



Pale Cyst Nematode (PCN) Eradication Program - Idaho Falls, Idaho 2021 1st Quarter Report (January 1 – March 31)

PROGRAM UPDATES AND NEW INFORMATION:

- The PCN program completed trace work for infested fields announced in 2019 and 2020. On January 28, 2021, 444 acres were added to the regulated area as associated fields due to their exposure to infested field soil and high risk for PCN infestation.
- On January 28, 2021, the PCN program deregulated 240 acres of associated fields after they completed a release protocol comprised of a sequence of surveys with negative laboratory results for PCN.

ERADICATION ACTIVITIES

- The PCN program is contracting with a chemical applicator to fumigate five PCN-infested fields (approximately 505 acres) with the nematicide Telone II (1,3-dichloropropene) in August and September of 2021.
- Results from the 2020 fumigation treatments on four infested fields are pending completion of laboratory analyses, and are expected by August 2021.

REGULATORY DATA

Regulatory Treatments

Treatment type	Regulatory Treatments (# of pieces of equipment)		
	1 st Quarter of 2021	2021 Year to date	Since program inception (2006)
Pressure Washed	67	67	30,530
Steam Sanitized	10	10	5,037
Total	77	77	35,567

Self-Certification Program

Treatment type	Regulatory Treatments (# of pieces of equipment treated by stakeholders participating in the self- certification program)		
	4 th Quarter of 2020*	2020 Year to date*	Since program inception (2006)*
Pressure Washed	17	17	4,724

*Self-certification data lags one quarter behind all other program data in order to provide a stakeholder reporting period.



Regulatory Documentation

Documentation type	Regulatory Documentation			
	1 st Quarter of 2021	2021 Year to date	Since program inception (2006)	Active
Certificate (PPQ 540)	37	37	13,928	*
Limited Permit (PPQ 530)	12	12	4,131	*
Compliance agreements	1	38	*	38

*Not applicable

SURVEY DATA

- To date, the PCN program has collected 541,964 soil samples in Idaho outside of the 31 known infested fields.

Type of survey	Idaho soil samples collected		
	1 st Quarter of 2021	2021 Year to date	Since program inception (2006)
Detection	0	0	244,591
Delimiting	646	646	292,738
Eradication	0	0	188,274
Total	646	646	725,603

LABORATORY DATA

- Since 2009, the PCN program has collected and screened 89,379 soil samples in support of the ISDA’s post-regulation monitoring survey of fields deregulated by APHIS.
- Since program inception, the PCN laboratory has screened 90,726 soil samples collected in other potato-producing states. There have been no PCN detections in the U.S. outside of Idaho.

Identification and Diagnostics

Type of survey	Samples processed by the Idaho PCN Laboratory		
	1 st Quarter of 2021	2021 Year to date	Since program inception (2006)
Detection	6,531	6,531	282,383
Delimiting	921	921	283,478
Eradication	2,172	2,172	183,884
Total	9,624	9,624	749,745



Type of survey	Samples processed at other Idaho laboratories	
	Idaho Food Quality Assurance Laboratory (2006-2009, now closed)	Idaho State Parma Research and Extension Center (2006-2009)
Detection	52,670	69
Delimiting	10,227	896
Total	62,897	965

ERADICATION MONITORING AND PROGRESS

- Since its inception in 2006, the PCN program has used a staining technique to analyze the viability of nematode eggs in 989 cyst samples collected from infested fields before and after fumigation treatments. Viable nematode eggs are no longer detected in 24 of the infested fields, which advances those fields to the next phase of evaluating eradication progress, the greenhouse bioassay.

Method	Location	Results	
		Total number of infested fields	Fields with no viable PCN detected by stain
Cyst stain	Idaho Falls PCN Laboratory	31	24

- Greenhouse bioassay is a test of the nematode’s ability to hatch, feed, and reproduce when placed in proximity to a growing host plant. Twenty of the 24 fields at zero viability, according to the staining method, have also successfully completed the greenhouse bioassay test. Of the four fields currently in greenhouse bioassay testing, final results are expected for one field by the end of 2021, and by the end of by early 2022 for three fields.
- The PCN program continues to monitor and regulate fields after successful completion of greenhouse bioassay testing, but with reduced sanitation requirements. Fields that have passed the greenhouse bioassay test are also eligible to return to potato production at the landowners’ discretion.

	Location	Results	
		Fields that advanced to greenhouse bioassay testing	Fields that have passed greenhouse bioassay testing
Greenhouse bioassay	University of Idaho, Moscow	24	20

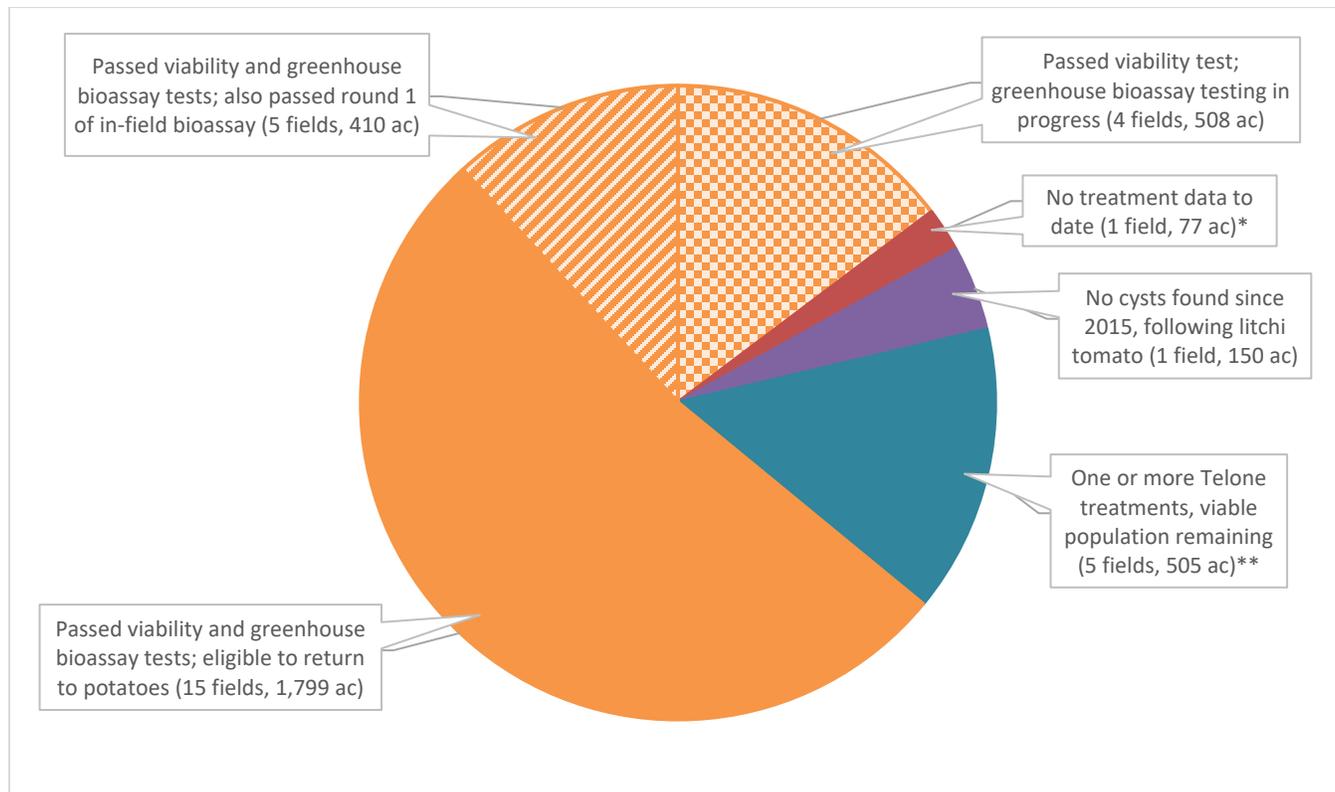
- The PCN program requires infested fields that return to potato production to undergo full-field surveys following each of three subsequent potato crops to check for viable PCN populations. Potatoes were planted in four eligible fields in 2020, which was the first potato crop since before PCN was found on those fields. The PCN program collected soil samples from the fields following harvest and analyzed them for the presence of viable nematodes in early 2021. No viable nematodes



were found in samples from three of four fields; however, viable nematodes were found in samples from the fourth field. As a result of finding viable nematodes, the prohibition on growing potatoes and full sanitation treatments (pressure washing and steam treatment) were reinstated for that field.

ERADICATION PROGRESS SUMMARY AS OF MARCH 31, 2021

- This pie chart represents eradication progress for the 31 infested fields (3,446 ac) detected in Idaho since program inception in 2006.



* One field planted with a multi-year alfalfa crop in 2020.

** 2019 data; 2020 post-Telone data will be available by August 2021.



IMPACTS ON COMMERCE

In response to the initial PCN detection in 2006, Canada, Mexico and Korea shut off importation of potatoes from Idaho, while Japan cut off importation of potatoes from the entire U.S. The Mexico and Canada export markets have both been re-opened except for potatoes from PCN-regulated areas. Both require PCN soil surveys from origin fields. The Korea market was reopened in June 2010 except for potatoes originating from Bingham and Bonneville Counties, Idaho. Japan reopened their market to Idaho potatoes in September 2017. This action represented a major milestone for the Idaho potato industry and the PCN program, the full restoration of all markets lost due to the original 2006 PCN detection. Because of extensive field surveys conducted throughout production areas in Idaho, all of which have been negative beyond the twenty-nine infested fields, the general opinion by trading partners is that potatoes produced outside regulated areas do not pose a risk for spread of PCN.

PUBLIC OUTREACH

Pale Cyst Nematode program information is available via the USDA APHIS Stakeholder Registry. The Registry allows anyone to subscribe and receive alerts by email or by text message when new information about PCN or other topics of interest are announced. Subscribing is simple and you can unsubscribe or change your selections at any time. For PCN program announcements, select Plant Health in the U.S. (Domestic), then Pest Management, and finally Potato Pests and Diseases. To sign up, visit <https://public.govdelivery.com/accounts/USDAAPHIS/subscriber/new>

More PCN program information can be found at:

<https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/nematode/pcn>

If you have additional questions, contact the PCN program office at (208) 522-2431, Monday through Friday, 8:00 AM to 4:30 PM (Mountain Time), excluding federal holidays.