



2 October 2025

Dear Sir/Madam

Response to the policy review for tomato brown rugose fruit virus (ToBRFV)

Thank you for submitting views on the policy review which assessed the quarantine status and current regulations of ToBRFV in Great Britain (GB). This letter is to notify you of the outcome.

Recommendations

The policy review concluded that there should be no changes to the quarantine status or associated regulations for ToBRFV. However, it proposed that the situation should continue to be monitored and a further review held if:

- ToBRFV becomes widespread in GB and eradication is no longer feasible;
- Tolerant and resistant varieties become widely adopted and reduce impacts to an acceptable level; or
- Seed interceptions are reduced to a marginal level.

Background

ToBRFV is a damaging pest of tomatoes, which has been recorded to infect up to 100% of the crop and cause yield losses of between 25 and 70%. Since the virus was first observed in Israel in 2014, it has spread to other parts of Asia and to Africa, Australia, Europe, North America and South America.

ToBRFV is currently listed as a quarantine pest (QP) in GB and there are specific import requirements for seeds and plants for planting (excluding seed) of *Solanum lycopersicum* (tomato) and *Capsicum* (pepper) spp. to prevent the introduction of the virus into the country.

There have been 14 outbreaks of ToBRFV in GB since 2019, nine of which have been declared eradicated, with eradication measures being applied at the five remaining outbreak sites.

The EU Commission has adopted new legislation to reclassify ToBRFV from being a QP to a regulated non-quarantine pest (RNQP), as the virus is now widely distributed in the Union territory and has increased its area of distribution worldwide. To consider this change of approach, a policy review was carried out to assess the quarantine status and current regulations of ToBRFV in GB. A stakeholder engagement exercise was subsequently held between March and June 2025.

Summary of responses to the engagement exercise

Four responses were received. The British Tomato Growers' Association and National Farmers' Union were supportive of the conclusions of the policy review, while Euroseeds and Rijk Zwaan were not supportive and raised several concerns.

The British Tomato Growers' Association commented that whilst they appreciated the European Union have now moved to a RNQP position for ToBRFV, they agree with the Defra assumption that British crops are currently in a significantly better position than those in the EU (we do not have extensive outbreaks) and only approximately 44% of commercial tomato crops grown in GB are of the 'resistant' cultivar types. The National Farmers' Union added that no changes should be made and ToBRFV should continue to be classified as a QP, while its distribution is limited in GB and eradication remains a possibility.

Both the British Tomato Growers' Association and National Farmers' Union welcomed the continued dialogue between Defra, the Animal and Plant Health Agency (APHA), Fera Science Ltd., the British Tomato Growers Association and growers, which is helping to manage ToBRFV and shape future policy regarding the virus.

Euroseeds and Rijk Zwaan raised the following concerns:

- That GB is not aligning sufficiently with the EU.
- The virus is widely distributed, highly transmissible and difficult to eradicate.
- There are significant costs on seed suppliers, growers and regulators, if the current regulations are maintained.
- The current policy does not create a level playing field.
- There are a lack of outbreaks and impacts in pepper production.
- Having multiple import requirements for seed and plants for planting (excluding seed).
- Providing additional declarations for many import countries and having to state the name of the site of production on the phytosanitary certificate.
- The extent of seed testing at the border.

- The testing sensitivity for seed.
- Delays at the border.

These concerns are discussed in more detail in the next section.

Key concerns and government response

Alignment with the EU

Concern – As of 1st January 2025, the EU reclassified ToBRFV from a QP to a RNQP. This change reflects a shift in how the virus is managed—focusing on preventive measures (like seed testing and hygiene protocols) rather than strict quarantine and eradication.

Response – While the EU has reclassified ToBRFV as a RNQP, GB is in a different position to the EU. The virus is not widely distributed in GB and we continue to eradicate outbreaks as they arise. ToBRFV did not meet the RNQP criteria when assessed as part of the policy review, as it still qualified as a QP.

Distribution of the virus and management challenges

Concern – ToBRFV has become widely distributed across many countries, including the UK. Its high transmissibility and difficulty in eradication make it impractical to maintain strict quarantine measures. Instead, the focus is shifting toward risk mitigation through:

- a. Use of resistant varieties of tomato and pepper.
- b. Seed certification and testing.
- c. Improved hygiene and biosecurity in production systems.

Response – ToBRFV is not widely distributed in GB. There are currently five active outbreaks, which are all under eradication. While the virus is difficult to eradicate, particularly because it is mechanically transmitted and can remain viable for long periods, we have successfully eradicated it on nine occasions, with most outbreaks being declared eradicated within two years, and are confident that eradication can be achieved at the remaining sites.

Seed testing and good biosecurity are measures we have implemented to prevent the introduction of the virus into GB and keep it at a manageable level. We encourage the development and use of “resistant” varieties to minimise the impacts of ToBRFV. If these varieties become widely adopted and reduce impacts to an acceptable level, we recommend a further review of our regulations and policies.

Pathways

Concern – We recognise that if ToBRFV is present only in a limited part of GB and eradication measures have shown and remain to be effective, there is reason to maintain the quarantine status of this pest. In spite of this, we would like to highlight that there are several other pathways other than seed that could lead to new introductions in GB.

Response – We are aware of pathways other than seed, including plants for planting. We have adopted regulations on plants for planting, namely seed testing and field inspection, to mitigate this risk. Fruit is also a pathway, with the risk being higher if the fruit is stored or repacked at destination in facilities that also grow host fruits or repacked at destination in facilities that also pack local fruits. While there are no specific regulations on fruit for ToBRFV, a phytosanitary certificate is required for the import of tomato and pepper fruit into GB, and we have recommended biosecurity measures in our ToBRFV contingency plan and factsheet to minimise transfer of the virus from fruit.

Regulation of pepper

Concern – We would like to highlight that all outbreaks have been in tomato production and not pepper. While it is noted that there may be justification for keeping regulations in place for plants which do not harbour the L1, L3 or L4 genes/alleles that result in the resistance, the non-existing outbreaks on pepper in GB show that the impact does not exist. The number of interceptions on pepper for the past two years has also been zero.

In the review of Defra, it is noted that Defra has never been provided with a list of resistant pepper varieties. We would like to highlight that in several EU Member States, such lists have been created in cooperation with the registration offices and that it should be possible for GB to establish such a list.

Response – As noted in our review, there have been records of impacts in pepper from other countries, including Italy and Mexico, and therefore there is justification for keeping regulations in place for plants which do not harbour L1, L3 or L4 genes/alleles. For plants which do harbour these genes, there is an exception in our legislation, which means that seed and plants for planting are not subject to the regulations. The onus is on importers to provide us with evidence that the varieties they are importing are resistant. Otherwise, they will have to follow the regulations as for non-resistant varieties.

Multiple import requirements for seed and plants for planting

Concern – Current measures on seeds of *Solanum lycopersicum* and varieties of *Capsicum* spp. demand double requirements on measures as denoted by 'and' in the following measures:

- a. That the mother plants of seeds have been produced in a production site* where tomato brown rugose fruit virus is known not to occur on the basis of official inspections carried out at the appropriate time to detect that pest, and
- b. That the seeds or their mother plants have undergone official sampling and testing for tomato brown rugose fruit virus and have been found, according to those tests, to be free from that pest.

Considering the double requirement of a laboratory test AND field inspection for seeds, we kindly request Defra to refrain from double requirements as denoted by 'and' in the measures above.

Current measures on plants for planting of *Solanum lycopersicum* and varieties of *Capsicum* spp. not known to be resistant to ToBRFV demand double requirements on measures as denoted by 'and' in the following measures:

- a. the plants are derived from seeds which have undergone sampling and testing for tomato brown rugose fruit virus in the manner set out in column (3) of entry 6 which has shown them to be free from that pest, and
- b. the plants have been produced in a production site* which is registered and supervised by the national plant protection organisation in the country of origin and is known to be free from tomato brown rugose fruit virus on the basis of official inspections carried out at the appropriate time to detect that pest, and where the plants have shown symptoms of tomato brown rugose fruit virus, the plants have undergone official sampling and testing for tomato brown rugose fruit virus and have been found, according to those tests, to be free from that pest.

Considering the double requirement, we would like to emphasise that young plant raisers from the EU that move plants into GB are not necessarily seed companies and therefore the capability to comply with the item a depends in many cases on the seed providers, and therefore it creates a hurdle for the seed industry to provide extra information to support the exports to GB. Therefore, we request Defra to refrain from double requirements as denoted by 'and' in the measures above.

Response – Carrying out a combination of field inspection and testing provides an effective means of minimising the introduction of ToBRFV. While field inspection will be effective in detecting symptoms when present, there will be situations when field inspection will not be as effective, such as in young plants and “resistant crops” which present less or no symptoms. Likewise, seed and mother plant testing will be able to detect the virus down to a certain level, but will not catch very low concentrations of the virus. Research has shown that testing 3000 seeds in large seed lots is unlikely to detect all instances of ToBRFV, for example. We have continued to intercept the virus on seeds, despite the regulations in place. The measures provide a balance between preventing the entry of the virus, whilst not being too costly to seed suppliers, propagators and producers.

Traceability

Concern – ISPM 38 on the International Movement of Seeds describes the specific phytosanitary certification challenges for seeds, i.e. re-export to many destinations, repeated re-export from the same seed lot and long-term storage. For example, seeds produced in one country and exported to a second country for processing (e.g. pelleting and coating), testing and packing may then be re-exported to numerous other destinations (including the country of origin). At the time of production of the seeds, the destination countries and their phytosanitary import requirements may not be known, especially if several years pass between production and export to the final destinations.

With these common practices in place, it is very challenging to provide specific additional declarations for a large number of importing countries. In addition, it is not standard practice to provide information about the production site(s) on the phytosanitary certificate. We would therefore advise to remove the requirement of
*The name of the site(s) of production must be included in the phytosanitary certificate under the heading “Additional declaration”.

Response – While we appreciate that the seed supply chain is complex, we do not think it is unreasonable to require companies to keep records of this information, which will be important for tracing back any issues. Stating the name and site of production is also common practice for plants and plant products, but it has come in more recently for EU trade.

Economic and practical considerations

Concern – Maintaining ToBRFV as a QP imposes significant costs on seed suppliers, growers and regulators, including:

- a. Destruction of thousands of seeds per batch on import to the UK. Currently there is a 100% seed inspection rate with destructive sampling.

- b. Delays to plant raisers in the UK as seed is held at the port (average wait time at port 36 days).
- c. Small quantities of trial material including 'Rugose Defence' varieties are destroyed, meaning UK growers are at a disadvantage by not having disease resistant varieties in the UK. EU growers have this and grow this first.
- d. Mandatory destruction of infected crops.
- e. Movement restrictions.
- f. Ongoing surveillance and reporting obligations.

Reclassifying it as a RNQP allows for more flexible, cost-effective management, while still protecting plant health.

We note that one of the key concerns for the industry with the current ToBRFV status and related measures is the 100% import control of both tomato and pepper seed that is imported into GB. While the policy review considers that despite only one interception last year, a moderate number of interceptions may still justify this 100%, we recommend a risk-based approach where seeds from EU countries are not tested upon arrival as seeds have already been tested prior to export. A key aspect of this recommendation also comes from the implications on the movement of seed, as a result of 1) the size of the samples taken, 2) the delays in testing and releasing the seeds while not being stored under ideal conditions. We note with concern the burden on cost for the seed companies to the UK officials including for inspection, testing and holding of seeds at the border. Therefore, it is important that Defra offers a policy that creates a level playing field and burden less as it has recently introduced on the import of fruit and vegetables from EU to the UK.

Response – The seed testing requirements at the border have helped to protect tomato and pepper propagation and production in GB. The number of tomato and pepper seed interceptions has fallen since 2022, but there were still 18 interceptions in 2024, including multiple interceptions of potato spindle tuber viroid. If this seed had not been destroyed, the seed may have gone on to produce an infected crop, resulting in greater costs down the line.

However, given the fall in interceptions, we will be reviewing whether testing 100% of tomato and pepper seed is still appropriate.

While there is mandatory destruction of infected crops in an outbreak situation, fruit can still be sold direct to retail/wholesale or moved to other production sites for packing under statutory plant health notice, provided there are deemed to be suitable hygiene measures in place to prevent infection of growing crops. Ongoing surveillance and reporting of ToBRFV is good practice to ensure that outbreaks are identified early, increasing the chance of eradication and minimising costs.

The current policy does not create a level playing field

Concern –

- a. Seed testing requires 100% of batches imported are tested.
- b. Rijk Zwaan commented that the sensitivity of testing in the UK is too high. Defra uses Ct values that may give a positive result, where scientific evidence suggests that a Ct value of that sensitivity relates to the detection of a few molecular RNA fragments, not full genome encapsulated virus particles. Euroseeds requested a harmonised testing sensitivity between EU and the UK because at the moment they experience an unnecessary failure on import control for pepper and tomato seeds imported from the EU. This introduces a superfluous barrier to seed movement.
- c. Seed companies are charged for inspection, testing and the cost of holding seed at the border.
- d. Rijk Zwaan noted that there is no certainty of the environment in which the seed is held at the border. Meaning released seed may have been adversely affected by its time held at the port. Euroseeds added that the checks at customs, including the testing, can take an average of 36 days while seed are held at ports. Meanwhile seeds are stored at customs, which are often not ideal conditions for seeds to be stored, and that can negatively impact the quality. These delays greatly impact the availability of seed to the UK plant raisers and growers on time for sowing.
- e. Inexperienced APHA border control staff can take incorrect sample sizes.
- f. The same seed can then be imported to the UK when transformed into plants with an inspection rate is 10%. This is a leaf sample, non-destructive and the plants can continue to the nursery.
- g. The government has scrapped border checks on fruit and veg imported from the EU fruit and veg import checks scrapped ahead of UK-EU deal - GOV.UK.

Response –

For point a, see our response to the concerns about economic and practical considerations.

For point b, the methods used for testing for the detection of the presence of ToBRFV have been validated. It is acknowledged that a blanket threshold ("cut-off") is not applied on import testing, which is supported by the variability recorded during the validation exercise. All methods used are included in the EPPO standard, and the laboratory took part in both the initial Test Performance study for these tests and regularly takes part in proficiency testing to ensure the reliability of diagnosis. To avoid erroneous reporting, a sample is not interpreted as being positive unless there is (1) an initial result with target amplification from the Menzel and Winter primers (Detecting the CP region / ORF4) **AND** (2) a second extraction is carried out from the original homogenate and tested again with the Menzel and Winter primers, the ISF-CaTa-28 (Movement protein / ORF3) and the Bernabe-Orts primers (small replicase subunit / ORF1). This ensures detection of three separate parts of the ToBRFV Genome. If this is not achieved, a sample is reported as inconclusive.

In cases where these real-time RT PCR tests indicate an adequate concentration of the virus in the sample, it will also be confirmed using both conventional PCR followed by Sanger (partial) sequencing, and high throughput sequencing to obtain the whole genome.

For point c, the 2025 UK Border Strategy sets out our vision for the UK border to be the most effective in the world. The border retains the global standard sanitary and phytosanitary (SPS) control concepts of pre-notification, health certification and inspection at a Border Control Post or Control Points that are well established mechanisms across the world for plant health import controls. The official controls at the border are provided at a sufficient level to protect and enhance our biosecurity and maintain our reputation as an exporter with good regulatory standards. The requirement for testing on seeds is required as most diseases cannot be detected by visual examination and are required to be sent to the National Reference Laboratory (NRL) for sampling and testing. Samples are time critical, and the NRL ensures that diagnoses are carried out as quickly as possible.

It is UK Government policy to charge for many publicly provided goods and services.

The standard approach is to set fees to recover the full costs of service delivery. This relieves the general taxpayer of costs, so that they are properly borne by users who benefit from a service. It allows for a more equitable distribution of public resources and enables lower public expenditure and borrowing.

Charging for plant health services is consistent with the principle that businesses using these services should bear the costs of any measures to prevent harm that they might otherwise cause by their actions or non-actions, since most serious pests and diseases that arrive and spread in this country do so via commercial trade in plants and plant products. The revised import fees model was introduced in July 2022 and ensures a fair allocation of cost to the industry. It addresses stakeholders concerns over the unintended consequences on the competitiveness of GB businesses versus those in the EU.

For point d, designated plant specific BCP facilities must provide temperature-controlled zones, dedicated inspection and bio secure detention areas and extensive cleaning protocols to avoid the spread of harmful pests and diseases. Most BCPs can unload six or more vehicles at a time with ample space to remove or inspect products through a sealed docking bay with palletted lorries. Consignments that are flagged for an inspection are held in suitable temperatures in a fully enclosed dedicated area.

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Turnaround times start when a sample is accepted by the NRL. For diagnoses, tests for individual pests, turnaround times can be between 3-20 days. This is all done under strict quality control processes to prevent any contamination.

Where a sample is required, all goods, including plants for planting are held at the Border Control Post or Control Point pending the diagnosis and are not allowed to move inland until a diagnosis has been received. In a consignment where there are multiple genera but only one requires a sample to be taken, only that Genera will be required to remain on hold pending lab diagnosis, the remainder can be released, if there is no suspicion of pest or disease.

For point e, APHA's plant health import inspection process is accredited to the ISO 17020 Inspection Standard¹, which is subject to external audits from the UK Accreditation Service (UKAS). Inspectors are rigorously trained and are equipped to ensure SPS goods are handled safely and with care. PHSI do not perform an independent inspection without first being trained and signed off as being competent by an approved PHSI. This allows for a consistent and accurate standard of import inspections across England and Wales, for both EU and non-EU goods.

All other members of staff working within a BCP facility are trained to meet standard operating procedures, ensuring inspections are undertaken safely, efficiently, and accurately. Where appropriate, staff will be trained to meet SPS processes and procedures and identify cases of non-compliance.

For point f, seed currently has a higher inspection and testing rate because seed present a high risk of transferring latent pests. There is a risk of seed being used for propagation and infected material being moved to multiple premises.

For point g, even before the postponement of checks on certain fruit and vegetables imported from the EU, we did not have specific import requirements for tomato or pepper fruit as regards ToBRFV.

Next steps

We would like to thank those responding for taking the time to submit views on the policy review for ToBRFV.

Although there were several concerns voiced by Euroseeds and Rijk Zwaan, no significant new evidence was provided that had not been taken into account during the initial review to suggest that ToBRFV should be reclassified as an RNQP. However, we will be taking on board the arguments raised with respect to seed testing and we will review whether 100% testing of tomato and pepper seed is still appropriate.

We hope this letter demonstrates the reasoning behind our decision and that we have sought to find a solution which reflects the current position and the views expressed from different stakeholders. We will be pleased to continue engaging with you about this pest.

If you have any views about how this review was handled, or its outcome, please let me know.

Yours faithfully,

A handwritten signature in black ink, appearing to read "Michael".

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