

EXPLANATORY MEMORANDUM TO
THE PLANT HEALTH (ENGLAND) (AMENDMENT) (No. 2) ORDER 2012
2012 No. 3033

1. This explanatory memorandum has been prepared by the Food and Environment Research Agency (FERA), an executive agency of the Department for Environment, Food and Rural Affairs, and is laid before Parliament by Command of Her Majesty.

This memorandum contains information for the Joint Committee on Statutory Instruments.

2. **Purpose of the Instrument**

This Order amends the Plant Health (England) Order 2005 (S.I. 2005 No. 2530) (“the PH Order”), which contains measures to prevent the introduction and spread of harmful plant pests and diseases. It introduces measures to address an increased risk of harmful organisms being introduced through consignments of potatoes from certain other EU member states.

3. **Matters of special interest to the Joint Committee on Statutory Instruments**

The poor 2012 UK potato harvest has resulted in a shortfall of potatoes. UK companies are urgently looking further afield for supplies, including some (particularly Poland) where ring rot – a harmful disease of potatoes – is known to be present. There has been an increase of potato imports from such areas recently, with some evidence of non-compliance with existing plant health arrangements, resulting in an increased threat associated with this trade. There is also the possibility of companies sourcing potatoes from other sources where ring rot and other serious potato diseases are present, including Romania. In order to address the increased level of potato imports from areas where ring rot is present and the heightened and immediate risk of infected consignments entering England, this order breaches the normal 21 day rule for parliamentary scrutiny.

4. **Legislative Context**

- 4.1 Council Directive 2000/29/EC on protective measures against the introduction into the EU of organisms harmful to plants or plant products and against their spread within the EU¹ (“the Plant Health Directive”) establishes the EU plant health regime. The Plant Health Directive is implemented in England by the PH Order and by the Plant Health (Forestry) Order 2005 (S.I. 2005/2517) which extends to Great Britain. Similar but separate legislation to the PH Order operates in Scotland, Wales and Northern Ireland.

¹ This Directive can be found at <http://europa.eu.int/eur-lex/en/search/index.html>.

- 4.2 Existing measures in the PH Order provide for imports of seed potatoes (i.e. potatoes for planting) from all member states to be notified before they are landed. These measures need to be strengthened in order to safeguard England from an increased risk of consignments of ware potatoes (i.e. potatoes for processing or consumption) from certain member states arriving which are infected with ring rot and other potato pests and diseases . These changes are described in more detail below. This Instrument amends the PH Order to include measures aimed at addressing this risk.

5. Territorial Extent and Application

This instrument applies to England only. It is already a statutory requirement in Scotland for all potatoes grown in Poland to be notified before they are landed in Scotland.

6. European Convention on Human Rights

As the instrument is subject to negative resolution procedure and does not amend primary legislation, no statement is required.

7. Policy background

- 7.1 Poland joined the European Union in 2004. Ring rot (*Clavibacter michiganensis* ssp *sepedonicus*) was previously unregulated in Poland, as it is still in many other non-EU countries such as the USA. Given other member states' concerns about ring rot in Polish potato production, a precautionary system was adopted by Poland, requiring all consignments being despatched to other member states to be officially tested for ring rot and for member states to be notified by the Polish authorities of the movement. An official testing certificate accompanies the consignment. Although the level of ring rot in most new member states has generally fallen since accession and adoption of the EU controls, Poland still experiences hundreds of positive cases each year and their testing and notification system remains in force.
- 7.2 To supplement the Polish system, legislation was introduced in the UK in 2004 requiring statutory notification of imports of Polish potatoes, to allow monitoring and targeted inspection. This system stayed in place until 2008. Given an improving position in Poland and sporadic findings in other countries it was then replaced in England with a requirement for all imports of seed potatoes grown in all other EU countries and Switzerland to be notified before their landing. Infected seed potatoes present a much higher risk to UK crops than ware potatoes, because of their potential to spread infection when multiplied and distributed. Scotland kept its requirement for imports of all Polish potatoes to be statutorily notified, partly based on their protected area status for seed potato production.
- 7.3 In most years there is little demand in the UK for Polish potatoes and imports have been few. However, given a poor potato harvest in UK in 2012, with a possible reduction in production from 6 to 4.5 million tonnes, traders are looking for other supplies. Poland is a major producer and so traders have been buying

from there. To remind traders of the Polish requirements on consignments of potatoes exported to other EU countries, as well as the requirements for importing ware potatoes from other sources, Fera wrote to industry representatives on 6th November.

- 7.4 One sample, taken by Fera inspectors from a consignment of Polish ware potatoes imported without a certificate before the letter was circulated, has now tested positive for ring rot on routine tests. Final confirmation of the result depends on a lengthy bioassay method prescribed by the EU rules. The potatoes had already been processed at the time the test result was received. The processing plant has good waste disposal and biosecurity facilities and the risk of spread from that consignment is judged to be very slight. Since the letter was issued, Fera has identified a further consignment of Polish ware potatoes with no certification, highlighting the increased risk associated with this trade.
- 7.5 Given the increased imports of Polish potatoes, including the risk of some bypassing the official Polish testing arrangements, there is currently a high risk of consignments of Polish potatoes entering the UK infected with ring rot. Although most of these are expected to be for processing, there is a risk of cross contamination with seed potatoes leading to outbreaks in future years' potato production. The instrument amends the PH Order to require all Polish potatoes to be accompanied by the official Polish test certificate. It also introduces a requirement for any imports of Polish ware potatoes to be notified before they are landed so that additional checks and tests can be carried out where appropriate. This supplements the existing notification requirement for seed potatoes from all member states. We are working closely with the Polish authorities to confirm the authenticity of certificates received and to provide the information necessary to facilitate investigations of Polish exporters where necessary.
- 7.6 The instrument also introduces notification requirements for ware potatoes from Spain, Portugal and Romania. Next to Poland, Romania experiences most ring rot outbreaks in the EU and while there is no evidence of significant imports from Romania at present, statutory notification will allow the trade to be monitored and targeted inspections to be carried out. Spain and Portugal are experiencing outbreaks with two other serious potato organisms, potato brown rot and Epitrix. The latter represents a serious plant health threat to the UK potato industry and would be impossible to eradicate if introduced. The risk has been recognised at EU level and an emergency Decision was adopted this year against this pest. Spain and Portugal are the only two countries in the EU where the pest is present and a statutory notification system for potatoes from these sources will allow targeted inspections and monitoring to be undertaken.

8. Consultation outcome

No formal consultation has been undertaken. However, key stakeholder organisations, including the Potato Council, the British Potato Trade Association, the Fresh Potato Suppliers Association, Potato Processors Association and National Farmers Union, have been consulted informally and support the changes introduced through the amending order.

9. Guidance

We have informed the main stakeholders and a summary of the changes will be placed on our website.

10. Impact

A preliminary impact assessment has been prepared and is attached.

11. Regulating small business

The legislation applies to all businesses importing controlled plant health material, including small businesses.

12. Monitoring and review

We will continue to monitor the situation and the need for future amendments to take account of new or revised risk assessments, pest interceptions and other developments.

13. Contact

Richard McIntosh, Room 10GA07, Fera, Sand Hutton, York, YO41 1LZ; Tel: 01904 465632; e-mail: richard.mcintosh@fera.gsi.gov.uk can answer any queries regarding these Regulations.

Preliminary Impact Assessment for Potato Ring Rot

This document summarises the finding of Fera's preliminary assessment of risk posed by increased imports of ware potatoes from Poland due to a shortfall in the UK supply in 2012. This has resulted in approx. 983% increase in imports from Poland between 2011 (101 tonnes) and 2012 (1095 tonnes). Nevertheless, imports from Poland to date are only 0.065% of the total UK imports in 2012 (estimated at 1.67 million tonnes).

Ring rot is endemic in Poland and is also present in a number of other EU MS countries in the region. Given that the risks posed by imports from Poland could threaten the integrity of the current disease-free status, the impact of three policy options on UK industry and government expenditure are assessed in terms of their relative ability to maintain, improve or weaken the effectiveness of the current EU quarantine regime for ring rot. Regardless of the option adopted, the quarantine legislation will require UK authorities to eradicate the disease if it is found in the UK. Under this regime, all affected produce will be destroyed and farms placed under restriction for some time to prevent that contaminated land is used for potato cropping. The scale of imports from Poland and the links required from such ware potatoes, if infected, to UK potato crops in the field mean that the risk of disease entering and becoming established by this means is very small. Furthermore, an existing Polish law, which requires exporters to seek certification, reduces the risk. However, any additional controls over and above the current baseline quarantine controls to minimise would entail costs.

The main costs of disease include losses to affected growers due to yield loss and disposal costs and, for wider industry, due to potential reduction in export volumes. Government may also incur costs in disease eradication. Evidence from three previous outbreaks of ring rot suggested that the main Government costs are due to sampling and monitoring activities required by EU quarantine law.

On that basis we have estimated that:

- **Under Option 1** (Do Nothing– baseline of relying on existing EU legislation only), the risk associated with imports from Poland is likely to result in social cost of £35k over 10 years, 2013-2022. The annual benefit of the existing quarantine measures over the same period is estimated to be approx. £2.56 million.
- **Under Option 2** (Legislate by requiring certification of imported Polish potatoes), the risk associated with imports is assumed to diminish (by 85%), resulting in cost of approx. £9k over the 10 years. The net annual benefits of the certification (over and above option 1) are approximately £5k.
- **Under Option 3** (Ban of imports of potatoes from Poland) is likely to increase the risk of imports from this region by shifting supply to neighbouring countries which may have weaker controls for ring rot compared Poland. In this case, the social cost of ban is estimated to be approximately £44k over the 10 year period. However, the net loss of ban (approx. 2k) is relatively small compared to overall benefits already guaranteed by existing EU legislation.

The finding of the analysis is summarised in Table 1. A detailed discussion on underlying assumptions, methodology applied and data used is provided in Annex 1.

Table 1: Cost Benefit Analysis (discounted at 3.5% over 10 yrs, base and price year 2012)			
	Benefits	Cost	Net Benefit
Option 1: Do Nothing	2,560,688.61	3,467.69	2,557,220.92
Option 2: Legislate	2,563,220.00	936.31	2,562,283.68
Option 3: Ban	2,559,730.62	4,425.68	2,555,304.94

Annex 1

1. Background

Potato ring rot (**PRR**) is a bacterial disease caused by *Clavibacter michiganensis* subsp. *Sepedonicus*. It is highly contagious and causes economic losses in both the growing potato crop and during storage. PRR is one of the most serious potato diseases in Asia, North America, and central and northern European countries. The disease causes the early death of plants, rotting of progeny tubers and extensive yield reduction in affected crops. There had been no reported outbreaks in the UK prior to a finding in Wales in November 2003.

However, imports of contaminated potatoes from Eastern Europe, such as Poland, pose a risk to UK industry. Under the terms of the EC Plant Health Directive and the Plant Health (England) Order 1995, importation of material carrying this disease is prohibited. In addition, a specific control directive (93/85/EEC) for the disease lays down measures aimed at preventing its spread wherever it is found and, if possible, eradicating it. On accession in 2004, Poland unilaterally introduced a domestic requirement to test all lots of potatoes being sent to other Member States. Consignments are accompanied by a certificate and all such movements are pre-notified to the receiving Member State by the Polish Plant Health Authorities. As a supplementary measure, from 2004 to 2008 the UK unilaterally imposed a requirement to notify all imports of Polish potatoes (requirements were also in place for Dutch and German potatoes). In 2008, because of improvements in the Polish situation and elsewhere, coupled with sporadic findings in seed potato production other Member States a decision was taken to broaden this requirement to cover all countries, but to focus it only on seed potatoes. Seed potatoes represent a higher risk pathway than ware potatoes for processing or consumption, since infected seed inevitably produces an infected crop, which can be distributed and spread further afield.

Introduction of the disease through imported ware or processing potatoes can also occur through cross contamination between ware and seed potatoes as described below. Polish imports in particular pose a risk as current EU legislation does not require notification for ware potatoes and a shortfall in UK production this year is leading to greater imports of potatoes from Poland. There is some evidence of Polish potatoes being received which have not been tested in accordance with the official Polish arrangements. UK surveillance currently relies on notification of consignments by the Polish authorities; therefore without notifications UK authorities are unable to identify and verify the status of ware potatoes imported from Poland. The Polish notification arrangements are not included in UK legislation and any action on non-compliance is taken using general plant health powers.

According to the most recent EU PRR survey (EU Commission, 2012), 10.5% of Polish ware potatoes were infected in 2011, whereas the infection rate in Romania, Lithuania and Latvia was 6.6, 3.4 and 2.9 % respectively. Thus, imports from this region pose a relatively higher risk to UK industry compared to other exporting countries which currently supply more than 99% of ware potatoes imported in the UK.

2. Disease spread

PRR disease spread is largely via infected seed potato tubers. Ring rot can pass through one or more field generations without causing symptoms and non-systematic infected tubers are

an important means of spreading the disease. Laboratory tests can detect latent infection in a sample, but small samples may miss low levels of infection.

There are two major routes of spread for PRR.

- Direct contact can spread infection from diseased to healthy tubers, particularly if the latter are damaged. Cutting, grading and handling of seed tubers is a potential route of spreading ring rot within and between potato stocks. The bacterium can survive for at least a month on machinery and much longer if the machinery dries rapidly and is kept under dry conditions after contamination. Sharing equipment and machinery that is used to harvest, grade or process seed and ware potatoes therefore poses a very high risk of cross-infection between different growers. The bacterium survives much less well under moist conditions.
- A second possible route is through contact between seed potatoes and residual contamination from storage of infected ware potatoes. Bacteria can survive and remain infectious for several years on potato bags, boxes, store walls and other surfaces that have been contaminated by rotting ooze. Although these are not the main means of disease transmission, it can make eradication of the disease very difficult if the disease establishes itself in the UK. The bacterium is able to overwinter in the soil, usually in association with groundkeepers (unharvested potatoes from the previous crop) and debris from infected crops. Infected groundkeepers lifted with an otherwise clean seed or ware crop can infect that crop. Contaminated potato waste is another possible source of infection.

3. Reported economic impact

High yield losses up to 50% were reported in the USA and Norway. In practice, such heavy direct losses are not usually observed. It is reasonable to assume that, given the high value of the crop, UK industry will use technology at their disposal to minimise impact, as long as this doesn't inflate their average cost of production above the market price. Disinfectants such as quaternary ammonia, chlorine, iodine or phenol-containing compounds applied to equipment and other contaminated surfaces for a minimum of 10 minutes under low organic load are effective against *Clavibacter michiganensis* (CABI/EPPO 2002).

Nevertheless, due to the quarantine status of PRR in the EU which requires a zero tolerance for this disease, a single infected tuber can lead to destruction of entire affected and associated crops. There are further additional indirect losses resulting from disposal and disinfection costs and negative effects on domestic trade and export, particularly for seed potatoes. If it were to become established in the UK, the effect on the seed-potato industry would be substantial, especially for exports. Once established, the costs of control would be high as every batch may have to be tested and certified as disease-free. Laboratory tests can detect latent infection in a sample, but small samples may miss low levels of infection. Therefore, a high number of (up to 4,000 tubers per lot) may be required to reach a 95% confidence of detecting a low level of infection – 0.07%. Control of this disease can also entail further public and industry costs as it requires constant vigilance across all sectors of the industry, from growers through to merchants, packers and retailers.

4. Approach to appraisal of policy options

Previous experience of PRR outbreaks in the UK is limited to a finding in Wales where infected potatoes were grown in three nearby fields in 2003, and two outbreaks in 2004. All outbreaks were linked to infected imported seed potatoes. The harvested crops were destroyed or processed and the affected fields put under controlled restrictions. No subsequent establishment of the pathogen occurred; therefore the disease was successfully eradicated in these localised cases. The cost of official sampling and testing for the Welsh ring rot outbreak was £107k, although total costs were much higher, including other Government costs and costs to affected growers of affected potatoes – 164,000 tubers were involved.

However, experience from USA, Scandinavian countries and Eastern Europe outbreaks suggest that if PRR was introduced in the UK and spread over a large area of the country it is unlikely that the eradication would be successful. In such eventualities, the impact on UK industry can be substantial. ADAS (2000) study¹ concluded that the net economic benefits of the PRR exclusion (quarantine) measures for PRR in England are mostly likely to be around approximately £3 million per year. Cook et al. (2006)² estimated that the same measures yield a net of economic £2.6 million per annum. Both studies identified earnings from export as the greatest benefits from exclusion of disease. In terms of impact on specific subsectors, Cook et al. used the damage estimates of Mumford et al. (2000) and Pemberton (1988), and assumed that a PRR establishment in the UK would cause a 10–48% reduction in ware potato exports revenue, a 0–5% reduction in processed potato export revenue, and a 20–95% reduction in seed export revenue³.

Given that the risks posed by imports from Poland threaten the integrity of the current UK quarantine measure and resulting disease-free status, the impact of three policy options on UK industry and government expenditure are assessed in terms of their ability to maintain and/or improve the effectiveness of the current quarantine measures.

We use evidence from Cook et al (2006) and develop a set of assumptions for each policy option as follows:

Option 1: Do nothing

1. We assumed that, based on the low (0.065%) level of imports and quarantine measures in place, the risk posed by imports from Poland are proportional to the

¹ Mumford, J., Temple, M., Quinlan, M., Gladders, P., Blood-Smyth, J., Mourato, S., Makuch, Z. and Crabb, R. (2000). Economic policy evaluation of MAFF's plant health programme. Report to Ministry of Agriculture Fisheries and Food. London: ADAS Consulting.

² Cook David C., Waage, Jeffery K., Mumford, John D., Fraser Rob W. (2006), T8.11: The benefits of potato ring rot exclusion from the United Kingdom, Foresight (Report on) Infectious Diseases: preparing for the future, Office and Science and Innovation

³ It is worth mentioning that these estimates may be high given that the quarantine measures have been in place for sometime in most of exporting countries and UK and our response capability has improved since. An informal consultation with Scottish Government's plant health policy team indicated that the impact on seed subsector may now be around 25% in Scotland. Potato Council felt that the assumptions for the 2000 assessment remained realistic, as any establishment of ring rot would require substantial marketing resources to counter negative impacts, which are not necessarily available.

volume imported. However, we have assumed that, since potatoes from Poland present a higher risk (EU Commission, 2012), we double that proportion. Hence we estimated the relative risk weight of 0.131% to calculate the economic impact of the risk.

2. If the UK government takes no action and potentially infected potatoes continue to be imported from Poland, this small risk is likely to result in a limited sporadic incidents which can be eradicated under the existing quarantine measures. Previous experience of the ring rot outbreak in Wales in 2003-04 suggests that, at the point of detection, the disease will most likely be limited in spread.

Option 2: Legislate to require Polish all potatoes to be accompanied by a valid test certificate and require destruction of any which do not have a certificate

1. We assume that a new UK requirement for a valid test certificate for all Polish imports will enhance the existing quarantine measures as no consignment should leave Poland without one. Most uncertified consignments in 2012 are attributed to new suppliers due to exceptional UK demand resulting from a shortage in domestic supply.
2. Overall, there will be lower risk of introduction than under option 1, and a very small risk of limited spread as the EU quarantine measures would be adequate to eradicate any small number of introductions. We assume that the risk weight will be reduced by 85% from the do-nothing option, if mandatory certification is introduced.
3. If Polish exporters cannot meet the export certification requirements, UK importers will seek alternative sources which may be limited and/or more expensive. However, we assume that the existing Polish exporters sourcing from disease-free areas will increase their export volume in the longer run. As such cost of certification of additional potato from disease-free areas is unlikely to be significant to affect UK price in the longer run.
4. PHSI will not need significant additional resources to manage the notification database resulting from new certification requirements. The database is already in operation for seed potatoes. Overall PHSI monitoring resources are unlikely to increase significantly as the enforcement will largely rely on the existing EU quarantine legislation coupled with Polish controls and the threat of action is expected to be sufficient to discourage imports of uncertified consignments.
5. If a consignment without a valid certificate arrives, it will be disposed of in accordance with EU legislation with cost to the importer, £270⁴ per tonne delivered. We assume that this will affect only 1% of Polish imports or 11 tonnes.

⁴ Includes £70 transport cost

Option 3: Ban imports of Polish potatoes

1. We assumed that a ban on Polish potatoes is likely to result in UK importers having to find alternative sources which may be limited and/or more expensive and more risky. As a result, the importers may circumvent the ban by bringing in potatoes of unknown origin from neighbouring EU countries with a less well developed certification system against ring rot than Poland. There would also be a strong risk of legal challenge if a ban was introduced without valid technical justification.
2. This option is likely to increase the risk of infected imports arriving. A ban is likely to result in reduced effectiveness of UK controls due to loss of the current hybrid arrangement under which, in addition to EU control measures against ring rot, Polish law requires exporters to seek certification. We assumed that a ban will increase the risk weight by 25% (from option 1 level). However, although the reported incidents of PRR in ware potato in these countries are lower than Poland, they are deemed to have weaker regulatory governance. Furthermore, the loss of the existing protection from the Polish certification regime is likely to increase the risk.
3. Additional sampling (10% of import) may be necessary to ascertain the status of the increased new supply from countries neighbouring Poland, as part of the existing quarantine surveillance activities. However, the overall PHSI monitoring costs are unlikely to increase significantly as inspections will still be relying on the existing legislation and threat of action against non-compliance.