Department
for Environment
Food & Rural Affairs

Full summary of responses: plant varieties and seeds framework for precision bred plant varieties

Full summary of responses to the consultation on a proposed Precision Bred Plant Variety List for England, and the mandatory inclusion of precision bred status on labels for precision bred seeds and other plant reproductive material.

October 2025

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Contents

1. Executive summary

1.1 Between 17 February 2025 and 14 April 2025, Defra consulted on the proposed Plant Varieties and Seeds Framework for precision bred plant varieties in England. This continues the collaborative approach Defra has taken on precision breeding and follows the previous consultation on the regulation of genetic technologies undertaken in 2021.

1.2 The purpose of the consultation was to gather feedback on the proposed Precision Bred Variety List for England (PB VL) to understand how the variety listing of precision bred agricultural and vegetable plant varieties in England would impact businesses. The consultation also sought to understand how information on precision bred plant varieties should be made available to those that require it, and what impact the mandatory inclusion of precision bred status in labels for precision bred seed and other plant reproductive material would have on businesses.

1.3 The consultation was aimed at businesses and individuals working in the plant breeding industry, seed merchants and processors, growers and farmers, research institutes, and membership bodies and other organisations representing plant breeders and growers.

1.4 A total of 425 responses were received, of which 411 were submitted through the online consultation response form hosted on the Defra Citizen Space hub, and 14 were received by email. Most respondents identified as ‘individuals’ based in England, responding with their personal views. Organisations, businesses, public bodies and academic institutions who responded operated across the UK, and most frequently worked in the cultivation of crop plants.

1.5 Quantitative analysis was applied to the closed questions within the consultation. A structured thematic analysis was conducted on the open responses, through which key themes were systematically identified and recorded. Email responses which did not follow the online consultation format were incorporated into the most relevant sections.

1.6 Of the responses received via Citizen Space, 110 were identified as having been based on pre-prepared templates provided by campaign groups. A thematic analysis was undertaken on these responses to identify key themes, which were fully considered in the analysis. All responses were analysed in full and contributions that raised issues beyond the scope of the consultation were recorded.

1.7 Overall, there was a good understanding of the proposed PB VL with broad support for its publication in the Plant Varieties and Seeds Gazette on the condition that the information was clear and accessible. Businesses and other organisations, particularly those in the organic sector, anticipated some operational impacts, and

highlighted the list's potential to support organic certification, traceability, and regulatory compliance.

1.8 There was a strong consensus on the importance of clear, accessible information on precision bred seed and other plant reproductive material. In addition to a central, searchable list, the inclusion of precision bred status within labels was widely supported, particularly by organic businesses, citing decision-making and confidence in the supply chain. A multi-channel approach to information sharing was broadly endorsed to ensure clarity and transparency across sectors and supply chains.

1.9 The government remains committed to the implementation of the Genetic Technology (Precision Breeding) Act 2023, and the outcome of this consultation will inform and shape the implementation of this Act within the plant varieties and seeds policy area.

2. Introduction

2.1 Between 17 February 2025 and 14 April 2025, Defra consulted on the proposed Plant Varieties and Seeds Framework for precision bred plant varieties in England, including the proposed Precision Bred Plant Variety List for England (PB VL), and the provision of information on precision bred seed and other plant reproductive material (PRM).

2.2 The consultation was hosted on the Defra Citizen Space hub. Respondents were provided the option to complete the online consultation response form on Citizen Space (please see Annex A for a blank copy of this form), or to provide a response via email to Defra-Plant-Varieties-and-Seeds@defra.gov.uk.

2.3 This engagement continued the collaborative approach Defra has taken on precision breeding and follows the previous consultation on the regulation of genetic technologies undertaken in 2021.

2.4 The consultation was an opportunity for a wide range of views to be gathered and was aimed at businesses and those working in the following sectors:

- the plant breeding industry
- seed merchants and processors
- growers and farmers
- research institutes
- membership bodies and other organisations representing plant breeders and growers

2.5 The purpose of the consultation was to gather feedback on the proposed PB VL. We wanted to understand how the variety listing of precision bred agricultural and vegetable plant varieties in England would impact businesses. The consultation also sought to understand how information on precision bred plant varieties should be made available to those that require it, and what impact the mandatory inclusion of precision bred status in labels for precision bred seed and other PRM would have on businesses.

2.6 A summary of responses received for each section of the consultation which contained questions is presented within this document. A summary of next steps resulting from responses is set out in Section 7.

2.7 In total 411 responses were received via Citizen Space and a further 14 responses were received via email. Of those received via Citizen Space, 110 responses were identified as having been based on pre-prepared templates provided by campaign groups.

2.8 Defra would like to thank those who took the time to respond.

3. Methodology

3.1 The consultation asked a mix of closed (multiple choice) and open (free text) questions. All responses received were reviewed in full. The closed questions were quantitively analysed, and where appropriate, results have been presented as percentages, rounded to the nearest 1%. This means total responses to questions do not always equate to 100%.

3.2 A thematic analysis of the responses to the open (free text) questions was undertaken, during which the key themes were identified and logged for each response. Some responses received by email and by the online form did not answer the consultation questions directly; these contributions have been included in the summaries of the most relevant sections. Furthermore, some responses included themes which were out of scope of the consultation, these have been summarised in Annex B.

3.3 As part of the analysis, 110 submissions were identified as having been based on pre-prepared templates provided by stakeholder campaign groups. The templates reflected a coordinated position and contained structured language and recurring phrases intended to guide respondents. To support a structured understanding of the issues raised, key phrases from these templates were categorised according to thematic areas. This thematic categorisation provided a concise summary of the main concerns and priorities expressed through the template responses and supported the broader analysis of stakeholder feedback. All responses were included in the analysis, whether they followed only the template or included extra information. A summary of the campaign response to each section and/or question is provided in the following analysis. For more information on how the template responses were analysed, please see Annex C.

3.4 The consultation was split into 5 sections which focused on different areas:

- **Section 1:** About you (questions)
- **Section 2:** Precision Bred Plant Variety List for England - supporting information
- **Section 3:** Precision Bred Plant Variety List for England - consultation questions
- **Section 4:** Information on seed and other plant reproductive material produced using precision breeding technologies - supporting information
- **Section 5:** Labelling of seed and other plant reproductive material produced using precision breeding technologies - consultation questions

3.5 Respondents were asked whether they were replying as:

- An individual - You are responding with your personal views, rather than as an official representative of a business / business association / other organisation
- Non-governmental organisation - In an official capacity as the representative of a non-governmental organisation / trade union / other organisation
- Business - In an official capacity representing the views of an individual business
- Public sector body - In an official capacity as a representative of a local government organisation / public service provider / other public sector body in the UK or elsewhere
- Academia - In an official capacity as a representative of an academic institution
- Other please specify (please state)

3.6 This has been drawn upon where relevant to characterise the views of different types of respondents. Respondents identifying as replying as a business in an official capacity, have been further broken down into those working in the organic sector, and those working in the non-organic sector. This separation has been based on the information provide in free text responses and has been undertaken to support the analysis of this consultation.

3.7 Due to the low number of responses from those identifying as responding on behalf of a non-governmental organisation, public sector body, academia and other, have been grouped together as “All Others” to preserve respondent anonymity for data protection purposes.

4. Summary of responses for Section 1

Data analysis

4.1 This section contained questions on the respondents' demographic information.

Question 4: Please tell us who you are responding on behalf of?

4.2 As presented in Table 1, 69% of respondents identified as an individual, with the second most frequent category being in an official business capacity (20%).

Table 1. Breakdown and percentage of respondent type, in response to the question 'Please tell us who you are responding on behalf of?'.

Respondent Type	Number of responses (%)
An individual	284 (69%)
Business	83 (20%)
Other	30 (7%)
Non-governmental organisation	11 (3%)
Academia	2 (<1%)
Public sector body	1 (<1%)

4.3 A free text option was provided for the question "Please tell us who you are responding on behalf of?" to allow respondents to clarify if their response was 'other'. Of the 30 'other' responses, the following respondent types were identified (in most-cited to least-cited order):

- Gardeners / Allotment holders / Small scale growers
- Landowners / Farmers
- Organic shareholders / Local organic groups
- Community Gardens / Seedbanks
- Consultants in the area of Plant Varieties and Seeds
- Network representatives
- Retailers
- Students in the area of Plant Varieties and Seeds

Question 5: If responding as an individual, where are you based in the UK?

4.4 For those that identified as an individual, 75% were based in England, with 10% based in Wales and Scotland, respectively (please see Table 2).

4.5 International responses were received from individual respondents based in the United States and New Zealand.

Table 2. Breakdown and percentage of respondents identifying as individuals, in response to the question "If responding as an individual, where are you based in the UK?

Respondent location	**Number of responses (%)**
England	212 (75%)
Scotland	28 (10%)
Wales	27 (10%)
Not applicable	12 (4%)
Northern Ireland	3 (1%)
Other	2 (1%)

Question 7: If responding as an organisation, business, public body or academic institution in Question 4, which of the following areas does your business or organisation operate in?

4.6 In response to the question 'If responding as an organisation, business, public body or academic institution in Question 4, which of the following areas does your business or organisation operate in?', respondents were able to select multiple categories. Just over half of the 'organisation, business, public body or academic institution' respondents (56%) worked in only one area. Please see Table 3.

Table 3. Breakdown of the number of areas organisations, businesses public bodies and academic institutions operated in.

Number of areas organisations, businesses, public bodies and academic institutions operated in	**Number of responses (%)**
Not Applicable	2 (2%)
1	53 (55%)
2	22 (23%)
3	12 (12%)
4	6 (6%)
5	2 (2%)

4.7 The cultivation of crops was the most frequent area to be selected for those respondents identifying as an organisation, business, public body or academic institution in Question 4, with 56 responses (please see Table 4). 'Other sectors/activities' was the second most frequent response with 42 responses.

Table 4. Breakdown of areas in which organisations, businesses, public bodies and academic institutions operated. Percentages are not provided as respondents could select more than one answer.

Operational area	**Number of responses**
Cultivation of crop plants	56
Other sectors / activities	42
Seed merchant / processing	26
Research and development	24
Plant breeding	19
Not applicable	2

4.8 Analysis of the free text for question 7 was undertaken where respondents within the question category had selected ‘other sectors / activities’ or ‘not applicable’. Of the 44 free text responses, the following respondent areas were identified (in most-cited to least-cited order):

- Organic sector
- Farmers
- Retailers
- Food and feed manufacturing
- Education
- Community based projects / initiatives
- Supply chain
- Fertiliser production
- Technology
- Consultants in the area of Plant Varieties and Seeds
- Campaign Groups / Non-profit organisations

Question 8: If responding as an organisation, business, public body or academic institution, where does your business or organisation operate?

4.9 Of those who identified as responding on behalf of an organisation, business, public body or academic institution, 61 said that they operated in the UK, 20 in England only, with the remainder working across England, Scotland, Wales and Northern Ireland as presented in Table 5.

4.10 Where respondents selected ‘Other’, all responses in the free text indicated that they worked internationally.

Table 5 Breakdown of regions where organisations, businesses, public bodies and academic institution operated in. Percentages are not provided as respondents could select more than one answer.

Respondent organisation, business, public body or academic institution operational location	**Number of responses**
UK	61
England only	20
Other	9
Wales only	6
England and Wales only	3
England and Scotland only	3
Scotland only	2
GB	1
Northern Ireland only	1

Email responses

4.11 Of those responses received via email, it was possible to breakdown respondents by type. Overall, six email responses were from individuals, five from non-governmental organisations and three from businesses.

4.12 Not all of the email responses followed the structure of the consultation questions therefore it is not possible to provide a detailed breakdown of where respondents were based.

Summary of Section 1 responses

4.13 The majority of respondents identified as ‘individuals’ based in England, responding with their personal views. Of the businesses or organisations that responded, the majority operated across the UK in the cultivation of crop plants.

4.14 Due to the technical nature of the consultation, it was signposted as of most interest to the plant breeding industry, seed merchants and processors, growers and farmers, research institutes, membership bodies, and other organisations representing plant breeders and growers. For this reason, branching logic was not applied to the questions in this consultation. Defra appreciates the feedback received on this issue and would like to reassure respondents that all responses have been analysed and considered as part of this summary of responses.

5. Summary of responses for Section 3

5.1 This section contained questions on the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties (PB VL). Respondents were asked to ensure that they had read the supporting information in Section 2 before answering the questions.

Data analysis

5.2 The following section analyses all responses received through the Citizen Space online form.

Question 9: Based on the explanation in the supporting information, do you understand the proposed process and requirements for the Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties?

5.3 A total of 75% (309 respondents) answered 'Yes', they understood the proposed process and requirements for the PB VL, based on the explanation in the supporting information, 22% (90 respondents) answered 'Unsure', and 3% (12 respondents) answered 'No' (please see Table 6).

Table 6 Summary of responses on respondents understanding of the proposed process and requirements for the PB VL.

Respondent Type	Total number of respondents	Total number of 'yes' responses per respondent type (%)	Total number of 'no' responses per respondent type (%)	Total number of 'unsure' responses per respondent type (%)
Individuals	284	206 (73%)	9 (3%)	69 (24%)
Businesses	83	68 (82%)	2 (2%)	13 (16%)
All Others	44	35 (80%)	1 (2%)	8 (18%)
All	411	309 (75%)	12 (3%)	90 (22%)

Business Responses

5.4 A total of 82% of business respondents indicated that they understood the proposed PB VL process. In the responses, 88% of organic businesses and 71% of non-organic businesses indicated they understood the proposal. Non-organic businesses showed the highest level of uncertainty, with 26% responding 'Unsure' compared to 10% of organic businesses.

5.5 Eight businesses (three organic, five non-organic) responded that they thought the process was clearly explained whilst four respondents felt there was a lack of detail in areas including traceability and testing.

Individual Responses

5.6 Among individuals, 73% believed they understood the proposals, though 24% were unsure. For some individual responses, the outlined process was perceived as either complicated (16 responses), too lengthy or detailed (nine responses), or unclear (four responses). Several also raised specific points or questions about the process itself (six responses), indicating a need for clearer, more concise communication.

"All Others" Responses

5.7 A total of 80% of "All Others" felt that they understood the proposals, with 18% saying that they were unsure. Respondents indicated they had read and understood the documentation provided (15 responses), with a subset expressing that the process should be mandatory (six responses). Two respondents in this category also noted that the proposed process closely resembled the existing approach used for non-precision bred varieties.

5.8 Some responses raised issues that were out of scope for this question, including concerns about precision breeding (seven responses), alongside calls for both labelling and variety listing (six responses).

Campaign Group Pre-Prepared Templates

5.9 In total, 110 responses were submitted using template text circulated by campaign groups. These responses included the statement:

> *"I have read the information provided."*

Question 9. Summary of Citizen Space Responses

5.10 Three quarters (75%) of respondents indicated they understood the proposed process, though levels of confidence varied. Businesses showed the highest understanding (82%), particularly among those identifying as organic, followed by "All Others" (80%) and individuals (73%). However, 24% of individuals and 18% of "All Others" were unsure, suggesting that clarity may not have been consistent across all groups.

5.11 While many found the explanation clear, others described it as complex or lacking detail. Several respondents, particularly from non-business groups, raised broader concerns, including the need for mandatory elements, clearer labelling, and greater

transparency. Overall, the responses reflect general understanding but highlight areas where further clarification and engagement are needed.

Question 10a. Do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties will impact your business?

Table 7. Breakdown and percentage in response to the question "Do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties will impact your business?"

Respondent Type	Total number of respondents	Total number of 'Yes' responses per respondent type (%)	Total number of 'No' responses per respondent type (%)	Total number of 'Unsure' responses per respondent type (%)
Individuals	284	95 (34%)	58 (20%)	131 (46%)
Businesses	83	59 (71%)	6 (7%)	18 (22%)
All Others	44	32 (73%)	2 (5%)	10 (23%)
All	411	186 (45%)	66 (16%)	159 (39%)

5.12 A total of 45% (186 respondents) answered 'Yes', that they thought the proposed PB VL would impact businesses. 39% (159 respondents) answered 'Unsure', and 16% (66 respondents) answered 'No' (please see Table 7).

5.13 Data may be skewed as branching logic was not applied to the questions in this consultation, therefore individuals were required to answer this question, despite not having a business. Defra appreciates the feedback received on this issue.

5.14 Individuals had the highest percentage of 'No' responses at 20% (58 respondents), potentially due to Individuals not having a business to be impacted by the PB VL. Individuals were also the least certain, with 46% (131 respondents) responding 'Unsure' and only 34% (95 respondents) saying 'Yes'.

Question 10b. If you answered yes to the previous question, what changes do you anticipate your business will have to make to adhere to the new legislation?

Table 8. Breakdown and percentage in response to the question "If you answered yes to the previous question, what changes do you anticipate your business will have to make to adhere to the new legislation?" As this question was multiple choice, percentages are not included within the table.

Respondent Type	Total number of responses	Total number of 'Administration' responses per respondent type	Total number of 'System' responses per respondent type	Total number of 'Other' responses per respondent type
Individuals	114	20	17	77
Businesses	84	26	24	34
All Others	43	13	11	19
All	241	59	52	130

5.15 Across all respondents, to adhere to the proposed new legislation, 59 respondents anticipated making administrative changes, 52 respondents anticipated making system changes, and 130 respondents cited other changes (please see Table 8).

5.16 A total of 232 respondents did not answer this question.

5.17 Across businesses, 26 respondents anticipated administration changes, 24 respondents anticipated system changes, and 34 respondents selected other changes. Non-organic businesses identified administration as the most anticipated change (15 respondents), whilst organic businesses mostly anticipated other changes (24 respondents).

5.18 The "All Others" group showed a relatively balanced distribution of anticipated changes, with 13 respondents selecting administrative, 11 respondents selecting system, and 19 respondents selecting other changes.

5.19 Individuals were the most likely to cite other changes, with 77 respondents falling into this category, suggesting a broader or less defined range of anticipated impacts.

Question 10c. Please provide further details of any changes your business may have to make to adhere to the new legislation.

Business Responses

5.20 Amongst the businesses who provided further details on changes they anticipated, there was a distinction between organic and non-organic businesses. Comments from organic businesses indicated that anticipated changes were related to concerns about the loss of organic status should a precision bred organism (PBO) be introduced into the supply chain. The related costs include, but are not limited to, extra work to check PBO status with suppliers, creating or amending business systems to hold additional information, and demonstrating that the business is compliant with organic principles (17 responses). The same issues were raised in relation to maintaining organic certification by 12 organic businesses. One business stated:

> *"Existence of a PBO variety list will enable our business to identify PBO varieties and meet our supply chain requirements. Our business must exclude PBOs and so we need a mechanism in place to identify and exclude them from organic production. A PBO variety listing will allow us to check varieties against the PBO variety list. A variety list will also ensure that hundreds of farmers who supply us are able to identify PBO varieties so we can check that our supply chains are also excluding them."*

5.21 Five businesses noted that if PBO information was included on all labels/packaging during the supply process this would ease the burden on them.

5.22 For non-organic businesses, the comments reiterated the need for administrative changes, whilst three businesses referenced needing to adhere to other countries' legislation.

Individual Responses

5.23 A total of 22 individuals highlighted the importance of consumer choice, expressing a desire to be able to identify PBOs in the supply chain. Transparency was a recurring theme, with 17 individuals calling for clear identification of PBO status throughout the supply chain. There was also support for labelling (20 responses), with individuals noting that labelling would enable informed decision-making and help businesses meet consumer expectations.

5.24 Concerns about the impact on organic supply chains were raised by 15 individuals. These included the potential for increased costs and administrative burdens associated with maintaining organic certification and avoiding contamination with PBOs. There was also support (10 responses) for a comprehensive, user-friendly list

or register of PBOs to help businesses verify PBO status and reduce compliance burdens. One individual stated:

> *"[Businesses] will have to create systems in their supply chain to ensure their products are free from PBO-GMO and this could involve expensive testing in order to maintain reputation and avoid any potential legal risks associated with inadvertent contamination or the introduction of GM-PBOs into non-GM supply chains To provide greater clarity and avoid the extra work for businesses keeping their supply chain free from PBO-GMO the Precision Bred Plant Variety List should be mandatory, user friendly, transparent, and easily accessible."*

5.25 Four individuals raised practical concerns about the time and labour required to trace seed supply chains and use a register to identify PBOs, with one respondent stating:

> *"It will mean spending more time/labour researching and tracing seed supply chains for information required to be transparent to customers"*

5.26 A smaller number of responses mentioned administrative costs (two responses), the need for additional staff (one response), and traceability (one response). These responses reflect broader concerns about the operational and financial implications of new legislation for businesses.

"All Others" Responses

5.27 Most respondents in this category selected other changes in response to Question 10b.

5.28 Respondents noted that there would be a bigger impact if there was no mandatory listing (three responses), and that the listing was essential for the organic sector (4 responses). Other responses included concern about the risk of cross-contamination (four responses), and the need for labelling alongside mandatory listing (five responses).

5.29 A positive change mentioned was that mandatory listing would increase traceability of the supply chain and trust from customers (four responses). One respondent stated:

> *"Any changes to organic business (whether farmers, or other businesses within the sector) arising from mandatory listing will be minor compared to the impact of no mandatory listing. Identification of PB varieties is essential to maintain the integrity of the organic sector and enable the necessary transparency and enable coexistence measures to be implemented by organic sector operators."*

5.30 Other responses mentioned making changes to incorporate precision breeding into the curriculum. One responses highlighted the need to provide evidence that a variety is a PBO, and one response noted the importance of accessing PBO status before Gazette publication and the knock-on effects of changes to the VCU process.

Campaign Group Pre-Prepared Templates

5.31 Pre-prepared template text was not circulated by campaign groups for this question.

Question 10. Summary of Citizen Space Responses

5.32 A total of 45% of respondents indicated that the proposed PB VL would have an impact on businesses, with the highest levels reported by businesses (71%) and "All Others" (73%), while individuals were more uncertain (46% unsure, 34% yes).

5.33 Businesses most often cited 'administrative' or 'other' changes, particularly around maintaining organic certification, with responses describing the need for supplier checks, system updates, and compliance measures.

5.34 Individuals and "All Others" also frequently selected other changes, highlighting concerns about consumer choice, labelling, transparency, and risks such as cross-contamination and impacts on the non-PBO market. Responses saw mandatory listing as a way to improve traceability and consumer trust and called for labelling alongside listing.

5.35 Despite differences in certainty and emphasis, a shared need for clarity, transparency, and safeguards was clear across all groups.

Question 11a. Do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties will benefit your business?

Table 9 Breakdown and percentage of answer, in response to the question "Do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties will benefit your business?"

Respondent Type	Total number of respondents	Total number 'Yes' of responses per respondent type (%)	Total number of 'No' responses per respondent type (%)	Total number of 'Unsure' responses per respondent type (%)
Individuals	284	109 (38%)	121 (43%)	54 (19%)
Businesses	83	52 (63%)	23 (28%)	8 (10%)
All Others	44	28 (64%)	13 (30%)	3 (7%)
All	411	189 (46%)	157 (38%)	65 (16%)

5.36 A total of 46% (189 respondents) answered ‘Yes’, that they thought the proposed PB VL would benefit businesses, 16% (65 respondents) answered ‘Unsure’ and 38% (157 respondents) answered ‘No’ (please see Table 9).

5.37 A total of 63% (52 respondents) of businesses felt that the proposed PB VL would benefit their business, with 64% (28 respondents) of “All Others” also responding positively.

5.38 Individuals were the least certain, with 43% (121 respondents) responding ‘No’ and only 38% (109 respondents) saying ‘Yes’.

Question 11b. If you answered yes to the previous question, what benefit(s) do you think the Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties may have on your business?

Business Responses

5.39 The percentage of businesses who thought the PB VL would benefit their business was fairly evenly distributed across organic businesses (62%) and non-organic businesses (65%).

5.40 For organic businesses, the benefits would arise from a mandatory list (four responses) whilst other businesses highlighted the benefit of a list in terms of the transparency and traceability of PBOs, customer reassurance and trust, and the reduction of effort businesses would have to make in cross-checking information (eight responses). One business stated:

> *"[The PB VL] must be mandatory so that farmers and growers we buy direct from, as well as those we buy indirectly from, are able to maintain their GM free or Organic status by being able to identify PBO varieties. This is important to us, and we know it is important to our customers.”*

5.41 A total of 13 organic businesses mentioned the list was essential to them being able to obtain certification.

5.42 Eight of the non-organic businesses commented that the proposed PB VL will benefit their business as it will allow for the marketing of precision bred plant varieties. These businesses were either in the production stage or planning to produce precision bred plant varieties and highlighted the innovation benefit. One business stated:

> *“A PB VL is hoped to speed up innovation in breeding and will allow [precision bred] varieties to be marketed - in England at least.”*

5.43 The other key theme from the non-organic businesses related to consumer and business choice in whether to use PBOs (10 businesses).

Individual Responses

5.44 The most prominent theme was ‘Choice & Autonomy’ cited in 115 responses. This was closely linked with ‘Transparency & Information Access’ which appeared in 74 responses. Together, these themes suggest that individuals value the ability to make informed decisions, supported by clear and accessible information. Respondents indicated that the PB VL could enhance their autonomy by providing reliable data on breeding techniques and traits. One respondent explained:

> *“There must be no barriers in accessing the list, it should be online and publicly available without requiring any formal request. It must be easily searchable by variety name, with specific technique used, introduced traits, full genetic modification details as well as any disclosure of existing or pending patents.”*

5.45 ‘Economic & Business Impact’ (58 responses) and ‘Regulatory & Legal Concerns’ (29 responses) were also frequently mentioned. A further 39 responses focused on ‘Protection & Support for Organic/Non-PBO’ systems, often in connection with transparency and choice. Respondents in this group viewed the PB VL as a tool to support traceability, particularly for organic producers.

5.46 Themes related to ‘Efficiency & Practicality’ (21 responses) and ‘Trust & Confidence’ (20 responses) were also prominent.

“All Others” Responses

5.47 Overall, 64% of “All Others” indicated that the proposed PB VL would benefit them. The list was seen as important for enabling informed choice (eight responses) and supporting those wishing to avoid PBOs (fourteen responses). Responses emphasised the need for a simple and familiar process, as well as calls for transparency (four responses) and public accessibility (seven responses). Benefits mentioned included reducing time spent on cross-referencing (four responses), with one respondent stating:

> *“[Respondent] represents a diversity of small-scale farming and growing businesses in a context where their choice of farming practices and commitment to transparency with the community they sell their produce to is paramount. This will no longer be possible without a clear and simple way to check the PBO status of the seed they plant. They also tend to grow a wide diversity of crops, and therefore cross-referencing across registers for each variety is not practicable.”*

5.48 Other benefits also included allowing businesses to access and market precision bred plant varieties in England (three responses), with one respondent noting that the PB VL could be used as a tool to support development or marketing, stating:

"The presence of a Precision Bred Plant Variety List will raise awareness among investors and researchers, growers and breeders, of the availability of precision bred varieties coming onto the market. This could increase investment and research into this application of technology in agriculture and horticulture."

Campaign Group Pre-Prepared Templates

5.49 Responses using the pre-prepared templates typically included the following key statements:

- For individuals:
  - *"It would aid freedom of choice over whether I plant new GMOs/PBOs."*
  - *"It would mean I do not have to spend time cross referencing other registers to find out if certain varieties are new GMOs/PBOs."*
- For businesses:
  - *"It will engender trust between DEFRA as an agency and my business and our customers."*
  - *"If there is no list it is unclear how I would maintain my organic or non-GMO status, and this may mean the end of my business."*
- For non-commercial growers, consumers, and concerned citizens:
  - *"I support organic and non-GM growers, and if there is no list it will threaten the status of their businesses."*
  - *"I want to be able to buy PBO-free varieties for myself and my family, if there is not list then these supplies will be threatened."*

5.50 A total of 40 individuals were identified as having submitted responses directly from the pre-prepared templates to answer Question 11b, with 12 of those providing further information in addition to the pre-prepared template answers.

5.51 A total of seven businesses were identified as having submitted responses directly from the pre-prepared templates to answer Question 11b. Of these, four were from organic respondents and three from non-organic respondents.

Question 11. Summary of Citizen Space Responses

5.52 A total of 46% of respondents believed that the proposed PB VL would benefit them, with support relatively consistent across organic and non-organic businesses (62% and 65% respectively), and 64% of "All Others" also indicating a benefit.

5.53 Businesses valued the PB VL for different reasons: organic businesses emphasised its role in maintaining certification and avoiding precision bred plant varieties, while non-organic businesses highlighted opportunities for marketing, innovation, and consumer choice. Individuals placed strong emphasis on autonomy, transparency, and access to clear, searchable information to support informed decision-making.

5.54 Across all groups, the PB VL was seen as a tool to enhance traceability, reduce administrative burden, and build trust with customers. Common themes included the need for a mandatory and publicly accessible PB VL, support for organic and non-GM systems, and the importance of enabling both avoidance and promotion of PBOs depending on user needs. Pre-prepared campaign responses echoed these points, particularly around freedom of choice, transparency, and the protection of organic supply chains.

Question 12a. Do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties will have a negative impact on your business?

Table 10 Breakdown and percentage of answer, in response to the question "Do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties will have a negative impact on your business?"

Respondent Type	Total number of respondents	Total number 'Yes' of responses per respondent type (%)	Total number of 'No' responses per respondent type (%)	Total number of 'Unsure' responses per respondent type (%)
Individuals	284	76 (27%)	130 (46%)	78 (27%)
Businesses	83	24 (29%)	53 (64%)	6 (7%)
All Others	44	9 (20%)	26 (59%)	9 (20%)
All	411	109 (27%)	209 (51%)	93 (23%)

5.55 A total of 51% (209 respondents) answered 'No', they thought the proposed PB VL for England will not have a negative impact on businesses, 27% (109 respondents) answered 'Yes', and 23% (93 respondents) answered that they were 'Unsure' (please see Table 10).

5.56 A total of 64% (53 respondents) of businesses stated that there would be no negative impact on their business due to the proposed PB VL. Of those businesses that responded, organic businesses were the most likely to anticipate a negative impact, with 33% responding 'Yes'.

5.57 Individuals had the highest level of uncertainty, with 27% (78 respondents) responding 'Unsure', although 46% (130 respondents) of individuals anticipated no negative impact to businesses.

Question 12b. If you answered yes to the previous question, what negative impact(s) do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties may have on your business?

Business Responses

5.58 Organic businesses were more likely to anticipate negative impacts from the proposed PB VL, with 33% expressing concern, compared to the 23% of non-organic businesses. The most prominent issue for organic businesses was the risk of contamination (five responses), which could impact organic certification. Respondents also highlighted the lack of transparency around the genetic modifications present and the potential lack of choice in the food they consume.

5.59 For the non-organic businesses who responded there were no clear themes concerning negative impacts, however one respondent stated:

> *"[T]here will be an extra cost to the business if we wish to market a precision bred variety, we are rarely asked about the breeding technologies used in our work - e.g. open pollinated/ hybrid".*

Individual Responses

5.60 The most common concern, cited in 23 responses, was a reduction in choice, particularly for those wishing to avoid PBOs, as well as trust and public confidence (22 responses). This was closely linked to concerns about labelling and traceability (21 responses) and transparency and information access (15 responses) with respondents emphasising that without clear, mandatory labelling and accessible information, it would be difficult to make informed decisions. One respondent noted:

> *"It leaves too much for me to research myself when the responsibility should be on those producing PBO seeds."*

5.61 Others criticised the current system, citing difficult navigation, with one stating:

> *"It is not appropriate for me to have to refer to the Seeds Gazette - an Excel workbook released monthly that is exceptionally difficult to navigate."*

5.62 Concerns regarding regulatory (nine responses), administrative, and economic burdens (2 responses) were raised, particularly for organic or heritage growers (18 responses in total) was also raised. These included concerns about the costs of compliance, such as verification.

“All Others” Responses

5.63 Over half of responses (59%) did not think that PB VL would negatively affect their business, with 20% of respondents thinking that it would have a negative affect and another 20% unsure.

5.64 Free text responses from the "All Others" group reflected a broad range of concerns. These included potential difficulties in tracing precision bred genetics (one responses), increased administrative burden (one response) and associated staff time and costs (one response).

5.65 Key concerns raised by respondents included the difficulty in avoiding the use or purchase of precision bred plant varieties (four responses), challenges in preventing cross-contamination (three responses), and the possibility that the extra processes required for precision bred plant varieties may undermine confidence or lead to increased costs compared to traditionally bred seeds (two responses).

Campaign Group Pre-Prepared Templates

5.66 Pre-prepared template text was not circulated by campaign groups for this question.

Question 12. Summary of Citizen Space Responses

5.67 Just over half (51%) of respondents indicated that they did not expect the proposed Precision Bred Plant Variety List to negatively impact businesses, while 27% believed it would, and 23% were unsure.

5.68 Organic businesses were more likely to anticipate negative impacts (33%) compared to non-organic businesses (23%), with concerns primarily focused on the risk of contamination affecting organic certification. Non-organic business responses were more varied, referencing administrative and cost-related implications.

5.69 Among individuals, the most frequently cited concerns were reduced choice and insufficient labelling and traceability, which were seen as barriers to informed decision-making. Responses from the "All Others" group echoed many of these themes, including concerns about administrative burden, traceability, and the difficulty of avoiding precision bred plant varieties, as well as the potential for increased costs and reduced confidence in the system.

5.70 Common themes across all respondent types included transparency, compliance, and the ability to differentiate in the market.

Question 13a. Do you think your business will incur extra costs because of the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties?

Table 11 Breakdown and percentage of answer, in response to the question "Do you think your business will incur extra costs because of the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties?"

Respondent Type	Total number of respondents	Total number 'Yes' of responses per respondent type (%)	Total number of 'No' responses per respondent type (%)	Total number of 'Unsure' responses per respondent type (%)
Individuals	284	54 (19%)	132 (46%)	98 (35%)
Businesses	83	27 (33%)	44 (53%)	12 (14%)
All Others	44	14 (32%)	21 (48%)	9 (20%)
All	411	95 (23%)	197 (48%)	119 (29%)

5.71 A total of 48% (197 respondents) answered 'No', that they thought businesses would not incur extra costs because of the proposed PB VL. A total of 29% (119 respondents) answered 'Unsure', and 23% (95 respondents) answered 'Yes' (please see Table 11).

5.72 Just over half (53%, 44 respondents) of all businesses thought that they would not incur additional costs, with 33% (27 respondents) saying that they would, and 14% (12 respondents) saying they were unsure. For both organic and non-organic businesses, just over half said that they did not expect additional costs from the proposed list (52% and 55%, respectively). However, organic businesses were more likely to anticipate extra costs (37%) compared to non-organic businesses (26%).

5.73 Individuals had the highest level of uncertainty, with 35% (98 respondents) unsure.

Question 13b. If you answered yes to the previous question, what costs do you think your business will incur because of the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties?

Business Responses

5.74 Nine comments from organic businesses referred to time and resource costs resulting from having to check the list, however it was noted by several businesses that this effort would be reduced if mandatory labelling were required across the supply chain.

5.75 For non-organic businesses, three comments referred to the costs of innovation and the requirements to label. One respondent commented:

> *"There will be extra costs if the [PB VL] list is not mandatory and accompanied by clear point of sale labelling. This is because of the extra admin I will have to do to check anything seed or plant I buy is not [precision bred]."*

5.76 Businesses involved in developing precision bred varieties, acknowledged that they were expecting these costs, suggesting that for some businesses, particularly those in the plant breeding sector, the proposed PB VL is seen as part of a broader regulatory and commercial landscape that they are already navigating. One business stated:

> *"As a developer of precision bred plant varieties, we are fully aware of possible de-regulation, listing and IP costs arising from bringing new varieties to market."*

Individual Responses

5.77 The most frequently cited theme was avoidance costs (24 responses), where individuals anticipated expenses related to verifying supply chains (five responses). These concerns were closely linked to consumer choice (14 responses) and freedom of choice (two responses), with individuals highlighting the need for clear information to support informed decision-making. Without a reliable list, respondents felt they would bear the costs of ensuring alignment with their preferences.

5.78 A number of individuals explicitly stated that they anticipated no additional costs due to the list itself (14 responses), with some viewing it as a helpful tool for improving clarity and reducing uncertainty. Others anticipated administrative costs (12 responses) and indirect costs to individuals (12 responses), such as time spent verifying seed sources or adapting to new requirements. These concerns were often tied to labelling and traceability (11 responses), which many saw as essential for managing other risks and maintaining organic or heritage production systems.

5.79 Four responses suggested that the associated costs should not fall on those wishing to avoid PBOs but rather be passed on to the businesses developing or marketing precision bred products.

5.80 Organic integrity (10 responses) was a recurring concern, particularly among those involved in organic or heritage growing. Respondents noted that without clear identification and traceability of precision bred varieties, there could be increased costs and risks associated with maintaining organic certification. These concerns were often linked to business viability and economic impact (eight responses).

> *"Farmers, whether organic or not, who wish to avoid the use of or contamination by 'precision-bred' products, and any (small) grower like myself*

who wishes to avoid such contamination, will have to keep checking carefully to ensure that the seed and plants they use are genuinely free of contamination by 'precision-bred' varieties. This will require extra time to investigate…"

5.81 Overall, while the question focused on additional business costs from the proposed PB VL, many individuals interpreted it more broadly. Responses reflected a strong interest in ensuring that precision bred plant varieties are clearly identified and traceable, not only to manage direct and indirect costs, but also to support informed decision-making and maintain consumer trust.

"All Others" Responses

5.82 Respondents from this group highlighted a range of cost-related concerns as a result of the proposed PB VL. One respondent noted that costs would depend on whether variety listing fees remained consistent with those for non-precision bred plant varieties, while another respondent pointed to potential costs arising from changes to existing work activities.

5.83 Nine respondents suggested that the absence of a list could lead to increased costs, with four respondents also citing business-related changes as a source of financial impact. Additional concerns included a perceived reduction in choice (three responses).

Campaign Group Pre-Prepared Templates

5.84 A number of responses were submitted using template text circulated by campaign groups; these responses typically included the following key statements:

- For businesses:
  - *"I would incur costs if there is no list as it is unclear where the information on a varieties' PBO status would be held and how accessible it would be. The costs would be up to the value of my business.*
- For non-commercial growers, consumers, and concerned citizens:
  - *"If there is no list this may cost myself and my family's ability to access PBO-free varieties."*
  - *"We do not yet know the potential costs to human or environmental health as there will be no publicly-available, peer-reviewed risk assessments or safety assessments regarding the impacts of PBOs."*

5.85 A total of 35 individuals were identified as having submitted responses directly from the pre-prepared templates to answer Question 13b, with four of those providing further information in addition to the pre-prepared template answers.

5.86 A total of 15 businesses (12 organic and three non-organic) were identified as having submitted responses directly from the pre-prepared templates to answer Question 13b. These businesses answered ‘no’ to the first part of the question, then commented that they would incur costs if there was no list.

Question 13. Summary of Citizen Space Responses

5.87 Of all respondents, 23% indicated they expected to incur additional costs, while 48% did not, and 29% were unsure. Businesses were the most likely to anticipate additional costs (33%), followed by "All Others" (32%) and Individuals (19%).

5.88 Organic businesses were more likely than non-organic businesses to expect additional costs, particularly in relation to time and resources required to check the list and maintain certification.

5.89 Respondents across all groups viewed the list as a useful tool for improving clarity and reducing uncertainty, while also expressing concern that, in its absence, the burden of verifying product status would fall on those seeking to avoid precision bred varieties. Common themes also included the importance of traceability, transparency, and equitable distribution of costs.

5.90 Responses submitted via campaign templates reiterated these points, particularly the need for accessible information to support informed decision-making and minimise unintended financial impacts.

Question 14a. Do you agree to the publishing of notifications of the Precision Bred Plant Variety List for England in the Plant Varieties and Seeds Gazette?

Table 12 Breakdown and percentage of answer, in response to the question “Do you agree to the publishing of notifications of the Precision Bred Plant Variety List for England in the Plant Varieties and Seeds Gazette?”

Respondent Type	Total number of respondents	Total number ‘Yes’ of responses per respondent type (%)	Total number of ‘No’ responses per respondent type (%)	Total number of ‘Unsure’ responses per respondent type (%)
Individuals	284	206 (73%)	22 (8%)	56 (20%)
Businesses	83	67 (81%)	4 (5%)	12 (14%)
All Others	44	38 (86%)	2 (5%)	4 (9%)
All	411	311 (76%)	28 (7%)	72 (18%)

5.91 A total of 76% (311 respondents) answered ‘Yes’, that they agreed to the publishing of notifications of the Precision Bred Plant Variety List for England in the Plant Varieties and Seeds Gazette. A total of 18% (72 respondents) answered ‘Unsure’, and 7% (28 respondents) answered ‘No’ (please see Table 12).

5.92 A total of 81% (67 respondents) of businesses agreed to the publication of notifications of the proposed list in the Plant Varieties and Seeds Gazette. Organic businesses and non-organic businesses were equally likely to agree with the publication of notifications in the Plant Varieties and Seeds Gazette.

5.93 “All others” had the highest agreement rate (86%) and a low level of uncertainty (9%).

Question 14b. Please explain your answer to the previous question.

Business Responses

5.94 The majority of comments from businesses related to two key themes. The first theme was transparency (with 23 comments from organic businesses, 16 from non-organic businesses) and the second themes was scope (with 18 comments from organic businesses, 6 from non-organic businesses). Transparency comments referred to the need for a clear and transparent process for industry and a list that is clear and accessible to all. These comments were very closely tied into the comments on scope which largely referred to a need to publish this information beyond the gazette, with suggestions for labelling at all points of the supply chain, printed on product labels and the development of a searchable tool which is easy for anyone interested to use. One business stated:

> *“We strongly support the publication of Precision Bred Plant Variety List notifications in the Plant Varieties and Seeds Gazette as a way to increase transparency and accessibility for farmers, growers and businesses. However, this must be in addition to making the full Precision Bred Plant Variety List freely available online and ensuring mandatory labelling of GM-PBO products. The Gazette is not a widely used or easily searchable resource for many in the supply chain. Relying solely on it would not provide adequate access to critical information. For farmers and growers to make informed choices about what to cultivate and sell, they need clear, easily accessible and up-to-date information on precision bred varieties. A combination of publication in the Gazette, a fully searchable public list and mandatory labelling is necessary to ensure that businesses are able to meet their GM-free obligations.”*

5.95 There were 14 comments from businesses noting it was unclear where else the information would be made available.

Individual Responses

5.96 The most frequently cited theme was transparency (87 responses) and accessibility (33 responses), which were often discussed together. Respondents stated:

> *"Transparency is important. The public are entitled to know what they are eating."*

> *"It is essential that this information be readily accessible in the public domain."*

5.97 Primarily, accessibility concerns were raised about the Gazette itself, with respondents questioning whether it was a suitable platform for public communication. One respondent stated:

> *"The Gazette is not a widely used or easily searchable resource for many in the supply chain."*

5.98 The theme of clarity and understanding was highlighted in 12 responses, with calls for clearer presentation of information and the use of multiple dissemination channels. Suggestions included searchable databases and clearer product labelling. One respondent commented:

> *"Such notifications are essential and must be available in the public domain. There should be several sources for such information, so that all citizens can access them easily without the need for specialist links."*

5.99 Overall, while most individuals supported the proposal, their responses highlighted the importance of combining publication with broader communication strategies to ensure the information is clear, accessible, and actionable.

"All Others" Responses

5.100 Respondents from this category highlighted the importance of having a publicly available list. One responded noted that publishing information in the Plant Varieties and Seeds Gazette would enhance accessibility and support the uptake of precision bred varieties, stating:

> *"Publication of [PB VL] notifications in the Plant Varieties and Seeds Gazette will help raise awareness of the precision bred varieties that we develop, which we think will facilitate their uptake by growers and breeders."*

5.101 Eight respondents identified increased transparency and seven identified improved accessibility as key benefits of publication in the Gazette. One respondent suggested that using an established system would help minimise disruption and facilitate implementation, and three respondents expressed uncertainty about where such information would otherwise be found. One respondent stated:

“Publication in the Gazette increases transparency and so should be mandatory but should not be the only source of reference and full listings.”

5.102 Four responses specifically described the Gazette as the clearest and most appropriate location for this information. Transparency (six responses) and public accessibility (five responses) were recurring themes, and five responses also emphasised the need for labelling alongside publication to ensure clarity and informed decision-making.

Campaign Group Pre-Prepared Templates

5.103 Responses submitted using pre-prepared template text circulated by campaign groups; typically included the following key statement:

“It is unclear where else in the public domain information about the PB status of an organism would be.”

5.104 A total of 45 individuals were identified as having submitted responses directly from the pre-prepared templates to answer Question 14b, with one of those providing further information in addition to the pre-prepared template answers.

5.105 A total of 11 businesses were identified as having submitted responses directly from the pre-prepared templates to answer Question 14b. Of these, seven were from organic respondents and four from non-organic respondents.

5.106 A total of 6 “All Others” were identified as having submitted responses directly from the pre-prepared templates to answer Question 14b.

Question 14. Summary of Citizen Space Responses

5.107 The majority of respondents supported the proposal to publish notifications of the PB VL in the Plant Varieties and Seeds Gazette. Around 81% of businesses agreed, and 73% of individuals were in favour. The most common themes across responses were transparency (mentioned by 51 individuals and 39 businesses) and access to information (32 individual mentions), with many highlighting the importance of a clear, accessible, and accountable process. Responses from the "All Others" category echoed these priorities, with several noting that the Plant Varieties and Seeds Gazette would be the clearest and most appropriate place to publish this information.

5.108 However, concerns were raised about the Plant Varieties and Seeds Gazette’s usability, with respondents suggesting it is not widely used or easily searchable. To address these concerns, respondents recommended additional communication methods, including searchable online tools and product labelling. These suggestions were common among organic businesses, individual respondents and were also

reflected in comments from "All Others", who emphasised the need for broader dissemination to ensure informed decision-making.

5.109 A number of responses (45 individuals, 11 businesses, and 6 “All Others”) were submitted using campaign templates, which typically stressed the lack of alternative sources for accessing precision bred status information.

Email responses

5.110 Overall, most email respondents were supportive of the proposed Precision Bred Plant Variety List for England (PB VL) as a means to facilitate the marketing of precision bred plant varieties and as a mechanism to provide information. The PB VL was seen as a tool to help ensure that organic and non-GMO supply chains remain PBO-free, and to support traceability.

5.111 Respondents from the organic and non-GMO sectors stated that the proposed PB VL should not be used as a single measure to provide information to the sector or to end-consumers regarding the precision bred status of plant varieties, and other mechanisms, such as labelling, were also required. Information on the specific techniques, traits introduced, and full details of the genetic modifications were also stated as information that should be part of the new variety list.

5.112 It was also stated by organic and non-GMO respondents that additional measures would be needed following the introduction of the new list to ensure that these supply chains remain PBO-free, as well as to manage the movement of precision bred plant varieties under the United Kingdom Internal Market Act (UKIMA) and the Windsor Framework, where PBOs will remain classified as GMOs in Scotland, Wales and Northern Ireland. Additional measures included enforcement measures, and additional testing, leading to higher costs. Without these additional measures, the proposed PB VL was seen as a threat to the integrity of organic certification, increasing the risk of cross contamination, and reducing consumer confidence.

5.113 Non-organic businesses stated that DUS and VCU protocols should be reviewed and adapted to accommodate precision bred plant varieties, and that the process for the proposed PB VL should avoid creating additional administration tasks, which would increase costs and potentially reduce the uptake of the new technology. Some costs associated with the familiarisation of the process for the new variety list was also acknowledged.

5.114 Feedback common across all respondent types was that the proposed PB VL must be accessible, user friendly and free to access, and were in support of the publication of the list within the Plant Varieties and Seeds Gazette.

Summary of Section 3 responses

5.115 A total of 75% of all respondents reported understanding the proposed process for the Precision Bred Plant Variety List for England (PB VL), though individuals were more likely to express uncertainty (24%). While many found the explanation clear, free-text responses, particularly from individuals, described the process as overly complex or lacking detail in areas such as traceability and labelling. Several respondents noted that the process resembled existing systems but called for greater clarity.

5.116 A total of 71% of businesses and 73% of “All Others” believed that the PB VL would impact their operations. Organic businesses were particularly concerned about the implications for certification, citing the need for robust systems to identify and exclude PBOs. Free-text responses highlighted anticipated changes such as increased administrative work, updates to internal systems, and the need for supplier verification. Individuals and campaign respondents frequently raised the importance of consumer choice and transparency, calling for mandatory labelling and a publicly accessible, searchable list to reduce the burden of compliance.

5.117 Views on the benefits of the proposed variety list were mixed. While 63% of businesses and 64% of “All Others” saw potential advantages, only 38% of individuals agreed. Organic businesses valued the list as a tool to maintain certification and avoid contamination, while non-organic businesses saw opportunities for innovation and market access. Individuals and email respondents consistently emphasised the importance of autonomy, transparency, and access to detailed information, including breeding techniques and traits, to support informed decision-making. Many saw the list as a way to reduce uncertainty and build trust, particularly if it were mandatory and well-integrated with labelling systems.

5.118 Concerns about negative impacts of the proposed variety list were most common among organic businesses (33%) and individuals (27%). The most frequently cited issues included the risk of cross-contamination, loss of organic status, and increased administrative burden. Several respondents noted that without clear labelling and traceability, the list alone would not be sufficient to protect organic and non-GMO supply chains. These concerns were echoed in email responses, which stated that the absence of additional safeguards could undermine certification schemes and consumer confidence.

5.119 Cost implications were also a recurring theme. While 23% of all citizen space respondents expected to incur additional costs, free-text responses revealed a more nuanced picture. Organic businesses cited time and resource costs for checking seed status and maintaining compliance, while individuals anticipated indirect costs related to sourcing non-PBO products and verifying supply chains. Some respondents argued that the financial burden should not fall on those seeking to

avoid PBOs, and that mandatory labelling would help reduce these pressures. Email responses reinforced this view, highlighting the potential for increased costs without adequate enforcement and transparency.

5.120 There was strong support (76%) for publishing the proposed Precision Bred Plant Variety List for England in the Plant Varieties and Seeds Gazette, but many respondents, particularly individuals and organic businesses, stressed that this should not be the only communication channel. Free-text and email responses frequently described the Gazette as difficult to navigate and unsuitable for public use. Respondents called for additional formats, including searchable online tools and clear product labelling, to ensure the information is accessible and actionable across the supply chain.

5.121 Overall, respondents expressed cautious support for the proposed Precision Bred Plant Variety List for England, recognising its potential to improve transparency, traceability, and consumer choice. However, this support was often conditional on the introduction of mandatory listing, clear labelling, and accessible information systems. Free-text and email responses consistently emphasised the need for a multi-channel approach, robust safeguards for organic and non-GMO supply chains, and a commitment to transparency that supports both the promotion and avoidance of PBOs, depending on user needs.

6. Summary of responses for Section 5

6.1 This section contained questions on the provision of information on precision bred plant varieties, and the mandatory inclusion of precision bred status in labels for seed and other plant reproductive material (PRM). Respondents were asked to ensure that they had read the supporting information in Section 4 before answering the questions.

Data analysis

6.2 The following section analyses all responses received through the Citizen Space online form.

Question 15a. What information, if any, on precision bred plant varieties is important to your business?

Business Responses

6.3 A total of 34 businesses (21 organic businesses, 13 non-organic businesses) and 31 businesses (20 organic businesses, 11 non-organic businesses) requested information on the type of genetic modification made and information on the technique used to achieve the modification respectively.

6.4 A total of 29 businesses (19 organic businesses, 10 non-organic businesses) highlighted the importance of a unique reference number for each variety, supporting traceability and record-keeping. Similarly, 21 (19 organic businesses, 10 non-organic businesses) businesses requested patent information. Risk assessment data was also considered important by 18 businesses (11 organic businesses, seven non-organic businesses).

6.5 One business also proposed transaction notes as part of a comprehensive traceability system:

> *"Mandatory, clear naming of the variety as PBO on every identifying label, movement and transaction note at each stage of supply chain is essential. Full information should be available and accessible on and easy to use, fully searchable data base."*

6.6 Another business advocated for optional labelling requirements:

> *"Implementation of this approach should be pragmatic and minimize the costs and barriers for the marketing of PB varieties, therefore we advocate for voluntary instead of mandatory labelling.*

6.7 Organic businesses expressed additional needs to support transparency. 18 respondents stated that confirmation of whether a variety is a Precision Bred Organism (PBO) was required, and 13 respondents also wanted source information, such as the breeding company or country of origin.

Individual Responses

6.8 Although many individuals clarified that they do not operate a business, they reframed the question in terms of their self-identified roles as home growers, gardeners, or consumers. Their responses centred on transparency, labelling, and informed choice.

6.9 The most dominant theme was the need for accessible and transparent information (157 responses). Respondents called for clear, honest, and publicly available data about precision bred varieties to enhance public confidence (eight responses). This was closely tied to the second most common theme: mandatory labelling and traceability, cited 131 times. These themes were strongly linked to freedom of choice (85 responses), with many respondents expressing that without clear information, they would be unable to make informed decisions about what they grow or consume. One respondent stated:

> *"An official label on seeds and other plant matter indicating it is precision bred so I can make an informed decision"*

6.10 In regard to specific information, responses requested the label to include health and environmental risk assessments (70 responses), precision bred status (46 responses), the modifications used (32 responses), the techniques used (30 responses), a unique reference number or traceability system (28 responses), product inclusion (22 responses), health and safety testing (15 responses), patent and ownership information (15 responses) and origin and breeder information (10 responses).

6.11 Issues raised included the regulatory (48 responses) or economic (five responses) impact of the proposed framework. This was linked to concerns about maintaining organic integrity (24 responses), particularly among those who grow or consume organic produce.

"All Others" Responses

6.12 Across the group, the most commonly mentioned forms of information were on the modifications made and techniques used (nine respondents), labelling on all PBO products (eight respondents), a unique reference number (10 respondents), and precision bred status (12 respondents).

6.13 In six template responses, information on the health and safety tests carried out, modification and techniques used, environmental risk assessments completed and patents relevant to the product were also mentioned.

6.14 Two responses requested a similar label regulation as is in place for GM varieties, and information on the PB trait to highlight the benefits of the variety.

6.15 One respondent requested information about PBO status before it was published in the Gazette.

Campaign Group Pre-Prepared Templates

6.16 Responses submitted using template text circulated by campaign groups; typically included the following key suggestions:

- *"The unique reference number for the new GMO/PBO."*
- *"The modifications introduced."*
- *"The techniques used."*
- *"Details about any environmental risk assessments that have been conducted."*
- *"Details about any health and safety tests that have been conducted."*
- *"Details about which products they appear in."*
- *"Details about any patents that may be relevant to the product."*

6.17 A total of 73 individuals were identified as having submitted responses directly from the pre-prepared templates to answer Question 15a, with 13 of those providing further information in addition to the pre-prepared template answers.

Question 15a. Summary of Citizen Space Responses

6.18 In general, responses directly addressed the consultation's aim of identifying what information stakeholders consider important regarding precision bred plant varieties. Business respondents focused on technical and traceability-related information, with many requesting details on genetic changes, techniques used, and the inclusion of a unique reference number. Organic businesses highlighted the sector's additional needs around precision bred status and sourcing transparency to support compliance with organic standards.

6.19 Individual respondents, while not operating businesses, expressed strong preferences for mandatory labelling, public access to information, and the ability to make informed choices. Responses from the "All Others" group and campaign templates echoed these themes, with repeated calls for information on modifications, techniques, traceability, and risk assessments.

6.20 Across all groups, there was a consistent demand for accessible, detailed, and trustworthy information to support decision-making and maintain confidence in the regulation of precision breeding.

Question 15b. In what format should this information be made available? (For example, an accessible list or register)

Business Responses

6.21 The majority of business respondents expressed a clear preference for a centralised list or register. This format was supported by 36 organic businesses and 15 non-organic businesses, who emphasised the importance of a reliable, accessible, and searchable database to verify the precision bred status of plant varieties. One respondent stated:

> *"Full information should be available and accessible on and easy to use, fully searchable data base."*

6.22 A total of 10 organic businesses highlighted the need for this information to be available at all stages of the supply chain, from production through to sale.

6.23 In addition to a formal register, 14 organic and nine non-organic businesses recommended that precision bred status be clearly indicated in marketing materials, such as catalogues and promotional content. One respondent stated:

> *"A simple clear indication if a variety is a Precision Bred Organism should be visible on labelling and marketing material for seeds, plants and seed potatoes*."

Individual Responses

6.24 The most frequently cited theme by individuals was the need for transparency and access to information, which appeared in 154 responses. This was closely followed by support for clear labelling and traceability, mentioned in 109 responses. A total of 101 individuals specifically stated that precision bred status should be indicated directly on product labels to ensure consumers can easily identify the nature of the product, linking to the theme of trust and public confidence (54 responses).

6.25 An accessible list or register was also raised by 86 individuals who advocated this format to verify precision bred status. Additionally, 21 individuals proposed the creation of an online database to facilitate easy and widespread access to this information. One respondent suggested that the information should be:

> *"Available in multiple formats so that it is as clear and accessible as possible. It should be included on all plant labels as well as on an online database (i.e. list or register) and should be available in as much detail as possible from the original breeder."*

6.26 Marketing materials were mentioned in 30 responses as another useful channel for communicating precision bred status. With one respondent stating:

"On the label and on any marketing material eg website/catalogue not just a list/register"

6.27 A total of 44 individuals, although not operating businesses, raised concerns about the potential regulatory burden associated with implementing new labelling or information systems. These comments often reflected apprehension on behalf of small-scale growers or retailers about the administrative or cost implications.

"All Others" Responses

6.28 Responses from "All Others" included requests for information to be made available through an official list or online database (17 responses), as well as through labelling on products and in catalogues (21 responses), as well as more detailed information in the Defra and FSA lists and in the variety breeder's own documents (four responses each). 12 respondents also specifically mentioned that the PB status needed to be made clear to the public at the point of sale.

Campaign Group Pre-Prepared Templates

6.29 Responses submitted using template text circulated by campaign groups; typically included the following key suggestions:

- *"Some information, including PBO status, should be available on the label and all marketing material such as catalogues."*
- *"All lists and registers that DEFRA and the FSA maintain in relation to the PBOs should contain the rest of the information."*
- *"The company's own published documentation should contain the rest of the information."*
- *"On the labels for seed and other plant reproductive material."*
- *"On marketing materials accompanying seeds e.g. catalogues."*
- *"On a mandatory Precision Bred Plant Variety List, available online, user friendly and fully searchable."*
- *"In any relevant trade and regulatory documents to ensure full traceability at all stages of the supply chain, from seed to sale."*

6.30 A total of 64 individuals were identified as having submitted responses directly from the pre-prepared templates to answer Question 15b, with eight of those providing further information in addition to the pre-prepared template answers.

6.31 A total of 15 businesses were identified as having submitted responses directly from the pre-prepared templates to answer Question 15b. Of these, 10 were from organic respondents and five from non-organic respondents.

Question 15b. Summary of Citizen Space Responses

6.32 Responses to this question demonstrated broad support for making information on the precision bred status of plant varieties available through accessible and reliable

formats. Business respondents, particularly from the organic sector, strongly favoured a centralised, searchable register to support verification and traceability. Many also supported clear labelling throughout the supply chain and the inclusion of precision bred status in marketing materials.

6.33 Individual respondents echoed these preferences, with a strong emphasis on transparency, public access, and the ability to identify precision bred plant varieties at the point of purchase. While some individuals raised concerns about the potential regulatory burden of new labelling systems, the majority supported a combination of labelling, online databases, and marketing materials to ensure clarity and informed choice.

6.34 Responses from the "All Others" group and campaign templates aligned closely with these views, consistently calling for precision bred status to be visible on labels for seed and other plant reproductive material, in catalogues, and through an official online register.

6.35 Across all groups, there was a shared view that information should be presented clearly, consistently, and in formats that support both traceability and public understanding.

Question 16a. Would the mandatory inclusion of precision bred status on labels for seed and other plant reproductive material to identify them as precision bred have a positive impact on your business?

Table 13 Breakdown and percentage in response to the question "Would the mandatory inclusion of precision bred status on labels for seed and other plant reproductive material to identify them as precision bred have a positive impact on your business?"

Respondent Type	Total number of respondents	Total number 'Yes' of responses per respondent type (%)	Total number of 'No' responses per respondent type (%)	Total number of 'Unsure' responses per respondent type (%)
Individuals	284	203 (71%)	37 (13%)	44 (15%)
Businesses	83	70 (84%)	7 (8%)	6 (7%)
All Others	44	30 (68%)	9 (20%)	5 (11%)
All	411	303 (74%)	53 (13%)	55 (13%)

6.36 A total of 74% (303 respondents) answered 'Yes', they thought the mandatory inclusion of precision bred status on labels for seed and other PRM to identify them as precision bred would have a positive impact on businesses. A total of 13% (55

respondents) answered ‘Unsure’, and 13% (53 respondents) answered ‘No’ (please see Table 13).

6.37 Businesses demonstrated the strongest agreement, with 84% responding ‘Yes’, and only 8% and 7% responding ‘No’ and ‘Unsure’ respectively.

Question 16b. If you answered yes to the previous question, what positive impact(s) do you think the mandatory inclusion of precision bred status on labels for precision bred seed and other plant reproductive material may have on your business?

Business Responses

6.38 Business respondents, particularly organic businesses, indicated that mandatory labelling of precision bred status would have a positive impact on their operations. Specifically, 94% of organic businesses responded positively, compared to 68% of non-organic businesses.

6.39 The most frequently cited themes across both groups were choice (23 organic, 12 non-organic) and confidence (12 organic, eight non-organic). Businesses valued the ability to make informed decisions about whether to use precision bred seed and other PRM and saw labelling as a practical tool to support that choice. Labelling was also seen as a way to build confidence, both internally, in maintaining PBO-free operations, and externally, in reassuring customers. Organic businesses additionally highlighted the importance of transparency (16 responses) and trust (11 responses), with one respondent stating:

> *"Inclusion of precision bred status on labels will provide an important 'final check' to support us in complying with relevant regulations. It will also help us to reassure customers that they will be able to see the status of their seeds without needing to spend additional time searching variety lists."*

Individual Responses

6.40 Among individual respondents, the most frequently cited theme was freedom of choice, which appeared in 89 responses, with 35 individuals expressing that mandatory labelling would support their ability to make informed decisions about the products they purchase or grow. Related themes included the desire to avoid precision bred plant varieties (45 responses), maintain organic standards (39 responses), and ensure traceability (37 responses).

6.41 A total of 25 respondents highlighted the importance of transparency and accessible information which labelling would support. Other themes included building confidence with customers (18 responses) and public confidence (29 responses), all of which reflect a broader interest in ensuring that consumers and growers can access clear and reliable information. One respondent said:

> *"[A]s a home grower mandatory inclusion of precision bred status would be incredibly important to me so that I know what I am purchasing and can therefore make an informed decision at the time of whether I want to buy a precision bred product and if it would be appropriate for my growing context. Without this labelling I would lose trust in the seed industry as a whole, as I would not feel confident that I knew what seed was in the packet I was buying"*

6.42 Some individuals also linked labelling to broader economic and policy considerations, such as business viability and economic impact (48 respondents), trade and market access (51 respondents), and facilitating trade with the EU (5 respondents). These responses suggested that clear labelling could help maintain access to markets with stricter regulatory requirements or consumer expectations.

"All Others" Responses

6.43 Within this group, labelling was seen as a way to avoid precision bred plant varieties (14 responses), create more traceability and transparency in the supply chain (six responses) and thus build more consumer trust and confidence in products (seven responses). 16 respondents also noted that labelling would protect freedom of choice for both growers and consumers, particularly organic businesses (five responses). One respondent stated:

> *"[Respondent] will provide advice to our community of interest in relation to avoiding seeds, plants, food and feed containing GM PBOs. Without labels on seed packets it is unclear how complex this advice will need to be and how difficult it will be to follow it… Seed labelling is an imperative for the co-existence of organic and non-GM agriculture."*

6.44 Among those not in favour of labelling, it was noted that labelling is not typically used by farmers when choosing seed to buy (two responses), and that supply chains and demand should determine the level of regulation (three responses). With one respondent stating:

> *"Any mandatory labelling must be proportionate to the goal i.e. safety or requirements on how a product must be used. Other labelling can be driven by market demand and must not be misleading… As the PB Act 2023 sets out, from the conventional agrifood sector perspective, PBOs are not GMOs and should therefore not be treated differently to conventional varieties in*

terms of a statutory requirement to alert the supply chain to the specific breeding technology used."

6.45 Two respondents specifically noted that labelling would have a positive impact, allowing them to verify and trace precision bred traits, ensuring that they are not used inadvertently or in jurisdictions they are not permitted in.

Campaign Group Pre-Prepared Templates

6.46 Responses submitted using template text circulated by campaign groups typically included the following key statements.

- For businesses:
  - *"Increase the chances of keeping genetically engineered/PB materials out of my production processes, and therefore the continued viability of my business."*
  - *"Build confidence with customers."*
  - *"Would enable customers to label products they sell as PBO, or PBO-free, should they wish to."*
  - *"Europe is expected to require seed labelling of new GMOs - it may mean that I am able to trade with European companies and would not otherwise be able to."*
- For non-commercial growers, consumers, and concerned citizens:
  - *"This is a vital issue for me as it is likely to mean the difference between being able to select a PBO-free diet for myself and my family, or having no choice at all."*
  - *"We do not as yet know what the benefits will be as we do not as yet know what harms will arise from new GMOs."*
  - *"This is crucial for my suppliers of organic/non-GM fruit and vegetables and therefore a crucial issue for me."*

6.47 A total of 55 individuals were identified as having submitted responses directly from the pre-prepared templates to answer Question 16b, with 12 of those providing further information in addition to the pre-prepared template answers.

6.48 A total of 16 businesses were identified in as having submitted responses directly from the pre-prepared templates to answer Question 16b. Of these, 12 were from organic respondents and four from non-organic respondents.

Question 16b. Summary of Citizen Space Responses

6.49 Responses across all groups showed broad support for the mandatory inclusion of precision bred status on labels for seed and other plant reproductive material. Overall, 74% of respondents believed this would have a positive impact on their business, with support particularly strong amongst organic businesses. These respondents highlighted the value of labelling in enabling informed choice,

supporting regulatory compliance and building customer confidence. Non-organic businesses also cited benefits, though with slightly lower levels of support. Across the business sector, labelling was seen as a practical tool for maintaining transparency and ensuring clarity throughout the supply chain.

6.50 Individual respondents similarly supported mandatory labelling, with 71% indicating a positive impact. Their responses focused on the importance of informed choice, the ability to avoid precision bred plant varieties, and the protection of organic standards. Respondents also linked labelling to broader issues such as market access, economic viability, and public trust.

6.51 Responses from the "All Others" group and campaign templates echoed these themes, emphasising freedom of choice, traceability, and the need to support organic and non-GM systems. Some respondents also noted that labelling could facilitate trade with markets requiring clear identification of precision bred seeds and other plant reproductive material.

6.52 Although a minority expressed concerns about the relevance or proportionality of mandatory labelling, particularly in conventional supply chains, the overall trend across all groups was a strong preference for clear, consistent labelling to support decision-making and to maintain confidence in the seed and PRM sector.

Question 17a. Would the mandatory inclusion of precision bred status on labels for seeds and other plant reproductive material to identify them as precision bred have a negative impact on your business?

Table 14 Breakdown and percentage in response to the question "Would the mandatory inclusion of precision bred status on labels for seeds and other plant reproductive material to identify them as precision bred have a negative impact on your business?

Respondent Type	Total number of respondents	Total number 'Yes' of responses per respondent type (%)	Total number of 'No' responses per respondent type (%)	Total number of 'Unsure' responses per respondent type (%)
Individuals	284	24 (8%)	211 (74%)	49 (17%)
Businesses	83	5 (6%)	75 (90%)	3 (4%)
All Others	44	7 (16%)	31 (70%)	6 (14%)
All	411	36 (9%)	317 (77%)	58 (14%)

6.53 A total of 77% (317 respondents) answered ‘No’, they thought the mandatory inclusion of precision bred status on labels for seed and other PRM to identify them as precision bred would not have a negative impact on businesses. A total of 14% (58 respondents) answered ‘Unsure’, and 9% (36 respondents) answered ‘Yes’ (please see Table 14).

6.54 A total of 90% (75 respondents) of businesses felt that mandatory labelling of precision bred and other PRM would not have a negative impact on their businesses.

6.55 The highest level of concern came from the “All Others” group, where 16% responded ‘Yes’, suggesting more apprehension about potential negative effects.

6.56 Individuals showed the highest level of uncertainty, with 17% responding ‘Unsure’.

Question 17b. If you answered yes to the previous question, what negative impact(s) do you think the mandatory inclusion of precision bred status on labels for precision bred seed and other plant reproductive material may have on your business?

Business Responses

6.57 Only a small number of comments were submitted for question 17b, but the few comments received reflected a preference for flexibility and efficiency in how information about precision bred status in of seed and other PRM is communicated. Among the comments received, respondents stated:

> *“If there is a readily available and searchable list of precision bred plant varieties, I do not consider it necessary to include the precision bred status on the plant labels. These varieties are not GM and could have been developed using conventional breeding techniques. If you are wishing the breeding companies to be open and transparent about their breeding techniques, complying with the new legislation should not be made unnecessarily onerous.”*

> *“A mandatory and prescriptive seed labelling limits the ability to adapt to market conditions and adoption of innovation. In contrast, a voluntary industry-led system offers greater flexibility and can be more efficient by tailoring the information provided to meet specific needs. Also, it can incorporate up to date communication avenues with end users such as QR codes or other technologies.”*

Individual Responses

6.58 Similarly to the business respondents, only a small number of comments were submitted for question 17b, with individuals using the free text space to express broader views on precision breeding. Individual responses were more varied and frequently did not address the specific question.

“All Others” Responses

6.59 Two responses noted that mandatory labelling goes against the spirit of the Precision Breeding Act 2023 by singling out precision bred seed and other PRM as different from material derived from traditional breeding (additionally raised separately in two further responses). Market-led labelling or voluntary disclosure was proposed as an alternative, with one respondent stating:

> *“The plant breeding and seeds industry fully supports transparency and openness of information in relation to the use of different breeding methods, and many breeding companies are already disclosing this information voluntarily on their websites to suit their supply chains. However, mandatory imposition of seed labelling in relation to precision breeding only would single it out as different, and so undermine the core rationale of the Precision Breeding Act that precision bred varieties could equally have been achieved through conventional breeding. As above, a labelling requirement like this would seem out of step with the content and spirit of the PB Act 2023.”*

6.60 Concerns were also raised about the potential for mandatory labelling to act as a disincentive to access precision bred plant varieties (three responses), the difficulty in testing compliance with labelling, making enforcement a challenge (one responses), and the view that mandatory labelling would not provide benefits for transparency (two responses). With respondents stating:

> *“Ultimately, mandatory labelling adds an additional burden to companies and places unfounded doubt in the minds of consumers, with no additional benefit in terms of transparency. This risks reducing the number of companies willing to partake in precision breeding and may risk the UK’s role as a leader in this space. The only non-discriminatory way to introduce mandatory seed labelling for precision bred varieties would be to require equivalent labelling of all breeding methods, which would impose significant and unnecessary additional requirements on a sector already facing major increases in costs and business disruption due to leaving the EU.”*

> *“The inclusion of the information on the label would single out the type of technology used to create the variety, which would seem likely to have a negative impact on the sector as a whole by increasing the administrative burden without necessarily increasing clarity for all stakeholders within different markets and different processes.”*

Campaign Group Pre-Prepared Templates

6.61 Pre-prepared template text was not circulated by campaign groups for this question.

Question 17b. Summary of Citizen Space Responses

6.62 Responses indicated that most stakeholders did not believe the mandatory inclusion of precision bred status on labels would have a negative impact on their business. Overall, 77% of respondents answered “No,” with only 9% indicating a negative impact and 14% unsure. Businesses were the least likely to report concerns, with 90% stating that labelling would not negatively affect them. Organic businesses showed the strongest confidence, with 96% responding “No”. Among the small number of businesses who did raise concerns, comments focused on the need for flexibility in how information is communicated, with some preferring a centralised list over mandatory labelling, while others favoured voluntary, industry-led systems that could adapt to market needs.

6.63 Individual responses were more varied, with some using the question to express broader concerns about the feasibility and complexity of implementing a labelling framework. While 74% of individuals said labelling would not have a negative impact on business, 17% were unsure and 9% said it would, suggesting a wider range of perspectives.

6.64 Responses from the “All Others” group showed slightly higher levels of concern, with 16% indicating a negative impact. Comments from this group focused on the risk of singling out precision bred plant varieties, the potential for labelling to act as a disincentive for uptake, and doubts about the added value of mandatory labelling for transparency. Some respondents argued that such requirements could undermine the intent of the Precision Breeding Act 2023 and place unnecessary burdens on the sector. Despite these concerns, the majority across all groups did not anticipate negative consequences from mandatory labelling.

Question 18a. Do you think your business will incur extra costs if the mandatory inclusion of precision bred status on labels for seed and other plant reproductive material identifying them as precision bred was introduced?

Table 15 Breakdown and percentage of answer, in response to the question "Do you think your business will incur extra costs if the mandatory inclusion of precision bred status on labels for seed and other plant reproductive material identifying them as precision

Respondent Type	Total number of respondents	Total number 'Yes' of responses per respondent type (%)	Total number of 'No' responses per respondent type (%)	Total number of 'Unsure' responses per respondent type (%)
Individuals	284	20 (7%)	193 (68%)	71 (25%)
Businesses	83	11 (13%)	66 (80%)	6 (7%)
All Others	44	8 (18%)	32 (73%)	4 (9%)
All	411	39 (9%)	291 (71%)	81 (20%)

6.65 A total of 71% (291 respondents) answered 'No', that they thought businesses would not incur extra costs if the mandatory inclusion of precision bred status on labels for seed and other PRM identifying them as precision bred was introduced. A total of 20% (81 respondents) answered 'Unsure', and 9% (39 respondents) answered 'Yes' (please see Table 15).

6.66 A total of 80% (66 respondents) of businesses answered 'No', with a low number selecting 'Unsure' (7%, six respondents).

6.67 Individuals showed the highest level of uncertainty, with 25% (71 respondents) responding 'Unsure'.

6.68 Across all respondent types, 'All Others' had the highest percentage of 'Yes' responses (18%, eight respondents).

Question 18b. If you answered yes to the previous question, what costs do you think your business will incur due to the mandatory inclusion of precision bred status on labels for precision bred seed and other plant reproductive material?

Business Responses

6.69 Just under a quarter of non-organic businesses (23%) indicated that they would incur extra costs if mandatory inclusion of precision bred status on labels were introduced. In contrast, a smaller proportion of organic businesses (8%) anticipated additional costs.

6.70 Very few comments were provided, with only seven responses offering further detail. These comments anticipated an increase in administrative burden and regulatory complexity, with one respondent stating:

> *"The administrative processes associated with additional labelling will be complex with potentially different labels for different markets. The additional legislation may or may not mirror legislation in different markets."*

6.71 One respondent also noted that while there would be additional costs, they would likely be comparable to those already associated with existing labelling requirements for non-precision bred varieties, stating:

> *"Yes, however we don't expect this cost to be any higher than the obligation for existing labelling requirements for non-precision bred varieties."*

Individual Responses

6.72 Individual responses to this question were wide-ranging and often did not directly address the specific question. A small number of responses did address cost-related themes more directly. These included references to potential labour costs (two responses), administrative costs (one response), legal and regulatory costs (one response each), and costs associated with testing (one response), equipment (one response), and maintaining organic integrity (two responses).

6.73 One respondent who agreed that extra costs would be incurred from the mandatory inclusion of precision bred status on labels for seed and other PRM identifying them as precision bred, stated:

> *"Possibly a very small additional cost of seed since seed suppliers will have extra regulation to comply with."*

6.74 Other individuals thought mandatory labelling could reduce their personal costs, as they would save time and money not having to research which varieties were PBOs if the information was present on a label.

“All Others” Responses

6.75 Among those who did anticipate costs, the potential expense of label production was highlighted (five responses), with three respondents noting that this would bring disproportionate and unnecessary costs. One respondent also mentioned the additional cost of the generation of genome sequence data if required (one response).

6.76 It was noted by two respondents that while labelling may not be the most significant cost, additional costs could be passed down the supply chain to farmers, stating:

> *“Our perception is that a voluntary system can be readily incorporated within existing PVR arrangements, so extra provision for PBOs will come at a relatively minor extra cost at the point of purchase. Mandatory inclusion will necessitate extra critical control points, procedures & bureaucracy that will not achieve anything and make the seed more expensive than it needs to be. To clarify, [businesses] understand that premium seed that has superior attributes is worth paying a premium for. They heavily resent paying a premium for what they see as extra bureaucracy.”*

Campaign Group Pre-Prepared Templates

6.77 Pre-prepared template text was not circulated by campaign groups for this question.

Question 18b. Summary of Citizen Space Responses

6.78 Responses indicated that most stakeholders did not expect businesses to incur additional costs from the mandatory inclusion of precision bred status on labels. Overall, 71% of respondents said they would not face extra costs, while 20% were unsure and only 9% anticipated additional expenditure.

6.79 Businesses were the least likely to expect cost impacts, with 80% responding “No”. Among the small number of businesses who did foresee costs, concerns focused on administrative burden, regulatory complexity, and the potential need for different labelling across markets. However, one respondent noted that any additional costs would likely be comparable to existing labelling requirements.

6.80 Individual responses were more varied, with some citing potential costs related to labour, testing, and maintaining organic integrity, while others suggested that clear labelling could reduce personal costs by simplifying purchasing decisions.

6.81 Responses from the “All Others” group showed slightly higher concern, with 18% anticipating additional costs. Comments from this group echoed concerns about labelling costs for breeders and the potential for disproportionate impacts on the sector. Some respondents argued that mandatory labelling could introduce unnecessary bureaucracy without improving transparency. Despite these concerns,

the majority across all groups did not expect significant cost implications from the introduction of mandatory labelling.

Question 19a. Do you think your business will incur extra costs if no mandatory requirement to include precision bred status on labels for seed and other plant reproductive material is introduced?

Table 16 Breakdown and percentage of answer, in response to the question "Do you think your business will incur extra costs if no mandatory requirement to include precision bred status on labels for seed and other plant reproductive material is introduced?"

Respondent Type	Total number of respondents	Total number 'Yes' of responses per respondent type (%)	Total number of 'No' responses per respondent type (%)	Total number of 'Unsure' responses per respondent type (%)
Individuals	284	167 (59%)	39 (14%)	78 (27%)
Businesses	83	68 (82%)	8 (10%)	7 (8%)
All Others	44	28 (64%)	8 (18%)	8 (18%)
All	411	263 (64%)	55 (13%)	93 (23%)

6.82 A total of 64% (263 respondents) answered 'Yes', that they thought businesses would incur extra costs if no mandatory requirement to include precision bred status on labels for seed and other PRM is introduced. A total of 23% (93 respondents) answered 'Unsure', and 13% (55 respondents) answered 'No' (please see Table 16).

6.83 82% of businesses (68 respondents) answered 'Yes', with only 8% (seven respondents) selecting 'Unsure'.

6.84 Individuals showed a more mixed view, with 59% responding 'Yes', 14% 'No', and 27% 'Unsure', the highest level of uncertainty among all groups.

6.85 The "All Others" group also leaned toward expecting extra costs, with 64% responding 'Yes' and 18% each for 'No' and 'Unsure'.

Question 19b. If you answered yes to the previous questions, what costs do you think your business will incur if no mandatory requirement to include precision bred status on labels for seed and other plant reproductive material is introduced?

Business Responses

6.86 Most business respondents indicated that they would incur additional costs if there were no mandatory requirement to include precision bred status on labels for seed and other PRM. Among organic businesses, 94% reported that they would face extra costs, while a smaller proportion (61%) of non-organic businesses expressed the same view.

6.87 The most frequently cited costs were administrative (26 comments from organic businesses, 10 from non-organic businesses), viability (13 comments from organic businesses, eight from non-organic businesses) and for organic businesses, compliance (14 responses). Respondents stated:

> *"We would have to look up every new variety on the register. This would place extra pressure on staff, especially in the busiest part of the season. There would be a significant risk of PBOs being missed, especially during busy periods and if staff were absent."*

> *"I will have to conduct lengthy research to check if varieties are Precision Bred or not. I will not be able to comply with organic standards or prove my crops, seeds and plant propagation materials are free of Precision Bred varieties or genetic material."*

6.88 In terms of administrative costs, respondents highlighted the burden of cross referencing and checking precision bred status with some respondents noting these costs included time and resource elements. A number of respondents indicated that their business would not be viable without mandatory labelling.

Individual Responses

6.89 Individual respondents also raised concerns about the potential for increased costs in the absence of mandatory labelling, although their responses often extended beyond the specific scope of the question. Administrative costs were the most frequently mentioned, with 40 respondents highlighting the time and effort required to verify precision bred status independently. One respondent stated that it would be:

> *"Expensive and time-consuming to trace and research each source of seeds to ensure they are not PBOs and are indeed, organic."*

6.90 Organic certification costs were cited by 28 respondents, reflecting concerns about the ability to maintain certification without clear labelling. A total of 13 responses referred to legal and reputational risks, and another 13 mentioned the need for more extensive supply chain audits, with one respondent stating that the costs would be incurred due to:

> *"significant challenge investigating if products have had gene editing in any part of their production in order to satisfy their own organic status and also consumers"*

6.91 Wider concerns such as business viability and economic impact (86 responses), and regulatory burden (37 responses) was noted, and 70 respondents referred to potential implications for trade and market access if there was no mandatory labelling. Further themes included freedom of choice (61 responses), trust and public confidence (40 responses), and the requirement for transparency and information access (82 responses).

"All Others" Responses

6.92 Of those who responded 'Yes' to question 19a, several concerns were raised if there was no mandatory requirement to include precision bred status within labelling. The most commonly mentioned cost-related concern was costs associated with the extra time and labour needed without labelling (six responses), including the additional costs required to research the status of precision bred plant varieties (eight responses) and the additional administrative burden (six responses).

6.93 Also important was the economic costs affecting growers, consumers and trade with regions with different legislation, such as the EU (seven responses), and complications for organic businesses, such as problems with certification and reputational risk (four responses), risk of contamination for traditional varieties (five responses), and a loss of trust and traceability (nine responses), as well as threatening the organic sectors net worth (seven responses). One respondent stated:

> *"Not having clear documentation to work on would make my job so much harder and potentially incur extra costs to us as an organic certification body having to ensure everything is clear and separate on our databases and systems. Current clear labelling for GM seeds and plants in the food chain works very well and helps the farmer to make their own free choice. If there would be no labelling then they would be working in the dark which for the organic sector would seriously undermine its reputation."*

Campaign Group Pre-Prepared Templates

6.94 Responses submitted using template text circulated by campaign groups; typically included the following key statements:
For businesses:

- *"My business may not be able to continue to uphold key social and environmental commitments we have made, and this may damage the viability of our business and damage trust with our customers."*
- *"It would be an administrative burden for us to cross reference all seed or other plant reproductive material that we buy against registers or variety lists. It is unclear how this would work – if indeed it were possible – and how much time and expense it would cost us."*
- *"It may mean that we are unable to trade with customers in devolved nations and Europe."*

For non-commercial growers, consumers, and concerned citizens:

- *"We do not yet know the costs to our economy of failing to label GM PBO seeds. There is likely to be an economic impact as a result of damage to our trade with Europe and internationally."*
- *"We do not yet know the costs to our health of failing to enable freedom of choice in relation to new GMOs."*
- *"We do not yet know the costs to our environment of allowing people to unknowingly plant new GMOs."*
- *"The UK organic sector is now worth £3.7billion. This market will be threatened by failure to label GM PBO seeds."*

6.95 A total of 57 individuals were identified as having submitted responses directly from the pre-prepared templates to answer Question 19b, with seven of those providing further information in addition to the pre-prepared template answers.

6.96 A total of 16 businesses were identified in as having submitted responses directly from the pre-prepared templates to answer Question 19b. Of these, ten were from organic respondents and six from non-organic respondents.

Question 19b. Summary of Citizen Space Responses

6.97 Responses revealed a shared concern across all respondent groups that the absence of mandatory inclusion of precision bred status on labels would lead to additional costs, particularly administrative and compliance related. However, the nature of these concerns varied.

6.98 The majority of businesses (82%), especially organic businesses (94%), anticipated extra costs. These were primarily linked to the need for manual verification of seed status, increased staffing, and the burden of demonstrating compliance with organic standards. Organic businesses also expressed strong concern about legal and

reputational risks, with some warning that their operations might become unviable without clear labelling.

6.99 Individuals also expected increased costs to businesses (59%), though with greater uncertainty (27% ‘Unsure’). Their concerns mirrored those of businesses, highlighting administrative burden, certification challenges, and the need for transparency, but were often framed in terms of consumer rights and freedom of choice. Many emphasised the importance of labelling for maintaining trust and enabling informed decisions.

6.100 The “All Others” group aligned closely with individuals and businesses in expecting additional costs (64%). Their responses focused on the risks to the organic sector, and potential trade impacts. Certification bodies and inspectors noted the operational challenges posed by the lack of clear documentation.

6.101 Across all groups, administrative burden was the most frequently cited cost, followed by compliance risks, market access concerns, and threats to business viability. While businesses focused more on operational and legal implications, individuals and “All Others” placed greater emphasis on transparency, traceability, and public confidence.

6.102 Overall, responses reflected a strong consensus that mandatory labelling is necessary to reduce costs, support compliance, and maintain trust across the supply chain.

Email responses

6.103 On information that was important to the respondent on precision bred plant varieties, a range of subjects were suggested, including information that would be captured in the publication of the proposed Precision Bred Variety List for England (PB VL) (e.g. a unique identifier, precision bred status), and details of the specific gene edit, traits introduced, and details of the genetic modifications, with the latter suggested by respondents from the organic and non-GMO industries. It was suggested that any information on precision bred plant varieties should be captured in several ways - in the proposed PB VL, seed labels, marketing material, and in trade and regulatory documents.

6.104 On the mandatory inclusion of precision bred status on labels for seed and other plant reproductive material (PRM), respondents were overall either supportive or accepting of labelling. The labelling of precision bred seed was seen by those respondents with specific organic and non-GMO interests as a way to maintain grower and consumer choice, a way to reduce contamination in supply chains, and to reduce the need for additional testing.

6.105 In comparison, respondents without organic or non-GMO specific interests felt that labelling may reduce the uptake of precision bred products and could lead to boycotting, reducing the impact of the new technology. It was suggested that labelling could be voluntary rather than mandatory as precision bred information would be included within marketing information accompanying seeds and other PRM. Respondents without organic or non-GMO specific interests also said that the mandatory inclusion of precision bred status on labels for precision bred seeds would create additional costs associated with the creation of new labels, and costs associated with compliance.

6.106 If no mandatory inclusion of precision bred status on labels for precision bred seeds were introduced, respondents with organic and non-GMO specific interests said that there would be an increased risk of contamination in those supply chains due to a lack of traceability, and that there would be a negative impact on the UK's ability to trade internationally, as well as creating challenges concerning the movement of precision bred plant varieties within the UK under the United Kingdom Internal Market Act (UKIMA) and the Windsor Framework.

Summary of Section 5 responses

6.107 Respondents identified a wide range of information as important for understanding precision bred plant varieties. Businesses, particularly organic ones, prioritised technical detail such as genetic modifications, breeding techniques, and unique identifiers to support traceability and regulatory compliance. Individuals and "All Others" focused on transparency, informed choice, and maintaining organic integrity. These themes were echoed in email responses, which also called for information to be available across multiple formats, including registers, labels, and marketing materials.

6.108 On the preferred format for sharing this information, there was strong support across all groups for a central, searchable register. Businesses also favoured clear labelling and inclusion in marketing materials, while individuals emphasised visibility at the point of sale. Although some raised concerns about regulatory burden, most respondents supported a multi-channel approach to ensure clarity and accessibility.

6.109 A total of 74% of all respondents believed that mandatory labelling of precision bred status would have a positive impact on their business, particularly organic businesses (94%). Respondents cited benefits such as informed choice, customer confidence, and regulatory compliance. Individuals and "All Others" also highlighted the role of labelling in supporting transparency, market access, and trust in the supply chain. Fewer respondents (9%) believed that mandatory labelling would have a negative impact, with businesses showing the least concern. Where concerns were raised, they focused on administrative burden, market flexibility, and the risk of

singling out precision bred plant varieties. Some respondents preferred voluntary or market-led labelling approaches.

6.110 A total of 71% of respondents did not expect to incur extra costs from mandatory labelling. Organic businesses were particularly confident, while non-organic businesses showed slightly more concern. Among those who did anticipate costs, comments focused on administrative complexity and market-specific labelling requirements. Some individuals noted that clear labelling could reduce personal costs by simplifying purchasing decisions.

6.111 In contrast, 64% of respondents believed that the absence of mandatory labelling would lead to additional costs, particularly among organic businesses. Respondents cited increased administrative burden, challenges in verifying seed status, and risks to certification and market access. Individuals and “All Others” echoed these concerns, with campaign responses warning of broader economic and reputational impacts.

6.112 Overall, responses across Section 5 reflected a strong consensus that mandatory labelling of precision bred status is essential to support transparency, reduce costs, enable informed choice and maintain confidence across the seed and PRM sector.

7. Next steps

7.1 We welcome the responses received to this consultation and have considered all feedback by those directly and indirectly affected by the topics covered. The government remains committed to the implementation of the Genetic Technology (Precision Breeding) Act 2023, and the feedback received will directly inform and shape the implementation of this Act within the plant varieties and seeds policy area.

7.2 We will continue to work on the implementation of the Act, and in doing so, we will ensure that information on precision bred plant varieties is transparent, accessible to all, and user friendly. This is in recognition of the feedback stating the importance of providing information to support transparency through the supply chains and to support decision-making.

7.3 We understand the importance of providing information in multiple, accessible formats throughout the supply chain but that any measures to support this, such as labelling, should be balanced to minimise the cost to businesses. We will use the feedback received to inform future decisions on the inclusion of precision bred status in mandatory labelling of precision bred seed and other plant reproductive material. Furthermore, we will work with other teams in Defra, other government departments, and industry to ensure that information on precision bred plant varieties is provided in a meaningful and effective way.

Annex A: Format of online consultation

Section 1: About you

This section contained questions on the respondents' demographic information.

1. Would you like your response to remain confidential (required)? [Yes, No]

If you answered Yes to this question, please give your reason(s) [Free text]

2. What is your name? [Free text]

3. What is your email address? [Free text]

4. Please tell us who you are responding on behalf of (required)? (Please select one option only)

a. An individual – You are responding with your personal views, rather than as an official representative of a business / business association / other organisation.
b. Non-governmental organisation – In an official capacity as the representative of a non-governmental organisation / trade union / other organisation.
c. Business – In an official capacity representing the views of an individual business.
d. Public sector body – In an official capacity as a representative of a local government organisation / public service provider / other public sector body in the UK or elsewhere.
e. Academia – In an official capacity as a representative of an academic institution.
f. Other please specify (please state)

5. If responding as an individual in Question 4, where are you based in the UK (required)? (Please select one option only) [England, Wales, Scotland, Northern Ireland, Other (please state)]

6. If responding as an organisation, business, public body, or academic institution in Question 4, what is the name of your business / organisation? [Free text]

7. Which of the following areas does your business or organisation operate in (required)? (Please select all that apply)

- Plant breeding
- Cultivation of crop plants
- Seed merchant / processing

- Research and Development
- Other sectors / activities (please state)

8. If responding as an organisation, business, public body or academic institution in Question 4, where does your business or organisation operate (required)? Please select all that apply.

- UK
- GB
- England
- Northern Ireland
- Scotland
- Wales
- Other (please state)

Section 2: Precision Bred Plant Variety List for England - supporting information

This section provided more detail on the proposed Precision Bred Plant Variety List for England.

Section 3: Precision Bred Plant Variety List for England - consultation questions

This section contained questions on the proposed Precision Bred Plant Variety List for England. Respondents were asked to ensure that they had read the supporting information in Section 2 before answering the following questions.

9a. Based on the explanation in the supporting information, do you understand the proposed process and requirements for the Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties? (Please select one option only) [Yes / No / Unsure]

9b. Please explain your answer to the previous question [Free text]

10a. Do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties will impact your business? (Please select one option only) [Yes / No / Unsure]

10b. If you answered yes to the previous question, what changes do you anticipate your business will have to make to adhere to the new legislation? (Please select all that apply)

- administration changes
- system changes
- other changes

10c. Please provide further details of any changes your business may have to make to adhere to the new legislation. [Free text]

11a. Do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties will benefit your business? [Yes / No / Unsure]

11b. If you answered yes to the previous question, what benefit(s) do you think the Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties may have on your business? [Free text]

12a. Do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties will have a negative impact on your business? [Yes / No / Unsure]

12b. If you answered yes to the previous question, what negative impact(s) do you think the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties may have on your business? [Free text]

13a. Do you think your business will incur extra costs because of the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties? [Yes / No / Unsure]

13b. If you answered yes to the previous question, what costs do you think your business will incur because of the proposed Precision Bred Plant Variety List for England for agricultural and vegetable plant varieties? [Free text]

14a. Do you agree to the publishing of notifications of the Precision Bred Plant Variety List for England in the Plant Varieties and Seeds Gazette? [Yes / No / Unsure]

14b. Please explain your answer to the previous question. [Free text]

Section 4: Information on seed and other plant reproductive material produced using precision breeding technologies - supporting information

This section provided more detail on the provision of information on precision bred seed and other plant reproductive material.

Section 5: Labelling of seed and other plant reproductive material produced using precision breeding technologies - consultation questions

This section contained questions on the provision of information on precision bred plant varieties, and the mandatory inclusion of precision bred status in labels for seed and other plant reproductive material. Respondents were asked to ensure that

they had read the supporting information in Section 4 before answering the following questions.

15a. What information, if any, on precision bred plant varieties is important to your business? [Free text]

15b. In what format should this information be made available? (For example, an accessible list or register) [Free text]

16a. Would the mandatory inclusion of precision bred status on labels for seed and other plant reproductive material to identify them as precision bred have a positive impact on your business? [Yes / No / Unsure]

16b. If you answered yes to the previous question, what positive impact(s) do you think the mandatory inclusion of precision bred status on labels for precision bred seed and other plant reproductive material may have on your business? [Free text]

17a. Would the mandatory inclusion of precision bred status on labels for seeds and other plant reproductive material to identify them as precision bred have a negative impact on your business? [Yes / No / Unsure]

17b. If you answered yes to the previous question, what negative impact(s) do you think the mandatory inclusion of precision bred status on labels for precision bred seed and other plant reproductive material may have on your business? [Free text]

18a. Do you think your business will incur extra costs if the mandatory inclusion of precision bred status on labels for seed and other plant reproductive material identifying them as precision bred was introduced? [Yes / No / Unsure]

18b. If you answered yes to the previous question, what costs do you think your business will incur due to the mandatory inclusion of precision bred status on labels for precision bred seed and other plant reproductive material? [Free text]

19a. Do you think your business will incur extra costs if no mandatory requirement to include precision bred status on labels for seed and other plant reproductive material is introduced? [Yes / No / Unsure]

19b. If you answered yes to the previous questions, what costs do you think your business will incur if no mandatory requirement to include precision bred status on labels for seed and other plant reproductive material is introduced? [Free text]

Annex B: Topics out of scope of the consultation

We received a high volume of responses on topics which were outside the scope of the consultation. For transparency, and to acknowledge all feedback received, a summary of the out-of-scope responses is captured below. This information has been passed onto the responsible teams and departments.

Definition of PBOs and relationship to GMOs

Objections to the separation of PBOs from GMOs, arguing that PBOs should be regulated under the same framework as GMOs and calls for this classification to be reconsidered.

Reason this issue is out of scope: This issue was addressed and resolved through the Genetic Technology (Precision Breeding) Act 2023, which legally defines PBOs as distinct from GMOs in England. The consultation did not seek views on this definition or the broader legislative framework.

Opposition to the use of precision breeding technologies

Opposition to the use of precision breeding technologies in agriculture citing ethical, environmental, human health, or philosophical concerns.

Reason this issue is out of scope: Ethical and philosophical perspectives are acknowledged but were not within the remit of this consultation. The use of precision breeding technologies has already been established under the Genetic Technology (Precision Breeding) Act 2023.

Calls for a moratorium or ban on PBOs

Calls for a moratorium or outright ban on the development, sale, or cultivation of PBOs.

Reason this issue is out of scope: The consultation did not seek views on whether PBOs should be allowed. The legal framework permitting their use has already been established under the Genetic Technology (Precision Breeding) Act 2023.

Requests for broader risk assessments or reclassification

Requests that all PBOs undergo full environmental and health risk assessments.

Reason this issue is out of scope: The risk assessment approach for PBOs was established under the Genetic Technology (Precision Breeding) Act 2023 and

associated guidance. The consultation did not seek views on the risk classification or regulatory thresholds for PBOs.

Comments on the use of PBOs in food and feed

Concerns about the use of PBOs in food and animal feed, including calls for labelling of food products derived from PBOs.

Reason this issue is out of scope: The scope of the consultation was limited to seeds and plant reproductive material. The regulation of PBOs in food and feed is being addressed separately by the Food Standards Agency (FSA) and was not within the scope of this consultation.

Broader ethical or societal concerns

Broad ethical concerns about the role of biotechnology in agriculture, including its impact on traditional farming practices and corporate control of the seed supply, including through the use of patents.

Reason this issue is out of scope: The consultation was focused on the technical and procedural aspects of implementing the proposed Precision Bred Plant Variety List for England (PB VL). Ethical and societal debates about biotechnology therefore fall outside the scope of this consultation.

Plant Breeders' Rights

Questions and concerns on how Plant Breeders' Rights (PBR) will be granted for precision bred plant varieties, and how they will interact with patents.

Reason this issue is out of scope: The consultation focused on the implementation of the proposed PB VL which is separate to the process of the granting of UK PBR and was therefore out of scope. There are currently no plans to change the way in which UK PBR are granted for precision bred plant varieties.

Cost of DUS Testing

The requirement and cost of undertaking DUS testing in the UK for all plant varieties.

Reason this issue is out of scope: The consultation asked for feedback on the proposed PB VL, and on the provision of information on precision bred status of plant varieties. As such, current policy on DUS testing and associated fees for non-precision plant varieties was out of scope.

Annex C: Summary of template responses

All responses were included in the analysis, whether they followed only the template or included extra information.

As part of the analysis of responses to the consultation, 110 submissions were identified as having been based on pre-prepared templates provided by stakeholder campaign groups. The templates reflected a coordinated position and contained structured language and recurring phrases intended to guide respondents in expressing their views on the listing, labelling, and traceability of precision bred plant varieties.

To support a structured understanding of the issues raised, a selection of key phrases from these templates were extracted and categorised according to thematic areas relevant to the consultation. Each phrase was assigned a primary and secondary theme, based on its content and the context in which it was used. The themes used for classification included:

- Transparency & Information Access
- Freedom of Choice
- Labelling & Traceability
- Health & Environmental Risk
- Business Viability & Economic Impact
- Regulatory Burden
- Trade & Market Access
- Trust & Public Confidence

This thematic categorisation provided a concise summary of the main concerns and priorities expressed through the template responses and supported the broader analysis of stakeholder feedback received during the consultation process.

Transparency and Information Access

Covers the need for clear, centralised, and accessible public data on which varieties are PBOs, what modifications they contain, and where they appear.

Issue raised by template respondents: Respondents identified the need for a centralised, publicly accessible register of precision bred plant varieties. They requested that this includes information on the nature of the genetic modifications and the breeding techniques used and expressed concern about the accessibility and usability of existing information sources.

Freedom of Choice

Encompasses the respondent's ability to make informed decisions including planting, purchasing, or avoiding PBOs.

Issue raised by template respondents: Respondents stated that access to information on the precision bred status of plant varieties is necessary to support decision-making by farmers, businesses, and consumers. This was considered particularly relevant for operators in the organic sector.

Labelling and Traceability

Focuses on the need for mandatory, visible labelling of PBOs on seed packets, registers, marketing materials, and product packaging. Also includes requests for detailed traceability (e.g. unique reference numbers, techniques used).

Issue raised by template respondents: Respondents supported mandatory labelling of precision bred status on seed packets, registers, and marketing materials. Some also proposed the inclusion of unique reference numbers and detailed descriptions of the genetic techniques used.

Health and Environmental Risk

Reflects concerns over the long-term effects of PBOs on ecosystems, biodiversity, and human health.

Issue raised by template respondents: Concerns were expressed about the effects of precision bred organisms on human health, biodiversity, and ecosystems. Respondents questioned whether the current regulatory framework provides sufficient oversight and monitoring.

Business Viability and Economic Impact

Captures concerns that lack of regulation, traceability, or labelling will damage the viability of organic businesses, increase costs, and threaten consumer trust, particularly in sectors where non-PBO status is critical.

Issue raised by template respondents: Respondents expressed concern that the absence of labelling and traceability requirements could affect the viability of businesses operating in the organic sector. They also raised concerns about potential increases in compliance costs and the impact on consumer confidence.

Regulatory Burden

Relates to the administrative load and inefficiency of manually verifying PBO status. Includes calls for clarity on how the new rules will operate in practice.

Issue raised by template respondents: Respondents indicated that the proposed framework may result in additional administrative requirements, particularly for businesses that need to verify the precision bred status of plant varieties. They requested the development of a streamlined system and clear guidance on compliance obligations.

Trade and Market Access

Concerns about trade disruption, particularly with the EU and devolved governments, due to inconsistent labelling standards. Reflects concern that businesses could lose access to markets without alignment.

Issue raised by template respondents: Concerns were raised about potential trade disruptions resulting from regulatory divergence between England, the devolved governments, and international partners, particularly the EU. Respondents noted that inconsistent labelling and regulatory standards could affect market access.

Trust and Public Confidence

Speaks to the relationship between transparency, trust in government agencies (e.g. Defra, FSA, APHA), and respondent confidence. Respondents raise concerns about public perception and reputational damage.

Issue raised by template respondents: Respondents noted that transparency and public engagement are important for maintaining trust in regulatory bodies. They suggested that greater public involvement and improved communication strategies could enhance confidence in the regulatory process.