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Consultation on implementation of Directive 2007/33/EC: control of potato cyst nematodes (PCN)

March 2009

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Summary

- Directive 2007/33/EC introduces new requirements on the control of potato cyst nematodes and takes effect from 1 July 2010. This paper seeks views on implementation of the Directive. An Impact Assessment and Q&A have been produced to accompany this paper.
- If you grow seed potatoes, ware potatoes or certain plants for planting (including bulbs) the Directive may have an impact on you.
- If you are an exporter and have official soil samples taken to check for PCN prior to export, a revision of soil sampling and testing procedures will have an impact on you.
- Views on the key aspects of the Directive are sought, to be submitted to the address at the end of this document by 19 June 2009.
- Any views submitted will contribute to future policy concerning this pest, which will be given effect by an amendment to the Plant Health (England) Order in 2010.

1. Introduction

1. Potato cyst nematodes (PCN), *Globodera rostochiensis* and *Globodera pallida*, are serious pests of potato crops world-wide. They feed on the roots of the plant and can cause significant loss of yield. Controls are in place in most potato-producing countries to limit the increase and spread of PCN. This consultation paper addresses the implementation of updated controls which are due to be introduced in all EU Member States from 1 July 2010.

2. Potatoes are an important crop for England and Wales, which produces and markets seed potatoes of high health status, including from the Community Grade region for seed potato production in the North of England. Maintaining the supply of seed potatoes free of PCN (and other quarantine diseases) is vital to the ware potato industry, as well as for export sales. It is also in the interest of the industry to avoid the spread of PCN, to maintain the supply of land for potato production.

3. The main route by which PCN spreads is through the movement of infested seed potatoes, or in soil moved with tubers or other plants and on farm machinery. Cysts can also be transported by water, so there is a risk of contamination from washing water as well as soil and waste from grading and processing. PCN multiply rapidly in the presence of host plants, which include peppers, tomatoes and aubergine, as well as potatoes. In the absence of hosts, populations decline, so long rotation of host crops is an effective control method. Resistant varieties can be used to control PCN; many successful commercial varieties have high levels of resistance to *G. rostochiensis* but breeders have so far not been successful in incorporating similar levels of resistance to *G. pallida* into new varieties.

Background

4. PCN, then known as Potato Cyst Eelworm, *Heterodera rostochiensis* Wollenweber, was one of the first plant pests to be subject to a European Control Directive, Council Directive 69/465/EEC. The Directive requires an official investigation to ensure that seed potatoes intended for marketing are produced only on land that has been confirmed as uncontaminated by Eelworm. On land found to be contaminated, no potatoes or plants intended for transplanting can be grown, although derogations are permitted for some ware potato production on contaminated land. These allow fully resistant varieties to be grown, crops to be harvested before the cysts mature and crops to be produced following disinfection.

5. PCN is also listed as a quarantine organism in Annex IAll of the Plant Health Directive, 2000/29/EC, meaning that its introduction and spread within the EU is banned. Annex IV of that Directive requires that seed potatoes and plants with roots intended for planting, introduced into or moved within the EU, must come from a field or place of production known to be free of PCN. The Seed Potatoes Marketing Directive (2002/56/EC) also requires that both the production ground of seed potatoes and individual lots of seed potatoes are free of PCN.

6. These controls are currently implemented by a range of legislative and other measures:

- Schedules 1 and 4 of the Plant Health (England) Order 2005 implement the requirements of the Plant Health Directive in relation to the introduction and movement of PCN, seed potatoes and plants with roots intended for planting.
- Schedule 15 of the Plant Health (England) Order 2005 implements the requirements of the 1969 PCN Control Directive relating to land contaminated with PCN.
- Schedule 1 of the Seed Potatoes (England) Regulations 2006 implements the requirements of the Seed Potatoes Marketing Directive that both the production ground of seed potatoes and individual lots of seed potatoes are free of PCN.
- The rules of the Seed Potato Classification Scheme (SPCS) require that crops entered for classification must be grown on land for which a certificate of PCN clearance is in force at the time of planting. They set out in detail the current arrangements for carrying out soil tests and the restrictions placed on a field when live or dead cysts of PCN are found. Although they are administered by the SPCS, the rules on infested land and contaminated soil and plant material also apply to ware potatoes, bulbs and other relevant plants.
- Around 50% of PCN sampling is undertaken for export purposes to meet the requirements of recipient countries. Soil samples from fields are taken and tested in the same way as for the SPCS and the finding of PCN will result in the scheduling of the field.

Equivalent legislation applies in Wales.

Soil sampling and testing is carried out by the Plant Health and Seeds Inspectorate (PHSI) and CSL respectively.

7. In recent years efforts have been made to update the 1969 Directive, to take account of changes in the understanding of the biology of the pest, its distribution

across the EU and practices within the potato industry. The new PCN Control Directive, 2007/33/EC was adopted on 11 June 2007 and will come into force on 1 July 2010, in preparation for planting in 2011¹. There were two consultation exercises to help determine the UK negotiating position on the Directive and the final version largely reflected the key objectives agreed.

Consultation

8. Some of the provisions of the new PCN Control Directive are obligatory, with the aim of harmonising measures in all Member States. Others allow some flexibility for local implementation. The requirement to amend current arrangements also provides an opportunity to review some of the SPCS rules on PCN which are not set out in legislation. This paper explains the requirements of the new Directive and seeks stakeholders' views on various options in those areas where flexibility is available. We will take all responses into consideration in deciding how the new regime should operate.

2. Contents of the 2007 Directive

Sampling rate

9. A key aim of the new Directive was to produce a harmonised approach to testing for PCN, in particular that the sampling rate for official pre-crop soil testing should be the same across the EU. A single standard sampling rate is therefore imposed. A lower rate is set for land where no potatoes have been grown in the previous six years, or where previous official tests have found the land to be free of PCN. Both the standard and the lower rate may be reduced for larger fields, which helps to offset the higher probability of detecting PCN when larger fields are tested.

10. Member States have freedom to define a "field", which is the area from which a single soil sample will be drawn and tested, and to which the consequences of the results of the test will be applied. Although larger "fields" can be sampled at reduced rates, the consequences of finding PCN are greater in terms of the area of land that would then be designated as contaminated and subjected to control measures.

11. Details of the standard sampling rates and the implications for PCN testing are discussed in **section 3**, together with options for the definition of a field and related issues.

Farm saved seed

¹ The 2007 Directive applies controls on the production of plants for replanting of other PCN hosts in addition to seed potatoes. The species affected are *Capsicum* spp (peppers), *Lycopersicon lycopersicum* (L.) Karsten ex Farw. (tomato) and *Solanum melongena* (L.) (aubergine). Since there is little, if any, production of these plants in the field, they will not generally be mentioned in this paper. The controls on plants other than potatoes are summarised in section 8.

12. Unlike the 1969 Directive, the 2007 Directive does not discriminate between seed potatoes “intended for marketing” and others. For the purposes of the 2007 Directive all potatoes that are planted are viewed as “seed potatoes”. All seed potatoes must be produced on land which has been found clear of PCN by a pre-planting soil test, unless they are to be used “within the same place of production situated in an officially defined area”. This measure recognises that all movement of seed potatoes, including those saved from unclassified crops (“farm saved seed”) poses the same risk of spreading PCN, and there is little point imposing controls on classified seed if farm saved seed can be moved without restriction. There is some scope for local interpretation of the area within which untested farm saved seed can be used; options are discussed in **section 4**.

Land infested with PCN

13. If official testing finds PCN in a field, the field must be recorded as infested and the following restrictions will apply:

- No seed potatoes may be grown in the field;
- Ware potatoes may be grown, provided that an officially approved control programme is used, aiming at least at the suppression of PCN (control programmes are discussed in **section 6**);
- Ware potatoes which have been grown or stored in an infested field, or which have come into contact with infested soil, must be graded and processed at a plant with appropriate waste disposal facilities which pose no risk of spreading PCN. They must not be used as seed in any circumstances. Disposal of contaminated waste is discussed in **section 7**.

3. Soil sampling rates and criteria

Standard and reduced rates

14. The 2007 Directive sets a standard sampling rate for official pre-crop soil testing for PCN of **1500 ml soil per ha**. This is to be collected from at least 100 cores per ha, preferably in a rectangular grid not less than 5m in width and 20m in length between sampling points, covering the entire field. The entire sample is to be used for analysis.

15. The sampling rate can be reduced to a minimum of **400ml/ha** for fields where:

- a. There is documentary evidence that no potatoes have been grown for 6 years before the test; or
- b. No PCN have been found in the previous 2 official tests; or
- c. No PCN or dead cysts have been found in the most recent official test.

If potatoes are planted in the field after the first test referred to in (b), or after the test referred to in (c), they must have been grown on PCN tested land. Tests carried out under the current SPCS rules will count towards qualification for the reduced sampling rate for as long as they remain relevant.

16. The adoption of a flat rate for soil sampling would result in the testing of more soil from larger fields and would lead to a greater chance of detecting a similar

underlying distribution of PCN in a large field than in a small field. In recognition of this, a further reduction is permitted for large fields:

- For the standard sampling rate, the first 8ha shall be sampled at 1500 ml/ha, with each additional hectare sampled at a minimum rate of 400 ml/ha;
- For the reduced rate, the first 4ha shall be sampled at 400 ml/ha, with each additional hectare sampled at a minimum rate of 200 ml/ha.

In each case the average sampling rate is calculated and applied across the whole field. So for example, a field of 11ha would be calculated as follows, for the standard rate and for the reduced rate:

11ha at standard rate	11ha at reduced rate
8ha @ 1500 ml = 12,000ml	4ha @ 400ml = 1600ml
3ha @ 400 ml = 1200ml	7ha @ 200ml = 1400ml
Total soil required = 13,200ml	Total soil required = 3000ml
Average rate = 1200ml / ha	Average rate = 273ml / ha

(In practice the amount of soil taken will be rounded up to allow inspectors to take a whole number of standard-sized samples).

Impact on soil sampling

17. The current standard rate of pre-planting soil sampling for PCN is 600ml for an area up to 4ha. If the standard rate in the 2007 Directive of 1500ml per hectare was applied to all land currently tested, it would result in a ten-fold increase in the amount of soil tested. This would impose a significant burden on growers and would probably exceed the capacity of current testing resources, both staff and laboratory facilities. Fortunately, however, much of the land used for production of seed potatoes will qualify for sampling at the reduced rate. A very high proportion of land which has been tested under the current arrangements has a documented history of freedom from PCN. In addition, the majority of basic seed potatoes are grown on rotations of one year in seven or longer. It is estimated that only a small percentage of the land currently tested each year would require to be sampled at the standard rate.

18. Around 2,300 official soil samples are currently tested for PCN. This equates to around 1,380 litres of soil, for a sample size of 600ml. It is estimated that the total quantity of soil to be tested under the new arrangements will double.

Definition of a field

19. Member States have freedom to define a “field” for the purposes of the PCN Directive. This is the area from which a single soil sample will be taken – cores may be placed in several sample bags for ease of processing, but they will not be identified as coming from separate areas and a single result will be given for the whole “field”. If PCN is found in the sample, restrictions will also apply to the whole area. The sampling unit under current arrangements is the 4ha unit – fields larger than 4ha are split into 4ha sections for soil sampling, and fields smaller than 4ha may not be divided. Sampling across a larger “field” allows a lower sampling rate to

be used, which would generally be an advantage for both growers and the Plant Health and Seeds Inspectorate. However, this also carries the risk that a larger area will be taken out of production if PCN is found.

20. The most obvious definition of a field is an area marked by recognisable boundaries or features – fences, dykes, hedges, ditches, power lines, buildings posts and masts. Given the practicalities and resource implications arising from adopting an alternative approach, it is proposed to retain existing policy on ‘whole’ fields, as described above. Therefore the complete planting area would be submitted for sampling. Parts of the area within recognised boundaries may be excluded from sampling, but the sampled area may not be subdivided.

Question 1 : Do you have any views on the proposed definition of a field?

Documentary evidence that no potatoes have been grown

21. In order to qualify for the reduced sampling rate, documentary evidence is required to prove that no potatoes or other host plants have been grown in the field in the previous six years, or since an official test which found the field to be clear of PCN. Various records are held by Defra (e.g. SPCS records) and growers (e.g. planting records) and it is proposed that all such evidence will be eligible to help establish that potatoes have not been grown. A declaration section will be included on the relevant application forms and where there is any doubt, the onus will be on growers to provide satisfactory documentation.

Question 2: Do you agree with the proposed method of obtaining documentary evidence that no potatoes have been grown? Are there any particular records that should be considered?

“Banking” of test results

22. SPCS allows PCN test results to be “banked”, remaining valid for 4 years from the date of the test. This recognises that any PCN populations in a field will normally decline if no host plants are grown, although retesting is necessary after a time to check that PCN have not been introduced from elsewhere. Four years has to date been considered a reasonable period for the banking of PCN test results, balancing convenience for growers with plant health protection, and we see no reason to adopt a different practice.

Question 3: Do you have any comments on the banking of PCN test results?

23. The 1969 Directive required only that an official investigation should recognise fields used to produce seed potatoes as free of PCN. SPCS rules state that this official investigation should take the form of a pre-planting soil test, but exemptions have occasionally been made, allowing post-planting or post-harvest testing in exceptional circumstances. The 2007 Directive prescribes that the official investigation must be carried out pre-planting, therefore no exemptions will be possible under the new regime.

Survey of ware land

24. An official survey for PCN must be carried out annually on at least 0.5% of all land on which ware potatoes have been grown in that year, and the results notified to the European Commission by 1 April each year. The sampling rate required for this survey is at least 400 ml/ha, or targeted sampling of at least 400 ml of soil after visual examination of roots where there are visual symptoms, or sampling of at least 400 ml of soil associated with potatoes after harvesting, where traceability can be assured. If PCN is found as a result of testing for this survey, the same measures will apply as for a field found infested through pre-planting soil sampling, and any potatoes which can be traced back to that field will be subject to restrictions. We anticipate selecting fields for the survey in spring/summer and carrying out the sampling in the autumn.

4. Farm saved seed

25. The 1969 Directive requires soil testing for PCN only for fields where “seed potatoes intended for marketing” are to be grown. Current controls therefore exclude seed saved from unclassified crops for the grower’s own use. However, in drawing up the 2007 Directive, Member States recognised that it was difficult to justify restricting PCN controls in these terms, on plant health grounds. Seed which is not marketed may sometimes be replanted in the same field or an adjacent field, but it may equally be moved to another holding planted by the same grower in another part of the country, or passed on to another grower contracted to the same merchant. A particular concern is the planting of unclassified seed in rented land; if this becomes infested then the next tenant may transfer PCN to his own land or to other rented land, creating a chain of contamination.

26. It is clear that many ware growers are well aware of the potential impact of PCN on their production and take measures to minimise the risks. This may include having fields tested, either officially or privately, and reserving areas believed to be free of PCN for their own seed production.

27. To ensure that the risks of spreading PCN through farm saved seed are kept to a minimum, the 2007 Directive requires that all seed potatoes must be produced on land which has been found clear of PCN by a pre-planting soil test, unless they are to be used “within the same place of production situated in an officially defined area”. This phrase is open to a degree of interpretation by Member States. Plant health authorities must also be satisfied that farm-saved seed used in this way poses no risk of spreading PCN.

28. The most restrictive definition of “same place of production” would be to limit it to a single holding. This would provide the maximum protection against the spread of PCN, but fails to recognise the reality that many growers operate across owned and rented land on a number of neighbouring holdings. The opposite extreme would be to permit farm-saved seed to be moved to any holding in the same ownership or management. Defra is minded to define “same place of production” as holdings under the same ownership or operational management. Principal reasons for this include the limited risk of further PCN spread via this means, the desire to avoid additional administrative burdens on the industry and difficulties of enforcing requirements on maximum distances in England and Wales given the number of

growers involved. However, growers would need to be able to prove to Defra, if required, that they were complying with this arrangement. This may be checked through Defra's routine surveillance programme of ware potato growers and official inspections of seed potato growers.

Question 4: Do you have any comments on the proposed approach for farm saved seed?

5. Land recorded as infested

29. Where live PCN are found in a field, either by a pre-planting soil test or during the ware survey, it will be officially recorded as infested. Potatoes or plants which have been grown in the field, or which have come into contact with infested soil, will be "designated as contaminated".

30. When a field is recorded as infested with PCN, the 2007 Directive imposes the following restrictions:

- No seed potatoes may be grown in the field;
- Ware potatoes may be grown, provided that an officially approved control programme is used, aiming at least at the suppression of PCN (see section 6);
- For potatoes which are designated as contaminated, any industrial grading or processing must be at a plant with appropriate waste disposal facilities which pose no risk of spreading PCN. They must not be used as seed in any circumstances.

31. The more intensive sampling required under the 2007 Directive justifies a simplified system and we therefore propose:

- Where live cysts (of either species) are found, the "field" will be recorded as infested.
- The record will apply to the "field" from which the soil sample was taken (see section 3).
- There will be no restrictions on adjacent areas.
- No restrictions will be placed on land where only dead cysts are found.

32. Currently only around 2-3% of official PCN soil tests give positive results, meaning that only a small proportion of the 3,000ha or so of land tested each year requires scheduling. Under the higher sampling rates specified by the 2007 Directive, however, the rate at which restrictions are placed on land is likely to increase and the rate of removal of restrictions will decrease, especially as more intensive sampling (i.e. the standard rate) will be required for such purposes.

Question 5: Do you agree with the proposed system of dealing with the results of soil sampling for PCN? If not, please explain your concerns.

33. In order to remove the restrictions on a field officially recorded as infested, a pre-planting soil test must find the field clear of PCN. The 2007 Directive requires at least six years to have passed since the test which found PCN in the field, or since the last potato crop, before a de-recording test can be carried out. If approved control measures have been used to suppress PCN in the field, a minimum of three years is required.

34. Under current rules, a descheduling test can be carried out between six months and six years, depending on the quantity and species of PCN found when the field was scheduled. This is in the context that no potatoes may be planted in scheduled land; early descheduling allows the land to be used for ware, and it is assumed that growers who plant in such land will use appropriate control measures to protect their crop. Given that PCN can survive in the soil for at least 20 years, it is very likely that some will still be present after 3 years, even if a further test fails to find them. Under the new regime, ware potatoes can be grown in land recorded as infested, with a suitable control programme, so there is less justification for early de-recording. In order to provide more robust control of PCN where it is known to occur, we are minded not to permit de-recording until six years have passed.

Question 5a Do you agree that a de-recording test should not be permitted until six years after the test which found PCN in the field, or the last potato crop?

35. The Directive requires a de-recording test to be carried out at the standard sampling rate of 1500ml/ha, using the reduced rate for larger fields where relevant. However, it also allows for the lower rate of 400ml/ha to be used if 7 years have elapsed since the last potato crop. Current SPCS rules state that seed potatoes cannot be grown until between four and twelve years (depending on grade) after the last finding of PCN. We propose to require that all de-recording tests are carried out at the standard rate, but to remove the extended rotation requirement for growing seed on previously recorded land, in recognition that the higher sampling rate gives a greater chance of finding PCN at lower concentrations. After six years, therefore, it will be possible to carry out a de-recording test and, if this is clear, to plant seed potatoes immediately.

Question 6: Do you agree with the proposal to require all de-recording tests to be carried out at the standard rate and consequently reduce the rotational requirement for growing seed on previously recorded land to 6 years?

6. Official control programmes

36. The 2007 Directive allows ware potatoes to be grown in fields recorded as infested, provided the field is subject to “an official control programme aiming at least at the suppression of potato cyst nematodes”. A suitable programme is likely to include the use of resistant varieties and recognised control measures including nematicides, combined with suitable rotation periods and compliance with model programmes for PCN control. Information on varieties that meet the requirements for resistance will be made available. (Annex IV of the 2007 Directive sets out the prescribed method for identifying degrees of resistance to PCN). It should be noted that few varieties are currently available with significant levels of resistance to *G. pallida*, therefore control programmes suitable for land infested with this pathotype are likely to rely more on rotational control. It is proposed that growers should agree a tailored programme with their local Inspector taking account of all relevant factors.

37. Compliance with the approved programme will be able to be monitored by the PHSI during monitoring visits.

Question 7: Do you agree with this approach to approving control programmes for growing ware on infested land? If not, please explain your concerns and any alternative proposals.

7. Disposal of contaminated waste and soil

38. Where potatoes have been grown in a field officially recorded as infested, if sent for industrial grading or processing, this must be at a plant where the waste disposal facilities have been officially approved, to ensure there is no risk of spreading PCN through contaminated waste and soil. In general, waste disposal arrangements should be in line with the Plant Health Code of Practice for the Management of Agricultural and Horticultural Waste. The following specific points should also be noted:

- As much soil as possible should be left in the field. If material from the infested field is handled separately, it may also be returned to the same field. This is not appropriate if material from more than one field is handled together;
- Soil and waste from grading and processing must not be deposited on any other agricultural land ;
- All vehicles and machinery must be cleaned and disinfected after handling the contaminated material, and the washing water disposed of in a suitable way.

39. When an official control programme for growing ware on infested land is approved, and the harvested potatoes are intended for industrial grading or processing, the grower will be required to use only those plants which have approved waste disposal facilities and procedures. A number of plants are already approved for the purpose of processing Egyptian potatoes and, generally, these plants will have the necessary features for disposal of PCN infested material.

Question 8: Do you agree with this approach for using approved facilities for disposal of contaminated waste and soil? If not, please explain your concerns and any alternative proposals.

8. Other host plants and bulbs

40. In addition to potatoes, the 2007 Directive places requirements on other plants which are either hosts of PCN or are likely to be grown in rotation with potatoes and have the potential to spread the pest. These are listed in Annex 1 of the Directive in the categories set out below. There will need to be a consequential amendment to the Plant Health Directive before July 2010, updating plant passporting requirements to take account of the list below.

1. Host plants

Capsicum spp.

Lycopersicon lycopersicum (L.) Karsten ex Farw.

Solanum melongena (L.)

2a. Other plants with roots

Allium porrum L.

Beta vulgaris L.

Brassica spp.

Fragaria L.

Asparagus officinalis L.

2b. Bulbs, tubers and rhizomes

Allium ascalonicum L.

Allium cepa L.

Dahlia spp.

Gladiolus Tourn. Ex L.

Hyacinthus spp.

Iris spp.

Lilium spp.

Narcissus L.

Tulipa L.

41. The provisions applying to these plants are summarised in this section. They apply only to plants grown in soil, and mainly to plants, bulbs etc intended for transplanting with roots or soil attached.

42. **Host plants** (point 1 of Annex 1) intended for planting are subject to similar restrictions as for seed potatoes. They may only be grown in soil which has been found clear of PCN through a pre-planting soil test, unless they are to be used on the same place of production. In order for any field to qualify for the lower sampling rate, documentary evidence must show that no potatoes or other host plants have been grown in the field for a minimum of six years, or there is an official testing history which confirms that PCN is not present, in line with the arrangements for seed potatoes. Plants which have been grown in a field officially recorded as infested will be designated as contaminated and must not be replanted. There are no restrictions on planting host plants other than potatoes in infested land if they are not intended for replanting, nor on disposing of waste from contaminated plants.

43. Restrictions on **other plants** (point 2 of Annex 1) only apply if they are intended for replanting by professional plant or cut flower producers (not for final retail sale). Plants, bulbs etc are also exempt from the requirement for a pre-planting soil test and from restrictions regarding planting on known infested land if they are disinfested after harvesting by appropriate measures, or washed or brushed until practically free of soil, so that there is no identifiable risk of them spreading PCN. If these measures are not to be taken, plants for replanting listed in point 2 must be grown in soil which has either passed a pre-planting soil test, or where it can be shown that tests have been carried out and no PCN has been found in the field, or no potatoes or other host plants have been grown in the field, for 12 years. In this latter case, growers must ensure that documentary evidence is available to confirm, if required, the testing and cropping history of the land.

Plant Health Propagation Scheme

44. Defra offers a voluntary certification scheme for narcissus and iris bulbs, which allows growers to demonstrate that their produce is free from serious pests and diseases and true to type. No pre-planting soil test for PCN is currently required nor will it be required under the 2007 Directive, since the bulbs are marketed practically free of soil. Soil may however be tested prior to lifting, to meet export requirements. Currently there are no participants in the scheme, but in the event of future demand, if any changes are considered necessary, we will discuss these separately with the users of the certification scheme.

Question 9: Do you have any views on the arrangements for plants and bulbs?

Crops not grown in soil

45. The Directive does not apply to the production of potato microtubers or any other plants not grown in soil. We intend to continue testing peat growing medium for PCN, as this is required for exports to a number of countries.

9. Export to non-EU countries

46. Countries outside the EU have varying requirements in terms of proving that export consignments of seed, and in some cases ware, potatoes, bulbs and planting material are free from PCN. In most cases, the investigation carried out under the new Directive will be sufficient. For crops where no pre-planting investigation under the Directive is required (e.g. ware potatoes), it is proposed to apply a sampling rate of 400 ml/ha, reduced to 200 ml/ha for field areas above a 4ha threshold, which is consistent with the requirements of the Directive. Some countries require consignment testing or impose other criteria. Consignment testing for export is carried out by CSL with samples taken by PHSI. A fee is charged for this service (currently a minimum of £40.50). More information about PCN testing for export is available in the leaflet PH13.

10. Costs

47. At present, charges are made for PCN soil testing for export purposes, but not under the SPCS, or for descheduling. The UK is in a minority in the EU in not charging for tests associated with seed potato certification and implementing the 2007 Directive will require a significant increase in the amount of soil sampled and tested. In the short term Defra is not proposing any changes to existing arrangements, as a wider review of charging policy is anticipated. Therefore, any consideration of changes to the arrangements for PCN testing will be considered at that time. However, those responding to this consultation should be aware that a further consultation will be carried out, which will include options on charging for PCN testing, and this should be borne in mind when considering your response to this paper.

11. What to do next

48. Views are welcome from those with an interest in this issue. Please:

- i) Read the consultation paper and accompanying Impact Assessment and Q&A
- ii) Consider the questions raised in the consultation paper
- iii) Submit your comments to Nigel Wood, Plant Health Policy Unit, FERA, Sand Hutton, York YO41 1LZ or email to pcn@defra.gsi.gov.uk

49. Please send your replies by 19 June 2009.