



Pale Cyst Nematode (PCN) Eradication Program - Idaho Falls, Idaho 2017 4th Quarter Report (October 1 – December 31)

PROGRAM UPDATES AND NEW INFORMATION

- On December 4, 2017, the PCN program published a change to the regulated area that announced the deregulation of 485 acres of associated fields. These fields successfully completed a release protocol comprised of a sequence of soil surveys with negative laboratory results for PCN. After we made adjustments to geospatial information systems records to improve the accuracy of field size measurements, an additional 4 acres were removed from an infested field and 2 acres were removed from an associated field.
- On December 17, 2017, the PCN program published another change to the regulated area that announced the deregulation of 399 acres of associated fields. These fields successfully completed a release protocol comprised of a sequence of surveys with negative laboratory results for PCN.

ERADICATION ACTIVITIES

- The PCN program conducted eradication treatments on five infested fields (665 acres) in fall 2017 with the nematicide Telone II (1,3-dichloropropene). In October and November 2018, soil from four of the five fields was collected to test treatment efficacy. Results are expected by April 2018. Soil will be collected from the fifth field in early 2018, with results expected by September 2018.
- University of Idaho researchers and infested field operators planted the trap crop litchi tomato on a 36-acre portion of a PCN-infested field in 2017. Since litchi tomato is non-native to Idaho, the crop was managed under an invasive species permit issued by the Idaho State Department of Agriculture (ISDA) defining clear parameters for planting, monitoring and controlling escape of the plant. The PCN program collected soil samples after the treatment to determine effectiveness of the trap crop. Results are expected by April 2018.



REGULATORY DATA

Regulatory Treatments

Treatment type	Regulatory Treatments (# of pieces of equipment)		
	4 th Quarter of 2017	2017 Year to date	Since program inception
Pressure Washed	368	2,193	24,436
Steam Sanitized	35	282	3,340
Total	403	2,475	27,776

Self-Certification Program

Treatment type	Regulatory Treatments (# of pieces of equipment treated by stakeholders participating in the self- certification program)		
	3 rd Quarter of 2017*	2017 Year to date *	Since program inception *
Pressure Washed	35	127	4,233

*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		
	4 th Quarter of 2017	2017 Year to date	Since program inception
Certificate (PPQ 540)	154	871	11,758
Limited Permit (PPQ 530)	34	280	3,547
New compliance agreements	4	7	191



SURVEY DATA

- To date, the PCN program has collected and screened 512,710 soil samples in Idaho outside of the 27 known infested fields.

Type of survey	Idaho soil samples collected		
	4 th Quarter of 2017	2017 Year to date	Since program inception
Detection	3,730	5,784	239,487
Delimiting	2,307	14,240	276,630
Eradication	696	8,418	157,800
Total	6,733	28,442	673,917

LABORATORY DATA

- Since 2009, the PCN program has assisted with collecting and screening 89,351 soil samples in support of the ISDA’s post-regulation monitoring survey of fields deregulated by the USDA.
- The PCN laboratory has screened 68,261 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		
	4 th Quarter of 2017	2017 Year to date	Since program inception
Detection	3,675	10,841	254,605
Delimiting	6,016	14,483	268,391
Eradication	0	860	149,032
Total	9,691	26,184	672,028

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 885 cyst samples collected from infested fields before and after fumigation treatments. Viable nematode eggs are no longer detected in 20 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	27	20

- Greenhouse bioassay is a test of nematode eggs’ ability to hatch, feed, and reproduce when placed in proximity to a growing host plant. Nine of the 20 fields at zero viability by the staining method have also successfully completed the greenhouse bioassay test. Final greenhouse bioassay results are expected in 2018 for the other 11 fields currently in the testing process.
- The PCN program continues to monitor and regulate fields after successfully completing of the greenhouse bioassay test, 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.

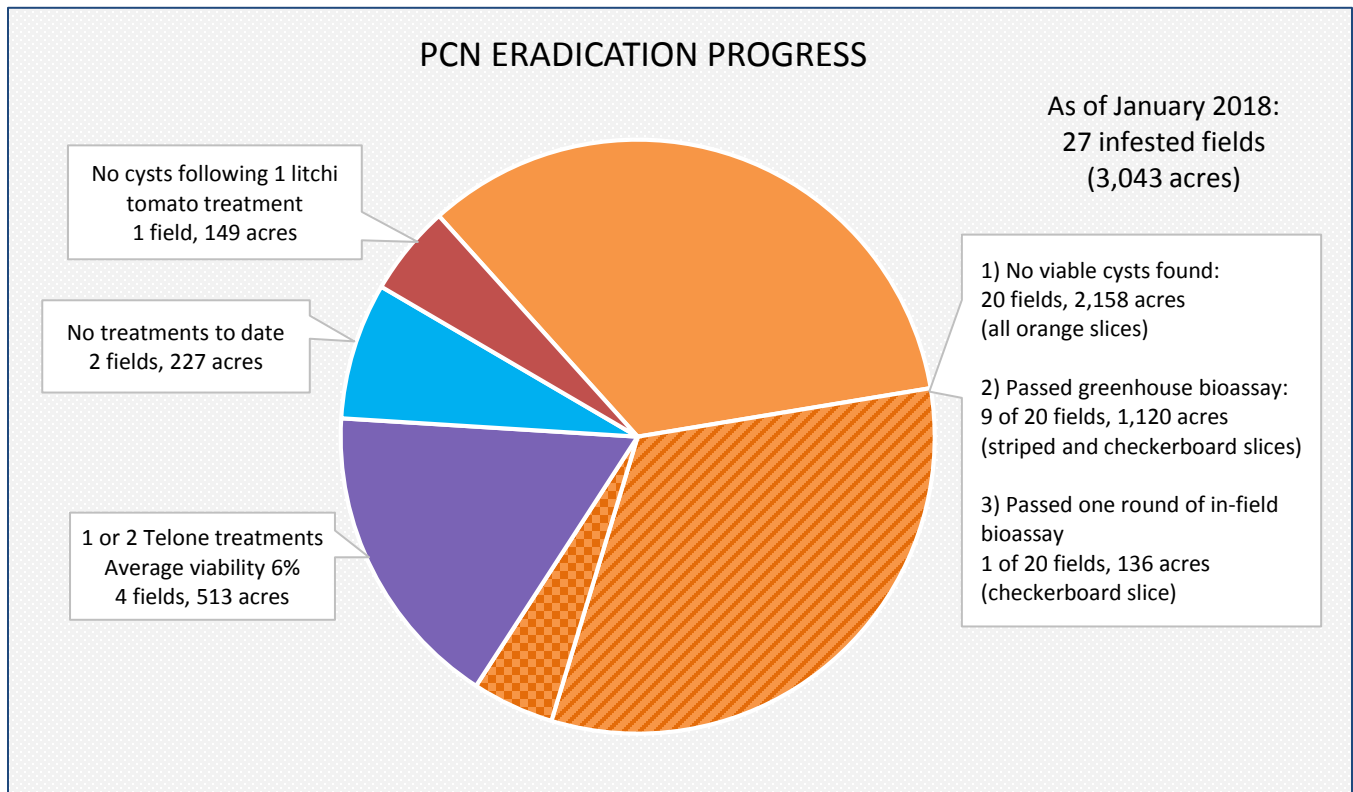
Method	Location	Results	
		Fields that advanced to greenhouse bioassay testing	Fields that have passed greenhouse bioassay testing
Greenhouse bioassay	University of Idaho, Moscow	20	9

- 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. Potatoes were planted on half of one eligible field in 2015, 2016, and 2017 (alternating sides of the field). These were the first potato crops produced on the field since before PCN was detected there in 2006. Potato production has been successful; no viable PCN were detected in post-harvest surveys conducted in 2015 and 2016. The field was sampled again after the 2017 potato crop to determine if viable PCN are present; results of that testing are expected by April 2018.

Method	Results	
	Fields currently eligible	Fields that have passed one or more rounds
In-field bioassay	9	1



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 South 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-seven infested fields, the general opinion by our trading partners is that potatoes produced outside regulated areas do not pose a risk for spread of PCN.

PUBLIC OUTREACH

- In October 2017, the PCN program conducted outreach to the Bingham and Bonneville County ranching community through an article in a University of Idaho Extension newsletter. The article explained that moving cattle through PCN-regulated fields poses a risk for spreading the pest. Ranchers are advised to contact the PCN program to erect temporary fencing before cattle drives to discourage cattle from entering regulated fields.



United States Department of Agriculture

PCN program information can be found at: <http://www.aphis.usda.gov/planthealth/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.