



BILLING CODE 3410-34-P

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

7 CFR Part 301

[Docket No. APHIS-2018-0041]

RIN 0579-AE48

Amendments to the Pale Cyst Nematode Regulations

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Final rule.

SUMMARY: We are amending the domestic quarantine regulations for pale cyst nematode by adding procedures that allow persons to review and comment on the protocols for regulating and deregulating quarantined and associated areas. As part of this action, we have made the protocols available online. We are taking these actions in response to a court order requiring the Animal and Plant Health Inspection Service to provide a means for public input on the protocols we use to deregulate fields for pale cyst nematode and to make the protocols publicly available. These changes make the protocols accessible to all and give persons the opportunity to comment on them.

DATES: Effective [Insert date 30 days after date of publication in the Federal Register].

FOR FURTHER INFORMATION CONTACT: Ms. Lynn Evans-Goldner, National Policy Manager, Office of the Deputy Administrator, PPQ, APHIS, 4700 River Road Unit 137, Riverdale, MD 20737; (301) 851-2286; [lynn.evans-goldner@usda.gov](mailto:lynn.evans-goldner@usda.gov).

SUPPLEMENTARY INFORMATION:

Background

The pale cyst nematode (PCN, *Globodera pallida*) is a major pest of potato crops in cool-temperature areas throughout the world, causing significant yield losses if left uncontrolled. Other hosts of this destructive pest include tomatoes, eggplants, peppers, and some weeds. The spread of PCN in the United States could result in a significant loss of domestic and foreign markets for U.S. potatoes and other host commodities.

Section 414 of the Plant Protection Act (PPA, 7 U.S.C. 7714) provides that the Secretary of Agriculture may, under certain conditions, hold, seize, quarantine, treat, apply other remedial measures to destroy or otherwise dispose of any plant, plant pest, plant product, article, or means of conveyance that is moving, or has moved into or through the United States or interstate if the Secretary has reason to believe the article is a plant pest or is infested with a plant pest at the time of movement.

On March 4, 2019, we published in the *Federal Register* (84 FR 7304-7306, Docket No. APHIS-2018-0041) a proposal<sup>1</sup> to amend the domestic quarantine regulations for PCN by adding procedures that allow persons to review and comment on the protocols for regulating and deregulating infested and associated areas. We took this action in response to a court order requiring the Animal and Plant Health Inspection Service (APHIS) to facilitate public input into the development of protocols for deregulating fields for PCN.

We solicited comments concerning our proposal for 60 days ending May 3, 2019. We reopened the comment period for 30 days ending July 26, 2019<sup>2</sup>, in response to commenters who experienced technical difficulties with accessing the protocols online.

One commenter stated that, in the proposed rule, we did not adequately include scientific support and source material for our confirmatory and deregulatory field protocols as mandated by the court order. To provide the public with an opportunity to review this material, we

---

<sup>1</sup> To view the proposal and comment period reopening documents, the comments we received, and supporting documents, go to <http://www.regulations.gov/#!docketDetail;D=APHIS-2018-0041>.

<sup>2</sup>84 FR 30040.

published another document<sup>3</sup> on June 5, 2020, in the *Federal Register* announcing a second reopening of the comment period for another 30 days, ending July 6, 2020. In that document, we explained the science underlying each of the field protocols and referenced the significant sources we consulted for developing them.

We received a total of 25 comments during the initial and reopened comment periods. They were from State agricultural officials, potato producers and producer organizations, agronomists, attorneys, and members of the public. A few comments we received expressed general agreement with the rule, while the remainder questioned or criticized specific provisions of the rule, the deregulation protocols, and PCN program activities. Some commenters raised topics concerning PCN program operations outside the scope of the proposal and deregulation protocols. We discuss the relevant comments we received below.

#### Comment Period

A few commenters stated that web links to the protocols, which we had included in the proposed rule and in a mailing sent to affected growers, were not connecting them to the protocol pages.

We acknowledge that the protocol links were not working during part of the initial comment period, so we reopened the comment period as noted above and provided working protocol links to ensure that stakeholders would have ample opportunity to comment.

One commenter asked that the proposed rule be republished, with the protocols included in the body of the rule.

As we made the protocols available for comment on Regulations.gov and the APHIS website throughout the reopened comment periods, we see no need for including them in a republished proposed rule. We also note that in the *Federal Register* document announcing the second comment period reopening, we included details of the scientific support and sources we used to develop the protocols.

---

<sup>3</sup>85 FR 34537-34541.

## Changes to the Regulations

We proposed revising § 301.86-3(c)(1), which designates fields with viable pale cyst nematodes present as being infested, by adding information for accessing the APHIS protocol for designation of infested fields in accordance with criteria established by the Administrator.

We also proposed revising § 301.86-3(d)(1) to read that an infested field will be removed from quarantine for PCN upon a determination that no viable PCN is detected in the field. We stated that the determination for removing the field from quarantine will be made in accordance with criteria established by the Administrator and sufficient to support removal of infested fields from quarantine, and that the removal criteria will be presented in an online deregulation protocol.<sup>4</sup> We also proposed revising paragraph (d)(2) for associated fields so that it refers to the deregulation protocol for those fields, also available online.

In paragraph (d)(4), we included the website address for accessing the infested and associated field deregulation protocols and indicated that any subsequent changes we make to them will be announced in a *Federal Register* notice and open to public comment. We proposed these changes to the regulations as a response to the court-mandated requirement that the deregulation protocols be publicly accessible and open to notice and comment in accordance with the Administrative Procedure Act.

## Deregulation Biosurvey

Our proposed deregulation protocol for infested and associated fields includes a 3-year biosurvey. Two commenters representing State departments of agriculture disagreed with using the 3-year biosurvey (equivalent to 3 consecutive susceptible potato crops) to evaluate for deregulation of infested and associated fields. Both commenters stated that a 3-year biosurvey of infested fields fails to sufficiently mitigate the risk of PCN spreading to uninfested fields in Idaho and in the commenters' respective States. As support, both commenters cited the results

---

<sup>4</sup> The deregulation protocols are available on the APHIS PCN page at <https://www.aphis.usda.gov/planthealth/pcn>.

of a study conducted in Norway showing that PCN cysts survived for 12 years in infested fields free of PCN host plants, and one cited a study from Northern Ireland claiming a 30-year survival period for PCN cysts in fields that were out of potato production for 42 years.

We are making no changes to the regulations based on the information provided by these commenters as they appear to be referring to an APHIS deregulation protocol no longer in use. Additionally, these commenters did not consider the effects of eradication treatments on infested fields, which shorten the survival period for PCN. As noted in the proposed rule, we originally included a 3-year deregulation biosurvey as part of an eradication program in a 2007 interim rulemaking<sup>5</sup> that quarantined certain areas of Idaho due to the presence of PCN. The biosurvey required planting PCN host crops in soil from an infested field, in a greenhouse, and sampling the soil for PCN following each of three crop cycles. Negative results for all three cycles would be necessary for APHIS to deregulate the field. In the 2007 interim rulemaking, this biosurvey was the sole criterion for deregulation of infested and associated fields.

However, in response to public comments and subsequent scientific input, we supplemented the 3-year biosurvey requirement with the in-field bioassay test for evaluating infested fields for deregulation. The in-field bioassay requires growing three susceptible host crops in a field with no detections of viable PCN following each crop. Under this current deregulation protocol, infested fields are required to pass a series of laboratory-based viability tests that take at least 3 years to complete. Once a field passes the laboratory-based tests, APHIS requires three host crops to be grown over the entire field while it remains under regulatory control. A field has met requirements for deregulation when full field surveys following each of the host crops are negative for viable PCN.

We do not dispute the studies cited by commenters that PCN cysts can remain viable for years in the absence of a host crop. However, we have determined that the current deregulation

---

<sup>5</sup> September 12, 2007 (72 FR 51975-51988, Docket No. APHIS-2006-0143).

protocol, which requires growing a host crop in the field as part of the evaluation, will effectively detect and mitigate viable PCN and ensure that fields are not deregulated prematurely.

Another commenter objected to the deregulation protocol requirement that three potato crops be planted in “hot spots” (infestation foci) of a regulated field and that those spots be sampled for viable PCN cysts with each crop, even if the initial sampling of the field indicated no viable cysts. According to the commenter, his field revealed no cysts after APHIS conducted an initial sampling, and on those grounds questioned why a grower whose field showed no cysts after testing could not skip over the required iterations of “hot spot” planting and sampling, and instead move directly to the next phase of the protocol.

We are making no changes in response to the commenter. The deregulation protocol provides an alternate testing strategy when cysts are not detected in soil samples for use in laboratory-based tests. Three crops of potatoes over the entire area of the field or within the infestation foci can be substituted for the viability and greenhouse bioassay testing to achieve the same level of detection confidence as the laboratory and in-field bioassay tests together.

Two commenters stated that APHIS has been successful to date in delimiting the extent of PCN infestation in Idaho potato fields under the existing survey and sanitation requirements. Both commenters noted that several fields in Idaho are in the process of completing bioassays this production season that could make them eligible for removal from quarantine under the current deregulation protocol. They asked that APHIS make no bioassay protocol changes until the results of the third bioassay on these fields are determined after the growing season, and added that the results of these bioassays should be used to inform any future consideration of modifications to the bioassay protocol with respect to removal of quarantine status. If the results cast doubt on the ability of three bioassays to detect the presence of viable PCN cysts, they suggested that APHIS consider increasing the number of bioassays required for release from quarantine.

The current deregulation protocol is effective at detecting extremely small populations and APHIS is considering no changes to the bioassay at this time. The commenters are referring to several infested fields in Idaho being evaluated under the greenhouse bioassay to determine whether such fields are eligible to return to potato production. To date, no infested fields have met the testing requirements to be fully deregulated. At this stage in the eradication testing process, the fields remain regulated, with measures in place to mitigate the movement of soil off the field until or unless three crops of potatoes have been grown on the field and no viable nematodes are detected following harvest of each crop. If APHIS finds it necessary to change the deregulation protocol in the future, we would first provide the background and scientific basis for those changes and solicit public comment on the matter. Regardless of the deregulation method, if viable nematodes are detected in the bioassay of a particular field, the field will remain regulated.

A commenter stated that the infested field deregulation protocol includes "optional PCN program-sponsored eradication treatments" but that the protocol does not explain what these additional eradication treatments are and whether they are an option for APHIS or for the regulated entity. The commenter suggested that we clarify this explanation in a new proposed rule.

The optional PCN program-sponsored eradication treatments listed in the protocol documents are available at the option of regulated entities, as long as APHIS has sufficient funding and a ready supply of treatment materials. At present, the treatment options are the soil fumigant 1,3-dichloropropene (Telone II) and the trap crop *Solanum sisymbriifolium* (litchi tomato). We do not agree with the commenter's suggestion that a new proposed rule is necessary for explaining this information further.

A few commenters expressed concerns that practices required in the deregulation protocols could adversely affect the environment. One commenter stated that if PCN eradication treatments include a nematicide such as Telone II, additional environmental analysis should be

undertaken regarding its use. Another commenter stated that in-field pressure washing, steam sanitation, soil sampling, and host and trap crop planting have environmental implications and noted that issuance of a final rule in the absence of an environmental analysis will violate the National Environmental Policy Act (NEPA, 42 U.S.C. 4321 *et seq.*) and its implementing regulations.

We are making no changes in response to the commenters. This rule does not require such an analysis under NEPA requirements. The rule adds no provisions and makes no changes to the protocols themselves or how they are applied. We note, however, that we have conducted several environmental assessments<sup>6</sup> to evaluate the use of fumigants, trap crop planting, and other field treatments and mitigations with regard to PCN.

#### Deregulation of Associated Fields

As noted above, we proposed revising § 301.86-3(d) to indicate that, as with infested fields, criteria for deregulating associated fields are included in a protocol available on the PPQ website. For associated fields remaining in host crop production, the deregulation protocol requires that two host crops be grown, each followed by a full field soil survey. If lab results are negative for PCN in both surveys, the field will be deregulated. Statistical analyses have shown that APHIS' delimiting survey rate of 8,000 cubic centimeters of soil (approximately 20 pounds (lbs) per acre) has a greater than 95 percent probability of detecting small populations of PCN after one host crop, and closer to 99 percent probability of detecting PCN after two host crops.

A commenter expressed concern about inconsistencies in how APHIS determines what land should be regulated for PCN and stated that he has never heard of a clear deregulation plan for associated fields where no nematodes have ever been found.

Complete deregulation protocols for infested and associated fields, including associated fields where no nematodes have been found, are available at

---

<sup>6</sup>Available at [https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/ea/ct\\_pcn](https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/ea/ct_pcn).

<https://www.aphis.usda.gov/planthealth/pcn>. Under § 301.86-3(c)(2) of the regulations, APHIS may designate a field as an associated field if host crops have been grown in that field in the past 10 years and if the field came into contact with a regulated article from a PCN-infested field in the past 10 years. Included among the regulated articles listed in § 301.86-2 is any equipment or conveyance used in an infested or associated field that can carry soil if moved out of the field. Although we proposed no changes to these sections of the regulations, provisions for deregulating associated fields are included in the protocols and for this reason we are responding to comments we received regarding farm equipment and field quarantine status.

A commenter asked if potato seed farms should be regulated when they have an association with an infested field.

If a field used as a potato seed source is suspected of having or confirmed to have a PCN infestation, it will be regulated accordingly. Potato seed produced on a regulated field is considered to be a regulated article and as such is subject to movement restrictions. Any field that has come into contact with a regulated article (such as seed produced on an infested field) will be regulated as an associated field. Any fields that are identified as a seed source for an infested field will be prioritized for survey but are not included as part of the regulated area until or unless survey results are suspect or positive for PCN.

#### Field Borders and Barriers

Under § 301.86-3(c)(2)(i) of the regulations, APHIS will designate a field as an associated field on the basis of adjacency when PCN host crops have been grown in the field in the last 10 years and the field borders an infested field. Although we proposed no changes to this paragraph, we are responding to comments received regarding field borders and regulatory status because the status of such fields is contingent on the deregulation protocol for associated fields.

To deregulate an associated field under this process, the field owner must establish a buffer zone of uncultivated ground at least 15 yards wide along the entire interface with the infested field. The buffer zone must include a physical barrier, such as a ditch, berm, or fence to

discourage transfer of soil or other regulated articles between the two fields. The field must also meet the soil survey requirement for deregulation of an associated field. Establishing a field buffer zone is entirely voluntary for the owner of an adjacent field seeking to expedite the process to deregulate a field.

One commenter stated that the border buffer requirements constitute a taking of the neighbor's property and another commenter agreed, stating that farmers should be compensated for having to take land out of production for buffers. Another commenter noted instances in which APHIS required trenches or other barriers between fields on bordering farms even after a field was released from regulation and stated that barriers encroach on the land of innocent neighbors.

We disagree that establishing buffer zones to mitigate the spread of PCN between fields constitutes a taking of property, particularly as establishing such a zone in an associated field is voluntary on the part of the landowner. Creating an uncultivated buffer zone between an adjacent field and an infested field is a scientifically established means for expediting deregulation of the adjacent field before the infested field is deregulated.

#### Deregulation of Fields no Longer in Host Crop Production or Agricultural Use

We have made publicly available the deregulation protocols for fields no longer in host crop production and fields no longer in agricultural use. We received comments regarding the deregulation of such fields.

One commenter asked if a change in the use of regulated fields to non-agricultural use—such as for housing or pasture—would allow regulation of those fields to be lifted. Another commenter objected to APHIS continuing to designate a field as associated for PCN even though the property includes a home and grass lawn and is too small for growing a profitable host crop, and cysts have never been found there. The commenter asked whether a change in the use of the property to a non-agricultural use, such as a gravel pit, would be sufficient for APHIS to deregulate it. Another commenter cited the case of a homeowner who asked APHIS to remove

land connected to his yard from associated field status but was told he would need to follow the deregulation protocol. The commenter suggested that APHIS allow growers to opt out of the deregulation program for a portion of their ground if they choose to subdivide the property for housing.

We are making no changes based on the comments. The protocols already include provisions for deregulating fields that will not return to host crop production and will transition to other uses such as residential or commercial development or pasture. The exact requirements for deregulating a field that has been taken out of host crop production depend upon the nature of the land's intended future use and the level of PCN risk in the field at the time of deregulation.

Another commenter asked if a former large farming operation on regulated fields now functioning as a hobby farm still needs to be regulated for PCN, particularly as the host crops grown are only sold locally.

As all regulated fields can pose a PCN risk, hobby farms established on regulated fields that produce host crops must follow the same deregulation protocol as large-scale agricultural fields remaining in commercial host crop production.

#### Sampling and Testing Procedures

We received several comments regarding the soil sampling and testing procedures we use in the field deregulation protocols. We have established in the protocols specific soil sampling rates per acre, the findings of which are used to map the distribution and population of cysts in infested fields. Cysts discovered during sampling are tested for viability.<sup>7</sup>

One commenter asked how we determined soil testing rates, noting that any rates determined from an agreement between the United States and Canada are not based on scientific testing rates.

---

<sup>7</sup> More information about sampling rates and cyst viability is included in the comment period reopening document (85 FR 34537-34541, Docket No. APHIS-2018-0041, June 5, 2020), which can be accessed through the link in footnote 1.

While survey rates are often listed in agreements between countries, the rates themselves are based primarily on scientific research within APHIS and data from the scientific community.

A commenter asked if soil testing rates were determined by the Technical Working Group, noting that any rates based on the work of that group violate the District Court's order that APHIS may not rely upon the advice or recommendations of the Technical Working Group in any future actions.

As we noted in the document reopening the comment period for the proposal, the methodology for soil testing under the PCN program was drawn from scientific best practices and experience gained from our work in the APHIS Golden Nematode Program.

A commenter stated that our methods of proof of a PCN find are flawed, noting instances of fields where small numbers of nematodes were initially found but which subsequently disappeared without receiving any field treatments.

We disagree with the commenter that our methods for detecting PCN are flawed. The detection and subsequent absence of nematodes in a sample from an untreated field is not an unusual occurrence and cannot be ascribed to a problem with our methodology. Several factors can influence detection of PCN, including the aggregate distribution and infestation level of the pest in a field.

One commenter recommended that the protocol survey regimen of 40 lbs per acre on associated fields could be reduced to the European protocol of 1.28 lbs per acre. Another commenter stated that APHIS' soil sampling requirements for the deregulation protocol are 10 times the world standards and recommended that we use the world standard of 2 lbs maximum. Similarly, a commenter stated that since PCN is on the world eradication list, then Idaho should use the same lower level of soil testing that our trading partners use.

We are making no changes in response to the comments. APHIS' goal is to contain and eradicate PCN in Idaho to protect all U.S. growers from the yield losses experienced by growers in other countries that take different approaches to managing PCN. PCN is managed in Europe

because it is endemic and widespread and therefore less intensive surveys are sufficient if the goal is management and not eradication. However, PCN populations in Europe continue to increase and seed potato acreages are reduced annually as a result. The purpose of this program is to ensure the same thing does not occur in the United States. We determined that the current soil testing procedures we use are necessary and appropriate to achieve program goals.

A commenter stated we did not indicate the soil depth at which field samples are to be collected for the deregulation protocol, resulting in uncertainty about APHIS' ability to mitigate the PCN risk. The commenter cited soil samples in Norway and Northern Ireland surveys that were taken at depths of 9 to 17 centimeters and 70 centimeters, respectively. Similarly, two other commenters expressed concern that the methods used to collect samples for testing in APHIS-approved laboratories are scientifically invalid because soil samples are only collected from the top 2 inches of the soil.

Soil samples are collected at the field surface; however, tillage and potato harvest practices in southeast Idaho thoroughly mix the top 30 centimeters (cm) of the soil profile. Therefore, subsequent surface sampling effectively represents the top 30 cm of the soil profile. We consider this soil sampling depth to be adequate to detect the presence of PCN in Idaho, the only State in which PCN is known to exist.

A commenter stated that the nematode soil extraction methods required by APHIS in PCN laboratories are expedited, causing very low recovery rates and further invalidating the confirmatory policy.

We are uncertain as to what specific problem the commenter is citing. APHIS follows extraction protocols based on best practices described in scientific literature, which include a minimum 2-week soil drying period and a quality-controlled laboratory environment in which the samples are processed.

Two commenters stated that growers should be able to have an independent lab conduct soil testing and compare their results with APHIS' findings, with one commenter expressing doubts about the reliability of DNA testing conducted by APHIS.

We do not prohibit a field operator or owner from employing independent PCN testing of their fields. However, we note that as soil in regulated fields is considered a regulated article, it cannot be moved from such fields without APHIS authorization. Moreover, soil testing can only be administered at APHIS-permitted facilities under methods approved by APHIS. For any third-party sampling effort to be recognized by APHIS as a valid comparison, we must provide oversight of field sampling and laboratory extraction to ensure APHIS protocols are followed.

A commenter requested that we no longer require tare dirt testing for exotic nematodes, adding that if APHIS does not require testing from our trading partners then APHIS should not be doing it domestically.

We are making no changes in response to the commenter. Tare soil sampling has never been a requirement of the APHIS PCN domestic program.

#### Farm Machinery and Nonfarm Conveyances in Regulated Fields

As a regulated article under § 301.86-2, farm equipment and conveyances used in an infested or associated field that can carry soil out of the field are subject to pressure washing and steam sanitation requirements. These requirements constitute part of the deregulation protocols for infested and associated fields.

A few commenters stated these requirements have resulted in damage to the paint and computer components of their farming equipment and requested that APHIS provide them with compensation for damages.

We acknowledge that in the past there have been instances in which sanitation measures necessary for mitigating PCN have impacted farming equipment. However, through years of experience we have developed and applied approaches to sanitizing equipment that minimize or prevent instances of damage.

A commenter stated that equipment sanitation requirements were burdensome because it takes time to sanitize equipment and APHIS will not verify completion in a timely way. One commenter recommended that APHIS employ two sets of equipment cleaning teams at earlier and later hours so the whole day is covered.

We are aware of the time and effort required of growers to fulfill the sanitation requirements but note that doing so is essential to mitigating the spread of PCN. We have worked to make it easier for growers to meet these requirements by expanding our hours of service and implementing a central hotline for requesting sanitation services and scheduling appointments after hours, Saturdays, and on Federal holidays.

Some commenters stated that APHIS is inconsistent and arbitrary in how it establishes and enforces PCN regulations with respect to moving equipment and conveyances in and out of regulated fields. One such commenter noted that straw and alfalfa can be moved off an infested field while combines and other equipment used for harvesting must undergo sanitation as a regulated article, and yet power company equipment and third-party vendors move vehicles in and out of quarantined fields without regulation. Another commenter stated that pressure washing and steam sanitation requirements for infested and associated fields are arbitrarily applied. The commenter stated that his organization has provided APHIS with evidence of arbitrary application, including failure of APHIS to require sanitation of non-farm vehicles and equipment entering regulated fields. Finally, a commenter stated, without providing details, that APHIS has allowed trucks to travel unimpeded in infested fields and onto public roads without being washed or inspected, although harvesters could not do the same.

We disagree with the commenters' contention that APHIS applies sanitation requirements for infested and associated fields ineffectively and arbitrarily. Sanitation and limited permitting are required and enforced for all equipment and vehicles that exit a regulated field. We pursue all reports we receive of equipment moved in violation of the requirements and take action when there is enough evidence to warrant it. We use all records and other information available to us

to establish regulated areas and to enforce sanitation requirements for all equipment and vehicles, while recognizing that farm equipment poses the greatest risk for spreading PCN, given its exposure to soil and frequent movement between fields.

A commenter asked how many times a field can be re-associated with an infested field.

There is no limit to the number of times a field can be re-associated. The regulatory status of a field for PCN is dependent on that field meeting any of the criteria for designation of fields as associated fields in § 301.86-3(c)(2).

A commenter noted that a number of external environmental factors, including host plant root diffusates, soil temperature and moisture, soil oxygen, soil microorganisms, minerals, and organic substances can induce or influence cyst hatching, and asked why these options are not used in place of sanitizing equipment.

We acknowledge that these factors can influence cyst hatching but note they are currently in the research phase and not ready to be tried on a production scale. Moreover, the factors listed are not actually sanitizing agents but more allied with pest eradication practices. While we always seek new approaches to controlling pests, sanitation is required to adequately address the risk of spreading PCN on equipment used in infested fields.

One commenter expressed concerns about the difficulty of moving deregulated equipment between fields. The commenter noted an instance in which APHIS told a grower that it was a holiday and their grain combine would have to remain in the field for 3 to 4 days before it could be washed and released.

APHIS understands the impacts of the sanitation requirement on growers and works to minimize delays while still providing services at no cost to growers. We note that sanitation and inspection services have been made available to growers on Federal holidays since 2011. In 2012, we developed a self-certification option with program oversight so growers could work autonomously. Stakeholders have the option of entering into a compliance agreement enabling them to meet washing, inspection, and certification requirements themselves.

A commenter stated that pressure washing equipment on the edge of a regulated field creates muddy conditions, which actually enhances the movement of soil out of the field as the mud clings to the tires of the equipment.

The commenter has provided no evidence that APHIS washes equipment in such a way that enhances movement of soil on equipment. We note that APHIS has broad experience with ensuring that vehicles and equipment that have been in PCN regulated fields are washed appropriately.

#### Non-Compliance with Court Order

According to one commenter, the proposed rule, economic analysis, and protocols violate the District Court's order that APHIS may not rely upon the advice or recommendations of the Technical Working Group in any future actions, including this rulemaking. The commenter noted that in the Court's 2018 Memorandum Decision and Order in *Mickelsen Farms v. APHIS*, there are many instances of APHIS' reliance on the recommendations and findings of the Technical Working Group in the development of the protocols. The commenter stated that the Technical Working Group recommended that farm implements used on any known infested field must be completely sanitized and noted that the deregulation protocols call for pressure washing and steam sanitation. The commenter also pointed out that the Technical Working Group recommended using stain viability assays on eggs, as does the infested field deregulation protocols. Finally, the commenter noted that the Technical Working Group recommended post-eradication treatment monitoring using fixed grid patterns, and the infested field protocol also calls for fixed grid pattern field sampling.

Although we disagree with the commenter's contention that the deregulation protocols were developed based on the work of the Technical Working Group, we acknowledge that the March 2019 proposed rule could have provided the public with a more detailed explanation to draw its own conclusions on this matter. For this reason, we reopened the comment period on

the proposed rule a second time and provided in this June 2020 reopening document<sup>8</sup> additional information about the science and sources we used to develop the protocols. We have responded to comments addressing that information in this final rule.

### Other Comments

One commenter said that we provided no evidence to support our statement in the proposal that unmanaged PCN infestations can cause potato yield losses of between 20 and 70 percent, adding that no yield losses have ever been documented as a result of PCN in the State of Idaho.

The percentage range we cited in the proposed rule collectively refers to potato yield losses from a few types of potato cyst nematodes, including PCN. Several studies from around the globe cite similar yield losses in countries where potato cyst nematodes have multiplied unchecked.<sup>9</sup> We note that no losses in potato yields have been documented for PCN in Idaho as in other countries because the infestation was detected and addressed before the pest level could reach the threshold for significant crop yield loss.

Several commenters suggested that APHIS should remove PCN from the U.S. and global quarantine lists.

There are currently 85 countries in addition to the United States that regulate *G. pallida* and 127 other countries that also regulate *G. rostochiensis*. Each of these countries determines its own import requirements for commodities entering their country. We agree with the

---

<sup>8</sup> See footnote 1 for a link to the document.

<sup>9</sup>Studies on this topic include: “Scientists: Unless PCN is eliminated, ‘there will be no Scottish potato sector left in 25 years’ time.” *Potato News Today*, August 9, 2019;

Cotton, J. 2014, “The genome and life-stage specific transcriptomes of *Globodera pallida*: key aspects of plant parasitism by a cyst nematode.” *Genome Biology* 15: <https://doi.org/10.1186/gb-2014-15-3-r43>;

Greco, N. 1988, “Potato cyst nematodes: *Globodera rostochiensis* and *G. pallida*.” Nematology Circular 149, Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville, FL, USA;

Dale, M.F.B., 1988, “The assessment of the tolerance of partially resistant potato clones to damage by the potato cyst nematode *Globodera pallida* at different sites and in different years.” *Annals of Applied Biology* 113, pp. 79-88; and

Mai, J. 1977, “Worldwide Distribution of Potato-Cyst Nematodes and Their Importance in Crop Production.” *Journal of Nematology*, 9:1, January 1977.

regulatory and scientific communities that find PCN is capable of threatening Idaho<sup>10</sup> and the global potato industry with costs associated with managing unrestricted PCN populations.

Several commenters questioned the U.S. Department of Agriculture's (USDA's) ability to contain or eradicate PCN, citing instances in which viable nematodes have been dispersed broadly by wind, water, and animals.

While we acknowledge that water, wind, or animals are possible mechanisms for spreading PCN, our experience as well as scientific studies indicate that human-assisted spread is the primary mechanism for spreading PCN between fields. Natural PCN movement within soil, in contrast, has been shown to be generally no greater than 1-2 meters annually.<sup>11</sup> Although some infested fields in Idaho have been detected within close proximity to one another, all such fields to date have been shown to have a history of shared equipment or other human-assisted means of soil movement from another infested field.

We note, moreover, that APHIS regulates associated fields on the basis of adjacency to infested fields for the purpose of detecting any PCN spread by natural means. Our survey data have not supported that PCN is spread in Idaho by wind, water, or animals. APHIS has collected over half a million soil samples outside of infested fields, many from fields adjacent to infested fields, with no detections of PCN.

Therefore, for the reasons given in the proposed rule and in this document, we are adopting the proposed rule as a final rule, without change.

---

<sup>10</sup> See Koirala, S., Watson, P., McIntosh, C.S. *et al.* "Economic Impact of *Globodera Pallida* on the Idaho Economy." *American Journal of Potato Research*. 97, 214-220 (2020). <https://doi.org/10.1007/s12230-020-09768-2>.

<sup>11</sup> See, for example, N.C. Banks, et. al., "Dispersal of Potato Cyst Nematodes Measured Using Historical and Spatial Statistical Analyses." *Phytopathology* 102(6):620-6, June 2012: <https://apsjournals.apsnet.org/doi/pdfplus/10.1094/PHYTO-08-11-0224>; and Lambert, K. and S. Bekal, "Introduction to Plant-Parasitic Nematodes." *The Plant Health Instructor* (2002, revised 2009). DOI: 10.1094/PHI-I-2002-1218-01.

## Executive Orders 12866 and 13771 and Regulatory Flexibility Act

This final rule has been determined to be not significant for the purposes of Executive Order 12866 and, therefore, has not been reviewed by the Office of Management and Budget. This rule is not an Executive Order 13771 regulatory action because this rule is not significant under Executive Order 12866.

In accordance with the Regulatory Flexibility Act, we have analyzed the potential economic effects of this action on small entities. The analysis is summarized below. Copies of the full analysis are available on the Regulations.gov website (see footnote 1 in this document for a link to Regulations.gov) or by contacting the person listed under FOR FURTHER INFORMATION CONTACT.

According to the Small Business Administration, entities whose main activity is potato farming (classified under NAICS 111211) are considered small if they have \$750,000 or less in annual receipts. Based on the 2017 Census of Agriculture, there were about 25,000 farms in Idaho, of which around 700 were considered to be primarily potato farms. Bingham and Bonneville Counties had 108 and 40 potato farms, respectively. There were about 1,800 farms in Idaho with farm sales greater than \$500,000, of which around 1,070 farms had farm sales greater than \$1 million. According to the 2017 Census, 108 of Bingham County's 1,177 farm operations (about 9 percent) had farm sales greater than \$500,000, while Bonneville County, 40 of the 1,109 farm operations (about 4 percent) had farm sales greater than \$500,000. Although the distribution of potato farms with farm sales above \$500,000 (or \$750,000) is not known, it is reasonable to conclude that many of the potato farms in northern Bingham and southern Bonneville Counties are small business entities.

However, the final rule would not impose new or additional burdens on small entities as this is an administrative action for which there would be no additional costs.

Under these circumstances, the Administrator of the Animal and Plant Health Inspection Service has determined that this action will not have a significant economic impact on a substantial number of small entities.

#### Executive Order 12372

This program/activity is listed in the Catalog of Federal Domestic Assistance under No. 10.025 and is subject to Executive Order 12372, which requires intergovernmental consultation with State and local officials. (See 2 CFR chapter IV.)

#### Executive Order 12988

This final rule has been reviewed under Executive Order 12988, Civil Justice Reform. This rule: (1) Preempts all State and local laws and regulations that are inconsistent with this rule; (2) has no retroactive effect; and (3) does not require administrative proceedings before parties may file suit in court challenging this rule.

#### Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), the Office of Information and Regulatory Affairs designated this rule as not a major rule, as defined by 5 U.S.C. 804(2).

#### Paperwork Reduction Act

This final rule contains no reporting, recordkeeping, or third party disclosure requirements under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

#### List of Subjects in 7 CFR Part 301

Agricultural commodities, Plant diseases and pests, Quarantine, Reporting and recordkeeping requirements, Transportation.

Accordingly, we are amending 7 CFR part 301 as follows:

PART 301—DOMESTIC QUARANTINE NOTICES

1. The authority citation for part 301 continues to read as follows:

Authority: 7 U.S.C. 7701-7772 and 7781-7786; 7 CFR 2.22, 2.80, and 371.3.

Section 301.75-15 issued under Sec. 204, Title II, Public Law 106-113, 113 Stat. 1501A-293; sections 301.75-15 and 301.75-16 issued under Sec. 203, Title II, Public Law 106-224, 114 Stat. 400 (7 U.S.C. 1421 note).

2. Section 301.86-3 is amended as follows:

- a. In paragraph (a), by removing

“[http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/potato/pcn.shtml](http://www.aphis.usda.gov/plant_health/plant_pest_info/potato/pcn.shtml)” and adding

“<https://www.aphis.usda.gov/planthealth/pcn>” in its place; and

- b. By revising paragraphs (c)(1) and (d).

The revisions read as follows:

§ 301.86-3 Quarantined areas.

\* \* \* \* \*

(c) \* \* \*

(1) *Infested fields.* A field will be designated as an infested field for pale cyst nematode upon a determination that viable pale cyst nematode is present in the field. The determination will be made in accordance with the criteria established by the Administrator for the designation of infested fields. The criteria are presented in a protocol document that may be viewed at <https://www.aphis.usda.gov/planthealth/pcn>. The protocol may also be obtained by request from any local office of Plant Protection and Quarantine; local offices are listed in telephone directories. Any substantive changes we propose to make to the protocol will be published for comment in the *Federal Register*. After we review the comments received, we will publish another notice in the *Federal Register* informing the public of any changes to the protocol.

\* \* \* \* \*

(d) *Removal of fields from quarantine. (1) Infested fields.* An infested field will be removed from quarantine for pale cyst nematode upon a determination that no viable pale cyst nematode is detected in the field. The determination will be made in accordance with criteria established by the Administrator and sufficient to support removal of infested fields from quarantine. The criteria are presented in a protocol document as provided in paragraph (d)(4) of this section along with information for viewing the protocol.

(2) *Associated fields.* An associated field will be removed from quarantine for pale cyst nematode once surveys are completed and pale cyst nematode is not detected in the field. The determination will be made in accordance with criteria established by the Administrator and sufficient to support removal of associated fields from quarantine. The criteria are presented in a protocol document as provided in paragraph (d)(4) of this section along with information for viewing the protocol.

(3) *Removal of other areas from quarantine.* If the Administrator has quarantined any area other than infested or associated fields because of its inseparability for quarantine enforcement purposes from infested or associated fields, as provided in paragraph (a) of this section, that area will be removed from quarantine when the relevant infested or associated fields are removed from quarantine.

(4) *Protocol for removal of fields from quarantine.* The Administrator will remove infested and associated fields, and other areas as provided in this section, from quarantine for pale cyst nematode in accordance with the protocols published on the Plant Protection and Quarantine website at <https://www.aphis.usda.gov/planthealth/pcn>. The protocols may also be obtained by request from any local office of Plant Protection and Quarantine; local offices are listed in telephone directories. Any substantive changes we propose to make to the protocols will be published for comment in the *Federal Register*. After we review the comments received, we will publish another notice in the *Federal Register* informing the public of any changes to the protocols.

Done in Washington, DC, this 1st day of December 2020.

Michael Watson

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 2020-26962 Filed: 12/28/2020 8:45 am; Publication Date: 12/29/2020]