



**Pale Cyst Nematode (PCN) Eradication Program - Idaho Falls, Idaho
2020 3rd Quarter Report (July 1 – September 30)**

PROGRAM UPDATES AND NEW INFORMATION:

- Trace work is ongoing to identify and regulate fields that may have been exposed to soil from a Bingham County infested field that was detected and announced in November 2019.

ERADICATION ACTIVITIES

- The PCN program contracted with a chemical applicator to fumigate five PCN-infested fields (450 acres) with Telone II (1,3-dichloropropene) in September of 2020. Soil samples will be collected from the fields in 2021, and cysts extracted from soil samples will be tested to determine treatment effectiveness at reducing nematode egg viability.

REGULATORY DATA

Regulatory Treatments

| Treatment type | Regulatory Treatments (# of pieces of equipment) | | |
|-----------------|---|-------------------|-------------------------|
| | 3 rd Quarter of 2020 | 2020 Year to date | Since program inception |
| Pressure Washed | 1,045 | 1,642 | 30,159 |
| Steam Sanitized | 134 | 214 | 5,008 |
| Total | 1,179 | 1,856 | 35,167 |

Self-Certification Program

| Treatment type | Regulatory Treatments (# of pieces of equipment treated by stakeholders participating in the self-certification program) | | |
|-----------------|---|--------------------|--------------------------|
| | 2 nd Quarter of 2020* | 2020 Year to date* | Since program inception* |
| Pressure Washed | 7 | 7 | 4,572 |

*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 2020 | 2020 Year to date | Since program inception | Active |
| Certificate (PPQ 540) | 244 | 533 | 13,772 | * |
| Limited Permit (PPQ 530) | 83 | 152 | 4,096 | * |
| Compliance agreements | 0 | 36 | * | 36 |

*Not applicable



SURVEY DATA

- To date, the PCN program has collected 535,258 soil samples in Idaho outside of the 31 known infested fields.

| Type of survey | Idaho soil samples collected | | |
|----------------|---------------------------------|-------------------|-------------------------|
| | 3 rd Quarter of 2020 | 2020 Year to date | Since program inception |
| Detection | 57 | 321 | 241,002 |
| Delimiting | 472 | 472 | 281,593 |
| Eradication | 7,255 | 7,483 | 183,711 |
| Total | 7,784 | 8,276 | 706,306 |

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 85,470 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 2020 | 2020 Year to date | Since program inception |
| Detection | 768 | 6,083 | 275,826 |
| Delimiting | 0 | 257 | 281,230 |
| Eradication | 888 | 4,668 | 178,339 |
| Total | 1,656 | 11,008 | 735,395 |

| 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 976 cyst samples collected from infested fields before and after fumigation treatments. Viable nematode eggs are no longer detected in 23 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 | 23 |

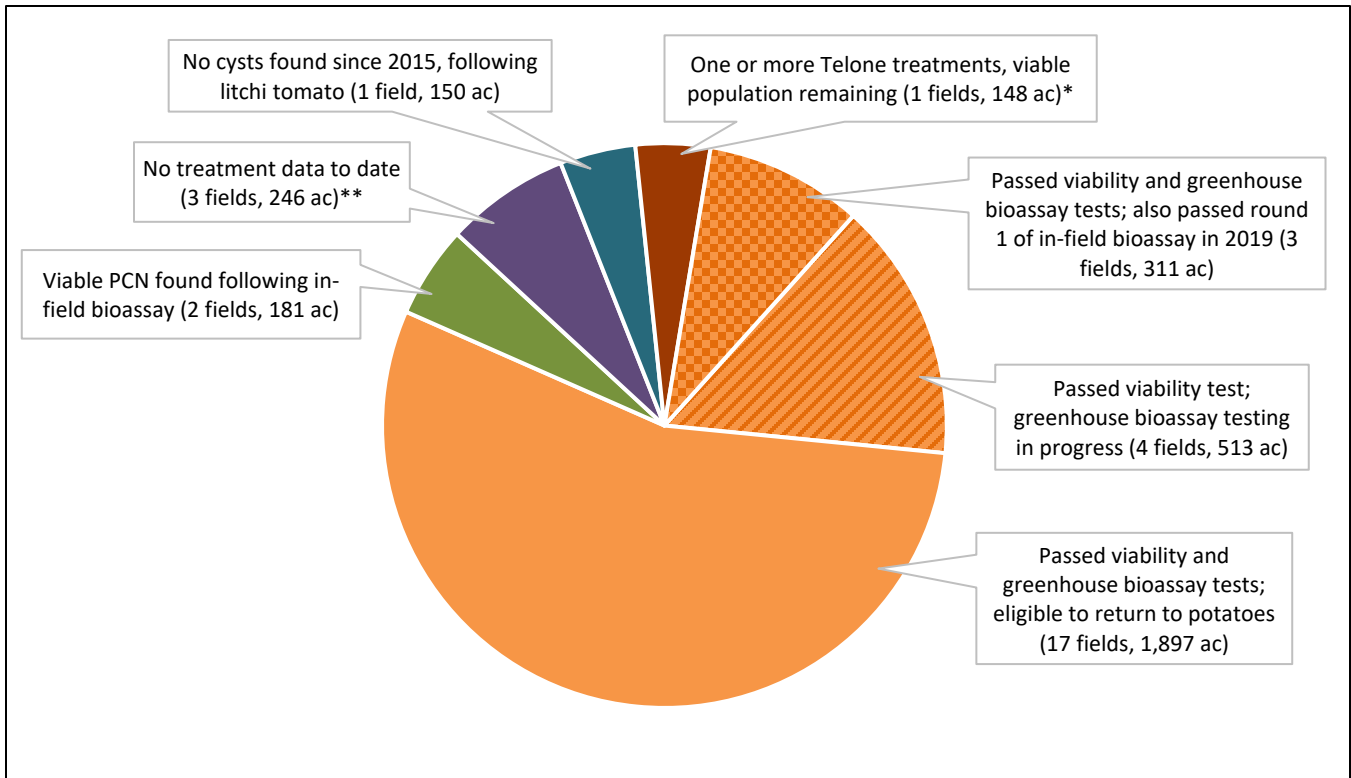
- Greenhouse bioassay is a test of the nematode ability to hatch, feed, and reproduce when placed in proximity to a growing host plant. Twenty of the 23 fields at zero viability by the staining method have also successfully completed the greenhouse bioassay test. Final greenhouse bioassay results are expected in early to mid-2021 for two of 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 | 23 | 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 2019. Soil samples were collected from the fields following harvest and analyzed for the presence of viable PCN. Three of the fields tested negative and one of the fields tested positive for viable PCN. Potatoes were planted on four additional 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 potato harvest and will screen them for the presence of viable PCN over the winter of 2020-21.



ERADICATION PROGRESS SUMMARY AS OF SEPTEMBER 30, 2020



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

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

** Includes one field planted with a multi-year alfalfa crop in 2020 and two fields treated with Telone in September 2020, results pending.

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



United States Department of Agriculture

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>

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.