientific and technical assistance to the central competent authorities.

The functions of NRLs are specified in Article 33 of Regulation 882/2004 and require NRLs to:

- a) Collaborate with the European Union Reference Laboratory (EURL) in its area of competence.



- b) Coordinate, with regard to methods of sampling and analysis, for their area of competence, the activities of official laboratories responsible for the analysis of samples in accordance with Article 11 of 882/2004.
- c) Where appropriate, organise comparative tests between the official national laboratories and ensure an appropriate follow-up of such comparative testing.
- d) Ensure the dissemination to the competent authority and official national laboratories of information that the EURL supplies.
- e) Provide scientific and technical assistance to the competent authority for the implementation of coordinated control plans adopted in accordance with Article 53.
- f) Be responsible for carrying out other specific duties provided for in accordance with the procedure referred to in Article 62(3) [that deals with voting rules and working groups] , without prejudice to existing additional national duties.

For the 2017-2018 period, the EURL did not publish an annual work programme.

NRL duties include advising the competent authority (FSA, Defra, Chemicals Regulation Directorate and Veterinary Medicines Directorate), and OCLs on sound measurement science and appropriate sampling methods.

LGC was re-appointed the UK National Reference Laboratory for genetically modified organisms (GMOs) in feed and food in March 2017 through competitive tender, following the initial appointment in 2009 and subsequent one in 2013 following competitive tender. LGC's appointment by the Food Standards Agency on behalf of the European Commission is under Regulation (EC) 882/2004, which aims to remove variation in the monitoring and enforcement of feed and food law across the European Union. As the National Reference Laboratory for GMOs LGC conducts the following activities, as specified in the contract with the FSA:

Core Function

Objective 01 – Secretariat Service (Core Function A)

Example Task:

- Disseminating information/advice supplied by the EURL and its working groups to the FSA, OCLs and other relevant laboratories.

Objective 02 – Advice and Representation within the UK/EU (Core Function B)

Example Tasks:

- Providing impartial expert advice as requested to the FSA, OCLs and other relevant laboratories on analytical methodology in the context of Official Controls.
- Representing the UK at relevant EURL meetings, and its working-groups.

Objective 03 – Production of Standard Operating Procedures, Codes of Practice and Guidance Documents (Core Function C)

Example Task:

- Contributing to the development of standardised operating procedures, relevant codes of practice and guidance documents for use by OCLs and other relevant laboratories, as requested by the FSA.

Objective 04 – Compliance Assessment via audits and ring trials (Core Function D)

Example Task:

- Participating in proficiency tests and method validation studies organised by the EURL, informing the FSA of the results and implementing any corrective measures required

Objective 05 – Co-ordination within the UK of EURL initiatives (Core Function E)

Example Task:



- Archiving of Standard materials (Control Materials) provided by the EURL
- Objective 06 – Communication of results and data use (Core Function F)**

Example Task:

- The Contractor shall ensure that the FSA receives regular updates of any developments related to the core functions of the NRL.

Additional Tasks

Objective 07 – Additional services and Tasks (as detailed in Annex I of the invitation to tender)

Example Tasks:

- If required, assist the EURL in testing and validating the methods of detection for GMOs, when necessary.
- Participate and contribute to the scientific input at meetings, e.g. the European Network of GMO Laboratories (ENGL) meetings, and working groups in a manner which supports UK policy on GMOs based on best available scientific knowledge.



Core Function

Production of the NRL annual report

This report details the activities carried out during the 9th year of the NRL operation (April 2017-March 2018) in relation to the duties of the NRL.

OBJECTIVE 01 - SECRETARIAT SERVICES - (CORE FUNCTION A)

Example Tasks:

- **Disseminating information/advice supplied by the EURL and its working groups to the FSA, OCLs and other relevant laboratories in a timely and effective manner.**
- **Creating and maintaining an efficient two-way channel of communication with OCLs and relevant laboratories and the EURL, including disseminating information on analytical methods and EU Regulations to OCLs and feedback of comments from OCLs to the EURL.**
- **Providing regular updates to the FSA on NRL activities, and up-to-date information on UK OCLs and other relevant laboratories to the FSA as requested.**

Example activities in relation to these Tasks:

- Attended 27th ENGL plenary meeting held at the JRC (Ispra) in April 2017.
- Supplied the FSA with the NRL draft meeting summary report to the 27th ENGL plenary meeting.
- Responded to enquiries from the EURL to help establish, develop, coordinate and present at a EURL organised DNA extraction training course to be held in June 2017.
- Wrote a comprehensive meeting summary report for the 27th ENGL plenary meeting and circulated to all UK ENGL members.
- Forwarded on to the FSA the official EURL minutes to the previous 32nd ENGL Steering Committee meeting held at the JRC (Ispra) in February 2017.
- Informed the FSA of the publication of the EURL guidance on detection of GM Petunia.
- Circulated the EURL published guidance on detection of GM Petunia to all UK ENGL labs.
- Attended the 33rd ENGL Steering Committee meeting at the JRC (Ispra) in June 2017.
- Forwarded to the FSA the official ENGL plenary report associated for the 27th ENGL plenary meeting held at the JRC (Ispra) in April 2017.
- Emailed all UK OCLs asking for any training requirements or issues they wanted raised at the 13th NRL workshop in September 2017.
- Forwarded to the FSA the official EURL minutes to the 33rd ENGL Steering Committee meeting held at the JRC (Ispra) in June 2017.
- Attended the 13th NRL workshop and the 28th ENGL plenary meeting at the JRC (Ispra) in September 2017.
- Wrote comprehensive meeting summary reports for the 13th NRL workshop and 28th ENGL plenary meetings and circulated to all UK ENGL members
- Received a request from the EURL-GMFF for a list of all EU member state's OCLs as per Official Control Regulation (EU) No 2017/625.



- Distributed to all UK OCLs a copy of a JRC report on the use of EU Reference Methods and Decision Support System tools for GMO analysis.
- Attended the 34th ENGL Steering Committee meeting held at the JRC (Ispra) in February 2018.
- Wrote the LGC report to the 34th ENGL Steering Committee meeting and circulated this to the FSA and UK OCLs.
- Forwarded on to the FSA the draft EURL minutes to the 34th ENGL Steering Committee meeting held at the JRC (Ispra) in February 2018.



OBJECTIVE 02 - ADVICE AND REPRESENTATION WITHIN THE UK/EU - (CORE FUNCTION B)

Example Tasks:

- **Providing impartial expert advice as requested to the FSA, OCLs and other relevant laboratories on analytical methodology in the context of Official Controls.**
- **Representing the UK at relevant EURL meetings, and its working-groups, consulting the FSA on objectives and requirements before each meeting and providing the FSA with an internal report of the meeting within two weeks of each meeting.**
- **Participating in activities organised by the EURL and contributing to the scientific input at EURL meetings and in manner which supports UK policy based on best available scientific knowledge.**
- **Advising the FSA, OCLs and other relevant laboratories on best scientific practice in testing for Official Controls and undertaking activities in consultation with the FSA that facilitate and promote their application in the UK within the policy aims of the FSA.**
- **Keeping abreast of and advising the FSA, OCLs and other relevant laboratories of developments for the sampling, testing and detection of analytes.**

During the April 2017 to March 2018 period, the NRL received and responded to 69 individual enquiries as part of the NRL function. This included 23 enquiries from the FSA as the Competent Authority, 15 enquiries from UK OCLs and 31 enquiries from EURL/UK stakeholders (including other UK ENGL labs and Defra)

Example activities in relation to these Tasks:

The next NRL newsletter (Spring 18) is due for imminent release and will be circulated to all UK OCLs. Copies of all previous NRL newsletters and NRL annual reports are freely available from the NRL webpages at <http://www.lgcgroup.com/services/regulatory-support/national-reference-laboratories/> and are referred to in Annex 1.

Received and responded to 23 individual enquiries from the FSA.

Example advice provided:

- Wrote LGC reports on the 33rd and 34th ENGL Steering Committee meetings and circulated these to the FSA and UK OCLs.
- Provided information to the FSA on potential access to international guidance documents and databases for GMO analysis post EU exit.
- Contacted FSA to make them aware of publication on "A brief review of current bioinformatics decision support system (DSS) tools for screening for GMOs in the EU using PCR based approaches" published in the Journal of Association of Public Analysts in 2017.
- Responded to query from FSA regarding access to GMO sequence information for individual GM events submitted by the applicant as part of the EU GMO authorisation process.



- Organised, hosted and chaired the August 2017 National Reference Laboratory Liaison Meeting with the FSA held at LGC.
- Provided advice to the FSA regarding available guidance on sampling and testing for GM seed.
- Provided a comprehensive summary on the applicability of sequencing/NGS for GM detection and risk assessment to the FSA to be used by the FSA at an EFSA forum.
- Addressed a request from the FSA for an updated list of those OCLs with current capability for GMO sampling and analysis.
- Approached by the FSA for views on the revision of the testing protocol for genetically modified CDC Triffid (FP967 Flax).
- Held discussions with the FSA regarding UK laboratory attendance at ENGL sessions in the future following EU exit.

Received and responded to 15 individual enquiries from Official Control Laboratories.

Example advice provided:

- Circulated an E-mail to all OCLs to make them aware of the publication of a review paper in the Journal of the Association of Public Analysts that captures the online decision support system bioinformatics tools that are freely available as an aid in GMO screening.
- Circulated the published EURL guidance on detection of GM Petunia to all UK ENGL labs.
- Circulated an email to UK OCLs asking for any training requirements or issues they want raised at the 13th NRL workshop at the JRC (Ispra) in September 2017.
- Circulated an email to UK ENGL members requesting feedback on the draft agenda for the 34th ENGL Steering Committee meeting being held at the JRC (Ispra) in February 2018.
- Wrote LGC reports on the 33rd and 34th ENGL Steering Committee meetings and circulated these to the FSA and UK OCLs.
- Responded to a request for advice on interpretation of testing for Chinese GM rice (Commission Implementing Decision 2013/287/EU) from an OCL.
- Distributed to all UK OCLs a copy of a JRC report on the use of EU Reference Methods and Decision Support System tools for GMO analysis.
- Received a request from an OCL for access to the ENGL screening and event specific pre-spotted plates to assist with an official control sample suspected of containing GM maize.
- Arranged provision of these pre-spotted screening plates to the OCL in response to the request received.
- Responded to a query from an OCL regarding the reported false positive issue associated with Chinese Rice testing protocol used by a lab in the Netherlands.



Received and responded to 31 individual from additional resources (e.g. other UK ENGL labs, Defra, etc.)

Example advice provided:

- Responded to enquiry regarding the date for the 28th ENGL plenary meeting.
- Supported two UK ENGL lab in their individual responses to the proposed revision of the ENGL Method Verification guidance document, including a suggestion for listing the changes between the Method Verification publications (versions 1 and 2) as a summary.
- Sent an E-mail around to UK ENGL members asking for feedback on the draft agenda for the 34th ENGL Steering Committee meeting.
- Responded to several comments on the availability of ENGL protocols, workshop and Working Group attendance, and ENGL membership post EU exit.
- Published "A brief review of current bioinformatics decision support system (DSS) tools for screening for GMOs in the EU using PCR based approaches" in the Journal of Association of Public Analysts (2017).
- Provided information to an ENGL lab with respect to attendance at the EURL workshop on DNA extraction.
- Held discussions with Defra regarding the environmental issue of GM petunia and the UK's response to the European Commission on this.
- Responded to enquiry from an ENGL lab regarding access to the ENGL/EURL DNA extractions solutions database.
- Provided advice to an ENGL lab on potential corrective actions to combat PCR inhibition found in DNA extractions.
- Provided advice to an ENGL lab regarding participation in the next EURL workshop on GMO screening and how to contribute to the harmonisation of the "technical zero" tolerance of un-authorised GMOs in seeds.
- The NRL was asked by Defra to provide advice regarding the proposed revision of the protocol for testing of GM flax (CDC Triffid FP967) for the UK representative on the Standing Committees on Plants, Animals, Food and Feed (PAFF Committee) prior to a meeting with the European Commission.



OBJECTIVE 03 - PRODUCTION OF STANDARD OPERATING PROCEDURES, CODES OF PRACTICE AND GUIDANCE DOCUMENTS - (CORE FUNCTION C)

Example Tasks:

- **Contributing to the development of standardised operating procedures, relevant codes of practice and guidance documents for use by OCLs and other relevant laboratories, as requested by the FSA.**

Example activities in relation to these Tasks:

- The UK NRL is a full member of the following ENGL Working Groups:
 - “Overview and recommendations for the application of digital PCR” (WG-dPCR)
 - “DNA Extraction” (WG-DNAex)
 - “ENGL Procedures” (WG-ENGLProc)
- The aim of the digital PCR Working Group (WG-dPCR) is to provide an ENGL Guidance Document detailing advice on best measurement practice for the application of dPCR for GMO analysis in analytical laboratories. The final draft of the guidance document resulting from this Working Group should be published Summer 2018.
- The aim of the newly formed DNA extraction Working Group (WG-DNAex) is to: (1) Create a webspace and forum for capturing and sharing information and data related to DNA extraction; (2) Provide a comprehensive Guidance document on the selection of DNA extraction methods, their characteristics and scope for specific food and feed matrices in the frame of official controls; (3) Support the organisation of a second training workshop on DNA extraction.
- The aim of the ENGL Procedures Working Group (WG-ENGLProc) is to provide guidance on selected administrative procedures associated with the day-to-day operation of the ENGL. The ENGL Consortium Agreement provides rules and procedures for all main aspects of the ENGL, including membership, work program and confidentiality. However, it does not cover procedures for the routine activity of the network, e.g. approval workflow of documents, management of observers, participation to meetings of non-ENGL members etc. A draft of the relevant guidance document is being finalised and should be forwarded on to the ENGL Steering Committee for approval prior to Summer 2018.
- Participated in the development, organisation, co-chairing, presentation and delivery of a DNA extraction workshop jointly with LGC and the EU Reference Laboratory (EURL) for GMOs in feed and food at the JRC (Ispra) in June 2017.
- Delivered invited presentations on the results from the DNA extraction workshop at the 33rd ENGL Steering Committee meeting and the 28th ENGL Plenary meeting at the JRC (Ispra).



OBJECTIVE 04: COMPLIANCE ASSESSMENT VIA AUDITS AND RING TRIALS - (CORE FUNCTION D)

Example Tasks:

- **Ensuring consistency and quality of testing approaches applied by UK OCLs and other relevant laboratories, including advising on corrective action following adverse reports on OCLs from UKAS**
- **Participating in proficiency tests and method validation studies organised by the EURL, informing the FSA of the results and implementing any corrective measures required**
- **Co-ordinating training exercises to promote best laboratory practice in respect of analysis.**

Example activities in relation to these Tasks:

- Participated in and submitted results for the 14th EURL Comparative Test (ILC_EURL_GMFF_CT_02_16). Received Z-scores of -1, 0.2 and 0.1 for the three GM events of Oilseed rape GT73, Oilseed rape 73496 and Soya MON89788 respectively, which were successfully detected in the samples.
- Participated in and submitted results for the 15th EURL Comparative Test (ILC_EURL_GMFF_CT_01_17). Received Z-scores of 0.3 and -0.1 for the two GM events of Soya 44406 and Maize VC01981 respectively, which were successfully detected in the samples.
- Participated in and submitted results for the 16th EURL Comparative Test (ILC_EURL_GMFF_CT_02_17). Received Z-scores of -0.3 and 0.3 for the GM event Soya 40-3-2 which was successfully detected in the two independent test samples.
- Performance in these Comparative Tests (including all Z-scores) were communicated to the FSA.



OBJECTIVE 05 - CO-ORDINATION WITHIN THE UK OF EURL INITIATIVES - (CORE FUNCTION E)

Example Tasks:

- **Archiving of Standard materials (Control Materials) provided by the EURL**

Example activities in relation to these Tasks:

- The NRL continues to maintain a dedicated physical and electronic register for control materials held in a secure cold room.
- Received, registered and archived the following new ENGL control plasmids:
 - Maize DP-4114
 - Maize MON 87403
- A full list of the registered ENGL plasmid control materials is provided in Annex 2.



OBJECTIVE 06 - COMMUNICATION OF RESULTS AND DATA USE - (CORE FUNCTION F)

Example Tasks:

- **The Contractor shall ensure that the FSA receives regular updates of any developments related to the core functions of the NRL.**

Example activities in relation to these Tasks:

- The UK NRL is in constant contact with the FSA by E-mail and phone in relation to queries, updates, developments and deliverables.
- The UK NRL is available for provision of advice on GMO analysis to all OCLs by E-mail, phone and face-to-face meetings where appropriate.
- Summaries on all ENGL plenary meetings that the UK NRL attends are supplied to all OCLs and the NRL is fully contactable in order to provide further details on each meeting as is necessary.
- Full meeting reports for the ENGL plenary and NRL annual meetings and summaries of the ENGL SC meetings are provided to the FSA.
- The NRL routinely organises, hosts and chairs the regular National Reference Laboratory Liaison Meeting with the FSA



ADDITIONAL TASKS

OBJECTIVE 07:- ADDITIONAL SERVICES AND TASKS (as detailed in Annex I of the invitation to tender)

Example Tasks:

- **If required, assist the EURL in testing and validating the methods of detection for GMOs, when necessary.**
- **Participate and contribute to the scientific input at meetings, e.g. the European Network of GMO Laboratories (ENGL) meetings, and working groups in a manner which supports UK policy on GMOs based on best available scientific knowledge.**

Example activities in relation to these Tasks:

- The NRL attended the annual NRL meeting, two ENGL Plenary Meetings, two ENGL Steering Committee meetings and one ENGL Working Group meeting during the 2017-2018 period:
 - Attended the 13th NRL workshop (representing the UK NRL as appointed under 882/2004) in June 2017.
 - Attended the 27th NRL plenary meeting at the JRC (Ispra) in April 2017.
 - Attended the 28th ENGL plenary meeting at the JRC (Ispra) in September 2017.
 - Attended the 33rd ENGL Steering Committee meeting at the JRC (Ispra) in June 2017.
 - Attended the 34th ENGL Steering Committee meeting at the JRC (Ispra) in February 2018.
 - Attended the kick-off meeting for the Working Group on DNA extraction (WG-DNAex) in February 2018.
- The NRL helped develop, organise, co-chair, present and deliver a DNA extraction workshop jointly with LGC and the EU Reference Laboratory (EURL) for GMOs in feed and food at the JRC (Ispra) in June 2017.
- The NRL attended a three day training workshop on digital PCR organised by the EURL in Ljubljana (Slovenia) in November 2017 and delivered a presentation on the UK NRL's expertise and experiences with digital PCR.



Annex 1: Additional links to NRL annual reports and Newsletters

Copies of previous GMO NRL annual reports and Newsletters are freely available to download from the UK GMO-NRL webpages at:

<http://www.lgcgroup.com/services/regulatory-support/national-reference-laboratories/>.



Annex 2: List of ENGL Control materials housed by the NRL

GM	Species	ENGL plasmid no.
281-24-236	Cotton	pENGL-00-14/05-01
3006-210-23	Cotton	pENGL-00-14/05-01-B
GHB119	Cotton	pENGL-00-04/11-01
GHB614	Cotton	pENGL-00-14/07-01
LL25	Cotton	pENGL-00-13/04-01
MON1445	Cotton	pENGL-00-15/04-01
MON15985	Cotton	pENGL-00-24/04-01
MON531	Cotton	pENGL-00-16/04-01
MON88701	Cotton	pENGL-00-01/13-01
MON88913	Cotton	pENGL-00-05/07-01
T304-40	Cotton	pENGL-00-05/11-01
3272	Maize	pENGL-00-03/06-01
5307	Maize	pENGL-00-07/11-01
59122	Maize	pENGL-00-03/05-01
Bt11	Maize	pENGL-00-12/05-01
Bt11	Maize	pENGL-00-10/07-01
BT176	Maize	pENGL-00-18/04-01
DAS-40278	Maize	pENGL-00-10/10-01
DP-4114	Maize	pENGL-00-02/14-01
GA21	Maize	pENGL-00-15/05-01
GA21	Maize	pENGL-00-29/04-01
LY038	Maize	pENGL-00-01/06-01
MIR162	Maize	pENGL-00-08/08-01
MIR604	Maize	pENGL-00-04/05-01
MON810	Maize	pENGL-00-25/04-01
MON863	Maize	pENGL-00-01/04-01
MON87403	Maize	pENGL-00-02/15-01
MON87411	Maize	pENGL-00-01/15-01
MON87427	Maize	pENGL-00-03/12-01 MON87427
MON88017	Maize	pENGL-00-16/05-01
MON89034	Maize	pENGL-00-06/06-01
NK603	Maize	pENGL-00-27/04-01
T25	Maize	pENGL-00-08/04-01
T25	Maize	pENGL-00-08/04-01
TC1507	Maize	pENGL-00-02/04-01
VCO	Maize	pENGL-00-07/12-01
DP73496	Oilseed rape	pENGL-00-02/12-01
MON88302	Oilseed rape	pENGL-00-09/11-01
Ms1	Oilseed rape	pENGL-00-11/04-01



GM	Species	ENGL plasmid no.
Ms8	Oilseed rape	pENGL-00-06/04-01
Oxy-235 genomic DNA	Oilseed rape	Oxy-235 oilseed rape
Rf1	Oilseed rape	pENGL-00-09/04-01
Rf2	Oilseed rape	pENGL-00-10/04-01
Rf3	Oilseed rape	pENGL-00-07/04-01
RT73	Oilseed rape	pENGL-00-26/04-01
T45	Oilseed rape	pENGL-00-14/04-01
Topas 19/2	Oilseed rape	pENGL-00-12/04-01
EH92-527-1	Potato	pENGL-00-09/05-01
Bt63	Rice	pENGL-00-EM02/06/01
40-3-2	Soybean	pENGL-00-08/05-01
A2704-12	Soybean	pENGL-00-13/05-01
A5547-127	Soybean	pENGL-00-01/08-01
CV127	Soybean	pENGL-00-01/09-01
DAS44406-6	Soybean	pENGL-00-01/12-01 DAS44406-6
DAS-68416-4	Soybean	pENGL-00-11/10-01
DAS81419-2	Soybean	pENGL-00-03/13-01 DAS81419-2
DP-305423-1	Soybean	pENGL-00-07/07-01
DP-356043-5	Soybean	pENGL-00-04/07-01
FG72	Soybean	pENGL-00-04/10-01
MON87460	Soybean	pENGL-00-04/09-01
MON87701	Soybean	pENGL-00-05/09-01
MON87705	Soybean	pENGL-00-01/10-01
MON87708	Soybean	pENGL-00-02/11-01
MON87751	Soybean	pENGL-00-03/14-01
MON87769	Soybean	pENGL-00-07/09-01
MON89788	Soybean	pENGL-00-05/06-01
SYHT0H2	Soybean	pENGL-00-04/12-01
H7-1	Sugar beet	pENGL-00-28/04-01