



Pale Cyst Nematode (PCN) Eradication Program - Idaho Falls, Idaho 2017 3rd Quarter Report (July 1 – September 30)

PROGRAM UPDATES AND NEW INFORMATION

- The Japan trade market was reopened to Idaho potatoes in September 2017. This event marks a major milestone for the Idaho potato industry and the Pale Cyst Nematode (PCN) program, the restoration of all markets lost due to the original 2006 PCN detection in Idaho.
- Another PCN-infested field has successfully completed the greenhouse bioassay test, bringing the number of fields to reach this milestone to nine. The greenhouse bioassay tests nematodes' ability to hatch and reproduce when challenged by an actively growing host plant (potato) under simulated field conditions. Bioassays are performed in a containment facility at the University of Idaho in Moscow, Idaho. Completing the greenhouse bioassay allows reduced regulatory and sanitation requirements and enables a field to return to host crop production.
- 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

- Late-September through early October, the PCN program conducted eradication treatments on five infested fields (665 acres) with the nematicide Telone II (1,3-dichloropropene). Soil samples will be collected after 30 days post-treatment to determine how well the treatments worked against PCN. Results are expected by spring of 2018.
- The University of Idaho and infested field operators planted the trap crop litchi tomato on 36 acres 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 spring 2018.



REGULATORY DATA

Regulatory Treatments

Treatment type	Regulatory Treatments (# of pieces of equipment)		
	3 rd Quarter of 2017	2017 Year to date	Since program inception
Pressure Washed	1,041	1,797	24,040
Steam Sanitized	135	244	3,302
Total	1,176	2,041	27,342

Self-Certification Program

Treatment type	Regulatory Treatments (# of pieces of equipment treated by stakeholders participating in the self- certification program)		
	2 nd Quarter of 2017*	2017 Year to date*	Since program inception*
Pressure Washed	71	73	4,179

*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		
	3 rd Quarter of 2017	2017 Year to date	Since program inception
Certificate (PPQ 540)	363	717	11,593
Limited Permit (PPQ 530)	135	250	3,511
New compliance agreements	0	3	187



SURVEY DATA

- To date, the PCN program has collected and screened 507,200 soil samples in Idaho outside of the 27 known infested fields.

Type of survey	Idaho soil samples collected		
	3 rd Quarter of 2017	2017 Year to date	Since program inception
Detection	107	2,054	235,757
Delimiting	4,307	11,933	274,323
Eradication	6,862	7,722	157,104
Total	11,276	21,709	667,184

LABORATORY DATA

- Since 2009, the PCN program has assisted with collecting and screening 87,604 soil samples in support of the ISDA’s post-regulation monitoring survey of fields deregulated by the USDA.
- The PCN laboratory has screened 68,223 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		
	3 rd Quarter of 2017	2017 Year to date	Since program inception
Detection	1,123	7,166	250,930
Delimiting	466	8,467	262,375
Eradication	860	860	149,032
Total	2,449	16,493	662,337

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 886 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 for 11 other fields currently in the testing process are expected in 2018.
- 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.

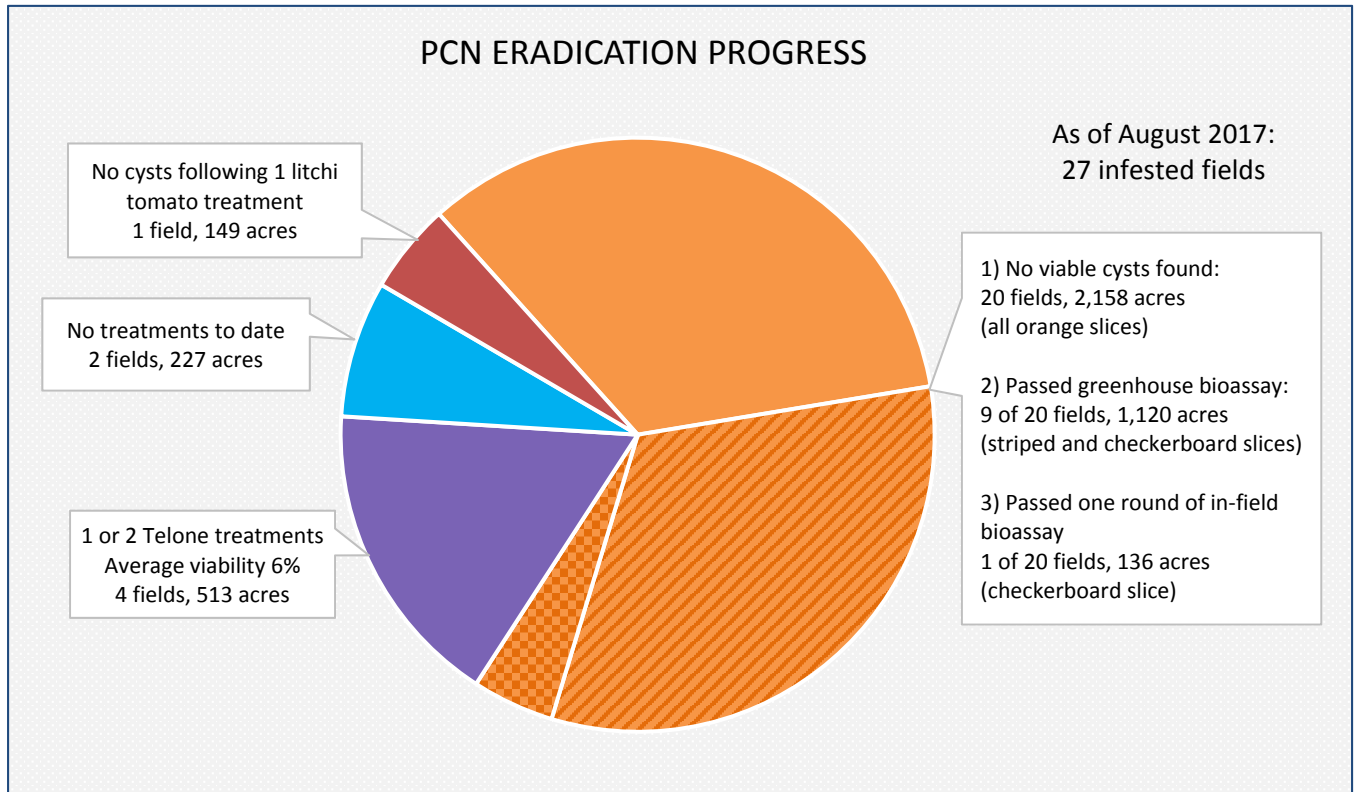
Method	Location	Results	
		Fields that advanced to greenhouse bioassay testing	Fields that have passed greenhouse bioassay testing
Greenhouse bioassay	University of Idaho, Moscow	20	9

- 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 are expected by spring 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 Korea market was reopened in June 2010 with the exception of potatoes originating from Bingham and Bonneville Counties, Idaho. The Japan market was reopened to Idaho potatoes in September 2017. This represents 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

- July 2017: PCN program staff handed out flyers at homes and businesses around the litchi tomato treatment field. The flyers provided background information about this unique treatment option and guidance for reporting any LT plants spotted outside of the treatment area.
- August 2017: 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.



PUBLIC OUTREACH, *continued*

- August 3, 2017: PCN program staff conducted program outreach to the Shelley-Firth Fire Department. First responders were provided with a program overview, updated maps of the regulated area, and suggestions for best practices when responding to emergencies in and around PCN-regulated fields.

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.