United States Department of Agriculture

Pale Cyst Nematode (PCN) Eradication Program - Idaho Falls, Idaho
2017 2nd Quarter Report (April 1 – June 30)

PROGRAM UPDATES AND NEW INFORMATION

- On April 4, 2017, Plant Protection and Quarantine (PPQ) announced the release of one 187-acre Bingham County field from the Pale Cyst Nematode (PCN) regulated area. The field was regulated as an associated field in 2015 due to its adjacency to an infested field. In addition to meeting the testing requirements for deregulating an associated field, the field owner created an uncropped buffer zone of at least 15 yards between his field and the neighboring infested field. The buffer zone contains a barbed-wire fence, a trench, and a soil berm as physical barriers to prevent inadvertent equipment and soil movement between fields. This change brings the current regulated area to 9,333 acres, of which 3,047 acres are infested fields.
- 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

- Another 36-acre litchi tomato treatment is in progress for 2017. Since litchi tomato is not native to Idaho, the Idaho State Department of Agriculture (ISDA) established a rigorous permitting process to define clear parameters for planting, monitoring and preventing escape of the plant. The University of Idaho and infested field operators planted the PCN trap crop litchi tomato on 50 acres in 2016. Researchers and field operators also planted litchi tomato on three fields (132 acres) in 2015. Testing at the end of the 2015 growing season did not detect any viable PCN cysts in two of the three treated fields, and no PCN cysts were found on the third field following testing in 2016.
- In September 2016, the PCN program conducted eradication treatments on eight infested fields (880 acres) with the nematicide Telone II (1,3-dichloropropene). Soil samples were collected following treatments and tested to determine the fumigant's efficacy against PCN. PCN egg viability declined by an average of 60% on fields with no prior PCN program-sponsored eradication treatments. Telone treatments on five infested fields (665 acres) are planned for late summer/early fall 2017.

REGULATORY DATA

Regulatory Treatments

Treatment type	Regulatory Treatments (# of pieces of equipment)		
	2nd Quarter of 2017	2017 Year to date	Since program inception
Pressure Washed	572	752	22,995
Steam Sanitized	67	109	3,167
Total	***639***	***861***	***26,162***

Self-Certification Program

Treatment type	Regulatory Treatments (# of pieces of equipment treated by stakeholders participating in the self-certification program)		
	1st Quarter of 2017*	2017 Year to date*	Since program inception*
Pressure Washed	0	0	4,108

*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		
	2nd Quarter of 2017	2017 Year to date	Since program inception
Certificate (PPQ 540)	261	349	11,225
Limited Permit (PPQ 530)	76	113	3,375
New compliance agreements	0	3	187

SURVEY DATA

- To date, the PCN program has collected and screened 503,000 soil samples in Idaho outside of the 27 known infested fields.

Type of survey	Idaho soil samples collected		
	2nd Quarter of 2017	2017 Year to date	Since program inception
Detection	1,947	1,947	235,650
Delimiting	1,682	7,626	270,016
Eradication	572	860	150,242
Total	***4,201***	***10,433***	***655,908***

LABORATORY DATA

- Since 2009, the PCN program has assisted with collecting and screening approximately 87,500 soil samples in support of the ISDA's post-regulation monitoring survey of fields deregulated by the USDA.
- The PCN laboratory has screened more than 67,900 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		
	2nd Quarter of 2017	2017 Year to date	Since program inception
Detection	1,372	6,043	249,807
Delimiting	8,001	8,001	261,909
Eradication	0	0	148,172
Total	***9,373***	***14,044***	***659,888***

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. Eight of the 20 fields at zero viability by the staining method have also successfully completed the greenhouse bioassay test. Final greenhouse bioassay results for the remaining 12 fields are expected in 2017 and 2018.

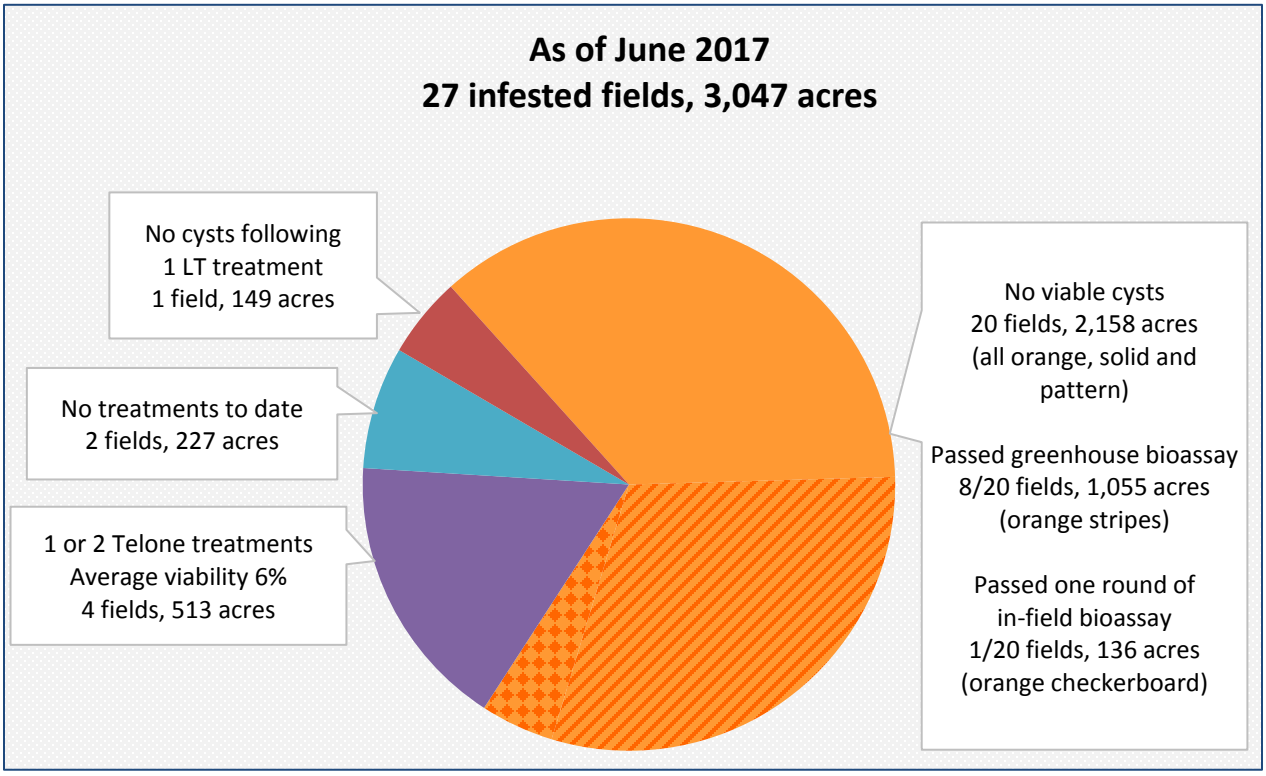
- The PCN program continues to monitor fields after successful completion of the greenhouse bioassay test, but with reduced sanitation requirements. Fields that have passed the greenhouse bioassay test are also eligible to return to potato production at the landowners' discretion.

Method	Location	Results	
		Fields that advanced to greenhouse bioassay testing	Fields that have passed greenhouse bioassay testing
Greenhouse bioassay	University of Idaho, Moscow	20	8

- 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, and on the other half in 2016. These were the first potato crops produced on the field since before PCN was detected in 2006. Potato production was a success; no viable PCN were detected in post-harvest surveys conducted both years.

Method	Results	
	Fields currently eligible	Fields that have passed one or more rounds
In-field bioassay	8	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 remains closed to Idaho potatoes but negotiations are actively underway to re-gain market access. 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

- On April 13, 2017, University of Idaho graduate students toured the PCN program facility during a week-long Potato Industry Tour. The annual statewide tour stopped at potato farming operations, packing and processing facilities, agricultural research companies, and included meetings with chemical companies, retail representatives, and county extension educators across the State of Idaho. The PCN program tour was followed by a meet-and-greet with PCN-impacted growers and landowners to discuss the quarantine and eradication process, and how PCN impacts their farming operations.

PUBLIC OUTREACH, *continued*

- On May 9, 2017, the PCN program provided outreach to employees of the Shelley, Idaho Rocky Mountain Power office. Rocky Mountain Power, a service provider to parts of Idaho, Utah and Wyoming, frequently works in or around agricultural fields that are regulated for PCN. The outreach touched on the importance of PCN program regulations and provided strategies for preventing the spread of PCN, as well as other agricultural pests and diseases.
- On May 10, 2017, the PCN program presented an update to employees of the American Falls facility for Lamb Weston, an international producer of frozen potato products. The presentation was broadcast additional Lamb Weston Facilities located in Louisiana, Minnesota, and Washington.
- On June 21, 2017, the PCN program provided an update at the University of Idaho's Snake River Pest Management Tour at the Aberdeen, Idaho Research and Extension Center. The annual tour, which provides the latest in herbicide research and recommendations for weed management in common southeast Idaho crops, is part of the university's outreach and extension program. The tour highlighted the PCN trap crop litchi tomato (LT) and University of Idaho's efforts to research effective herbicide options for controlling LT and weeds in a LT crop.
- On June 27, 2017, the PCN program provided an update and facility tour to the National Farm Bureau President, Zippy Duvall. The PCN program was one stop on a multiple day comprehensive tour of Idaho 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.