



Annual report on Activities

Performed by the UK NRL for

GMOs in Food and Feed

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and feed

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Glossary

BELAC – Belgian Accreditation Body

CA – Competent Authority

CCN – Contract Change Notice

CRISPR - Clustered Regularly Interspaced Short Palindromic Repeats

Defra - Department for Environment, Food & Rural Affairs

DNA - Deoxyribonucleic acid

dPCR – Digital PCR

DETECTIVE RRI-4 – DETECTIVE Responsible Research and Innovation (RRI) Workshop 4

EC-JRC – The European Commission’s Joint Research Centre

ENGL - European Network of GMO Laboratories

EU – European Union

EU-SAGE – European Sustainable Agriculture Through Genome Editing

FAPAS – Food Analysis Performance Assessment Scheme

Fera – The Food and Environment Research Agency

FSA - Food Standards Agency

FY – Financial Year

FSS – Food Standards Scotland

GB – Great Britain

GeMMA - Genetically Modified Material Analysis Scheme

GM – Genetically Modified

GMM - Genetically Modified Microorganism

GMO - Genetically Modified Organism

LA – Local Authority

NFX-UK - UK's Novel Foods Expert Network

NGTs – New Genomic Techniques



NGS – Next Generation (DNA) Sequencing

NIB – National Institute of Biology (Slovenia)

NML – National Measurement Laboratory, hosted at LGC

NRL - National Reference Laboratory (appointed under [assimilated] (EU) law 2017/625)

MANCP – Multi-Annual National Control Plan

MIQE - Minimum Information for Publication of Quantitative Real-Time PCR Experiments

OL – UK Official Laboratory

PHA – Port Health Authority

PBO – Precision Bred Organism

PCR - Polymerase Chain Reaction

qPCR – Quantitative Polymerase Chain Reaction (real-time PCR)

RFLP – Restriction Fragment Length Polymorphism

SASA - Science & Advice for Scottish Agriculture

SOP – Standard Operating Procedure

SPS – UK/EU Sanitary and Phytosanitary negotiations

UKAS – United Kingdom Accreditation Service

UKRI – UK Research and Innovation

WG – Working Group



Role of the National Reference Laboratory

The Food Standards Agency (FSA) and Food Standards Scotland (FSS) are respectively designated as the Competent Authority (CA) for Official Feed and Food Controls within their area of responsibility. The UK has a legal obligation to appoint National Reference Laboratories (NRLs) pursuant to assimilated Regulation (EU) 2017/625. This regulation relates to official controls designed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules. NRLs provide advice and support to food and feed enforcement laboratories and CAs to ensure a harmonised approach to food and feed enforcement. NRLs are responsible for setting standards for routine procedures and reliable testing methods in the regulated areas of food and feed. This delivers consumer protection and effective, risk-based and proportionate regulation and enforcement.

NRL GMO Services

As the duly appointed laboratory, LGC carries out the provision of services for the UK NRL for Genetically Modified Organisms (GMOs) in food and feed. The NRL for GMOs provides support to the UK Official Laboratories (OLs) for GMO control and identifies and participates as an independent expert at international GMO meetings and networks to further harness expertise and knowledge in the area.

The NRL liaises with and provides advice to the CA appointed laboratory responsible for the scientific assessment and validation of detection methods for GMOs in food and feed as part of the UK GMO authorisation of regulated products procedure.

The basic duties of NRLs include:

- (a) Disseminate relevant information/advice to the CAs and OLs in a timely and effective manner;
- (b) Create and maintain a dedicated website for communication of the work of the NRL;
- (c) Provide regular updates to the CAs on NRL activities;
- (d) Provide impartial expert advice as requested to the CAs, OLs and other relevant laboratories on policy, analytical methodology in the context of official controls and risk assessment;
- (e) Participate in standardisation activities (e.g. method validation studies, training, committee meetings) organised by international organisations;
- (f) Operate in accordance with the standard EN ISO/IEC 17025 and be accredited to that standard by UKAS;
- (g) Participate in inter-laboratory comparative tests or PTs for methods relevant to the NRL area;
- (h) Maintain records and ensure appropriate data use and security;
- (i) Contribute to the development of SOPs relevant codes of practice and guidance documents for use by OLs;
- (j) Support the identification of new and emerging areas for method development;
- (k) Support the FSA, FSS, Local Authorities (LAs), Port Health Authorities (PHAs), and OLs during a food or feed incident;
- (l) Disseminate relevant information/advice on analytical methods and relevant legislation to GB OLs and other relevant laboratories in a timely and effective manner;
- (m) Have regular engagement with the OLs to provide information on NRL activities and opportunities available for the OLs;
- (n) Where appropriate and in consultation with the FSA, the NRL is expected to organise assessment of OL capability;



(o) Liaise with and provide advice to the GMO authorisations reference laboratory.

LGC has maintained the position of the UK NRL for GMOs in food and feed since the inception of the role in 2009, following open competitive tenders in 2009, 2013, 2017, 2021 and 2025. LGC's appointment by the FSA is pursuant to UK legislation (assimilated (EC) Regulation 2017/625). As the NRL for GMOs, LGC conducts the following activities (objectives), as specified in the contract with the FSA:

Objective 01 – Secretariat services

Objective 02 – Advice and representation within the UK and internationally

Objective 03 – Compliance assessment

Objective 04 – Communication of results and data use

Objective 05 – Research duties

Objective 06 – Incident management

Objective 07 – OL Network

Objective 08 – OL assessment, training and PT schemes

Objective 09 - Supporting the GMO authorisation reference laboratory



Core Function

Production of the NRL annual report

This report details the activities carried out during the 16th year of the NRL operation (April 2025-March 2026) in relation to the duties of the NRL.

Objective 01 – Secretariat services

Tasks:

- 1.1 Design of annual work programme;**
- 1.2 Notify the CAs of any unusual occurrences resulting from the core functions of the NRL;**
- 1.3 Provide monthly activity updates to the CAs;**
- 1.4 Organise quarterly meetings with the CAs to review contract management requirements and provide updates on progress;**
- 1.5 If appropriate and relevant, provide a note of meetings with other organisations within 10 working days of the meeting;**
- 1.6 Review and communicate monthly spends;**
- 1.7 Where appropriate, organise informal check-ins with the CAs;**
- 1.8 Provide a draft annual report of work summarising all activities.**

Example activities in relation to these Tasks:

- **Kept the FSA informed on provision of services:**
 - Discussed with the FSA that robust procedures were in place to mitigate any potential disruption of NRL services during the limited transition period of the [NML \(LGC\)](#) moving from the Teddington to Guildford sites in May 2025.
- **NRL webpages maintenance:**
 - The [NRL webpages](#) were updated in line with a refresh of the LGC Group website, designed to enhance user experience, showcase impactful work, and make it easy for visitors to access information and connect with business areas faster. The technical content of the NRL webpages remained unchanged.
- **Meetings, reports and operational matters:**
 - A new Monthly Activity reporting template was established in line with the current NRL contract and deliverables.
 - Monthly Activity logs, providing detailed descriptions of all activities engaged in as part of the GMO NRL function, were provided to the FSA.
 - Four GMO NRL Quarterly Review Meetings were successfully held with the FSA and FSS, with copies of all presentations and action logs shared with the FSA and FSS.
 - All invoices were issued in a timely fashion based on the agreed invoicing profile.
 - The GMO NRL 2024/2025 annual report was published on the [NRL webpages](#).
 - The GMO NRL annual workplan 2025/2026 was published on the [NRL webpages](#).
 - The NRL is in continuous contact with the FSA by email, phone and Microsoft Teams in relation to queries, updates, developments and deliverables.



- The NRL is available for provision of advice on GMO analysis to all UK OLs by email, phone, MS Teams and face-to-face meetings where appropriate.
- Contract Change Notice (CCN1) FS900528 for additional training activities to support OL capability was issued in June 2025 and activities completed by March 2026.
- Estimates were submitted to the FSA regarding continued NRL support for GMO analytical capability building and maintenance for OLs for the 2026/2027 period.
- A further Contract Change Notice reflecting LGC's change of registered address (from Teddington to Guildford) was issued.



Objective 02 - Advice and representation

Tasks:

- 2.1 On request, provide scientific and technical assistance within NRL's areas of competence to the CAs for the implementation of Multi-Annual National Control Plan (MANCPs) and coordinated control programmes;**
- 2.2 On request, provide scientific and technical advice to the CAs, including, but not limited to methods and results interpretation;**
- 2.3 Represent the UK at relevant international meetings (e.g. CEN, ISO, BSI etc.), and working groups;**
- 2.4 Co-ordinate the participation of GB OLs and other relevant laboratories in international method validation studies and other initiatives;**
- 2.5 Advise the CAs, OLs and other relevant laboratories on best scientific practice in testing for official controls purposes;**
- 2.6 Keep abreast of and advise CAs and OLs of developments and research for sampling, testing and detection of GMOs, including horizon scanning for future developments in this space.**

Example activities in relation to these Tasks:

- **Provision of advice and input into discussions with UK Competent Authorities:**
 - Following feedback from some OLs, made the FSA aware of some of the continued high operational and financial challenges that OLs were experiencing when acquiring and maintaining ISO 17025 accreditation for GMO analysis.
 - Provision of advice to the FSA regarding UK capability and samples to prioritise for a potential GM soya sampling exercise.
 - Provision of information on OL accreditation status from the [UKAS](#) website to the FSA, to help inform on future retail surveillance exercises.
 - Provided a response to FSA/Defra on the benefits of positive engagement with the [EC-JRC](#) as part of the ongoing SPS negotiations.
 - Attended a meeting with the FSA Trade Strategy Team to further share experiences on EU interactions as part of the ongoing SPS negotiations.
 - Attended the [Defra UK-EU SPS Agreement: Industry Stakeholder Information Forum](#) meeting at which Defra colleagues communicated the planned approach and timelines.
 - Provided a written response to the FSA for the Defra review of further engagement with the EC-JRC as part of UK requests in upcoming EU negotiations for the SPS agreement.
 - Contributed proposals to the FSA Laboratories and Sampling Team's analytical methods Research and Development survey for FY 26/27.
 - Relayed to the FSA that an OL had reported cost savings associated with using a DNA sequencing approach compared to using traditional analytical approaches based on Capillary Electrophoresis.
 - Made the FSA aware of increasing needs from the OL network for updating the FSA food authenticity testing methods originally developed on the Agilent Bioanalyser over 18 years ago, where the instrument will no longer be supported for the future.



- Communicated to the FSA progress associated with the [EC proposal on NGT plants](#).
 - Forwarded to the FSA news on new GMO approvals and any revoked GMO authorisations in the EU, throughout the 2025/2026 reporting year.
 - Forwarded to the FSA updates regarding the [EC proposal on Genetically Modified Microorganisms](#).
- **Provision of impartial expert advice to the Official Laboratories and other relevant laboratories on analytical methodology in the context of official controls**
 - Provided advice to an OL regarding the potential implications of the [new provisional EU agreement on NGT plants](#).
- **Attendance and input at the European Network of GMO Laboratories (ENGL) Working Groups (WGs) as a recognised independent scientific expert:**
 - Provided input into the development of draft guidance documents and attended meetings for the following two [ENGL working groups](#):
 - ENGL Working Group on NGT microorganisms.
 - ENGL Working Groups on NGT animals.
- **Attendance at other international meetings, seminars and working groups discussing best measurement practice guidance on GMO analysis:**
 - A staff member from the NRL participated as a recognised independent expert in GMO analysis at the [36th ENGL plenary meeting](#) at the [EC-JRC](#) (Seville) in November 2025, providing a presentation on the current [PBO legislation in Great Britain](#).
 - As an invited expert, provided a presentation on the current [PBO legislation in Great Britain](#) at the annual GMO workshop organised by the [Slovenian NRL](#) (NIB) and attended by the CAs of Slovenia. A certificate of attendance and positive feedback were received from the Slovenian NRL.
 - Finalised a written report on behalf of [BELAC](#) following provision of scientific auditing for ISO 17025 and ISO 17034 of a laboratory based in the European Union.
 - Attended the 2025 [EU-SAGE](#) Annual General Meeting.
 - [EU HORIZON project DETECTIVE](#) (DETECTION OF NGT PRODUCTS TO PROMOTE INNOVATION IN THE EUROPEAN UNION):
 - A staff member from within the GMO NRL is part of the Scientific Advisory Board associated with the DETECTIVE project.
 - The project is aimed at investigating detection of NGT products and organisms in the food/feed supply chain.
 - Ongoing attendance at meetings including consortium and Work Package meetings, as well as provision of presentations and reviewing project progress and outputs.
 - Participated and provided support for the [DETECTIVE RRI-4 workshop](#) on capability needs for NGT product detection and interpretation, held at the EC-JRC in Seville (Spain) in November 2025.
 - Attended EU DETECTIVE seminars on consumer and business stakeholder acceptance of NGTs, and systems mapping approaches.



- **Keep abreast of standardisation activities (e.g. CEN, ISO, etc.) relevant to the work area.**
 - Continued maintenance of competency for ISO 17025 flexible scope of accreditation for GMO analyses held by the NRL.

- **Miscellaneous:**
 - Attended the [Bezos Centre for Sustainable Proteins](#) 2026 conference, which included discussions on GMOs and PBOs.
 - Organised one meeting and attended another for the UK GM Technical Group between LGC, SASA and Fera, aimed at discussing emerging issues and sharing information on GMO technical and analytical issues.
 - Staff from the NRL joined the [UKRI Microbial Food hub](#) and the [UK's Novel Foods Expert Network](#) (NFX-UK), based on synergistic activities.
 - Staff from the NRL attended a [Parliamentary and Scientific Committee](#) event, holding discussions inclusive of GMOs and PBOs.



Objective 03 – Compliance assessment

Tasks:

- 3.1 Participate in PTs and method validation studies organised by national or international organisations relevant to NRL areas to demonstrate competence;**
- 3.2 Participate in national and international training activities to ensure the NRL scientists remain at the forefront of scientific and technical developments in their area;**
- 3.3 Maintain accreditation for analyses relevant to the NRL area of competence.**

Activities in relation to these Tasks:

- **Example activities in relation to development of guidance documents:**
- **Proficiency test rounds**
 - The NRL participated in the GeMMA U123 proficiency test, organised by [FAPAS](#). The NRL received a Z-score of +0.1, submitting an estimated value of 1.12 (m/m) % GM, compared to an assigned value of 1.10 (m/m) % GM. These results were communicated to the FSA.
- **Maintenance of ISO 17025 flexible scope of accreditation for GMO analysis**
 - The NML (LGC) was subject to a full [UKAS](#) audit of GMO related activities, following its transition of main premises from Teddington to Guildford in May/June 2025. Following a successful UKAS audit with zero findings for the GMO area, UKAS awarded ISO 17025 flexible scope of accreditation for GMO analyses to LGC at the Guildford site on 23rd July 2025.



Objective 04 – Communication of results and data use

Tasks:

- 4.1 Make outputs available for review by the CAs prior to publication;**
- 4.2 Transfer all relevant information to the CA and subsequent NRL at the end of the NRL agreement.**

Example activities in relation to these Tasks:

- **Maintenance of records and information**
 - In accordance with the requirements and accreditation to ISO/IEC 17025:2017, the NRL keeps all records for a minimum of six years as standard.
 - The NRL maintains relevant records in accordance with the requirements of ISO 17025 and ISO 9001.
 - Where necessary and at the end of the project/contract, the NRL will assist in the transfer of any appropriate reference materials/information it has received as part of the NRL function and currently maintains as part of the NRL contract.



Objective 05 – Research duties

Tasks:

- 5.1 Provide an annual programme of research activities;
- 5.2 Provide updates and disseminate results of research activities to the CAs;
- 5.3 Notify the CAs immediately regarding any significant deviations from the annual work programme;
- 5.4 Contribute to the development of standardised operating procedures, relevant codes of practice and guidance documents for use by OLs and other relevant laboratories, as requested by the CA;
- 5.5 Where required, develop a database to store relevant information in relation to GMO official control testing;
- 5.6 Publish any relevant technical SOPs for GMO detection;
- 5.7 Transfer the method SOPs developed in the lab's capacity as the NRL to the next NRL;
- 5.8 Maintain any method validated in appropriate matrices for the duration of their tenure as an NRL.

Example activities in relation to these Tasks:

- **Annual work programme**
 - The annual work programme (Research/Training activities) was published on the [NRL webpages](#).
- **Disseminate research activities to CAs**
 - Following a request from Defra, in July 2025 provided a webinar to the CAs ([Defra](#), [FSA](#) and [FSS](#)) on an introduction to crop breeding techniques. This outlined the basic principles underlying crop breeding, inclusive of using CRISPR technologies. This was followed with a global snapshot of where genome editing was currently being applied in the food sector, and provision of some case studies on the potential advantages of PBOs, and the potential role of GMOs and PBOs in fighting climate change.
- **Contribute to SOPs and guidance**
 - The NRL advised relevant OLs that the [EC-JRC](#) were accepting expressions of interest to purchase plates for the Pre-Spotted Plates GMO screening system.
 - The NRL is an author on the publication of the [MIQE 2.0 guidelines](#) (revision of the minimum information for publication of quantitative real-time PCR experiments guidelines). The paper provides updates, simplifications and new recommendations from the original MIQE guidelines (published in 2009) for the design, execution and reporting of quantitative PCR in research, which are also applicable to GMO analysis. The guidelines have been updated to maintain their relevance and applicability in the context of emerging technologies and evolving qPCR applications.
 - Staff working within the NRL are recognised as an author on the EC-JRC technical publication of "[Detection of microorganisms obtained by new genomic techniques in food and feed products](#)". Traceability of genetically modified microorganisms obtained with NGTs is currently a regulatory requirement in the EU under the relevant GMO legislation. This published guidance highlights the scope, possibilities and



challenges to detect NGT microorganisms in food and feed using analytical technologies.

- **GMO positive controls**

- The NRL continues to maintain a dedicated physical and electronic register for control materials received prior to EU exit on the 1st January 2021, held securely.
- The full list of the registered plasmid control materials is provided in Annex 2.



Objective 06 – Incident management

Tasks:

- 6.1 Provide summary of analyses the NRLs could do rapidly in the event of an incident, including an engagement plan of how this service could be used;**
- 6.2 At FSA, FSS, LA, PHA and OL request, provide analytical advice, interpretation of results, and recommendation of follow-up actions;**
- 6.3 At CA request only, provide for rapid testing under direction of the CAs in the event of an incident relating to GMOs where capacity is reached within the OLs;**
- 6.4 Should an incident occur where there is currently no method, and at CA request, the NRL will prioritise and dedicate effort towards developing and validating in-house the new method(s) required;**
- 6.5 If used, summarise the use of this service.**

Example activities in relation to these Tasks:

- **Support for food and feed incidents involving GMOs**
 - Whilst there have been no requests received from the CAs to help assist in any coordinated control plans or incident management during the operational period of the NRL, the NRL remains ready to assist with any action plan agreed by the FSA.
 - The NRL would provide scientific and technical assistance to the FSA in terms of advice on experimental design, number of replicates, implementation of randomisation, blinding of samples, and instrument comparisons to help towards organising any appropriate control plans.



Objective 07 - OL network

Tasks:

- 7.1 Create list of OLs and monitor maintenance of accreditation on a yearly basis;
- 7.2 Organise regular network meetings or communications (e.g. newsletters), as appropriate, and on at least an annual basis, to ensure NRL update and engagement with OLs and the CAs;
- 7.3 Request feedback from attendees of OL network meetings and implement any appropriate changes for subsequent meetings;
- 7.4 Create and maintain a dedicated website for communication of the work of the NRL to CAs, OLs and LAs;
- 7.5 Where relevant, validate the reagents and lots of reagents, establish and maintain up-to-date lists of available reference substances and reagents and of manufacturers and suppliers of such substances and reagents.

Example activities in relation to these Tasks:

- **Maintenance of accreditation**
 - The NRL is in continuous contact with the OLs, available for provision of advice and assistance, and monitors OL accreditation for GMO analyses.
- **Meetings and communication**
 - The NRL holds regular meetings with the OLs to disseminate news and findings, and to elicit feedback on training requirements.
 - Since 2009, the NRL has responded to and provided advice on over 697 scientific and technical queries and has hosted 27 individual meetings with OLs in the last four years of the NRL role. For the 2025/2026 reporting period, the NRL held 15 meetings with UK OLs and responded to 147 individual requests for advice.
- **NRL website maintenance**
 - The [NRL webpages](#) are reviewed and maintained on a regular basis, housing information inclusive of annual activity reports.
- **GMO reagents and consumables**
 - The NRL maintains up to date lists of reagent and consumables suppliers for GMO analysis and can be contacted by OLs at any time to provide advice regarding these.



Objective 08 - OL assessment, training, and PT schemes

Tasks:

- 8.1 In collaboration with the CAs, assess the capability and capacity of the OLs conducting testing across the UK every two years;
- 8.2 In consultation with the CAs and based on OL needs, develop a programme of activities for the OLs;
- 8.3 Provide training activities to build GMO laboratory capability and promote best laboratory practice in respect of analysis;
- 8.4 If appropriate, provide a PT scheme for OLs and verify their performance;
- 8.5 In discussion with CAs, and if necessary other NRLs, develop and agree a poor performance protocol.

Example activities in relation to these Tasks:

- **Training activities: GMO analytical Capability Building Exercise**
 - As part of building a resilient and sustainable OL system, the FSA have provided targeted grants through the Public Analyst OL Grant Funding Programme to develop analytical capability in specific areas. The NRL continues to work with the FSA and several OLs in terms of technical, scientific and practical laboratory support.
 - A brief summary of example NRL activities in support of GMO analytical capability building and maintenance includes:
- Official Laboratory #1
 - Held three regular catch-up meetings inclusive of discussions on GMO sampling exercises, analytical testing methods, and the withdrawal of support for a laboratory capillary electrophoresis instrument and the potential impact upon analytical methods validated using this instrument.
 - Provision of bespoke advice on potential solutions to extracting DNA from challenging food matrices, and analytical methods for rice and wheat testing.
- Official Laboratory #2
 - Held three regular catch-up meetings inclusive of discussions on scopes of accreditation, analytical methods on a laboratory capillary electrophoresis instrument, dPCR and incorporation into pre-existing ISO 17025 accreditation infrastructure.
 - Provision of bespoke advice on the use of NGS for bacteria typing, experiences associated with customer support for NGS, potential UK controls for meat speciation/herbs & spices, GMO proficiency test rounds, and the utility of fluorometric and spectrophotometric approaches for DNA quantitation.
 - Provided a copy of the recent EC-JRC publication on "[Detection of microorganisms, obtained by new genomic techniques, in food and feed products](#)".
 - At the request of the OL, organised a meeting to provide advice on the scope and limitations of different GMO screening approaches.



- At the request of the OL, organised a meeting to provide the NRL's views and experiences on the range of dPCR instruments available.
 - Received a request from the OL to provide training and a knowledge exchange event on dPCR for GMO analysis.
- Official Laboratory #3
 - Held three regular catch-up meetings inclusive of discussions on proficiency test schemes, NGT microorganisms, and FSA targeted grant awards.
 - Provision of advice to the OL on an RFLP method for fish speciation, in view of the original capillary electrophoresis instrument the method was validated on no longer being supported in the future.
 - Provided a copy of the recent EC-JRC publication on "[Detection of microorganisms, obtained by new genomic techniques, in food and feed products](#)".
- Official Laboratory #4
 - Held three regular catch-up meetings inclusive of discussions on sampling for GMOs in rice/rice products originating from China, dPCR and analytical methods for food testing.
 - Following a request from the OL, the NRL provided advice on NGS instrumentation and costs.
 - Provided a copy of the recent EC-JRC publication on "[Detection of microorganisms, obtained by new genomic techniques, in food and feed products](#)".
- Official Laboratory #5
 - Following a request from the OL, provided general troubleshooting advice on qPCR, inclusive of examination of qPCR datasets provided by the OL.
 - Following a request from the OL, the NRL developed and hosted a combined real-time PCR training event and Q&A session, administered via Teams. The NRL provided presentations on DNA, PCR, real-time PCR, GMO analysis, applications for food testing and example areas of measurement uncertainty in an analytical procedure. An interactive Q&A "ask the experts" session then followed, with experienced staff from the NRL. Positive feedback from the OL included how informative and engaging the presentations were, the depth of explanations provided, and how participants were able to gain a better understanding of qPCR.
- In total, the NRL held 15 meetings with UK OLs and responded to 147 individual requests for advice, throughout the reporting year.
- Demonstrable output and impact of this GMO analytical capability building work has been evidenced through three laboratories successfully acquiring or maintaining ISO 17025 flexible scope of accreditation for GMO analysis within the reporting period.
- The NRL has received written positive feedback from the OLs on the consistent help, advice, training and support it provides with respect to the analytical capability building exercise.



- **Survey of OL capability and capacity**
 - A questionnaire was drafted to assess GMO analytical capability and training requirements for OLs. Following discussions with the FSA, it is envisaged that the assessment of OL GMO analytical capability and training requirements will be administered by the [UK Government Chemist](#) annual survey for 2026/2027.



Objective 09 - Supporting the GMO authorisation reference laboratory

Tasks:

- 9.1 Liaise with the FSA appointed laboratory on GMO authorisation process and applications;**
- 9.2 Where necessary, provide support and advice to the FSA appointed laboratory for GMO authorisation on the validation of methods of analyses, reference materials.**

Example activities in relation to these Tasks:

- The GMO NRL and GMO Authorisations (method validation services) positions were both operated by LGC during the reporting period.
- Staff from both areas were kept fully abreast of developments within each position, augmenting both functions in terms of delivery priorities whilst also providing cost saving opportunities due to synergistic activities.



Annex 1: Additional links to NRL annual reports, work programmes and advisory notes

Copies of previous reports, work programmes and advisory notes can be found on the [NRL webpages](#).



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

GM	Species	ENGL plasmid no.
Event 558 (GMM)	<i>Bacillus subtilis</i>	pENGL-00-EM-01/18-01
281-24-236	Cotton	pENGL-00-14/05-01
3006-210-23	Cotton	pENGL-00-14/05-01-B
COT102	Cotton	pENGL-00-05/16-01
DAS 81910-7	Cotton	pENGL-00-06/16-01
GHB119	Cotton	pENGL-00-04/11-01
GHB614	Cotton	pENGL-00-14/07-01
GHB811	Cotton	pENGL-00-04/18-01
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
GM Strain AG3139	<i>E. coli</i>	pENGL-00-04/08-01
GM Strain 19E	<i>E. coli</i> K-12	pENGL-00-06/08-01
3272	Maize	pENGL-00-03/06-01
5307	Maize	pENGL-00-07/11-01
59122	Maize	pENGL-00-03/05-01
Bt11	Maize	pENGL-00-10/07-01
Bt11	Maize	pENGL-00-12/05-01
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
MON87419-8	Maize	pENGL-00-02/17-01
MON87427	Maize	pENGL-00-03/12-01 MON87427
MON88017	Maize	pENGL-00-16/05-01
MON89034	Maize	pENGL-00-06/06-01
MZHG0JG	Maize	pENGL-00-04/16-01
MZIR098	Maize	pENGL-00-04/17-01



GM	Species	ENGL plasmid no.
NK603	Maize	pENGL-00-27/04-01
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
Ms11	Oilseed rape	pENGL-00-03/16-01
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
GMB151	Soybean	pENGL-00-01/18-01
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
MON71200	Wheat	pENGL-00-EM-02/18-01