



IDAHO STATE DEPARTMENT OF AGRICULTURE (ISDA) DIVISION OF PLANT INDUSTRIES

2014 SUMMARIES OF PLANT PESTS, INVASIVE SPECIES, NOXIOUS WEEDS, PLANT LAB, NURSERY AND FIELD INSPECTION PROGRAMS, WITH SURVEY RESULTS

INTRODUCTION

ISDA's Division of Plant Industries derives its statutory authority from multiple sections of Idaho Code, Title 22, including the Plant Pest Act, the Noxious Weed Law, the Nursery and Florist Law and the Invasive Species Act. These laws give the Division of Plant Industries clear directives to conduct pest surveys and manage invasive species and plant pests for the purpose of protecting Idaho's agricultural industries valued at over \$4 billion, which include crops, nursery and ranching. The Division of Plant Industries also cooperates with other agencies including the Idaho Department of Lands (IDL), the University of Idaho (UI), the United States Forest Service (USFS), the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Services (APHIS), Plant Protection and Quarantine (PPQ), county governments, Cooperative Weed Management Areas (CWMA), industry groups and other stakeholders to protect Idaho's landscapes and environments from invasive species. Finally, the Division of Plant Industries helps accomplish the ISDA's broader mission to *serve consumers and agriculture by safeguarding the public, plants, animals and the environment through education and regulation*. This report summarizes the comprehensive and cooperative programs conducted during 2014 to enforce Idaho statutes and fulfill the mission of ISDA.

PEST SURVEYS

APPLE MAGGOT (AM) (*Rhagoletis pomonella* (Walsh))

In 1990, ISDA established by administrative rule an AM-free regulated area (the "Apple Maggot Free Zone" or AMFZ) encompassing the major apple production areas of the state. Every year, ISDA conducts an area-wide survey for AM using sticky yellow panel traps with ammonium carbonate bait.

2014 Summary of trapping for apple maggot in Idaho

County	Total number of AM traps placed	Positive AM traps	Negative AM traps
Boise	20	5	15
Boundary	18	0	18
Canyon	143	0	143
Gem	93	5	88
Owyhee	35	0	35
Payette	95	0	95
Washington	101	8	93
TOTAL	505	18	487



In 2014, 505 traps were placed in commercial apple orchards and home landscape trees in Boise, Boundary, Canyon, Gem, Owyhee, Payette and Washington counties. Specimens suspected of being AM were confirmed by the ISDA entomologist. During the 2013 field season, ISDA had collected two AM in historically AM-free territory (one in Canyon County and one in Payette County), so in 2014 ISDA conducted a delimit survey around each location. All delimit traps were negative. Five of the eight positive AM traps in Washington County were located within the established AMFZ and all five of the positive traps in Gem County were located within the AMFZ; however, all AM collected within the AMFZ were found on traps that had been placed in hawthorn trees or in undermanaged or neglected apple trees in non-commercial settings. Gem and Washington counties are both considered partially infested and regulated under a state interior quarantine. <http://adminrules.idaho.gov/rules/current/02/0608.pdf>.

During 2015, ISDA will continue to conduct detection surveys in the seven-county area. In Canyon, Gem, Payette and Washington counties, ISDA will set out supplementary detection traps around the positive locations. See page 34 of this report for a map of 2014 AM survey activity in Idaho.

BROWN MARMORATED STINK BUG (BMSB) (*Halyomorpha halys* Stal)

Brown Marmorated Stink Bug is an invasive insect pest native to Asia. In the U.S., it was first detected in Allentown, PA in 1998 and has since spread to over 40 states. In the West, BMSB has become established in Utah, Oregon and Washington. BMSB is an agricultural pest because it feeds on a wide range of tree fruits, seed pods and vegetables including apples, peaches, green beans, peppers and corn. For homeowners, it is mainly a nuisance pest as it invades houses in vast numbers during the fall looking for a place to overwinter.



In 2012, ISDA collected several live BMSB adults from a household in Nampa, ID after a concerned homeowner reported finding them on his property. The homeowner had recently moved to Idaho from Maryland and these specimens “hitchhiked” to Idaho as stowaways in household items. During 2013, ISDA conducted visual surveys for BMSB on corn fields in several Idaho counties with negative results. The site in Nampa where BMSB was introduced in 2012 was revisited in 2014 and pheromone traps demonstrated to attract BMSB were set up in the neighborhood and checked biweekly throughout the summer. No specimens of the pest were found in the traps or observed during visual inspections of surrounding foliage, leading to the conclusion that an infestation failed to establish. In October of 2014, however, the first BMSB from Ada County was confirmed when a Boise resident contacted ISDA with a living specimen found in his garage. An inspection of the premises failed to turn up any additional BMSB specimens. Plans are to set up pheromone traps in the neighborhood during spring/summer of 2015.

WESTERN CHERRY FRUIT FLY (WCFF) (*Rhagoletis indifferens* Curran)

ISDA routinely conducts an annual trapping program to detect first emergence of WCFF. In 2014, WCFF adults were first observed in ISDA sentinel traps on May 27th near Caldwell in Canyon County and on June 3rd near Emmett in Gem County. The agency also tracks degree-day accumulation calculations as required by the California Department of Food and Agriculture (CDFA) to comply with their WCFF quarantine, which is aimed at states wishing to export fresh sweet cherries into or through California. To comply with the California Quarantine Permit statutes, and at the request of the Idaho Cherry Commission, commercial cherry growers were notified by mail during the week of May 27, 2014 that the 1,060 degree-day threshold had been reached, this having been established as an indicator to begin pesticide treatment for WCFF. In addition, electronic notifications were sent out with assistance from the University of Idaho Cooperative Extension Service via the PNW Pest Alert Network Web Site (<http://www.pnwpestaalert.net/index.php>).

2010-2014: Degree-day accumulations relevant to the start of pesticide treatments for WCFF

Site	2014 Forecast for first treatment (recommended at 1060 degree-days)	2013	2012	2011	2010
		Historical 1060 degree day accumulation forecast dates			
Boise	June 1	June 2	May 26	June 15	June 12
Caldwell	June 1	May 26	May 26	June 12	June 12
Nampa	June 1	May 31	June 1	June 17	June 13
Ontario	June 1	May 30	May 30	June 17	June 11
Parma	May 30	June 4	May 25	June 17	June 12
Emmett	June 2	May 28	June 2	June 21	N/A

Degree-day calculations used to decide when to begin pesticide treatments for WCFF are determined by use of a degree-day computer model from the Department of Entomology at Oregon State University. Control applications are recommended on or prior to accumulations of 1,060 degree-days according to the publication “Orchard Pest Management” published by the Good Fruit Grower, Yakima, WA, in 1993.

EUROPEAN PINE SHOOT MOTH (EPSM) **(*Rhyacionia bouliana* Denis & Schiffermuller)**

The Idaho EPSM survey is conducted annually to comply with California and Montana quarantines by tracking the insect's presence within the state. In 2014, ISDA staff placed 72 EPSM traps in nurseries and pine tree plantations throughout the 12 Idaho counties in which EPSM have, so far, never been detected. In addition, at the request of nurseries seeking phytosanitary data to allow export of nursery stock, traps were set out and monitored in three counties where EPSM had been captured in the past. No newly confirmed infested counties were reported in 2014. Finding effective control regimes and complying with Montana and California EPSM quarantines continue to challenge this segment of the Idaho nursery industry. A map of Idaho counties historically positive for EPSM is located on page 33 of this report.



ELM SEED BUG (ESB) (*Arocatus melanocephalus* Fabricius))

Elm Seed Bug, which until 2009 had never been found in North America, is common in central-southern Europe. It was first collected in the US in Ada County and Canyon County, but it took three years for its identification to be determined. By that time, it had spread to Elmore, Gem, Owyhee and Payette counties. During 2013, ESB was confirmed in four more counties in Idaho: Bannock, Bingham, Bonneville and Twin Falls, as well as Malheur County OR. By 2014, it had been reported as far west as Portland, OR and Wenatchee, WA and as far south as Provo, UT. ESB, which are related to boxelder bugs, stink bugs and other seed bugs, most likely arrived in Idaho in packing containers from Italy. The insect preferentially feeds on the seeds of elm trees but has also been observed on seeds of other trees. ESB adults are 1/3 inch long and dark chocolate-colored with rusty red triangular markings on their backs. The insect does not damage trees or buildings, nor does it present any threat to human health. However, due to its habit of entering houses and other buildings in large numbers to escape summer heat and later to overwinter, it can be viewed as a significant nuisance to homeowners. Currently, pesticides are not considered effective in managing ESB in homes, although research is in progress to determine what viable control options might be available. Excluding them from buildings by sealing cracks around windows and doors and removing those inside with a vacuum cleaner are the best recommendations for dealing with them at this time. Although ESB is not regulated by ISDA or USDA, ISDA will continue to track the movement of ESB as it is found in new counties within the state. A map of Idaho counties presently confirmed as having established ESB populations is located on page 36 of this report.



GYPSY MOTH (GM) (*Lymantria dispar* (Linnaeus))

During 2014, 3,785 Gypsy Moth survey traps were deployed throughout the state. The number of traps placed by each agency was:

- Idaho Department of Lands (IDL): 2,324 detection/36 delimit traps
- Idaho Department of Agriculture (ISDA): 836 detection traps
- United States Forest Service R-1: 94 detection traps
- United States Forest Service R-4: 495 detection traps



Between 05/01/14 and 11/01/14, staff members from each participating agency completed the placement and subsequent removal of gypsy moth traps throughout the state. In 2013, one gypsy moth was captured in Idaho. This moth was determined, by the OTIS Methods Development Lab, to be of the European/North American strain (EGM) and was caught in northern Idaho (French Gulch, Shoshone County). Response to that capture was a summer of delimitation trapping the following year, where 36 traps were set up in a square mile grid centered at the location of the 2013 catch. Detection traps are checked once per season for

moths. Delimit traps are checked biweekly. During 2014, no GM were captured in any Idaho traps (detection or delimit).

For the 2015, trapping season current plans are to continue detection trapping throughout the state based on an established historical rotating schedule for trap zones. Delimitation trapping (36 traps/sq mi) will be conducted for another year at the location in French Gulch where the single male EGM was captured in 2013.

The complete report on the 2014 Gypsy Moth Survey in Idaho may be viewed at the IDL website at: http://www.idl.idaho.gov/forestry/forest-health/gm_report2014.pdf (Report provided by Stephani Sandoval and Gina Davis of the IDL, Coeur d'Alene, Idaho)

JAPANESE BEETLE (JB) (*Popillia japonica* (Newman))

The Japanese Beetle is a highly destructive invasive plant pest that, if established, can be very difficult and expensive to control. Feeding on grass roots, JB grubs damage lawns, golf courses, parks and pastures. JB adults attack the foliage, flowers or fruits of more than 300 different ornamental and agricultural plants. Originally from Japan, JB was first noticed in the US in New Jersey in 1916. It is now known to occur in most states east of the Mississippi River while its presence in the West remains spotty. Quarantines for JB are maintained and vigorously enforced by the state governments of Arizona, Idaho, California, Colorado, Montana, Nevada, Oregon, Utah and Washington, as well as the Canadian Provinces of British Columbia and Alberta.



JB that show up in the west have usually arrived by “hitchhiking” on airplanes, other vehicles or nursery stock moving from an infested area. When suitable conditions are encountered, JB populations have been known to increase at a phenomenal rate. If JB were to become established, there could be large negative impacts, both economic and environmental, for the state.

Beginning in 1990, ISDA has regularly set out approximately 340 JB detection traps each year in high risk locations throughout Idaho. These routine surveys resulted in the capture of single specimens of JB in Ada County (1992), Gooding County (1997) and Twin Falls County (2011).

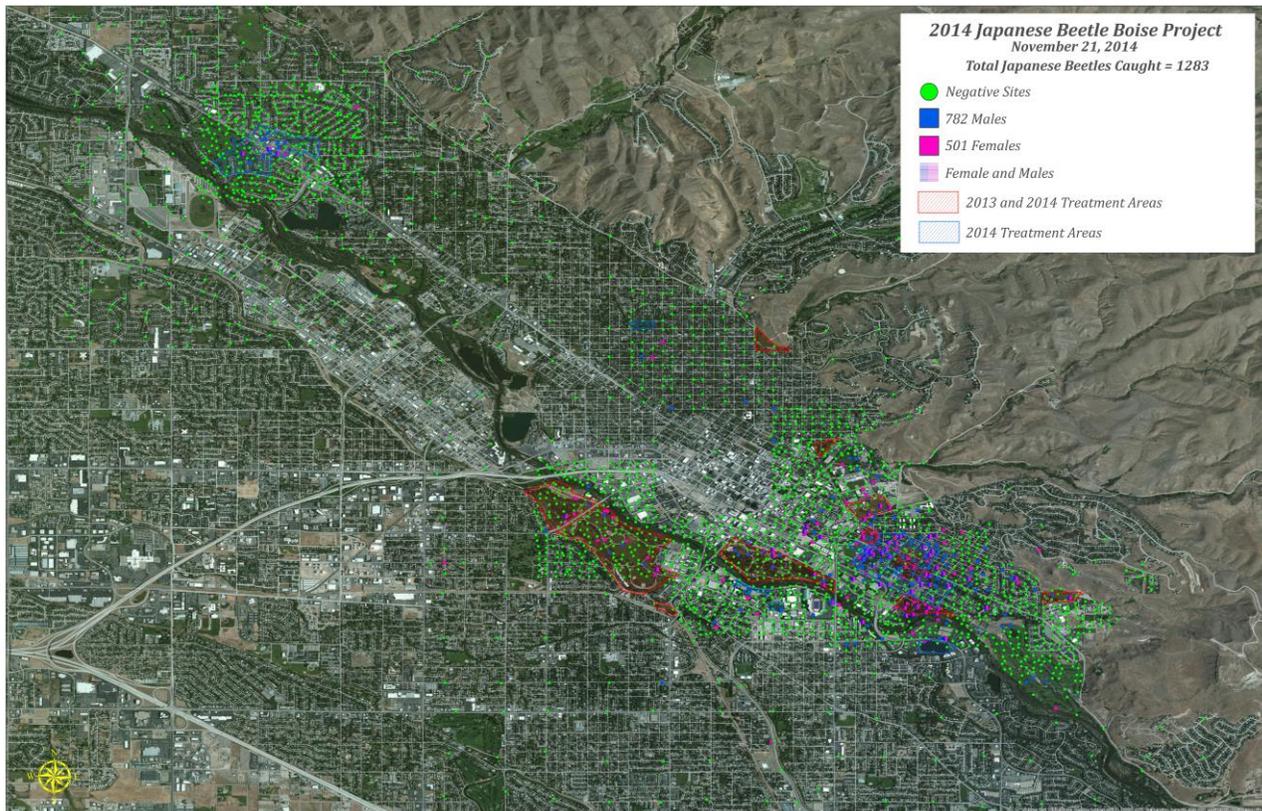
In late summer 2012, ISDA traps collected a total of 61 JB in Idaho: four near a nursery in Kootenai County, one near a nursery in Bannock County and 56 in Boise in Ada County. Extensive detection and delimitation trapping was conducted in 2013 with trap numbers increased to 1,553. The only catches were in Boise; however, 3,058 beetles were caught there. Most were in a residential area on the city's east side. Simultaneous with the 2013 survey, 95 residential properties and 14 city parks were treated with insecticides in an attempt to eradicate JB grubs and adults where they were found in the greatest numbers. During 2014 the number of survey traps was increased again to 2,947 to more accurately determine where JB populations were located and to aid in effective control efforts. Trap data from 2014 indicated that the 2013 insecticide treatments appeared to have a positive effect, with beetle numbers down overall about 60% - 1,283 JB were captured in the traps – and a 95% reduction in beetles in the area where the 95 residences had been treated. Pesticide applications, under the direction of ISDA, were continued during 2014 with 400 new residential/commercial properties added to the treatment area.

Plans for 2015 include a level of detection and delimitation trapping similar to what was undertaken in 2014; however, a more extensive area of pesticide treatment is being considered in an attempt to eradicate new JB populations spreading from the heart of the infestation while those new populations are still very small. A 2014 JB trap distribution map for the state is located on page 35 of this report.

Summary of 2014 JB catches in Idaho

County	No. of negative traps	No. of positive traps	No. of JB caught in county
Ada	2306	248	1283
Kootenai	139	0	0
Other Idaho Counties	254	0	0
Total	2699	248	1283

Map of Boise indicating locations of traps positive and negative for JB throughout the season



EMERALD ASH BORER (EAB) (*Agrilus planipennis* Fairmaire)

The emerald ash borer was first identified in North America in southeastern Michigan and the Windsor, Ontario areas in 2002. Since then, it has been found in 24 states primarily in the eastern half of the U.S. and parts of Canada. Interceptions have been made as far west as Denver, Colorado. Larvae of this extremely destructive tree pest feed on tissues beneath the bark of ash trees (*Fraxinus* spp.), effectively girdling and consequently killing the trees. Adult EAB are generally active from mid-May to September.



As part of USDA's 2014 National EAB Survey, USDA PPQ installed and monitored a total of 23 purple sticky traps at 23 locations throughout Idaho. Sites included ports of entry, parks, and urban ash plantings. In 2014, manuka oil lures used in the traps were supplemented with Z3 hexanol lures. As in previous years, no EAB were captured in Idaho in 2014.

(Report provided by Brian Marschman, Idaho State Plant Health Director, USDA APHIS PPQ)

SMALL GRAINS COMMODITY SURVEY

Wheat and barley industries play important roles in Idaho’s economy. Idaho grain farmers generated nearly \$500 million in cash receipts from sales of wheat and barley accounting for over 11% of all agricultural receipts in Idaho. Wheat, which is grown in 42 of 44 Idaho counties, is a prominent crop in Idaho with its largest production areas in the eastern part of the state and the north central Palouse region. The 2014 wheat crop tallied in at 93 million bushels: 58.4 million bushels of winter wheat and 34.6 million bushels of spring wheat.

The success of the Idaho wheat industry depends greatly on its ability to export crops to external markets, including the Asian market where a significant amount of the soft white wheat grown in the state is exported for use in pastry and noodle making. In 2014 ISDA, in cooperation with the USDA’s Cooperative Agricultural Pest Survey Program (CAPS), conducted visual surveys for four exotic organisms that could threaten Idaho’s small grains crops.

Organism	Photo	No. of Visual inspections performed in 2014	Results
<p>Black Maize Beetle (BMB) (<i>Heteronychus arator</i>)</p> <p>BMB, also known as the African black beetle, is a pest of pasturelands, turf and agricultural crops in Australia, New Zealand, and Africa.</p> <p>All life stages are subterranean, although adults are capable of flight. Adults tend to aggregate under grass species and prefer to oviposit there.</p> <p>Its establishment in Idaho would cause financial hardships for producers of corn, wheat, pastureland, grapevines, newly planted trees and other crops.</p>	 <p><i>Pest and Diseases Image Library bugwood.org</i></p>	<ul style="list-style-type: none"> • 2 Visual surveys mid-May and mid-June were conducted in 96 fields throughout the following counties: Bannock, Bingham, Bonneville, Canyon, Cassia, Fremont, Idaho, Jefferson, Latah, Lewis, Madison, Minidoka, Power and Twin Falls. 	<p>All negative</p>
<p>Cucurbit Beetle (CB) (<i>Diabrotica speciosa</i>)</p> <p>CB is an insect pest of small grain, corn, potato, grape, bean and soybean crops. Native to South America, the larvae feeds on roots of wheat and various other crops and non-crop hosts, while the adults will feed on the leaves, stems, etc. of the host plants and moving to other plants when necessary.</p> <p>Adult cucurbit beetles easily overwinter in cold climates and are known to be multi-generational.</p>	 <p><i>Photo provided by Cooperative Agricultural Pest Survey</i></p>	<ul style="list-style-type: none"> • 2 Visual surveys mid-May and mid-June were conducted in 96 fields throughout the following counties: Bannock, Bingham, Bonneville, Canyon, Cassia, Fremont, Idaho, Jefferson, Latah, Lewis, Madison, Minidoka, Power and Twin Falls. 	<p>All negative</p>

<p>Eastern Heath Snail (EHS) (<i>Xerolenta obvia</i>)</p> <p>EHS is a mollusk pest of dunes, meadows and rocky hillsides. It is a native of Europe and Asia Minor and was first detected in Michigan in 2001 and Montana in 2012.</p> <p>EHS is slightly smaller than a dime in diameter and is white with dark brown spiral bands. It prefers dry grassy areas and can survive long periods of dry conditions by withdrawing into its shell and sealing the opening with a mucous membrane. It feeds on a wide range of plants including alfalfa, clover, wheat, barley, fruit trees and weeds all present in Idaho.</p>	 <p>Ian Foley, Montana Dept. of Agriculture bugwood.org</p>	<ul style="list-style-type: none"> • 2 Visual surveys mid-May and mid-June were conducted in 96 fields throughout the following counties: Bannock, Bingham, Bonneville, Canyon, Cassia, Fremont, Idaho, Jefferson, Latah, Lewis, Madison, Minidoka, Power and Twin Falls. 	<p>All negative</p>
<p>Wheat Bug (WB) (<i>Nysius huttoni</i>)</p> <p>WB is a polyphagous species which feeds on a large number of weeds and crops. It has been mainly reported as a pest of wheat and Brassicaceae, but it can feed on many plant species.</p> <p>Primarily a sap feeding insect which attacks many plant parts including seeds, both adults and nymphs can cause significant injury. On wheat, damage is when the grains are at the milk-ripe stage.</p> <p>The establishment of this pest in Idaho's domestic and export wheat industries would result in increased management costs and potential crop losses.</p>	 <p>Natasha Wright Florida Dept. of Agriculture and Consumer Services bugwood.org</p>	<ul style="list-style-type: none"> • 2 Visual surveys mid-May and mid-June were conducted in 96 fields throughout the following counties: Bannock, Bingham, Bonneville, Canyon, Cassia, Fremont, Idaho, Jefferson, Latah, Lewis, Madison, Minidoka, Power and Twin Falls. 	<p>All negative</p>

PALE CYST NEMATODE (PCN) (*Globodera pallida*)

Pale Cyst Nematode Eradication Program: Idaho

- Production Acres Surveyed: 13,600
- Seed Acres Surveyed: 6,145
- Number of Counties Surveyed: 12
- Fields Positive: 5 new, 26 fields (2,897 acres total) are considered infested



PPQ confirmed 5 new pale cyst nematode-infested fields in Bingham County, Idaho in 2014 (May 29th, October 28th, November 21st, November 26th, and December 8th). All twenty-six known infested fields are located within a 7.5-mile radius that spans a portion of northern Bingham County and southern Bonneville County. PPQ regulated as many as 8,617 acres in Bingham and Bonneville Counties in 2014 as a result of the infested field detections in 2011-2014. Tracework is ongoing to identify and regulate fields associated with two of the infested fields detected late in 2014. PPQ released 2,297 acres in 2014 that successfully completed the deregulation protocol, which consists of two full-field surveys, each following a host crop. The current regulated area is 8,617 acres. Of those total acres, 2,897 acres are infested.

Greenhouse bioassays were ongoing throughout 2014 (at the University of Idaho in Moscow, Idaho) on cysts from infested fields in the eradication program that had no viable nematodes according to a non-vital staining analysis conducted at the PPQ laboratory in Idaho Falls. Cysts collected from these fields advanced to greenhouse bioassay, which is the next step in determining eradication success. Greenhouse bioassay assesses a nematode's ability to hatch from a cyst, infect a host plant and reproduce. The entire greenhouse bioassay process takes at least 18 months to complete. One field successfully completed the greenhouse bioassay process in 2012, followed by six additional fields in 2014. These seven fields are eligible to return to potato production in 2015, with certain regulatory limitations. Operators of these fields have expressed a desire to plant a trap crop before returning to potato production. By the end of 2014, one additional field successfully completed the first two of three bioassay rounds with negative results for PCN reproduction.

In May 2014, a contractor treated seven infested fields with methyl bromide. Of the sixteen fields that were not treated:

- 9 fields had already triggered bioassay in 2010-2014
- 6 fields had already received two methyl bromide treatments
- 1 field's owner opted out of methyl bromide for 2014

Grain, corn or alfalfa crops were grown for harvest in the untreated fields instead. Tricon 80/20 (80% methyl bromide/20% chloropicrin) was used again in 2014. To increase retention of fumigant in the soil and overall fumigant efficacy, a special tarp material (totally impermeable film) has been used in the fields since 2011.

In 2012-2014, PPQ did not treat any of the infested fields with the nematicide Telone II due to lack of funds. Telone II had been used in the infested fields from 2007-2011, with the exception of 2009 when there was a worldwide shortage of the chemical.

In January 2014, PPQ held a PCN research review meeting in Pocatello, ID that was attended by PPQ, Idaho State Department of Agriculture (ISDA), Idaho Potato Commission (IPC), representatives of the infested field operators and various researchers involved with PCN trials from the University of Idaho (Moscow, Aberdeen, and Parma) and Agricultural Research Service (Oregon and Washington). Many of the trials involve developing non-chemical PCN eradication tools such as trap crops, hatching factors, bio-fumigants and bio-control. There was also an update provided on developing a PCN resistant variety of Russet Burbank potato. The discussion involved covering results from all 2013 trials and determining priorities for 2014 trials. An additional research review meeting was held in Boise, ID in December 2014 to recap research developments from 2014. The discussion focused on litchi tomato trap crop trial results and the feasibility of expanding its use to production scale in infested fields in 2015. Stakeholder updates were distributed in January, April and August.

SAMPLING INFORMATION: To date, the PCN Program has collected 473,960 soil samples in Idaho to ensure Idaho's freedom from PCN outside of the 26 known infested fields. More than 123,300 samples have been collected from the eradication fields in order to monitor eradication progress and to provide cysts to several institutions for PCN research.

To date, the PCN laboratory in Idaho Falls has screened 494,135 soil samples collected in Idaho and approximately 54,212 samples from other potato-producing states. An additional 63,862 samples collected in Idaho were screened at the Idaho Food Quality Assurance Laboratory and the University of Idaho Parma laboratory between 2006 and 2009. There have been no pale cyst nematode detections in the U.S. outside of Idaho. Since program inception, the PCN Program has analyzed the viability of 773 cyst samples collected from infested fields before and after fumigation treatments. The average PCN viability in fields that have been fumigated with methyl bromide two times has declined by more than 99% since eradication treatments began.

Since 2009, 82,636 soil samples have been collected and screened in support of the Idaho State Department of Agriculture's (ISDA) post-regulation survey of fields deregulated by the USDA. *(Report provided by Brian Marschman, Idaho State Plant Health Director, USDA APHIS PPQ)*

KARNAL BUNT (KB) (*Tilletia indica*)

The smut fungus pathogen *Tilletia indica* causes a fungal disease in wheat referred to as karnal bunt (KB). It is known to occur in Arizona, New Mexico, California and Texas, where quarantines are in place while efforts are made to eradicate the disease. ISDA has conducted surveys in Idaho for KB since 1996. During 2014, ISDA collected 70 wheat samples from 17 counties in Idaho and tested them for the pathogen. Results from this year's survey were negative. To date, KB has never been detected in Idaho.



2014 Karnal Bunt Survey in Idaho (all samples negative)

County	Number of Samples	County	Number of Samples
Bear Lake	1	Lewis	5
Bingham	15	Lincoln	1
Boundary	1	Madison	7
Canyon	3	Nez Perce	6
Cassia	7	Owyhee	1
Clearwater	1	Power	7
Elmore	1	Teton	1
Fremont	4	Washington	1
Jefferson	8	Total	70

DISEASES AND PESTS FOUND DURING 2014 FIELD INSPECTIONS FOR EXPORT CERTIFICATION

In 2014, 62 seed companies submitted field inspection requests representing 36 crops. Total acres submitted for inspection numbered 26,620, with 55,846 acres actually inspected, due to multiple inspections required for some crop diseases. This is an increase in firms from the 57 participants in 2013, and a 12% increase in acreage from the 23,785 acres submitted in 2013.

Year	# Participating Firms	# of Crops	Submitted Acres	Inspected Acres
2004	44	27	46,282	79,671
2005	43	28	42,961	74,905
2006	47	30	37,859	70,692
2007	48	32	30,938	58,218
2008	50	32	34,439	66,114
2009	43	33	36,541	72,184
2010	46	35	32,495	62,608
2011	41	30	25,193	51,404
2012	50	30	24,102	50,045
2013	57	32	23,785	50,157
2014	62	36	26,620	55,846

Adzuki Beans: In 2014, there were 113 acres of Adzuki beans submitted for individual inspection. In total there were 188 acres inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.25, Rules Governing the Planting of Beans Other Than *Phaseolus* Species in Idaho, all fields submitted were also inspected for Halo Blight, Common Blight, Fuscus blight, Brown Spot, Bacterial Wilt, Anthracnose, Soybean Cyst Nematode and Asian Soybean Rust.

Alfalfa seed: A total of 2,195.22 acres were submitted for inspection during the 2014 growing season. *Cercospora medicaginis*, *Clavibacter michiganensis* subsp. *insidious*, *Ditylenchus dipsaci*, *Euphorbia esula*, *Verticillium albo-atrum* or *V. dahliae*, and *Xanthomonas campestris* ssp. *alfalfae* were not observed during the 2014 field inspection season. *Phoma medicaginis* was confirmed in 16 acres.

Allium (excluding garlic): A total of 774.59 acres of onions were submitted for inspection. There were 3 acres of chive fields submitted in the 2014 growing season, as well as 47.90 acres of Welsh Onions. All fields inspected were found apparently free from *Peronospora destructor*, *Urocystis cepulae*, *Puccinia*

asparagi, *Colletotrichum circinans*, *Ditylenchus dipsaci*, and *Sclerotium cepivorum*. In onions, *Botrytis allii* was confirmed in 32.8 acres.

Beans, dry: In 2014, there were 958.17 acres of dry beans submitted for individual inspection. In total, 2,075.11 acres were inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Bean Seed (*Phaseolus*) Species in Idaho, all fields submitted were also inspected for Halo Blight, Common Blight, Fuscus blight, Brown Spot, Bacterial Wilt, and Anthracnose. In addition, there were no reported observations of *Colletotrichum truncatum*, peanut stunt cucumovirus, or tobacco streak ilavirus in fields requested to be inspected for these diseases. In dry beans, *Fusarium oxysporum* was confirmed in 22 acres. Bean Common Mosaic Potyvirus was found in 27 acres.

Beans, garden: In 2014, there were 8,313.05 acres of garden beans submitted for individual inspection. In total there were 21,375.20 acres inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Bean Seed (*Phaseolus*) Species in Idaho, all fields submitted were also inspected for Halo Blight, Common Blight, Fuscus blight, Brown Spot, Bacterial Wilt, and Anthracnose. There were no observations of bean yellow mosaic virus, *Colletotrichum truncatum*, pea seed-borne mosaic virus, peanut stunt virus, *Phoma exigua* var. *diversispora*, or tobacco streak virus in fields requested to be inspected for these diseases. There were 44 acres of garden beans found positive for Bean Common Mosaic Potyvirus. *Fusarium oxysporum* f. sp. *Phaseoli* was confirmed in 92 acres. Brown Spot was detected in 127.83 acres of beans in 2014.

Beans, Trial Grounds: In 2014, there were 300.51 acres of trial beans submitted for individual inspection. In total there were 1,454.22 acres inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Bean Seed (*Phaseolus*) Species in Idaho, all fields submitted were also inspected for Halo Blight, Common Blight, Fuscus blight, Brown Spot, Bacterial Wilt, and Anthracnose. There were no observations of bean yellow mosaic virus, *Colletotrichum truncatum*, pea seed-borne mosaic virus, peanut stunt virus, *Phoma exigua* var. *diversispora*, or tobacco streak virus in fields requested to be inspected for these diseases.

Brassicas: A total of 204 acres of brassicas (collards, kale, mustard, pak choi and turnips) were submitted and inspected in 2014. No fields were found positive for *Leptosphaeria maculans*, *Xanthomonas campestris* pv. *campestris*, *Pseudomonas syringae* pv. *maculicola*, *Alternaria brassicola* or *Sclerotinia* spp.

Carrot: A total of 1,087.70 acres were inspected in 2014. *Sclerotinia* spp. occurred in 23.6 acres. There were no observations of *Alternaria radicina*, *Alternaria dauci*, *Pectobacterium carotovorum* pv. *carotovorum*, or *Xanthomonas campestris* pv. *carotae*.

Coriander: A total of 122 acres of coriander were submitted in 2014. No diseases of significance were observed.

Corn: In 2014, there were 7,080.03 acres of corn submitted for individual inspection. In total, there were 14,113.26 acres inspected due to multiple inspection requirements for certain diseases. Disease occurrence was confirmed as follows: High Plains Virus (HPV) found in 1,135.98 acres; Maize Dwarf Mosaic Virus (MDMV) was found in 66.60 acres; Wheat Streak Mosaic Virus found in 94.31 acres; *Gibberella fujikuroi* found in 38.53 acres; *Sporisorium reilianum* found in 19 acres; *Fusarium subglutinans* found in 14.5 acres; *Ustilago zaeae* (Common Smut) was reported in 2,622.89 acres; Sugarcane Mosaic Potyvirus was found in 26 acres; *Fusarium* Spp. was found in 5.5 acres. These statistics include 52 acres in 11 fields submitted for inspection and testing for export to Australia. Of these fields, 52 acres in 4 fields met the Australian guidelines. Seven fields with 87 acres failed due to testing positive for various combinations of high plains virus, maize dwarf mosaic virus and wheat streak mosaic virus.

Cress: In 2014, a total of 8 acres were submitted for inspection during the growing season. No diseases of significance were observed.

Dill: In 2014, a total of 9 acres were submitted for inspection during the growing season. No diseases of significance were observed.

Garlic: A total of 15.83 acres were inspected and found free from any disease symptoms of quarantine significance, including *Sclerotium cepivorum* (Onion White Rot).

Grain: A total of 329.41 acres of barley, grain sorghum, oats, rye, triticale, and wheat were inspected. No diseases of significance were observed.

Kale: A total of 35 acres of kale were inspected in 2014. No diseases of significance were observed.

Lettuce: In 2014, 312.5 acres of lettuce were submitted for inspection. There was no observation of Lettuce Mosaic Potyvirus (LMV).

Mint: A total of 82 acres of peppermint were inspected and found apparently free from *Verticillium dahliae*, Mint Root Borer (*Fumibotys fumalis*), and Mint Stem Borer (*Pseudobaris nigrina*).

Pak Choi: In the 2014 growing season, 8 acres of pak choi were inspected. No diseases of significance were observed.

Peas: In 2014, 3,635.96 acres of peas were submitted for individual inspection. In total, 9,722.91 acres were inspected due to multiple inspection requirements for certain diseases. *Cladosporium cladosporioides spicicola*, *Mycosphaerella pinodes*, and *Ascochyta pisi* were not found in any of the fields inspected. In addition, no symptoms of pea seed-borne mosaic virus were observed during 2014 inspections. *Phoma medicaginis* was found in 54 acres. *Sclerotinia spp.* was confirmed in 12 acres.

Peppers: In 2014, a total of 0.20 acres were submitted for inspection during the growing season. No diseases of significance were observed.

Potato: In 2014, a total of 421 acres were submitted for inspection during the growing season. No diseases of significance were observed.

Pumpkin & Winter Squash: In 2014, a total of 2.04 acres were submitted for inspection during the growing season. No diseases of significance were observed.

Radish: There were 316 acres of radishes submitted for inspection. All fields were found apparently free from *Colletotrichum higginsianum*, *Xanthomonas campestris pv. campestris*, and *X. campestris pv. raphani*.

Sunflowers: In 2014, 290 acres of sunflowers were submitted for inspection. *Sclerotinia spp.* was observed in 140 acres.

Thyme: In 2014, a total of 4 acres were submitted for inspection during the growing season. No diseases of significance were observed.

Tomato: A total of 0.10 acres of tomatoes were submitted during 2014. No symptoms of diseases of quarantine significance were observed.

Watermelon: A total of 0.66 acres of watermelon were submitted for inspection during 2014. No fields were found positive for *Pseudomonas syringae pv. lachrymans*, *Colletotrichum orbiculare*, *Acidovorax avenae subsp. citrulli*, *Xanthomonas cucurbitae* or cucumber mosaic virus.

ACREAGE SUBMITTED FOR INSPECTION UNDER THE IDAHO RULES FOR PHYTOSANITARY AND POST-ENTRY CERTIFICATION AND RULES GOVERNING THE PLANTING OF BEANS (*Phaseolus*) SPECIES IN IDAHO FOR THE 2014 FIELD SEASON

SPECIES	SUBMITTED ACRES	INSPECTED ACRES
ADZUKI BEANS	113.00	188.00
ALFALFA	2,195.22	2170.22
BARLEY	37.07	72.80
BEANS, DRY	958.17	2075.11
BEANS, GARDEN	8,313.05	21375.20
CARROT	1,082.70	1082.70
CHIVES	3.00	6.00
COLLARDS	29.00	29.00
CORIANDER (HERB)	122.00	116.00
CORN	7,028.03	14009.26
CORN TO AUSTRALIA	52.00	104.00
CRESS	8.00	8.00
DILL (HERB)	9.00	9.00
GARLIC	15.83	15.83
GRAIN SORGHUM	272.90	545.80
KALE	35.00	35.00
LETTUCE	312.50	307.50
MUSTARD	21.00	21.00
OATS	0.18	0.24
ONION	774.59	874.35

PAK CHOI	67.00	67.00
PEA	3,635.96	9722.91
PEPPER, BELL	0.13	0.26
PEPPER, HOT	0.07	0.14
PEPPERMINT	82.00	164.00
POTATO	421.00	370.00
PUMPKIN & WINTER SQUASH	2.04	2.04
RADISH	316.00	316.00
RYE	0.01	0.01
SUNFLOWER	290.00	580.00
THYME (HERB)	4.00	4.00
TOMATO	0.10	0.20
TRIAL GROUND - BN	300.51	1454.22
TRITICALE	0.02	0.02
TURNIP	52.00	52.00
WATERMELON	0.66	1.32
WELSH ONION	47.90	47.90
WHEAT	19.23	19.30
TOTALS:	26,620.87	55,846.33

Nick Deeds, Program Specialist, Division of Plant Industries, Boise, (208) 332-8650 compiled the field disease report.

APIARY INSPECTIONS AND REGISTRATION FOR 2014

The ISDA registered 131 Beekeepers and 119,285 colonies during this period. Three Apiaries were examined for the issuance of a Certificate of Apiary Inspection for entrance into inter-state commerce. One was inspected for a possible pesticide exposure, yet was not able to be confirmed. One inspection was conducted for Africanized Bees, which was determined not to be the case. The 2014 year had only one inspection for American Foulbrood; samples were sent to the ARS lab in Maryland and were confirmed negative.

EXPORT CERTIFICATION FOR THE 2014 CALENDAR YEAR

During 2014, the Division of Plant Industries issued 4,554 Federal and 313 State Phytosanitary Certificates for 332 different types of commodities to 91 countries. (Note: 4,511 Federal and 288 State Phytosanitary Certificates were issued to 85 countries in 2013.) The Division of Plant Industries certified over 575 million pounds of seed, hay, lumber, and other commodities for export. The ISDA operates this program under a Memorandum of Understanding with the USDA.

PLANT PATHOLOGY SUMMARY REPORT

In 2014, the Idaho State Department of Agriculture (ISDA) Plant Pathology Lab received 1,459 samples for examination; 1,187 samples were accepted for testing. The Pathology Lab ran a total of 3,904 tests on this material. Average turnover time per sample was 25 days.

One hundred fifty-eight bean seed samples from 8 different countries and 7 different states were tested for regulated bacteria and fungi. The lab identified 11 positive samples. These lots were not planted in Idaho. In addition to the positive seed lots, 3 growing fields in the Magic Valley found were infected with Brown Spot of bean (*Pseudomonas syringae* pv. *syringae*). Seeds from these fields will not be planted back into Idaho.

Other diagnoses from field samples included Common Corn Smut (*Ustilago maydis*), Head Smut of Corn (*Sporisorium reilianum*), *Sclerotinia* sp. in carrot, bean, pea, and sunflower, *Phoma medicaginis* in alfalfa and

pea, and some mildew in alfalfa and beans. However, the largest problem in the fields this summer was the level of virus infection in corn. The lab tested 161 samples for High Plains Virus and found 143 samples (89% of samples tested) positive for the disease. Please see the table below for other details.

The ISDA Plant Pathology Lab participated in 3 USDA sponsored Cooperative Agricultural Pest Surveys (CAPS) this year. These surveys were for Karnal Bunt (*Tilletia indica*) fungus in wheat, Plum Pox Potyvirus in stone fruit, and Apple Proliferation Phytoplasma in *Malus* sp. Sample numbers and results are listed below. More details for each of these surveys can also be found below.

Sample Type	# Samples	# Tests	To Time	# Positives (organism)
Bean Seed (Serology)	158	785	29.4	6 (<i>Pseudomonas syringae</i> pv. <i>syringae</i>)
* soybean incld				2 (<i>Pseudomonas savastanoi</i> pv. <i>phaseolicola</i>)
				3 (<i>Xanthomonas axonopodis</i> pv. <i>phaseoli</i>)
				1 (Bean Common Mosaic <i>Potyvirus</i>)
China export (Hay)	431	431	17.89	
Seed Tests				
alfalfa	12	24	27.83	1 (<i>Clavibacter michiganensis</i> subsp. <i>insidiosus</i>)
barley	4	6	19.33	
broccoli	1	1	23	
cabbage	1	2	16	
canola	5	5	25.8	
collards	1	1	29	
corn	6	6	28	4 (High Plains Virus)
kale	4	6	33.8	
onion	2	4	13.5	
radish	24	47	21.7	
turnip	4	4	21.75	
wheat	9	22	23.1	1 (<i>Urocystis</i> sp.)
Potato Year Out	9	36	26.9	

Nursery			32.75	
chrysanthemum	1	2		1 (Tomato spotted wilt virus)
evergreen	1	1		
hazelnut	1	2		1 (<i>Pythium</i> sp.)
pepper	1	6		
tomato	1	1		
CAPS Surveys				
Karnal Bunt	70	70		
Plum Pox	1024	1024		
Apple Proliferation Phytoplasma	632	632		

2014 CAP SURVEY SUMMARIES FOR PLANT PATHOLOGY

Plum Pox Potyvirus: In 2014, the Plant Pathology Lab completed a survey for the plum pox potyvirus in stone fruit. The plum pox potyvirus is not known to occur in Idaho, and it is considered an invasive species in Idaho and the United States. The virus affects stone fruit crops including nectarine, plum, peach and cherry as well as others. It can cause deformed, misshapen fruit that can make the fruit unsaleable. Leaf symptoms can also occur, which may lead to reductions in yield. In 2013, the lab began the survey for this virus in Northern Idaho, testing 50 samples from 2 different counties. These samples were all negative. ISDA staff continued the survey in 2014 and collected 1,024 samples from rooted fruit trees in 5 counties (Canyon, Gem, Washington Payette and Twin Falls). All samples were negative for the virus.

Apple Proliferation Phytoplasma: This disease is caused by a phytoplasma, which is an organism similar to a bacteria, but without a cell wall. The symptoms are diminished fruit production and witches brooming of terminal shoots. As yet, this disease is not known to occur in Idaho or the United States. It does occur in Europe, and has been found on many species of the Rosaceae family, most particularly apple. In 2012, there was concern that an orchard in the Pacific Northwest had sent trees infected with this phytoplasma into Canada. The trees proved to be not infected; however, Idaho decided to survey our nursery stock for further documentation. In 2014, staff surveyed 632 samples from 5 counties (Lewis, Boundary, Bonner, Gem and Canyon). All of the samples were negative.

SEED LAB SUMMARY

The Idaho State Seed laboratory (ISSL) received 3,761 samples and completed 5,642 service tests in 2014. The most common crops submitted for service testing during this timeframe were alfalfa, grains, onion, beans, peas, mixtures, turnip, lettuce, carrot, timothy and compost. In all, 56 regulatory enforcements were checked for licensing and truth-in-labeling requirements; 8 of these checks resulted in inspector actions. A total of 632 seed dealer licenses were issued.

In January 2014, another private lab located in Southeast Idaho was closed, which consequentially directed more service samples to ISSL. The seed lab prepared to handle this influx with the addition of two full-time

analysts. Numbers for 2015 are already far ahead of the last years' timeframe, and are expected to increase.

CULL ONION INSPECTIONS AND ACTIONS

In 2014, inspections of cull onion sites began during the first week of March in Canyon, Washington, and Payette counties. These inspections were conducted to identify areas of high concern for cull onions before the March 15th disposal deadline. Once the deadline was reached, visits were conducted and cull onion piles were then removed, resulting in compliance being reached.

Sheep owners disposed of cull onions by feeding them to their livestock according to ISDA rules and guidelines.

OTHER REGULATORY INSPECTIONS AND ACTIONS

ISDA, under the authority of Title 22, Chapters, 4, 5, 23, & 24 of the Idaho Code, and IDAPA defined pest quarantines, conducted 4,160 inspections and consequently took action against various pest threats and other violations. In 2014, there were 1,772 licensed nurseries in the state; of those, 553 were inspected for compliance under statutes of the Idaho Nursery and Florists Law and were examined for the presence of plant pests and noxious weeds. In addition, specific checks were made for compliance with other state laws, quarantines and pests of particular concern. The results of these inspections and regulatory actions are listed below.

Regulatory inspections and actions conducted by ISDA in 2014

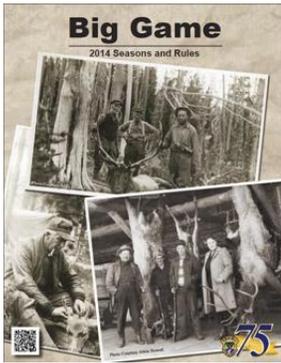
Quarantine/Pests	No. of inspections	No. of incidents	No. of corrective actions	Stop Sales
Certified Seed Potatoes	84	6	6	6
Aphids	405	1	0	0
Crop Management Zone	105	0	0	0
European Corn Borer	272	0	0	0
Grape Quarantine	131	2	2	2
Gypsy Moth	387	0	0	0
Hops	105	0	0	0
Red Imported Fire Ants	297	0	0	0
Japanese Beetle	397	0	0	0
Late Blight	249	0	0	0
Mint Quarantine	158	0	0	0
Nematodes	108	0	0	0
Noxious Weeds	299	6	2	1
Peach Tree Quarantine	137	0	0	0
Pine Shoot Beetle	217	0	0	0
Retail Potatoes	132	0	0	0
Idaho Seed Law	167	9	8	8
Snails	278	2	0	0
Sudden Oak Death	363	0	0	0
Onion White Rot	139	19	16	16
General Pests	40	8	2	2
Day Lily Rust	0	0	0	0
Total Inspections	4,470	53	36	35

Noxious Weed-Free Forage and Straw (NWFFS)

In 1996, the United States Forest Service (USFS) began requiring all forage and straw possessed on their lands in Idaho to be certified as noxious weed free (NWF) to prevent the introduction and spread of noxious weeds. In March of 2011, the Bureau of Land Management (BLM) implemented the same rule in Idaho. ISDA administers this program to facilitate compliance for equine users and re-vegetation managers.



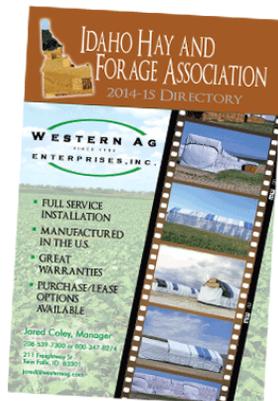
ISDA Specialist Nic Zurfluh explaining plant identification skills at Inspector training



In 2014, ISDA trained seventy five (75) people (the majority were NWFFS Inspectors) at seven (7) sites; Private landowners and agency partners were also invited to this event.

ISDA continues to partner with Idaho Fish and Game by supplying NWFFS information for their Big Game Hunting Regulations. ISDA also continues to be a partner with the Idaho Horse Council by attending and presenting about Noxious Weeds at their annual three (3) day Horse Expo. This council represents all horse groups (over 150) in Idaho.

During 2014, 23,167 acres of forage and straw were inspected and certified NWF by trained County cooperators for a farm value of \$7 million. NWF products such as hay bales, forage cubes, pellets, twice-compressed forage bales, and straw bales make NWF products increasingly more accessible and available to equine recreationalists. Education continues to be a focus of the NWFFS program. ISDA has an in-depth NWFFS website; to access this site, Google "ISDA Weed Free Hay". ISDA advertises the NWF message in the Idaho Hay Association hay directory. The NWFFS program plays an important role in protecting Idaho's wild places from noxious weed introduction. Below is a map of participating NWFFS counties and the advertisement that is placed annually in the Idaho Hay Association hay directory.



ISDA continues to be a partner with the Idaho Hay and Forage Association (IHFA). ISDA has attended and presented many times at their annual conference for the last ten years. In addition, the ISDA NWFFS Program Manager has participated on its board as an ex-officio member for ten years. ISDA also continues to be a partner with the College of Western Idaho Horticulture Program. ISDA presented its Invasive Species message to students this past year and has presented many times over the last ten years.

ISDA NOXIOUS WEEDS AND INVASIVE SPECIES PROGRAMS

Program highlights

- ISDA's Noxious Weeds Cost Share Program had participation from 33 CWMA's who treated over 212,000 acres throughout Idaho.
- ISDA worked cooperatively with local governments state-wide to establish and operate 15 mandatory inspection stations during the 2014 boating season.
- 49,300 watercraft were inspected in 2014 for aquatic invasive species.
- Over 247,000 mandatory watercraft inspections have been conducted since Idaho's watercraft inspection program began July 4, 2009.
- In 2014, 15 mussel-fouled boats were intercepted and decontaminated before they were allowed to launch into Pacific Northwest waters.
- 120 zebra / quagga mussel fouled vessels have been intercepted in Idaho since the program began in 2009.
- Idaho is working successfully with other western states to share education and outreach messages on various invasive species, providing consistent messaging to the travelling public.
- More than 300 Idahoans were trained to inspect watercraft for zebra and quagga mussels in 2014.
- To date, no zebra or quagga mussels have been detected in the waters of Idaho.

CWMA Cost Share Program

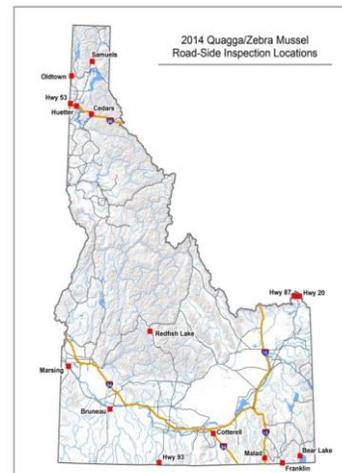
During 2014, ISDA's Noxious Weeds Program continued to work with Cooperative Weed Management Areas (CWMAs), county governments, Native American tribes, landowners and Federal partners to provide leadership, training and support for noxious weed management in the state. A total of 33 CWMAs have been formed, bringing people together across agency and administrative boundaries to manage the spread of noxious weeds. Their efforts helped protect wild land habitat, ecosystem diversity, recreational opportunities and agriculture in Idaho. During 2014, ISDA distributed a total of \$1.65 million from cost share grants to CWMAs for on-the-ground integrated weed management. Program applicants provided over \$5.1 million in matching contributions (over \$3 of match for every \$1 distributed), which allowed for treatment of a total of over 212,000 acres of noxious weeds, and for nearly 1.55 million acres surveyed and mapped. Education and prevention are essential to the success of Idaho's program. Over 1.46 million contacts were made statewide for noxious weed education and awareness. (Please note that this number is reported by CWMAs statewide and includes radio and television contacts made by the Idaho Weed Awareness Campaign).

A new invasive plant species was found in the state in 2014 called purple star thistle. This was the first population of purple star thistle ever observed in Idaho and it was found in Twin Falls County. The Director of ISDA designated an emergency EDRR Noxious Weed listing for this species to prevent the further spread of this spiny aggressive weed. Twin Falls County initiated action immediately and is aggressively treating to eradicate this population.

Watercraft Inspection

Watercraft inspection is the primary method ISDA utilizes to prevent the introduction of aquatic invasive species (AIS). The year 2014 was the sixth year of Idaho's watercraft inspection program and 15 inspection stations were operated state-wide, inspecting 49,380 vessels. This represents the highest number of inspections in a single season since the program began in 2009.

2014 Inspections	Number of Watercraft
Vessels Inspected	49,380
Passport Inspections	10,160
Vessels Recently In Mussel Waters	788
Vessels Hot Washed	688

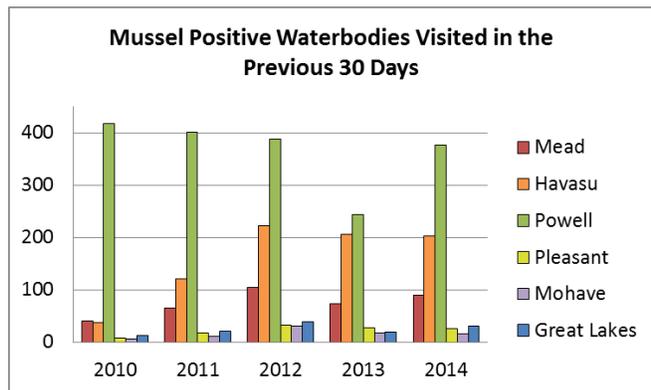


Vessels with Vegetation	245
Mussel-Fouled Vessels	15

Over 700 vessels inspected had been in zebra / quagga mussel impacted waters within the previous 30 days, representing a very high risk for transporting AIS. These vessels received thorough high-risk inspections and many were hotwashed to ensure that they were free of AIS.

During 2014, 15 vessels were intercepted transporting zebra or quagga mussels. These vessels were thoroughly cleaned and received a follow up inspection to ensure all mussel material had been removed. One-third of those vessels were destined to Idaho, with the others traveling to other states or provinces in the region. A total of 120 mussel-fouled vessels have been intercepted in Idaho since the program began in 2009.

Central to the operation and planning of the watercraft inspection program is data collection and management. Data is collected from the boating public at the stations electronically using tablet computers and standardized templates. This ensures that information collected is complete, accurate and consistent for each inspection. Each station is equipped with a wireless internet connection that allows for data to be uploaded daily to ISDA. These data are monitored to identify issues with data collection and trends in boater movement. This allows for rapid adjustments to address issues and adapt station operations to better address high risk boater movement. A five-year data review of Idaho's watercraft inspection data is available on the Invasive Species page of the ISDA website www.agri.state.id.us.



Watercraft inspection in Idaho relies on partners around the state to help carry out the program on the ground. Many of the inspection stations are operated by local entities, contracted and trained by ISDA, to conduct inspections. These local partners are critical to the implementation and operation of the program and provide local involvement and support for invasive species prevention. These partners include the Bonner, Bruneau, Franklin and Oneida Soil and Water Conservation Districts, Twin Falls and Fremont Counties, the City of Bloomington, and the US Forest Service. Local support from County Sheriff, Highway and Noxious Weed Departments, Idaho Fish and Game, Idaho Transportation Department, Idaho State Police, US Forest Service and local civic groups has been critical to the

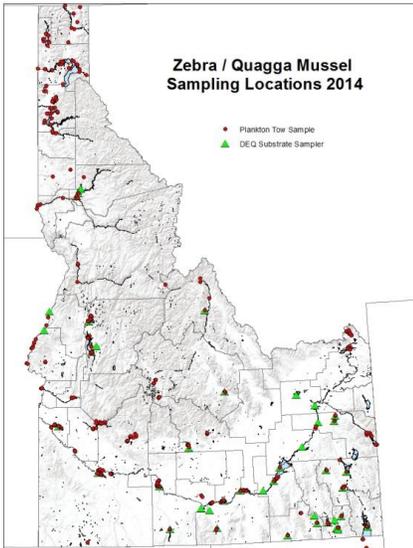
success of the program. ISDA also partnered with the Cocolalla, Hauser and Twin Lakes Home Owners Associations to inspect watercraft and promote the Clean, Drain, Dry message.

The Idaho Department of Transportation (ITD) plays an important role in implementing the Watercraft Inspection Program state-wide. ITD permits station setup and provides notification to ISDA when oversized load vessels are being transported through the state. ITD Port of Entry staff also conduct watercraft inspections at port of entry facilities.



Each watercraft inspected not only ensures that vessels are not transporting invasive species, but also serves as an opportunity to educate the public on the

invasive species issue. When boaters Clean, Drain, and Dry their vessels, they help prevent the spread of AIS and do their part to help protect the waters of Idaho.



Invasive Species Monitoring

Early detection monitoring is an important part of Idaho’s Invasive Species Program. Monitoring helps facilitate early detection of new AIS populations and allows for opportunities to contain or treat new infestations before they become too wide spread.

The waters of Idaho are surveyed annually for early detection of AIS. One of the primary monitoring methods for mussels involves the collection of plankton samples for the purpose of early detection of juvenile zebra / quagga mussels called “veligers”. Samples are collected from multiple locations in a waterbody using a fine-mesh plankton net. The resulting plankton samples are sent to a laboratory for microscopy analysis to identify if any veligers are present.

ISDA’s early detection monitoring program collected 670 plankton samples from 67 waterbodies in Idaho. Idaho Power and Lemhi County also assisted with sample collection. Additional sampling in Idaho was conducted by the US Army Corps of Engineers and the US Bureau of Reclamation. To date, no evidence of mussels has been found in

Idaho or anywhere in the Columbia River Basin.

Substrate monitoring is another early detection method to monitor for mussels. The method utilizes a substrate material that is attached to the dock or shore and is monitored regularly to see if there is any mussel attachment. The Idaho Department of Environmental Quality (DEQ) operates an extensive substrate monitoring program and provides a critical component of Idaho’s early detection mussel monitoring framework. Other partners that assist with mussel substrate monitoring include Idaho Power, the Northside Canal District, the US Army Corps of Engineers, US Forest Service, Cocolalla Lake Association, Fernan Lake Association and the Henrys Lake Foundation.

Monitoring events conducted by ISDA also involve surveys for invasive plants, snails, clams, mussels and crayfish. Surveys in 2014 identified new populations of Eurasian watermilfoil in Weiser, flowering rush in a new canal system near Idaho Falls and Asian clams in Stone Reservoir in Eastern Idaho.

Education

In cooperation with Idaho Parks and Recreation, invasive species brochures were mailed to all Idaho registered boaters along with their registration renewal. The brochures reinforce the Clean, Drain, Dry message and emphasize the need for inspection of Idaho boaters that visit Lakes Mead, Havasu, Powell, Pleasant and Mohave. These brochures were also provided when out-of-state and non-motorized stickers were purchased around the state.



At the watercraft inspection stations this season, inspectors provided a variety of invasive species related educational material to the public. Materials such as the Idaho Invasive Species Passport and the updated proof of inspection form not only provide proof of inspection for the boater, but also educational information and contact information for invasive species programs in surrounding states and provinces.

Certificate of Inspection Idaho Aquatic Invasive Species Inspection		
<small>All watercraft and conveyances are required to be inspected and certified by a designated Idaho State Department of Agriculture invasive species inspector.</small>		
Watercraft Registration Number	State	Month / Date / Time of Inspection
Inspection Location and Date (stamp)		
<input type="checkbox"/> Clean, Drained, Dry: <small>Watercraft/conveyance inspected & determined to not be transporting invasive species. Watercraft is clean, drained & dry.</small>		
Notes:		
<small>Disclaimer: This is a certificate of inspection of this vessel at the time of inspection. While this certificate may be used to expedite future inspections, watercraft must still stop at all of Idaho’s road-side inspection stations while traveling in the state.</small>		

Pet stores and garden centers are another potential pathway for invasive plants and animals to enter the state. ISDA, working through the Plant Program Investigator staff, conducts inspections of these facilities to see if they are carrying listed invasive species or noxious weeds. IDFG also assists with the identification and enforcement for listed invasive species in the pet trade.



ISDA staff participated in a number of events this season where they helped to educate the public on invasive species issues and the importance of Clean, Drain, Dry. Events included the Burley Boat Regatta, the Saint Maries Jet Boat Races, The Coeur d'Alene Wooden Boat Show, the Twin Falls County Fair, the Idaho State Fair and the Idaho Horticultural Show. Staff provided 11 watercraft inspection trainings, educating over 100 individuals on the threats of invasive species and watercraft inspection protocols. Staff also presented on invasive species issues to noxious weed professionals, counties, tribes, master naturalists, marine deputies, IDFG staff, lake associations and student groups.

Eurasian watermilfoil: Eurasian watermilfoil (EWM) is one of the most problematic invasive aquatic plants in North America. EWM out competes native vegetation and degrades aquatic habitats by reducing biodiversity. EWM forms dense canopies of growth in the water, which can make boating and fishing impossible and degrade property values. In 2014, 113 acres of EWM were treated with herbicide in Hayden and Cocolalla Lakes. ISDA also supported IDFG for EWM herbicide treatments in fishing ponds in southwestern Idaho. Low density EWM areas were treated by diver removal in Priest, Cocolalla, Coeur d'Alene, and Payette Lakes, as well as a small area along the Snake River near Buhl. Milfoil treatments in these areas remove nuisance growth to allow for lake access and improved recreation as well as prevent the further spread of EWM in the state. To date, no EWM has been found in Eastern Idaho.

Water hyacinth: Water hyacinth is an aggressive aquatic noxious weed that was first identified in the Hagerman area in 2012. An extensive survey found hyacinth in over 10 miles of the Snake River and in a small source pond upstream. In response to the discovery of this population, the Director of ISDA designated an emergency EDRR listing of water hyacinth and it was added to the Noxious Weed Rule in 2013. Extensive hand removal was conducted on this population and no water hyacinth plants have been observed since the summer of 2013. Survey will continue in this area, but it appears that this population may now be eradicated. Partners involved with the water hyacinth survey and eradication project include Twin Falls, Cassia, Jefferson and Madison Counties; Idaho Power, IDFG, and US Fish and Wildlife Service (USFWS).

Yellow floating heart: Yellow floating heart is an EDRR aquatic noxious weed in Idaho. A small population was discovered in Emmett in 2008 and was treated with herbicide by Gem County Noxious Weed Control several times. Follow up surveys were conducted every year following the treatments and no evidence of yellow floating heart was observed until this year, when a small number of plants were found. These plants were removed by hand by ISDA staff and follow up surveys will be conducted to ensure there is no regrowth of this aggressive noxious weed.



Hydrilla: Hydrilla is considered the worst submersed aquatic plant in North America. It is an EDRR noxious weed in Idaho and an eradication program has been ongoing in the Bruneau area since 2007. Hydrilla densities have decreased significantly over the course of the program and no downstream spread of the hydrilla has been observed. Partners involved with the hydrilla eradication project include IDFG, The Office of Species Conservation, USDA APHIS, US Bureau of Land Management (BLM), USFWS and the land-owners of the Bruneau Valley. The hydrilla eradication effort is supported in part by a grant from the BLM. Survey and removal efforts of hydrilla are ongoing.



Flowering Rush: Flowering rush is a submersed emergent noxious weed that is expanding in Idaho. It forms dense growth and causes significant problems for boating and irrigation systems. ISDA has been involved with hand removal projects at high use areas of Lake Pend Oreille and exploring other treatment options. No effective treatments have been demonstrated for this species and ISDA is actively working with regional partners to develop effective treatment methods.

ISDA AND USDA COOPERATIVE RANGELAND GRASSHOPPER AND MORMON CRICKET SUPPRESSION PROGRAM

Grasshoppers and Mormon crickets continue to be one of the most serious pest problems for Idaho rangelands and adjacent croplands. Based on annual surveys conducted by the United States Department of Agriculture (USDA), Animal Plant Health Inspection Service (APHIS), Idaho has experienced very serious pest outbreaks in previous years.



The management and timely control of grasshopper and Mormon cricket populations are high priorities for the Idaho State Department of Agriculture (ISDA) and our cooperators at USDA, APHIS. Congress has addressed this issue with special funding to the impacted states of Idaho, Utah and Nevada. With this funding, ISDA has made available to landowners pesticides to control these pests. To qualify to receive these pesticides, a landowner must file a complaint with ISDA, and ISDA will evaluate their land to determine if the site has reached economic thresholds.

Background

Sixty-four percent (64%) of Idaho lands are administered by the Federal Government. Forty-three percent (43%), or 21.8 million acres, in Idaho is classified for use as rangeland. The Bureau of Land Management (BLM) administers 11.8 million acres in Idaho, much of it prime grasshopper/Mormon cricket habitat. There is a significant area of grasshopper and Mormon cricket habitat on federal lands that borders private rangeland and irrigated cropland in the state. Mormon crickets and grasshoppers (primarily about six species) are cyclical economic pest problems, particularly in southern Idaho. In recent years, however, significant outbreaks have also occurred in north central and northern Idaho.

Summary of Grasshopper Actions by Region

Mike Cooper, Bureau Chief, retired in April 2014. Matt Voile, Section Manager for Noxious Weeds and Invasive Species, was appointed manager of the program. Garry West, Program Manager in the Twin Falls office (and supervisor of southeastern Idaho operations) retired in July 2014. Tina Eiman, Program Specialist, replaced Garry as the manager of the Twin Falls office.

North Idaho experienced drier than normal weather conditions, which resulted in earlier grasshopper emergence. There were eighteen (18) landowner complaints and eighteen (18) distributions (one per complainant) of Carbaryl bait in six (6) counties.

Southwest Idaho experienced normal weather conditions, which resulted in normal insect emergence. In Southwest Idaho, Valley County (elevation 5,000) reported the most damage statewide with ninety-one (91) landowner complaints, with damage to dryland and irrigated grazing lands. A combination of Carbaryl Bait, Dimilin 2L, and Malathion was distributed and/or reimbursed to seventy two (72) landowners. (See the next section for more details.) The only other areas where there were complaints in Southern Idaho was Boise, Gem, and Elmore Counties, which had four (4) landowner complaints and four (4) distributions (one per complainant) of Carbaryl bait.

In Southeast Idaho, there were ten (10) landowner complaints and six (6) distributions of Carbaryl bait in five (5) counties. A rare outbreak occurred in Custer County in the lower end of the East Fork of the Salmon River. Historical records dating to 2004 showed that landowners in this county had never received Carbaryl bait. Two landowners requested and received assistance. The source of the grasshoppers was not from their land, but from an adjacent landowner that did not want to control their infestation. Several other nearby

landowners wanted assistance; however, they did not meet the acreage minimum and land classification requirements.

Statewide, Carbaryl bait was distributed in North and Southeast Idaho at similar rates as 2013. However, during 2014 in Southwest Idaho (Valley County), there was a dramatic increase in Dimilin 2L and Malathion use and a 40% percent reduction in Carbaryl bait from the previous year. The reasons for this change are explained in the Summary of Valley County. *Camnula* was the main genus to reach economic thresholds statewide.

Statewide, no state or county lands or state road right-of-ways were treated by the ISDA for grasshopper infestations. This is the second consecutive year of no treatments of these lands.

Summary of Actions in Valley County

At the end of the large outbreak in 2013, ISDA scouted and identified “hatching beds”, defined as non-irrigated sites where grasshoppers prefer to lay their eggs. In the early summer of 2014, ISDA began scouting these hatching beds and other likely areas in the third week of May. ISDA’s plan was to identify hatching areas, monitor for economic thresholds (over 8 per square yard), and have the appropriate control products available for use by landowners. Dimilin 2L is effective from second to fourth instar for 21 days of control; liquid Malathion is effective at any instar and adults for three (3) days of control. The goal was to control grasshoppers in the early instar stage before they caused significant damage. Dimilin 2L is a Restricted Use Pesticide (RUP) and can only be distributed by a Pesticide Dealer to individuals that are licensed to apply RUPs.

The Boise APHIS office is registered as a Pesticide Dealer and distributed 63 gallons of Dimilin 2L (Diflubenzuron) and 250 gallons of crop oil to ISDA Boise (Also a Pesticide Dealer) ISDA then distributed to Valley County Weed Control (Pesticide Dealer) in the first week of June. ISDA also distributed Malathion and Carbaryl bait to Valley County Weed Control for distribution. Malathion and Carbaryl bait (both general use pesticides) were distributed from the Valley County Road and Bridge Department and the Dimilin 2L (a RUP) and crop oil from the Valley County Weed Control. The cooperation between USDA APHIS, ISDA, and Valley County were key components of the success of this program in Valley County in the last two years.

By June 10, 2014, economic thresholds of grasshoppers were reached in Valley County from the southern end (Round Valley) to the northern end (McCall). They were still in the nymphal stage, second to third instar. Estimated densities of ten (10) to thirty (30) grasshoppers per square yard were found during these evaluations. Two-striped Grasshopper, (*Melanoplus bivittatus*) and Clearwinged Grasshopper, (*Camnula pellucida*) were the most common species. Irrigated pasture and non-irrigated rangeland were primarily affected; however, there were some instances where other crops were affected (i.e. oats). Only private lands were treated and participation in this program was voluntary. Landowners began spraying hatching bed areas with Malathion and Dimilin on June 10, 2014. A group of landowners organized an aerial applicator (same company as 2013) to spray Dimilin.

As agency inventories of Malathion and Dimilin were exhausted, ISDA created a landowner reimbursement program. This program allowed landowners to arrange an applicator for pesticide and adjuvant, and landowners could then apply for reimbursement by ISDA for insecticide and adjuvant. Sixteen (16) landowners participated in the reimbursement program. ISDA made ATV mounted broadcast spreaders available for use at no cost to landowners for the spreading of Carbaryl bait.

Valley County was a primary area of focus in 2014, accounting for 67% of the Carbaryl bait distributed statewide and 100% of the liquid Malathion and Dimilin distributed statewide. Valley County was the only area in which ISDA operated a landowner reimbursement program. Post treatment inspections indicated excellent control and landowners were pleased with the results of the project.

ISDA continues to work with the United States Fish and Wildlife Service (USFW) to avoid treatment near endangered species. ISDA received a landowner complaint located near endangered Northern Idaho

Ground Squirrels (NIGS) in Valley County. ISDA evaluated the site, and it exceeded economic thresholds; however, ISDA determined that the site was too close to existing NIGS populations and informed the landowner that treatment assistance would not be available.

In summary, the cost to assist decreased in 2013 (\$128,948) to \$81,396 in 2014. This decrease is a result in the change from ISDA applications to cost reimbursement to the landowners. In 2014, treatments began about 30 days earlier than in 2013, which resulted in less damage to rangeland and irrigated pasture. The chart below details all the pesticides used (gallons and pounds), and costs in Valley County.

Pesticides used and method of application in Valley County	Gals/lbs	Value
Carbaryl bait, Dry, Ground:	21,750 lbs.	\$19,683.00
Dimilin 2L, Liquid , Value includes Crop Oil, Air and Ground:	148.83 gals.	\$40,893.00
Malathion, Liquid, Ground:	381.50 gals.	\$12,570.00
Fyfanon (Malathion ULV), Liquid, Aerial:	165.00 gals.	\$8,250.00
Total		\$81,396.00

Summary of Mormon Cricket Survey Results

Oneida County was the only county in Idaho to report landowner complaints of Mormon crickets, (*Anabrus simplex*). There were ten (10) landowner complaints and six (6) distributions of Carbaryl bait. Statewide, no state or county lands, or county or state road right-of-ways were treated by the (ISDA) for Mormon cricket infestations.

Summary of ISDA Program

In 2014, ISDA continued to suppress outbreaks of grasshoppers and Mormon crickets. One hundred thirty-three (133) complaints and one hundred six (106) private landowners in sixteen (16) counties received assistance. A breakdown of the pesticides distributed and/or reimbursed are in the below table. No cost-share spray projects were conducted in 2014; however, a landowner reimbursement program was implemented in Valley County. ISDA did not receive any complaints or observe any populations that exceeded economic thresholds on state lands or along county or state right-of-ways.

For additional information, go to the ISDA website www.agri.idaho.gov and search under the Plants and Insects tab for the Grasshopper/Mormon Cricket Program.

Pesticides Distributed/Reimbursed Statewide (method of application)	Gals/Lbs	Value
Carbaryl bait, Dry, Ground:	32,300 lbs.	\$29,231.50
Dimilin 2L, Liquid, Value includes Crop Oil, Air and Ground:	148.83 gals.	\$40,893.00
Malathion, Liquid, Ground:	381.50 gals.	\$12,570.00
Fyfanon (Malathion ULV), Liquid, Aerial:	165.00 gals.	\$8,250.00
Total		\$90,944.50

2015 Grasshopper and Mormon Cricket Forecast

North Idaho: The last two years have produced about the same amount of complaints and usage; however, historical data indicates that a larger economic outbreak may occur at some point. The following table is an eleven (11) year history of Carbaryl usage on private lands (grasshopper and Mormon cricket combined).

North Idaho

Year	Number of Counties	Lbs Distributed	Number of Distributions
2004	0	0	0
2005	2	103,750	292
2006	2	16,400	36
2007	2	7,900	19
2008	4	104,300	179
2009	8	180,750	222
2010	6	52,500	81
2011	5	23,500	46
2012	5	11,600	19
2013	5	5,350	15
2014	6	4,250	18
Avg.	4	46,391	84

Southern Idaho: Valley County has experienced two consecutive years of grasshoppers at economic levels over a large area. A review of Valley County's previous years' pesticide usage shows no usage in 2010, then an increase each year with a peak in 2013 and 2014. Hopefully, winter and spring conditions in Valley County will bring population numbers back to less than outbreak levels. The rest of southern Idaho has experienced lower than normal usage in the last two years; however, historical data indicates that a larger economic outbreak may occur at some point. The following table is an eleven (11) year history of Carbaryl usage on private lands (grasshopper and Mormon cricket combined).

Southwest Idaho

Year	Number of Counties	Lbs Distributed	Number of Distributions
2004	5	264,650	388
2005	6	48,950	218
2006	6	69,850	270
2007	7	150,440	346
2008	7	93,850	167
2009	7	205,350	237
2010	8	212,650	184
2011	9	68,100	46
2012	7	20,950	16
2013	2	58,400	62
2014	5	24,750	35
Avg.	6	110,722	179

Southeast Idaho: Carbaryl bait usage has stayed steady for the last three (3) years, averaging about 3,300 lbs per year; however, historical data indicates that a larger economic outbreak may occur at some point. The following table is an eleven (11) year history of Carbaryl usage on private lands (grasshopper and Mormon cricket combined).

Southeast Idaho

Year	Number of Counties	Lbs Distributed	Number of Distributions
2004	6	89,250	141
2005	2	34,700	49
2006	3	29,000	115
2007	3	26,500	56
2008	7	45,450	89
2009	5	39,200	66
2010	10	60,500	36
2011	2	550	4
2012	3	3,000	7
2013	4	3,650	4
2014	6	3,300	12
Avg.	5	30,464	53

MULTI-YEAR SUMMARY OF CARBARYL TREATMENTS ON COUNTY ROAD RIGHT-OF-WAYS AND STATE LANDS

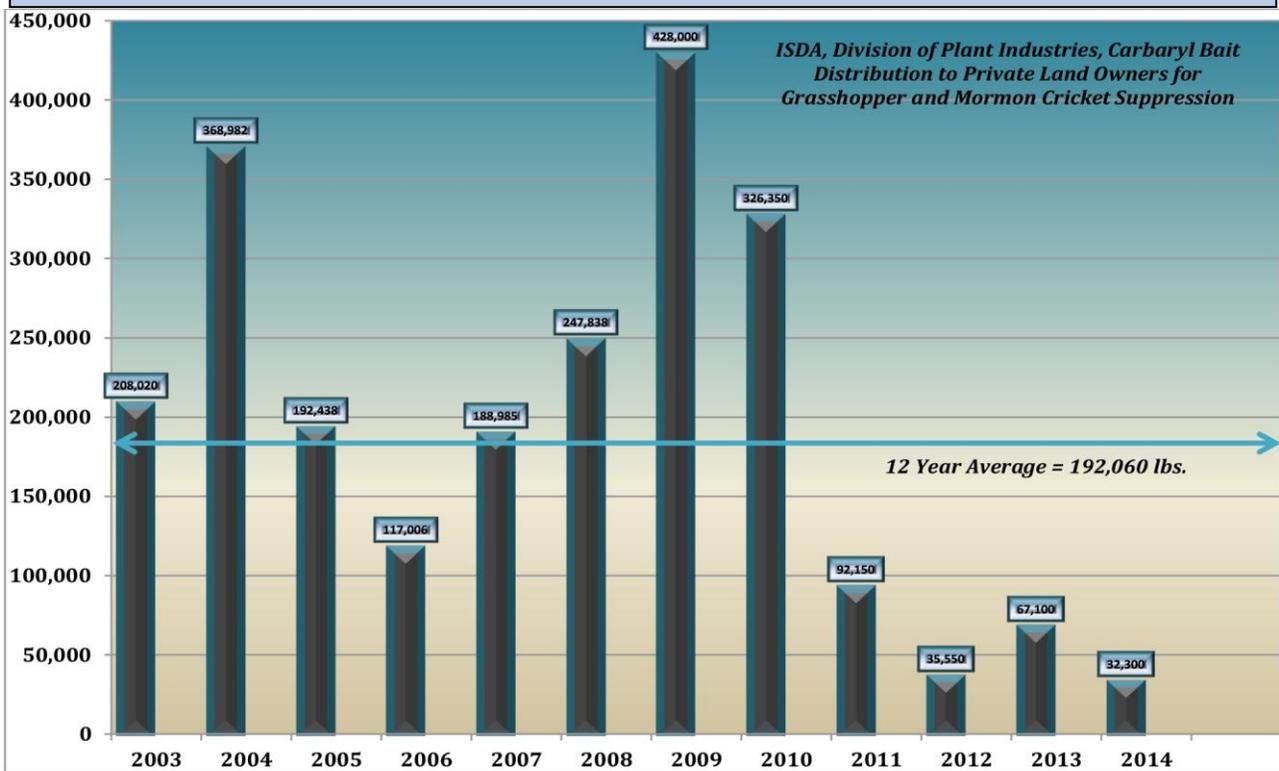
Year	Total Pounds Applied	Acres Treated
2005	12,175	1,218
2006	6,612	661
2007	3,906	340
2008	3,750	194
2009	21,200	1,446
2010	4,300	428
2011	900	92
2012	2,650	267
2013	0	0
2014	0	0

2014 BAIT DISTRIBUTIONS TO PRIVATE LANDOWNERS FOR GRASSHOPPER AND MORMON CRICKET SUPPRESSION

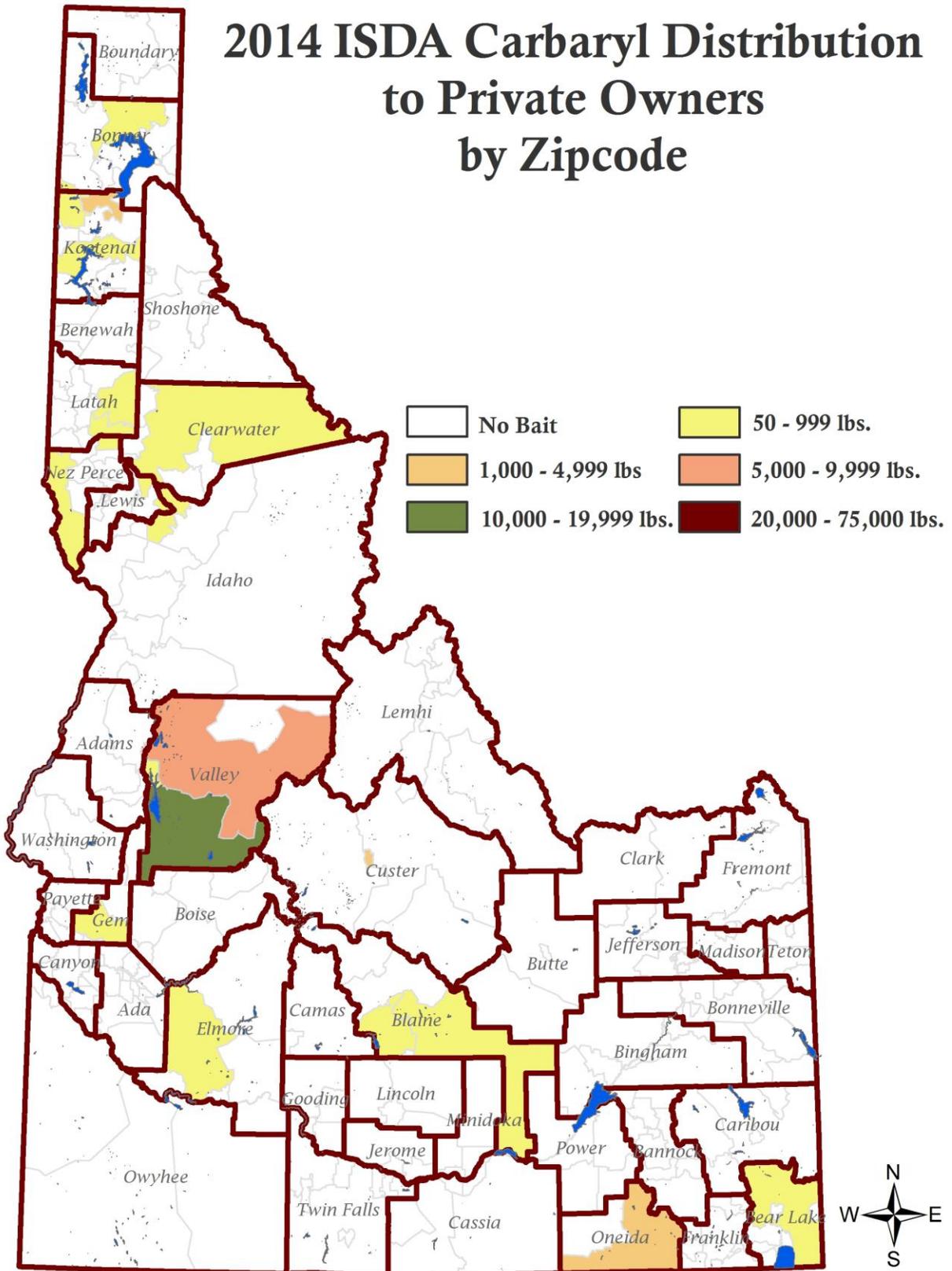
Rank	County	Number of Distributions	Carbaryl Bait Distributed (lbs)
1	Valley	31	21,750
2	Bonner	9	2,950
3	Boise	1	2,000
4	Oneida	6	1,100

5	Custer	2	1,000
6	Kootenai	3	750
7	Gem	2	650
8	Bear Lake	1	500
9	Elmore	1	350
10	Franklin	1	300
11(Tie)	Clearwater	3	250
11(Tie)	Twin Falls	1	250
13	Latah	1	200
14	Blaine	1	150
15(Tie)	Idaho	1	50
15(Tie)	Nez Perce	1	50
Totals	16 Counties	65	32,300

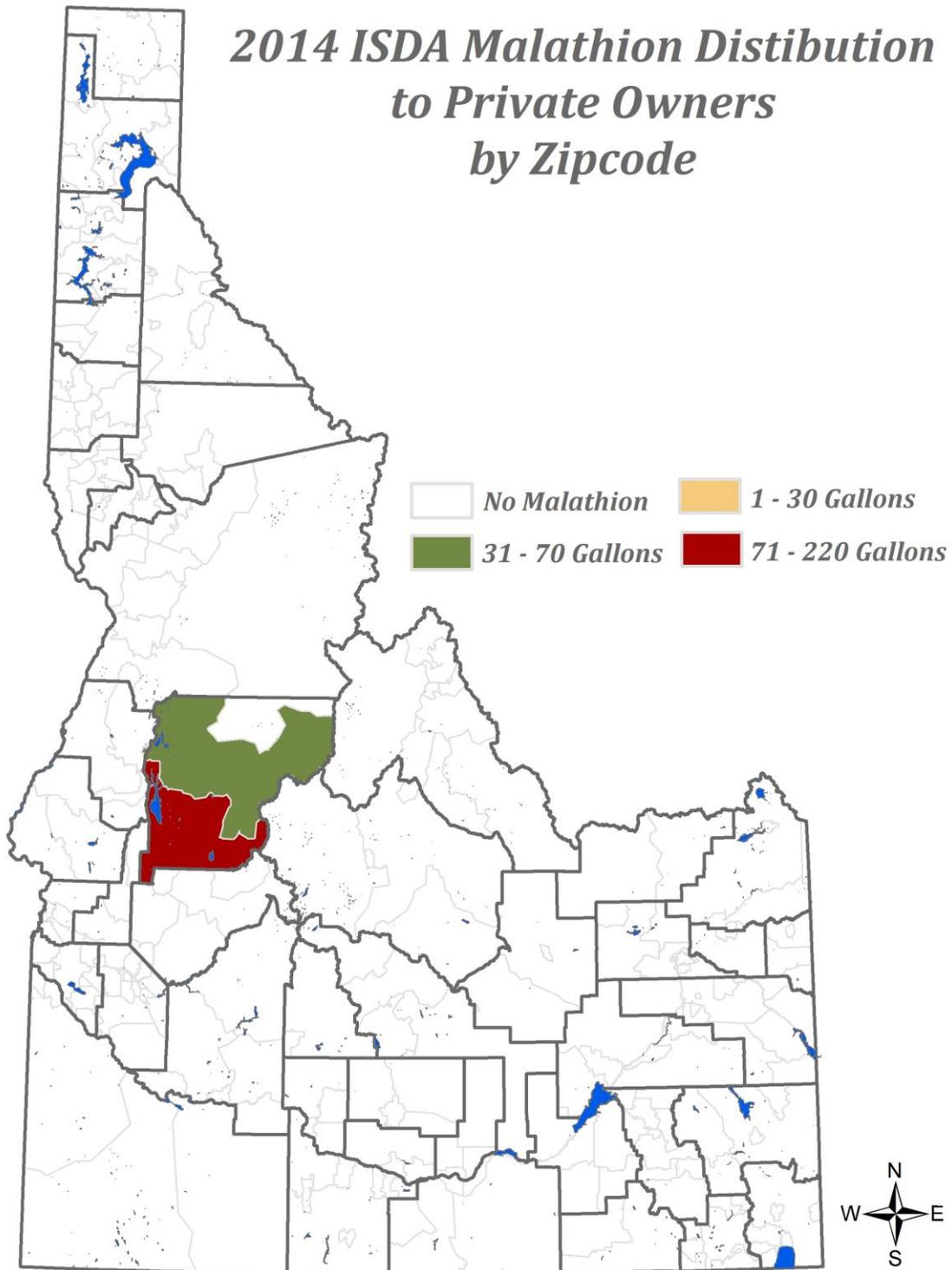
ISDA, Division of Plant Industries, Carbaryl Bait Distribution to Private Land Owners for Grasshopper and Mormon Cricket Suppression



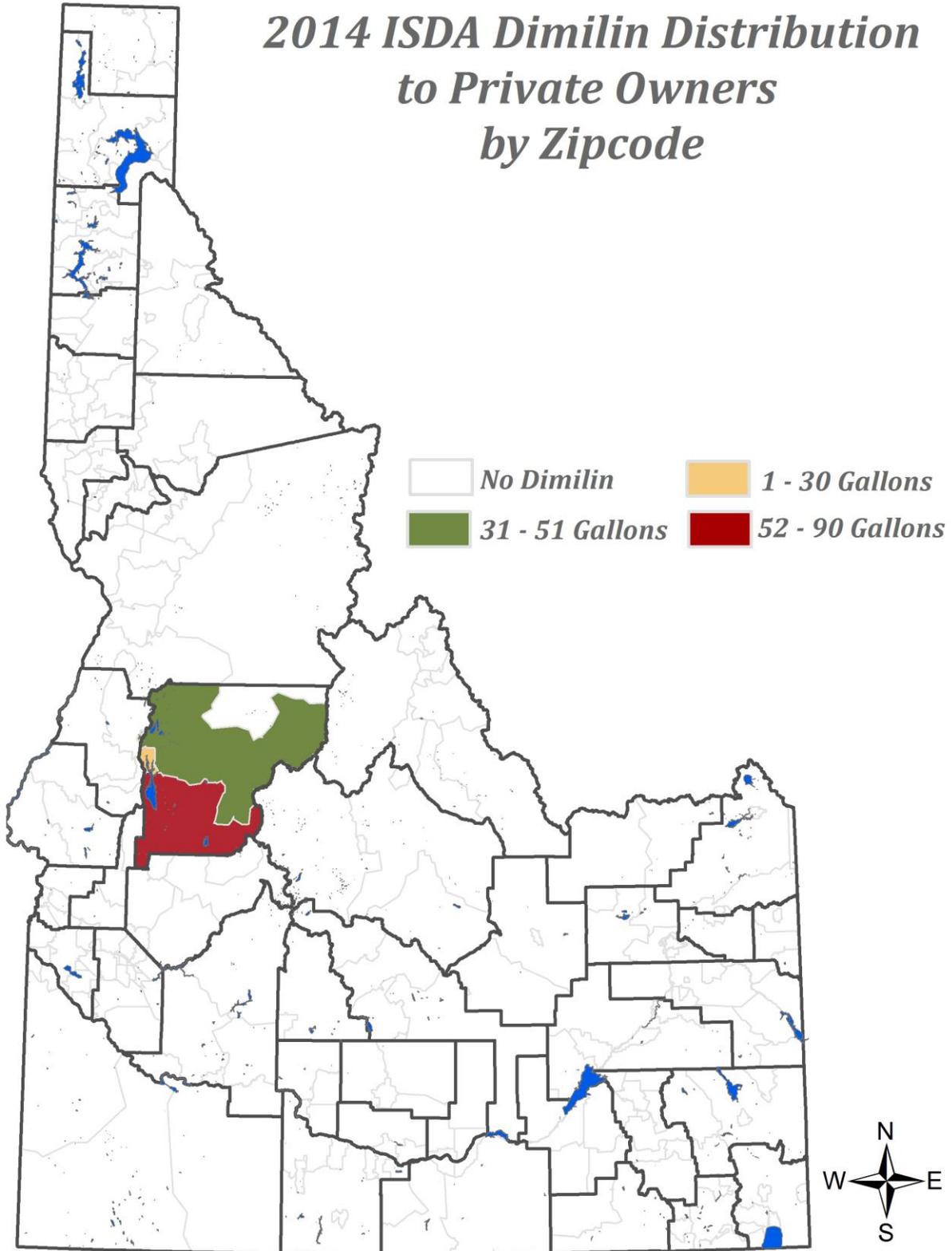
2014 ISDA Carbaryl Distribution to Private Owners by Zipcode



2014 ISDA Malathion Distribution to Private Owners by Zipcode



2014 ISDA Dimilin Distribution to Private Owners by Zipcode



MAJOR COOPERATORS FOR THE GRASSHOPPER/MORMON CRICKET PROGRAM

During the 2014 season, the following cooperators provided significant help in bait storage, distribution, and overall program delivery:

- Primeland Cooperative, Ferdinand, Idaho.
- University of Idaho, Extension Service, Elmore County, Idaho
- University of Idaho, Extension Service, Franklin County, Idaho
- University of Idaho, Extension Service, Oneida County, Idaho
- Valley County Road and Bridge Department, Cascade, Idaho
- Valley County Weed Control, Cascade, Idaho
- Valley County Idaho Commissioners
- Wilbur Ellis, Caldwell, Idaho

2014 PUBLIC OUTREACH AND EDUCATIONAL PRESENTATIONS ON INVASIVE SPECIES, PEST SURVEY AND DETECTION, AND GRASSHOPPER MANAGEMENT PROGRAMS

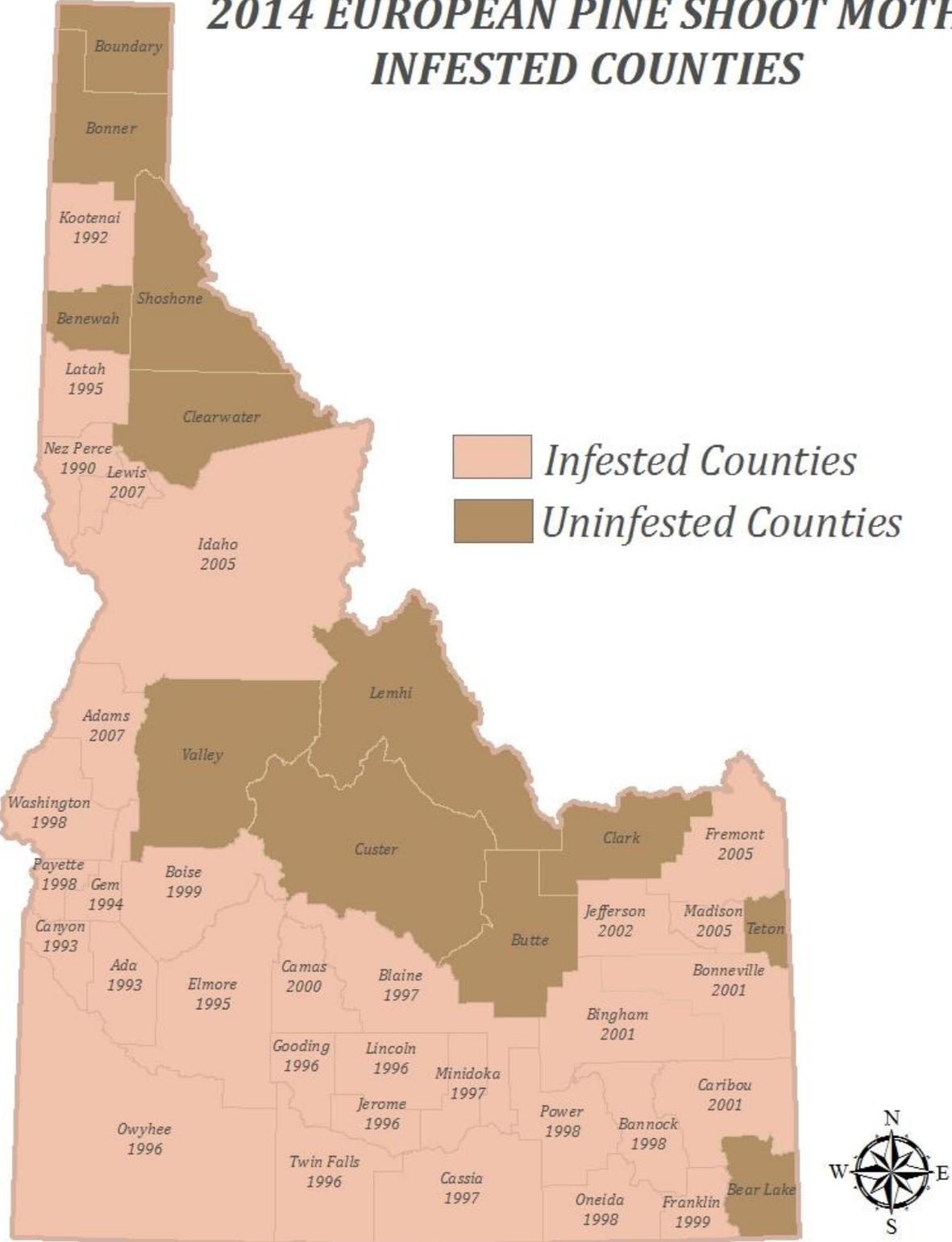
Presentations given in 2014 by ISDA staff

Date	ISDA Staff	Event	Target Audience
January 28	Dan Safford	Caldwell Agriculture Show “Noxious weeds & Invasive Species”	Farmers
January 22	Nic Zurfluh	Idaho Horticultural Show	General Public
January 29	Jared Stuart	Talk: Idaho Horticulture Expo “An Update on Some Invasive Insect Pests in Idaho”	Gardening public and industry professionals
February 5	Thomas Woolf	Idaho Noxious Weed Conference “Aquatic Invasive Species”	Noxious Weed Managers
February 8	Thomas Woolf	Eastern Lakes Conference “Idaho’s Aquatic Invasive Species Program”	Lake Managers and the General Public
February 10	Nic Zurfluh	Watercraft Inspection Training, Twin Falls	Watercraft Inspectors
February 12	Dan Safford	50 th Anniversary of Soil Conservation set up Invasive Species booth and manned it all day.	General Public
February 13	Nic Zurfluh	Watercraft Inspection Training, Malad	Watercraft Inspectors
February 13	Thomas Woolf	Northern Rockies Invasive Plant Council “Aquatic Invasive Species” and “Flowering Rush in Idaho”	Noxious Weed Managers
February 22	Mike Cooper	Talk: Rethinking Idaho Landscapes: ID Botanical Garden Horticultural Symposium “An Overview of Some Invasive Insect Pests and Their Look-A-Likes	Gardening public and industry professionals
February 25	Thomas Woolf	Clearwater CWMA Noxious Weed Clinic “Identification and Treatment of Aquatic Plants”	Noxious Weed Managers
February 26	Thomas Woolf	Palouse CWMA Noxious Weed Clinic “Identification and Treatment of Aquatic Plants	Noxious Weed Managers
February 27	Nic Zurfluh	Watercraft Inspection Training, Bruneau	Watercraft Inspectors
February 27	Thomas Woolf	Watercraft Inspection Training. Smelterville, ID	Watercraft Inspectors and the Public

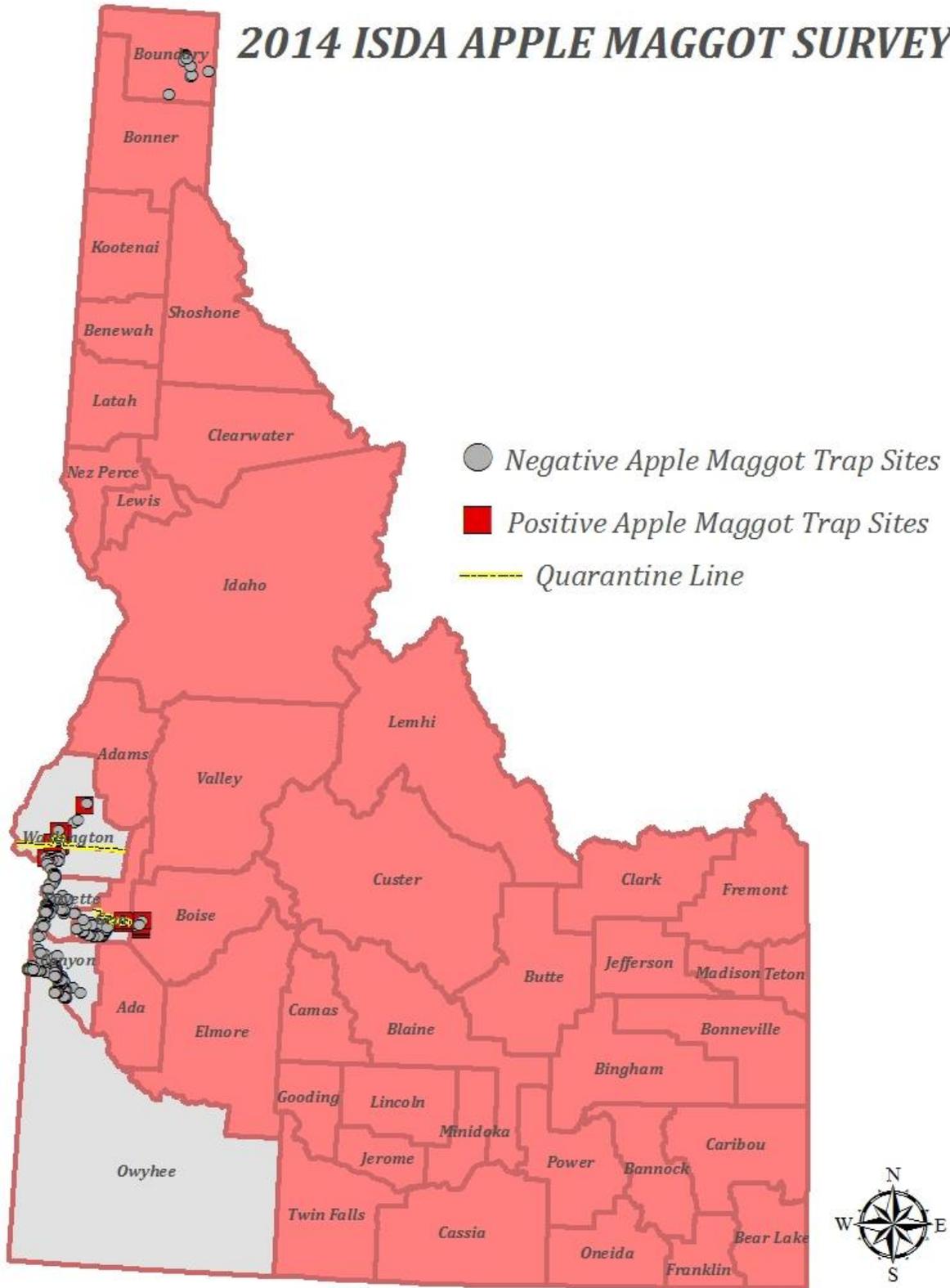
March 6	Nic Zurfluh	Watercraft Inspection Training, Burley	Watercraft Inspectors
March 18	Nic Zurfluh	Watercraft Inspection Training, Preston	Watercraft Inspectors
March 19	Paul Castrovillo	Talk: "Insect Pests of Concern During the 2014 Field Season"	ISDA Inspectors and staff
March 20	Nic Zurfluh	Master Naturalists, McCall	Master Naturalists
March 26	Thomas Woolf	Northern Idaho Lake Associations Meeting "Aquatic Invasive Species"	Lake Association Members
April 9	Thomas Woolf	Watercraft Inspection Training Post Falls, ID	Watercraft Inspectors and the General Public
April 16	Thomas Woolf	Greater Yellowstone Area Invasive Species Conference. "Idaho's Invasive Species Program"	Agency Personnel and Invasive Species Managers
April 19	Dan Safford	Idaho Horse Expo "Poisonous Noxious Weeds"	Equine Owners
April 30	Thomas Woolf	Idaho Fish and Game, Lewiston "Idaho's Invasive Species Program"	IDFG Staff
May 7	Paul Castrovillo	Talk: East End Neighborhood Association "Status of Japanese Beetle and the Eradication Program in the East End"	General public
May 8	Nic Zurfluh	Southern Idaho Marine Deputy Academy "Idaho Invasive Species Program Update"	Marine Deputies
May 8	Nic Zurfluh	Idaho Fish and Game Conservation Officers "Idaho Invasive Species Program Update"	IDFG Conservation Officers
May 17	Nic Zurfluh	Watercraft Inspection Training, Bloomington	Watercraft Inspectors
May 21	Thomas Woolf	100 th Meridian Columbia River Basin Team "Idaho Invasive Species Program Update"	Regional Invasive Species Managers
May 21	Thomas Woolf	Watercraft Inspection Training Dover, ID	Watercraft Inspectors and the General Public
May 23	Thomas Woolf	Northern Idaho Marine Deputy Academy "Idaho's Invasive Species Program"	Northern Idaho Marine Deputies
May 27	Matt Kreizenbeck	Idaho Falls Master Naturalists	Natural Resource Volunteers
May 28	Paul Castrovillo	Talk: Ada County Extension "Status of Japanese Beetle in Idaho"	Advanced Master Gardener class
June 4	Thomas Woolf	Nez Perce Invasive Species Workshop "Idaho's Invasive Species Program"	Regional Noxious Weed and Invasive Species Managers
June 19	Matt Kreizenbeck	BYUI Class	Natural Resource Class
June 19	Nic Zurfluh	Watercraft Inspection Training, Stanley	Watercraft Inspectors and Agency Staff
June 25	Paul Castrovillo	Talk: Ada County Extension "Insect Pests of Concern During the 2014 Field Season"	Advanced Master Gardener class
June 27	Matt Kreizenbeck & Nic Zurfluh	Idaho Regatta	Boat Owners

June 28	Matt Kreizenbeck & Nic Zurfluh	Idaho Regatta	Boat Owners
July 10	Paul Castrovillo	Talk: Four Seasons Gardening Club "ISDA's Surveys for Invasive Insect Pests"	Gardening public
July 29	Thomas Woolf	Priest Lake Invasive Species Workshop "Invasive Species Threats to Priest Lake"	The General Public
August 13	Nic Zurfluh	Western Idaho Fair	General Public
August 15	Darcy Heckathorne	Western Idaho Fair	General Public
August 23	Paul Castrovillo	Information Table: Idaho Botanical Garden "Ask an Entomologist"	Attendees at Bug Day event
August 26	Nic Zurfluh	Twin Falls County Fair	General Public
September 10	Thomas Woolf	Pend Oreille Invasive Species Workshop "Native and Invasive Species in Lake Pend Oreille"	The General Public
October 1	Paul Castrovillo	Talk: Deer Flat National Wildlife Refuge "The War on Invasive Insects in Idaho"	General public
October 8	Thomas Woolf	Idaho Invasive Species Council Meeting "Idaho Invasive Species Program Update"	Council Members and Taskforce Members
October 8	Paul Castrovillo	Talk: Invasive Species Council Meeting "2014 Field Season Update on Invasive Insect/Pathogen Surveys in Idaho"	Industry professionals
October 22	Paul Castrovillo	Talk: Northwest Nazarene University "The War on Invasive Insects in Idaho"	Plant & Animal Ecology class
October 22	Paul Castrovillo	Talk: Northwest Nazarene University "The War on Invasive Insects in Idaho"	Environmental Science class
November 4	Dan Safford	College of Western Idaho Horticulture Program "Noxious Weeds"	College Students
November 5	Darcy Heckathorne	Talk: Idaho Association of Plant Protection "Idaho State Department of Agriculture Response to First Idaho Japanese Beetle Infestation"	Plant Protection professionals
November 6	Paul Castrovillo	Talk: Annual Gypsy Moth Review "Idaho State Gypsy Moth Survey Report"	Industry professionals
November 18	Dan Safford	SW Idaho Weed Control Association Fall Conference "Poisonous Noxious Weeds"	Weed Control Industry
December 11	Paul Castrovillo	Talk: Canyon County Pesticide Applicator Re-Certification Training "Update on New Insect Invaders"	Pest Protection professionals
December 11	Paul Castrovillo	Talk: Elmore County Pesticide Applicator Re-Certification Training "Update on New Insect Invaders"	Pest Protection professionals
December 17	Dan Safford	Payette County Weed Control Recertification Meeting "The importance of Noxious Weeds"	Farmers

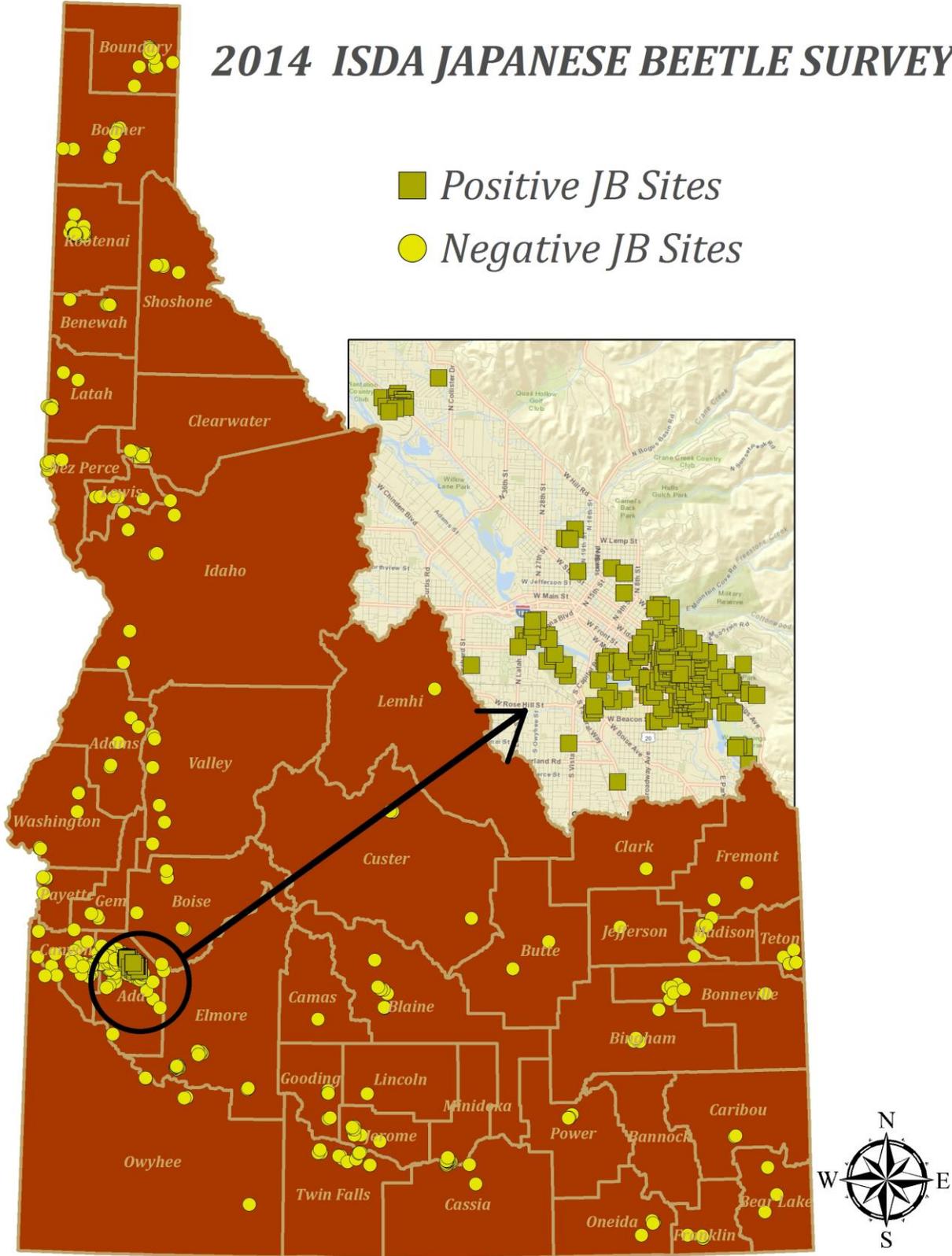
2014 EUROPEAN PINE SHOOT MOTH INFESTED COUNTIES



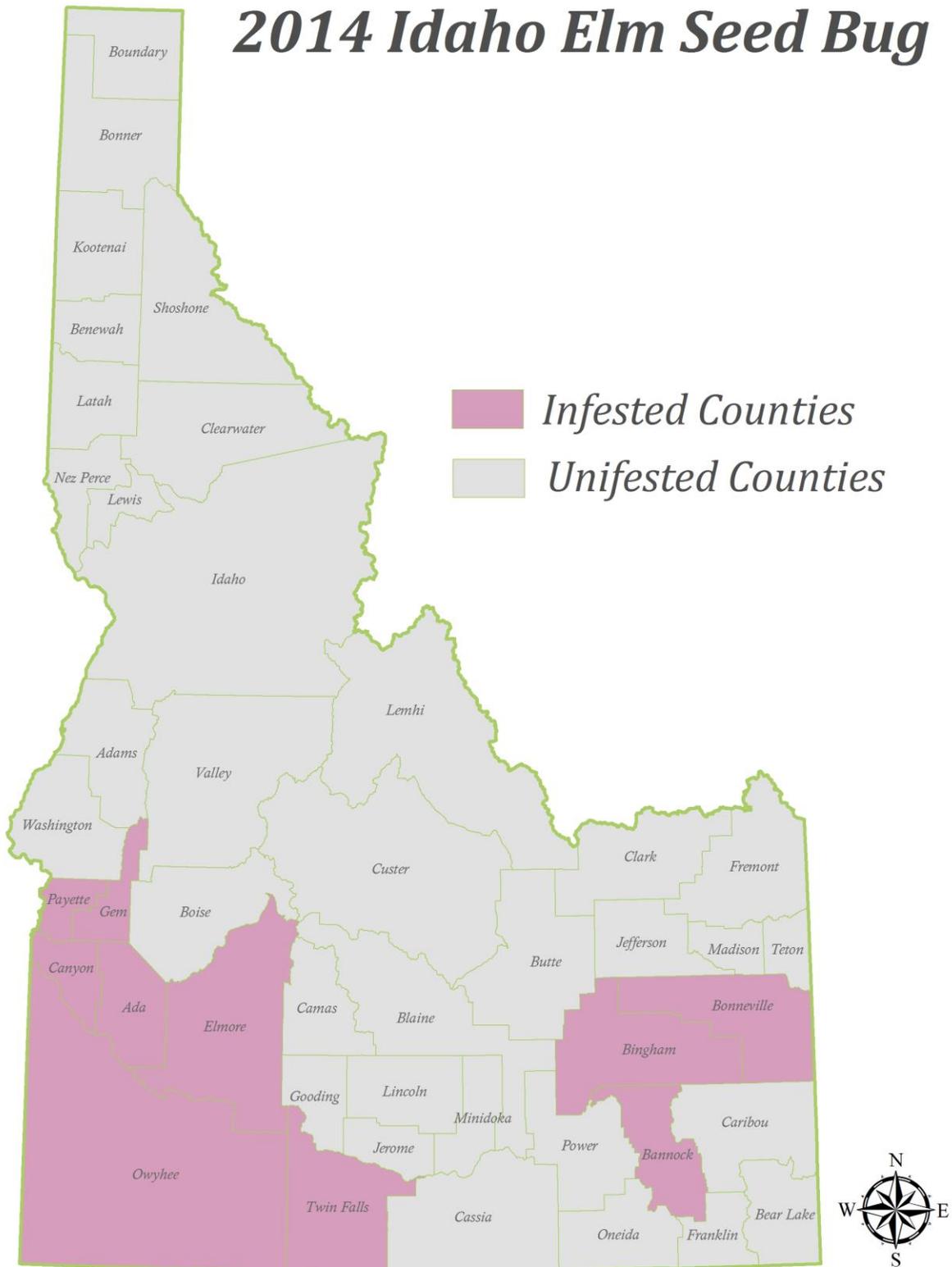
2014 ISDA APPLE MAGGOT SURVEY



2014 ISDA JAPANESE BEETLE SURVEY



2014 Idaho Elm Seed Bug



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Tom Woolf, Aquatic Program Manager, Thomas.Woolf@agri.idaho.gov

ISDA Website: www.agri.idaho.gov This report, as well as past years' summary reports, are available at the ISDA Website:

<http://www.agri.idaho.gov/Categories/PlantsInsects/RegulatedAndInvasiveInsects/Insectsformreports.php>