United States Department of Agriculture

Pale Cyst Nematode (PCN) Eradication Program - Idaho Falls, Idaho
2019 3rd Quarter Report (July 1 – September 30)

PROGRAM UPDATES AND NEW INFORMATION

- 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

ERADICATION ACTIVITIES

- The PCN program contracted with a chemical applicator in September and October to fumigate soil in five PCN-infested fields (approximately 665 acres) with Telone II (1,3-dichloropropene). Soil samples will be collected from the fields following fumigation, and cysts extracted from them will be tested to determine the treatments' effectiveness at reducing nematode egg viability.

REGULATORY DATA

Regulatory Treatments

Treatment type	Regulatory Treatments (# of pieces of equipment)		
	3rd Quarter of 2019	2019 Year to date	Since program inception
Pressure Washed	627	1,372	27,964
Steam Sanitized	402	502	4,717
Total	***1,029***	***1,874***	***32,681***

Self-Certification Program

Treatment type	Regulatory Treatments (# of pieces of equipment treated by stakeholders participating in the self-certification program)		
	2nd Quarter of 2019*	2019 Year to date*	Since program inception*
Pressure Washed	60	60	4,509

*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			
	3rd Quarter of 2019	2019 Year to date	Since program inception	Active
Certificate (PPQ 540)	217	504	13,077	*
Limited Permit (PPQ 530)	50	116	3,895	*
Compliance agreements	3	3	*	40

*Not applicable

SURVEY DATA

- To date, the PCN program has collected and screened 530,293 soil samples in Idaho outside of the 29 known infested fields.

Type of survey	Idaho soil samples collected		
	3rd Quarter of 2019	2019 Year to date	Since program inception
Detection	0	690	240,177
Delimiting	1,184	1,284	277,914
Eradication	9,428	14,984	172,784
Total	***10,612***	***16,958***	***690,875***

LABORATORY DATA

- Since 2009, the PCN program has assisted with collecting and screening 89,379 soil samples in support of the ISDA's post-regulation monitoring survey of fields deregulated by the USDA.
- The PCN laboratory has screened 80,151 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		
	3rd Quarter of 2019	2019 Year to date	Since program inception
Detection	995	1,062	269,743
Delimiting	100	100	276,839
Eradication	2,488	7,932	167,036
Total	***3,583***	***9,094***	***713,618***

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, the PCN program has used a staining technique to analyze the viability of nematode eggs in 944 cyst samples collected from infested fields before and after fumigation treatments. Viable nematode eggs are no longer detected in 22 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	29	22

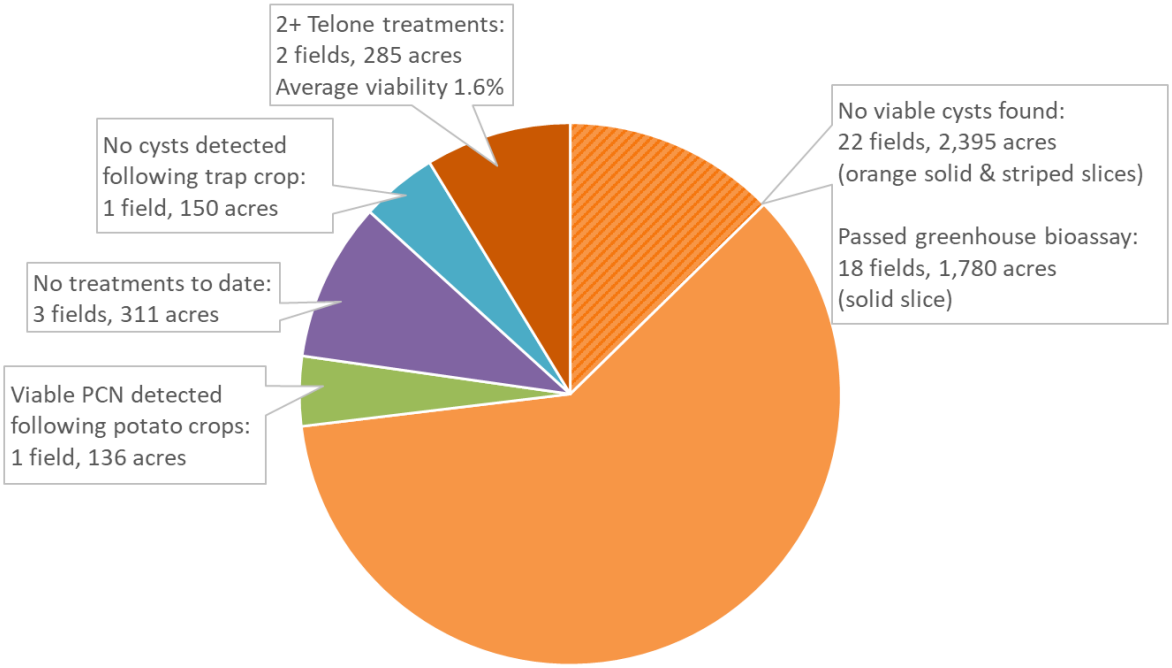
- Greenhouse bioassay is a test of the nematode ability to hatch, feed, and reproduce when placed in proximity to a growing host plant. Eighteen of the 22 fields at zero viability by the staining method have also successfully completed the greenhouse bioassay test. Final greenhouse bioassay results are expected in 2020 for the fields currently in the testing process.

- 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.

Method	Location	Results	
		Fields that advanced to greenhouse bioassay testing	Fields that have passed greenhouse bioassay testing
Greenhouse bioassay	University of Idaho, Moscow	22	18

- 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 fields in 2019. Soil samples will be collected from each field following harvest and analyzed for the presence of viable PCN, with results expected in early 2020.

ERADICATION PROGRESS SUMMARY



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 with the exception of potatoes from PCN-regulated areas. Both require PCN soil surveys from origin fields. The Korea market was reopened in June 2010 with the exception of potatoes originating from Bingham and Bonneville Counties, Idaho. Japan reopened their market to Idaho potatoes in September 2017, which 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

- August 2019: PCN program staff handed out flyers at homes and businesses around the Telone II treatment fields. The flyers provided general information about the chemical application, safety guidelines for reentry into the field, and how to contact the PCN program with questions or concerns.

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