



2023

# Idaho State

Department of  
Agriculture

Division of Plant  
Industries



Clean

Drain

Dry

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## End of Year Survey Results





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## Introduction

ISDA's Division of Plant Industries derives its statutory authority from multiple sections of Idaho Code, Title 22, which includes:

- 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, manage plant pests, and invasive species for the purpose of protecting Idaho's agricultural industries. These industries are valued at over \$4 billion dollars; which include crops, nurseries, and ranching.

The Division of Plant Industries works in cooperation with other agencies including:

- Idaho Department of Lands (IDL)
- University of Idaho (UI)
- United States Forest Service (USFS)
- United States Department of Agriculture (USDA), Animal and Plant Health Inspection Services (APHIS), Plant Protection and Quarantine (PPQ)
- County governmental agencies
- Cooperative Weed Management Areas (CWMA)
- Industry groups and other stakeholders to protect Idaho's landscapes and environments from invasive species.

The Division of Plant Industries aid in accomplishing 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 2023 to enforce Idaho statutes, and fulfill the mission of the ISDA.

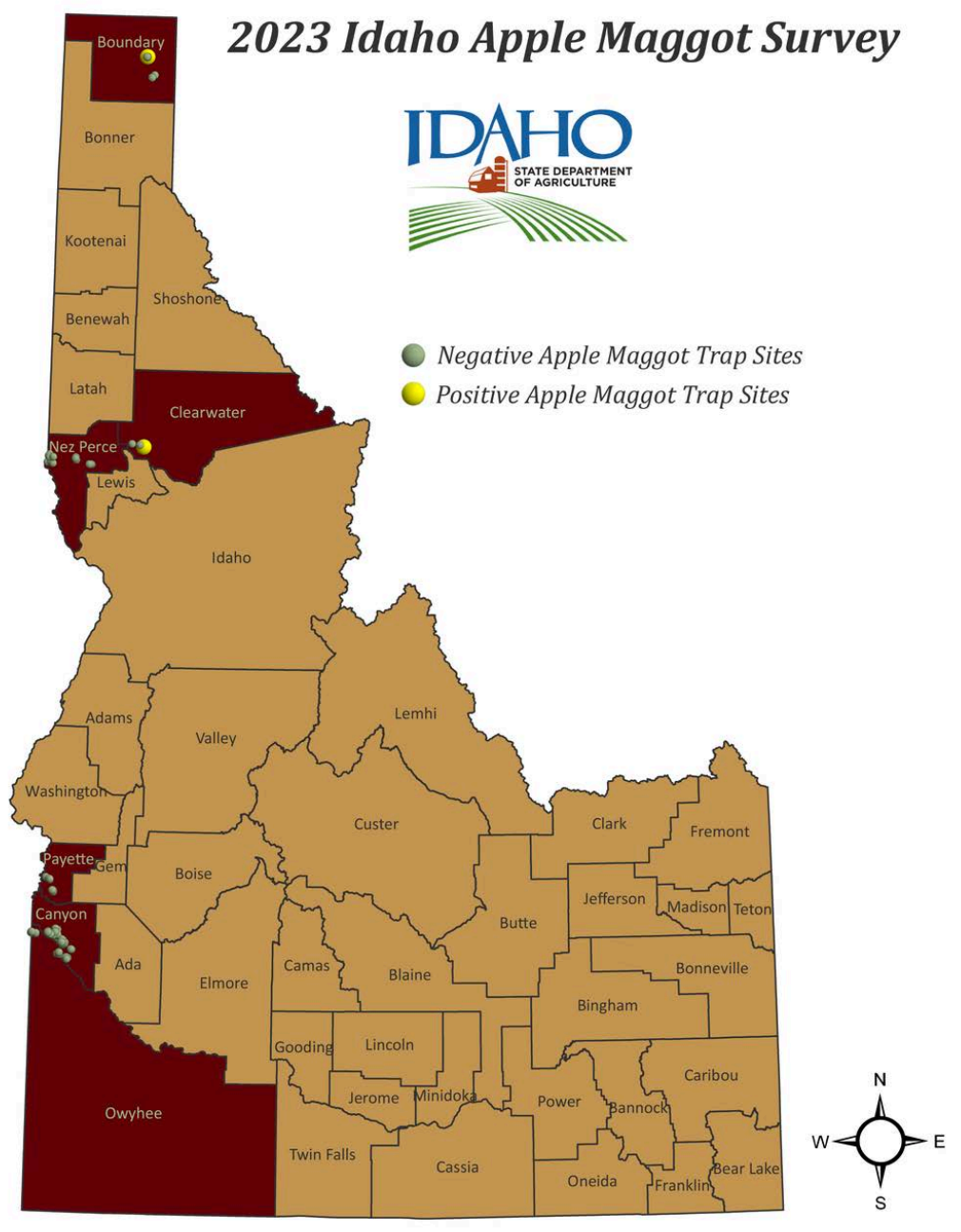




# Apple Maggot Survey (AM)

During the 2023 Apple Maggot (AM) trapping season ISDA placed 176 traps at sites located in Boundary, Canyon, Clearwater, Nez Perce, Owyhee, and Payette counties. The target locations that were chosen to place traps were areas in or near commercial apple orchards, and plant nurseries. For 2023 ISDA had two positive sites, one in Boundary county which caught 1 AM and the other in Nez Perce county which caught 14 AM.

During the 2024 trapping season, ISDA will continue to conduct these detection surveys in Boundary, Canyon, Clearwater, Owyhee, Payette, and Nez Perce counties; and we plan to concentrate on areas containing commercial orchards and plant nurseries.



# Western Cherry Fruit Fly (WCFF)



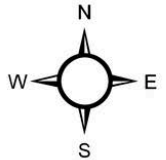
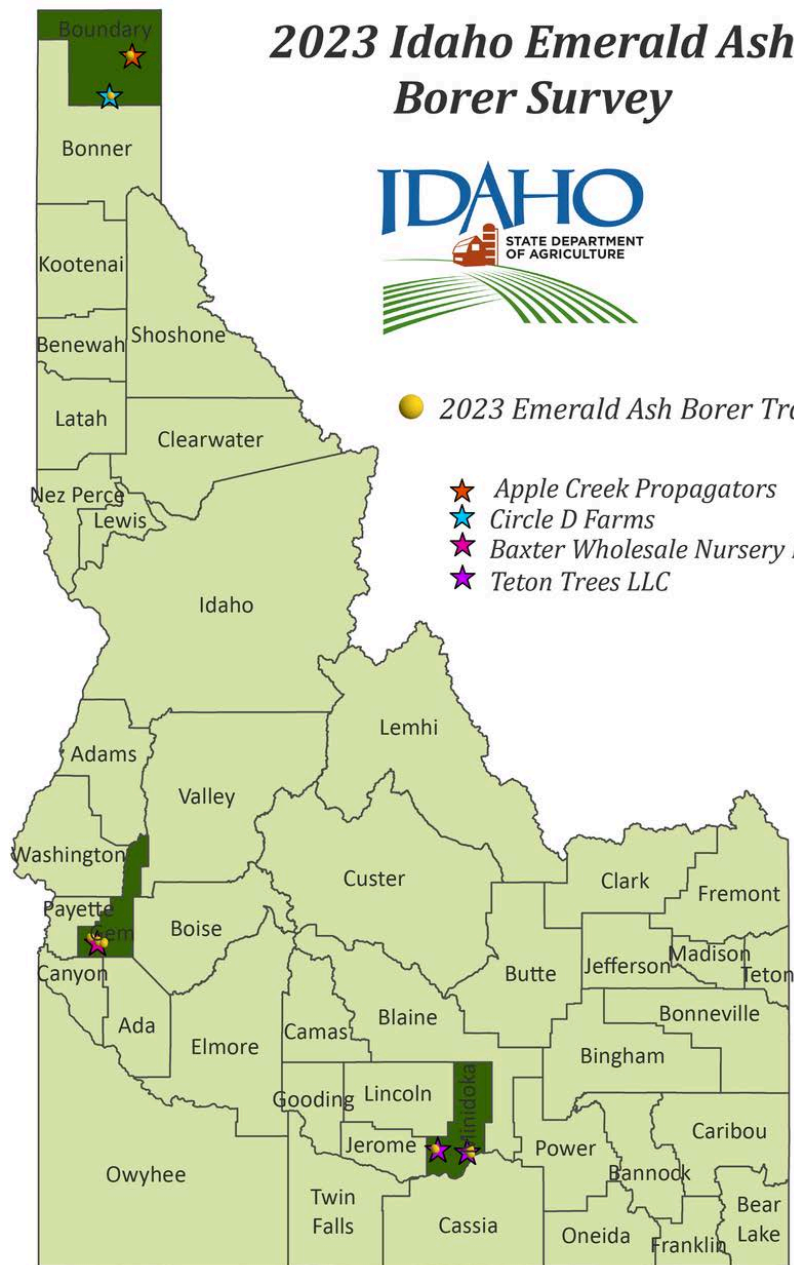
ISDA continues to carry out an annual trapping program to detect first emergence of Western Cherry Fruit Fly in the state. During the 2023 WCFF survey, adults were first observed in ISDA sentinel traps in Canyon Co. & Gem Co. on June 21th.

The agency also monitors and reports 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.





## 2023 Idaho Emerald Ash Borer Survey



## Emerald Ash Borer (EAB)

The emerald ash borer-known as EAB-is an invasive insect from Asia that is killing ash trees in North America. EAB was first found in the United States in southeast Michigan in 2002. USDA estimates that EAB had been here since the 1990s based on the size of the infestation. It probably arrived hidden in wood packing material used to ship consumer goods.

The Idaho Emerald Ash Borer survey was conducted to collect data to comply with Canada and Utah quarantines for moving ash tree nursery stock into their country or state.

In 2023 ISDA staff placed 22 EAB traps in 4 Idaho nurseries known to grow ash trees and in areas adjacent to those nurseries containing ash trees throughout 3 Idaho counties. ISDA plans to conduct this survey again in 2024.

All traps for 2023 were negative for EAB.





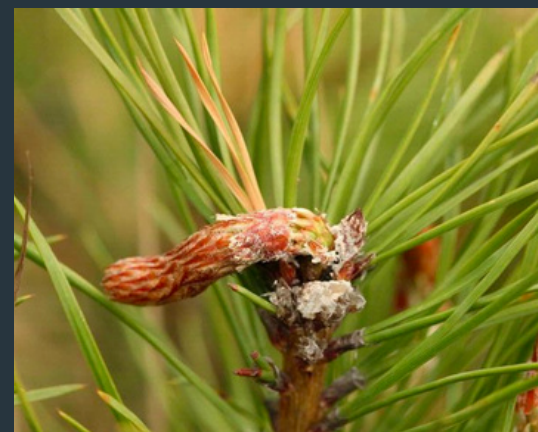
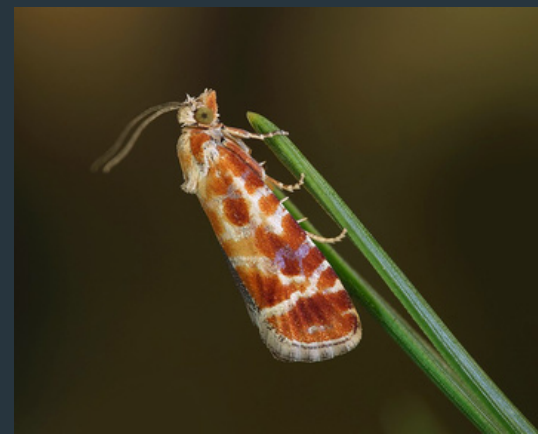
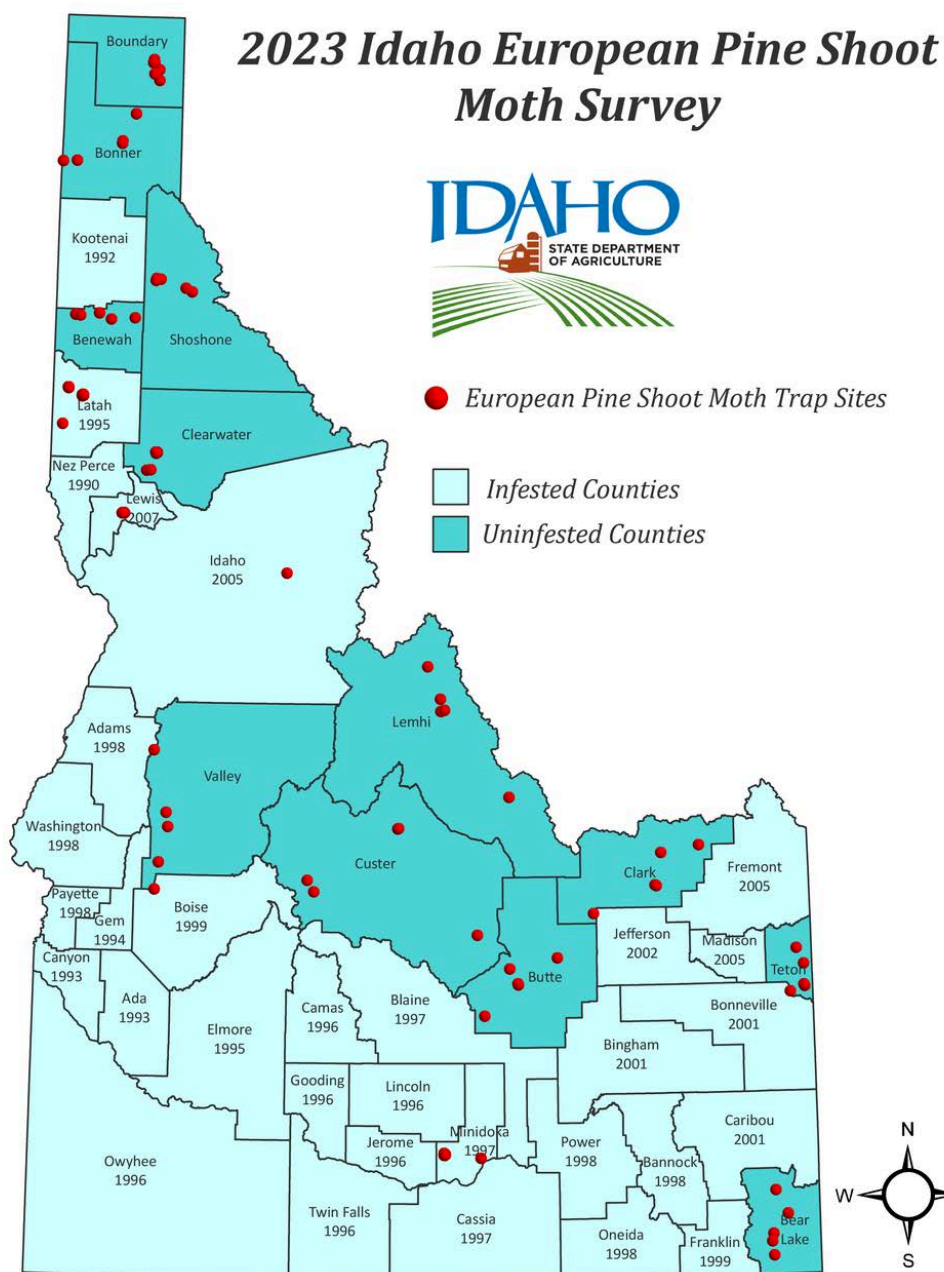


## European Pine Shoot Moth Survey (EPSM)

Idaho conducts a European Pine Shoot Moth survey annually to collect data that is used to comply with California and Montana quarantines on pine nursery stock moving into their states.

In 2023, ISDA staff placed 64 EPSM traps in pine trees that were in parks, cemeteries, golf courses, nurseries and pine tree plantations throughout 12 Idaho counties where EPSM have never been collected to date (currently considered "un-infested"). In addition, 28 traps were placed at the request of nurseries seeking phytosanitary certifications to allow export of nursery stock from three counties where EPSM have been captured in the past.

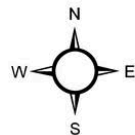
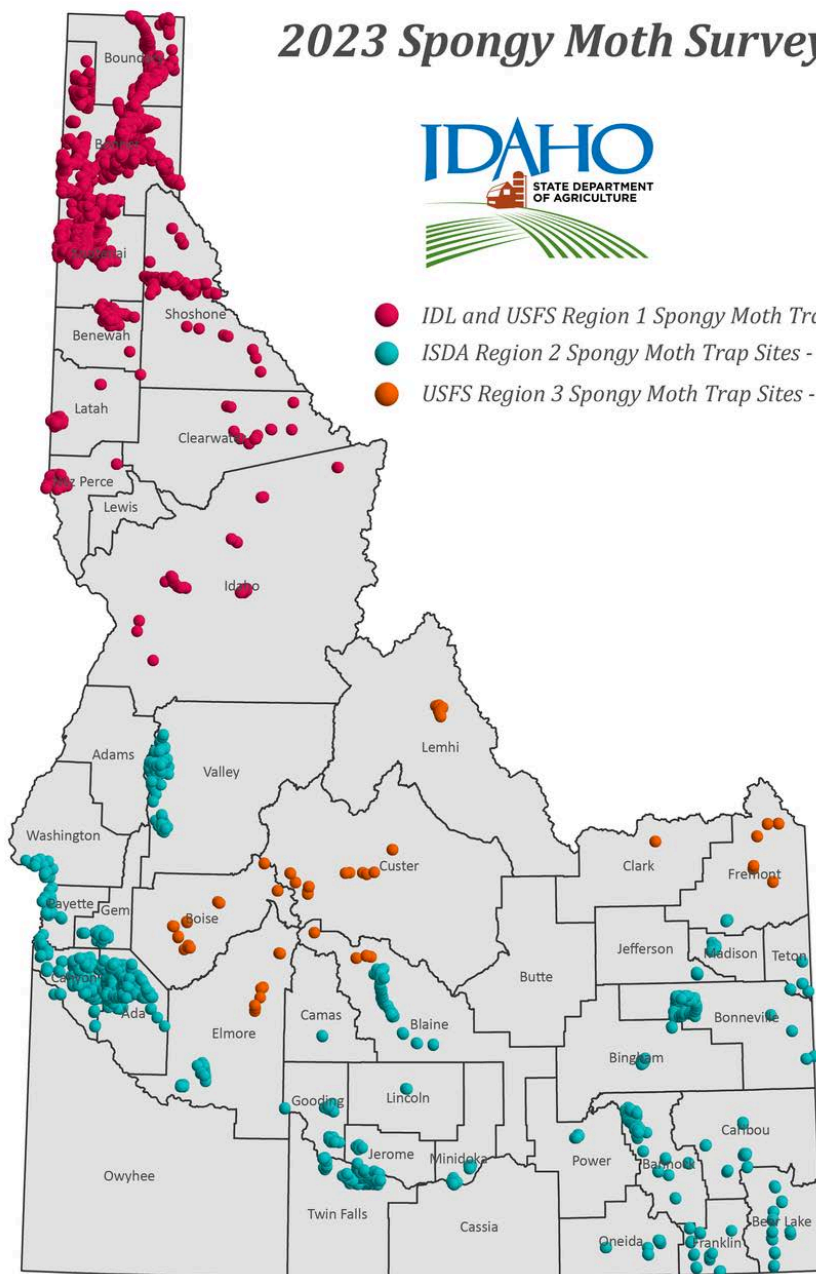
No new infestations were reported in 2023, and the nurseries that are located in infested counties who requested surveying, showed no evidence of an EPSM presence this year.







## 2023 Spongy Moth Survey



## Spongy Moth (SM)

During 2023 2,020 pheromone-baited SM traps were deployed throughout Idaho by the following agencies:

- Idaho Department of Lands (IDL): 1,130 detection traps
- Idaho State Department of Agriculture (ISDA): 713 detection traps
- United States Forest Service R-1 (USFS): 107 detection traps
- United States Forest Service R-3 (USFS): 70 detection traps

Between April 30 and October 27, 2023 staff from each participating agency completed the placement and subsequent retrieval of traps. ISDA caught one SM in a trap off Hwy 93 in Twin Falls County in 2023. ISDA will conduct a delimit survey of 36 traps around the positive location in Twin Falls County in 2024.

The complete report on the 2023 SM Survey Program in Idaho may be viewed on the following IDL website:  
<https://www.idl.idaho.gov/forestry/insects-and-disease/>





# Japanese Beetle Survey (JB)


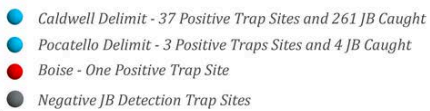
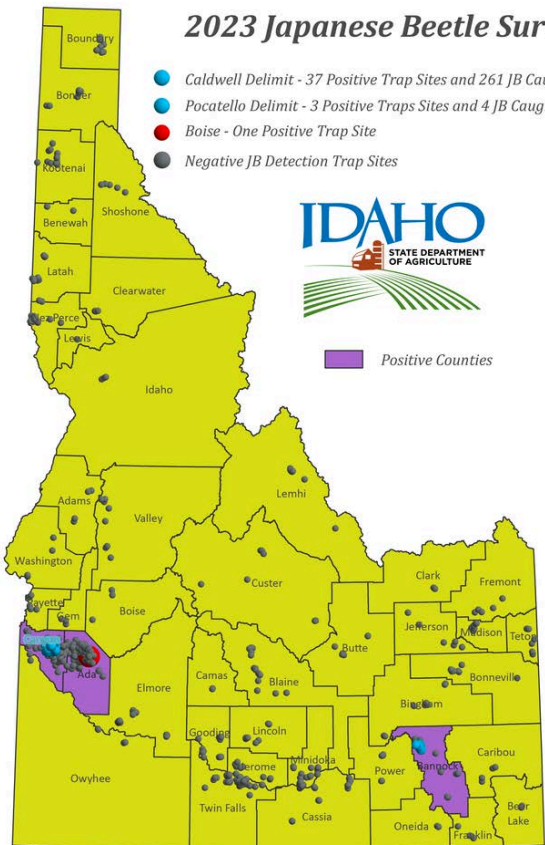
In 1990 the Idaho State Department of Agriculture (ISDA) began to monitor the state for Japanese beetle (JB), a major invasive insect pest in the eastern US, using pheromone-baited traps. Each summer between 200-300 traps have been routinely set out around high risk sites like plant nurseries, box stores and airports. On rare occasions (1992, 1997 and 2011) ISDA trapped single specimens at nurseries, most likely hitchhikers, on nursery stock obtained from an infested state.

During 2012, the first ever detection of a JB infestation in Idaho was uncovered when traps in downtown Boise collected 56 beetles. The following summer, with trap numbers increased to determine the true extent of beetle establishment, 3,058 were captured. By that time, a JB eradication program had been put into place. Through trapping, we were able to identify neighborhoods where JB were active, based on that data, turf in the infested locations was treated with pesticides demonstrated to be effective at killing young JB larvae living and feeding within the soil.

With funding from the Legislature and the help of residents affected by the presence of JB on their properties, ISDA was able to successfully carry out the JB eradication program in Boise. From a high of over 3,000 beetles in 2013, each year the number of JB captured has dramatically decreased until 2018 when only 4 were collected. No JB were found in Boise from 2019-2022. During the 2023 trapping season one beetle was found in a monitor trap in Boise, trap numbers will increase in the area to ensure there is not a larger population.

During 2012 a single JB was collected in one of the 5 traps set up in the city of Pocatello. Follow-up trapping uncovered no JB in Pocatello until 2018 when, again, a single individual was captured at a Pocatello park. Monitoring traps were increased to 35 in Pocatello during the 2019 season, and 4 beetles were collected, 1 from the 2018 park where the initial beetle was found. In 2020, with trap numbers again increased to 104; a total of 7 JB were captured in Pocatello - one in the park where JB was trapped during 2018 and 2019 and 6 more from a park just to the north of that one. Turf in both parks received pesticide treatment in 2021 - the same protocol that was successfully undertaken in Boise. In 2022, 49 traps were set out in areas surrounding the beetle catches from previous years and another treatment was done, 8 beetles were caught in Pocatello during this season. Within the 2023 season, treatment was performed in parks where traps were positive. The monitor traps placed around Pocatello found 4 beetles Still hovering around local parks. Within the 2024 season monitor traps will remain and the number of parks treated will increase to expand coverage.

During the 2021 field season one beetle was captured in Caldwell which led to 82 delimit monitoring traps to be placed in 2022. Unfortunately, 77 JB were collected, indicating an established infestation in Caldwell. With the help of the community and legislator ISDA was able to perform a 2023 treatment of the effected neighborhood, parks, and community areas. Monitor trap numbers increased to over 300 so ISDA could track where the beetles were headed. This season brought 260 beetles, therefore trapping and treatment will continue in 2024.

 *Positive Counties*

## Statewide Japanese Beetle Monitoring using Pheromone-Baited Traps and Results of the JB Eradication Program in Boise and Pocatello 2012-2023

	Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
#	Detection Traps	365	840	430	297	289	306	295	392	377	375	401	459
#	Traps Pocatello Delimit	0	0	0	0	0	0	0	29	104	104	49	52
#	Traps Caldwell Delimit	0	0	0	0	0	0	0	0	0	0	82	399
#	Beetles Caught in Boise	56	3,058	1,283	365	128	19	4	0	0	0	0	1
#	Beetles Caught in Post Falls	4	0	0	0	0	0	0	0	0	0	0	0
#	Beetles Caught in Pocatello	1	0	0	0	0	0	1	4	7	11	8	4
#	Acres Treated	N/A	250	400	550	340	60	40	0	0	45(P)	45(P)	49(P)
#	Acres Treated in Caldwell	0	0	0	0	0	0	0	0	0	0	0	232
#	Beetles Caught in Caldwell	0	0	0	0	0	0	0	0	0	1	77	260







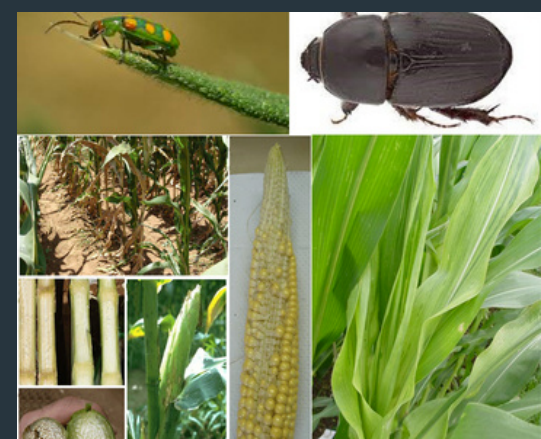
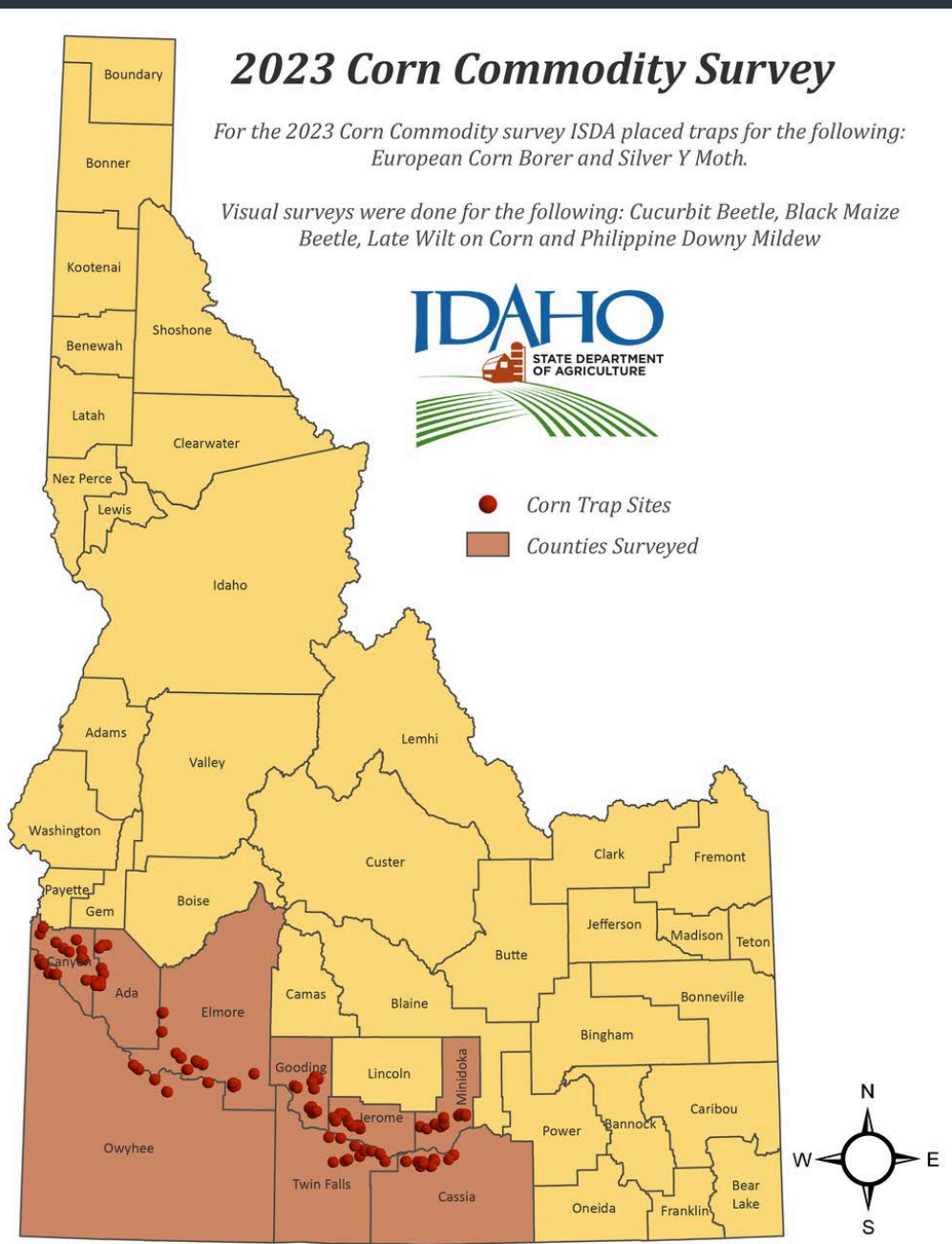
# Corn Commodity Survey

Corn is a major agronomic crop in Idaho. The USDA National Agricultural Statistical Service reported 390,000 acres planted in the state in 2020. In addition to grain, Idaho corn is used for silage, processed sweet corn, and sweet corn seed (Idaho ranks as the top production state for hybrid sweet corn seed varieties). Idaho sweet corn seed companies export across the U.S. as well as to international markets as well, making phytosanitary issues and data on freedom from exotic insects and pathogens of vital concern to the state's corn industry.

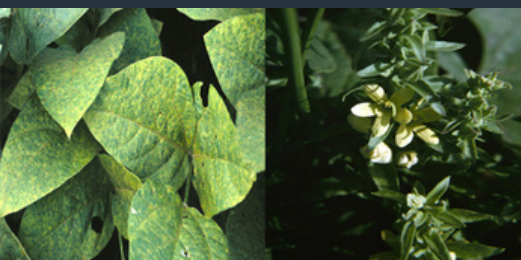
In 2023 ISDA, in cooperation with the USDA APHIS PPQ's Cooperative Agricultural Pest Survey program (CAPS), conducted pheromone-based trap surveys for two exotic organisms that could threaten Idaho corn crops: **European Corn Borer** and **Silver Y Moth**. ISDA staff located 100 corn fields throughout the following counties: **Ada, Canyon, Cassia, Elmore, Gooding, Jerome, Minidoka, Owyhee** and **Twin Falls**. Two traps per pest were set out in each corn field in June and removed by September. Traps were serviced every two weeks and lures were changed as instructed.

ISDA also conducted 2 visual surveys for **Black Maize Beetle**, **Cucurbit Beetle**, **Philippine Downy Mildew**, and **Late Wilt on corn** in all corn fields that were trapped throughout the assigned counties.

2023 Results from both the visuals and trap surveys were all negative.



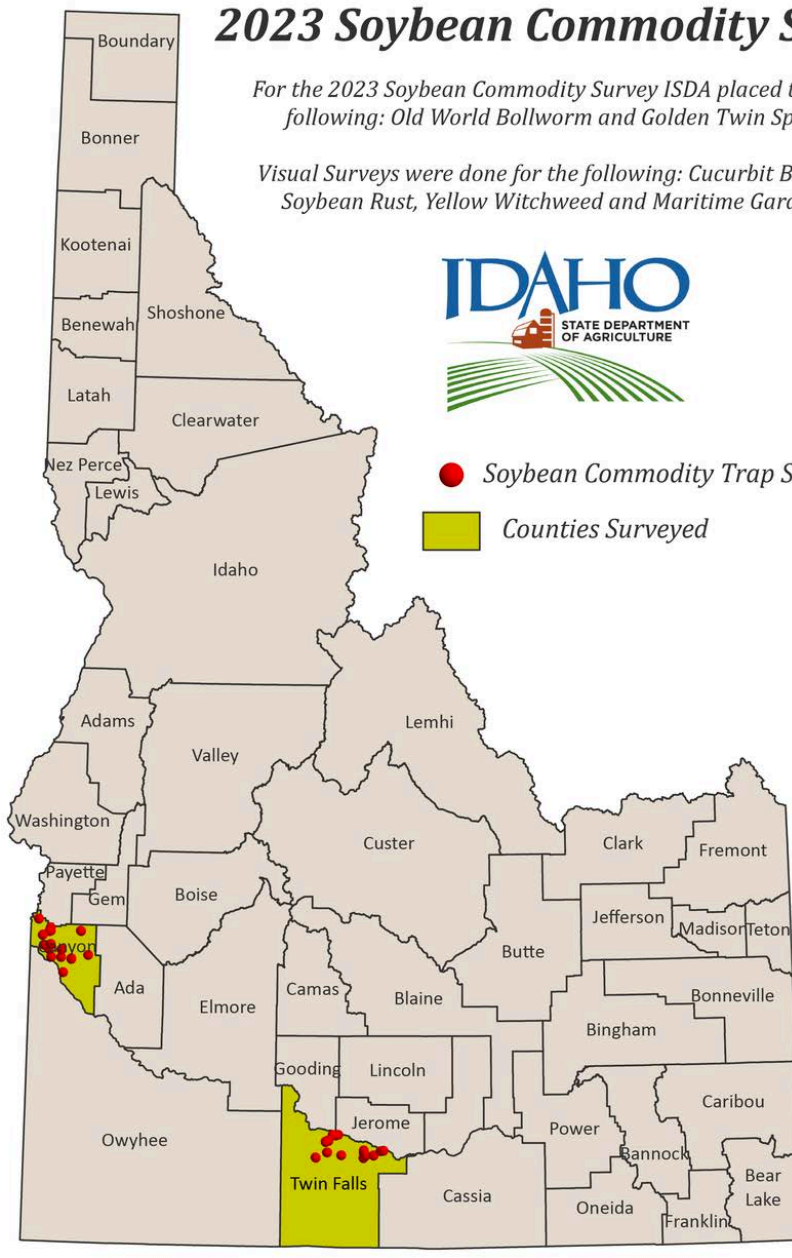




## 2023 Soybean Commodity Survey

For the 2023 Soybean Commodity Survey ISDA placed traps for the following: Old World Bollworm and Golden Twin Spot Moth.

Visual Surveys were done for the following: Cucurbit Beetle, Asian Soybean Rust, Yellow Witchweed and Maritime Garden Snail.



## Soybean Commodity Survey

In Idaho, soybeans are an emerging crop that falls under the umbrella of dry bean farming. Approximately 70 percent of the state's 50,000 acres of dry beans are grown for seed and Idaho is the nation's leader in dry bean seed production because of strict guidelines that require imported seed to be serology tested and certified as disease-free before it can be planted.

Since 2018, when Idaho's bean rule permitted growing of soybean in Idaho, approximately 22 acres of soybeans have been grown in the bean seed production areas, specifically within the Treasure Valley and Magic Valley regions of the state.

In 2023 ISDA, in cooperation with the USDA APHIS PPQ's Cooperative Agricultural Pest Survey program (CAPS), conducted pheromone-based trap surveys for two exotic organisms that could threaten Idaho soybean/bean crops: **Old World Bollworm** and **Golden Twin Spot Moth**. ISDA staff located 30 soybean/bean fields in the following counties: **Canyon** and **Twin Falls**. Two traps per pest were set out in each soybean/bean field in mid-June and removed by mid-September. Traps were serviced every two weeks and lures were changes as instructed.

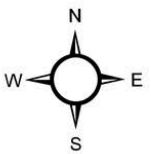
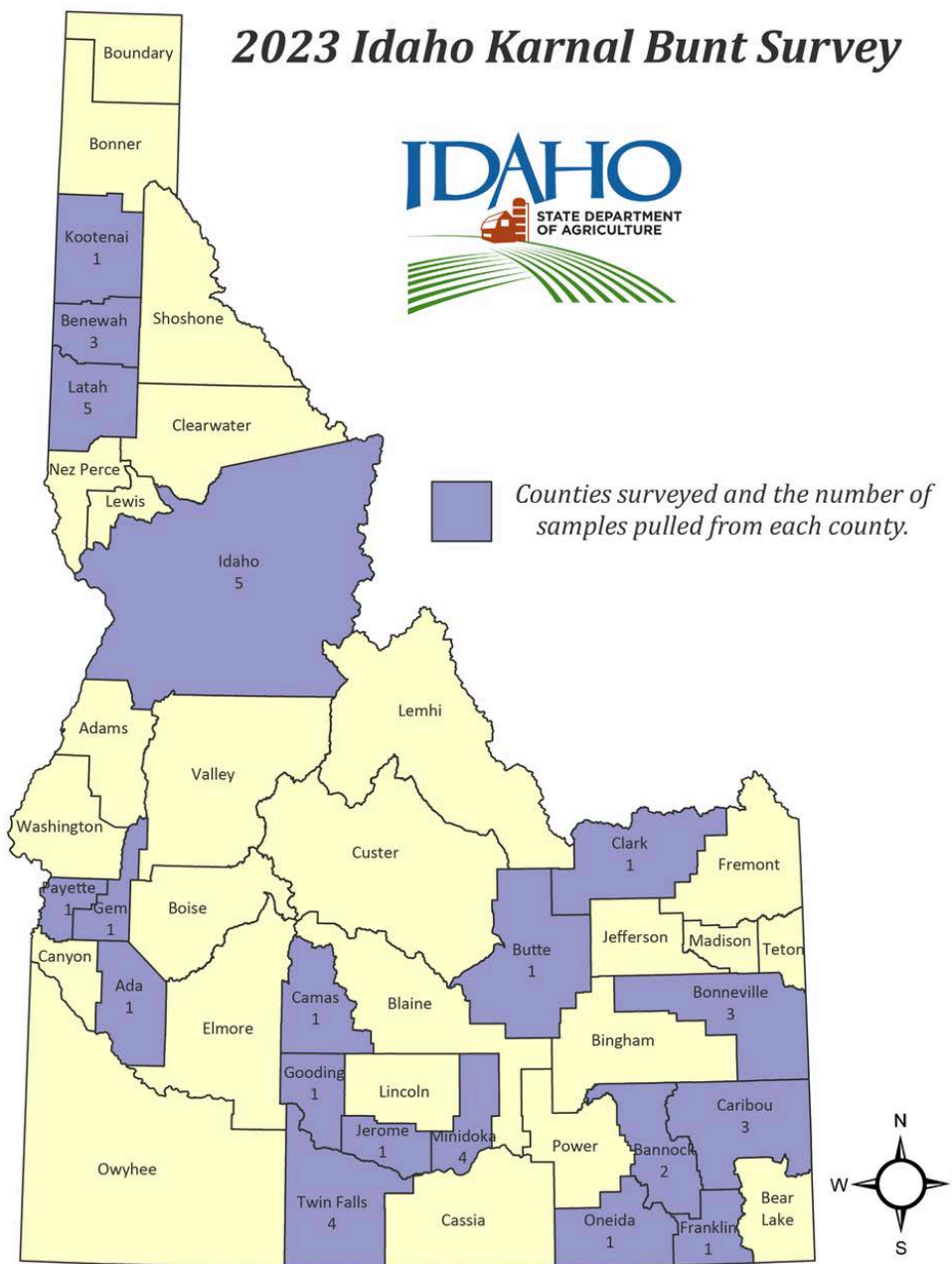
SDA also conducted 2 visual surveys for **Cucurbit Beetle**, **Maritime Garden Snail**, **Yellow Witchweed** and **Asian Soybean Rust** in all soybean/bean fields that were trapped throughout the assigned counties.

2023 Results from both the visuals and trap surveys were all negative.





# 2023 Idaho Kernal Bunt Survey



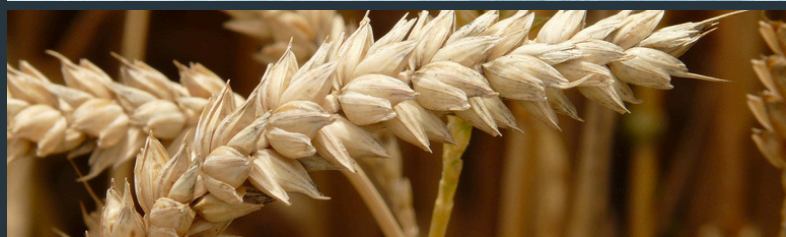
## Kernal Bunt Survey (KB)

Kernal Bunt (KB) is a disease of wheat caused by the fungus *Tilletia indica*. *T. indica* was found in the United States in 1996. It has not been found in Idaho. The US Department of Agriculture has attempted to eradicate the fungus via continuing surveys, along with quarantines.

ISDA has conducted surveys in Idaho for KB since 1996.

During 2023, ISDA collected 40 wheat samples from 19 counties in Idaho and sent them to a USDA APHIS PPQ lab to be tested for the pathogen. Results from this year's survey were all negative.

To date, KB has never been detected in Idaho!





# Idaho Apiary Registration and National Honey Bee Health Survey

Idaho registered 147 beekeepers and 143,767 honey bee colonies during 2023. As in years past, Idaho was one of 42 states and territories who participated in the USDA APHIS/University of Maryland National Honey Bee Health Survey.

This survey is an ongoing attempt to collect baseline data on the health of the US honey bee industry. The project has several parts, and is primarily geared towards establishing the absence within the US of several exotic bee pests including, but not limited to, the parasitic mite *Tropilaelaps*, the Asian honey bee (*Apis cerana*), and Slow Bee Paralysis Virus. To maximize information gained from the survey effort, samples were also analyzed for other diseases and parasites known to be present in the US such as *Nosema* sp., *Varroa* mites and a number of viral diseases. Additionally, wax or bee bread samples were collected from select hives to test for the presence of various pesticides of concern.

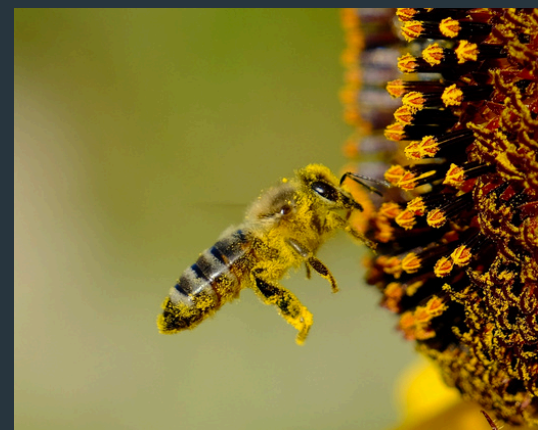
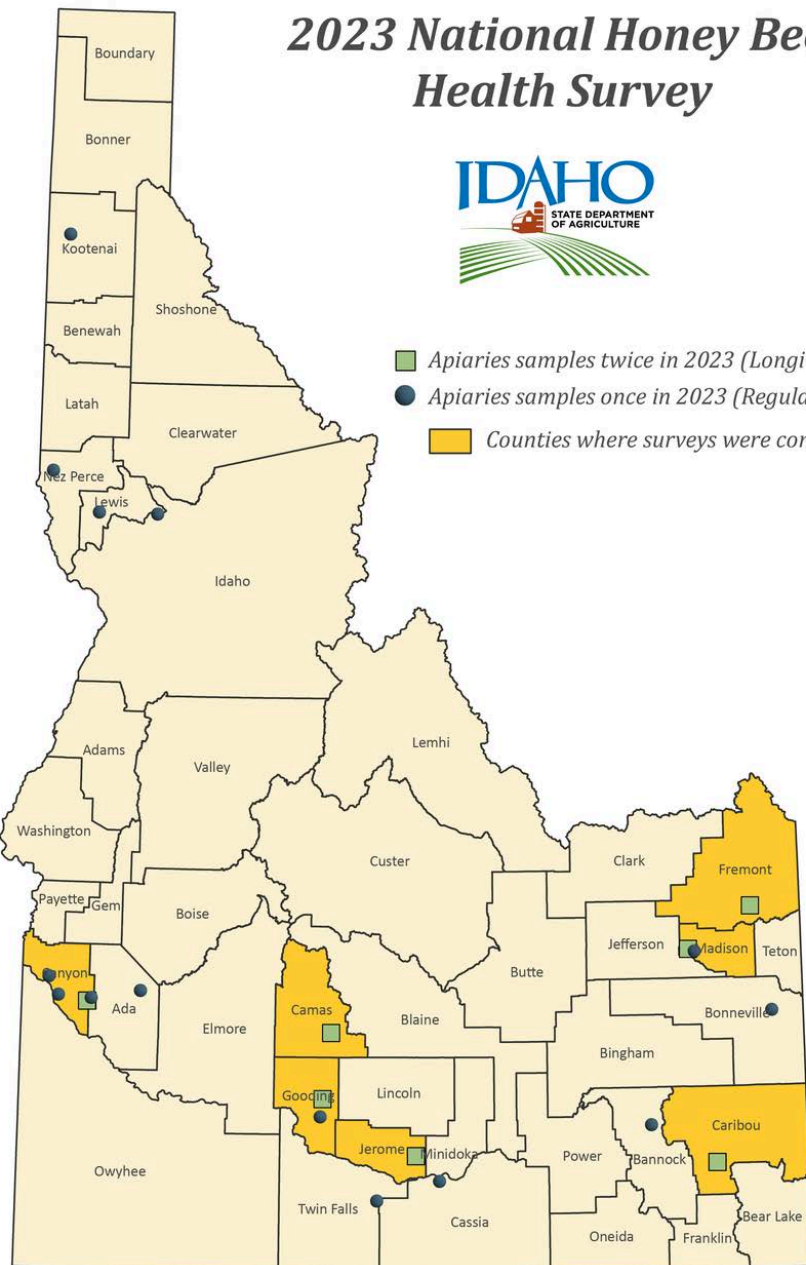
In June of 2023, ISDA started collecting samples of bees from 8 hives of 19 apiaries located throughout the state. 14 of those apiaries were sampled once during 2023. The remaining 5 were sampled once in the spring before honey flow and then again in the fall after honey was pulled. This is termed the "longitudinal survey". The 19 surveys carried out in 2023 were completed by October 4th. ISDA is expecting diagnostic reports with data analysis, to be supplied by ARS/U of Maryland, from the 2023 survey.

For summary reports for the past seven years of the Idaho Honey Bee Health Surveys go to: <http://invasivespecies.idaho.gov/plants-archived-yearly-reports>.

## 2023 National Honey Bee Health Survey



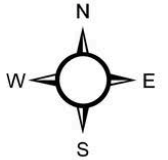
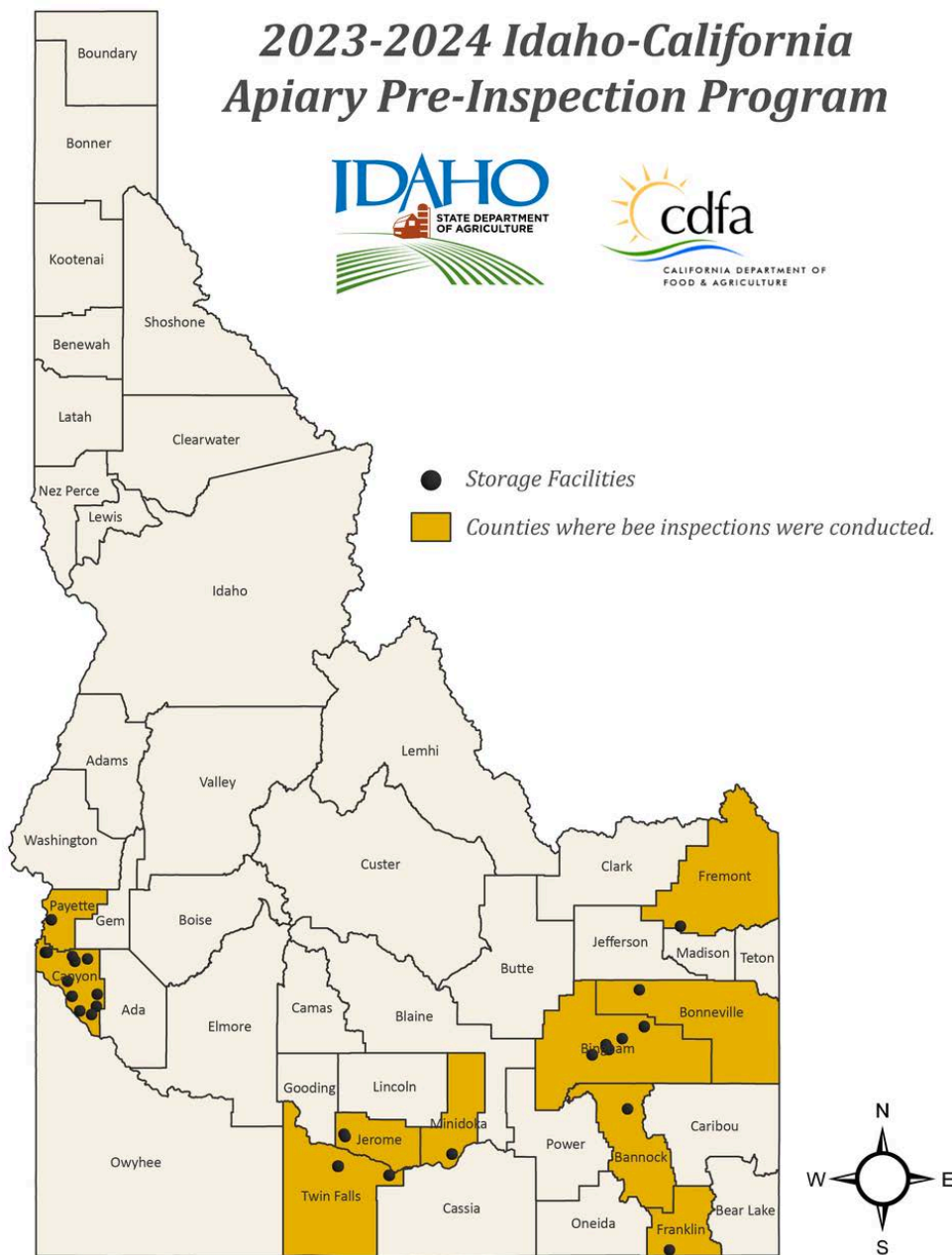
- Apiaries samples twice in 2023 (Longitudinal Surveys)
- Apiaries samples once in 2023 (Regular Surveys)
- Counties where surveys were conducted







# 2023-2024 Idaho-California Apiary Pre-Inspection Program



## Idaho-California Apiary Pre-Inspection Program

ISDA in conjunction with California Department of Agriculture (CDFA) are working together to schedule and perform pre-shipment inspections on honeybees that are heading to California for crop pollination services. These pre-shipment inspections if successfully passed are certified to allow expedited entry into California, bypassing time-consuming inspections at the California border stations.

In 2023 ISDA certified 65 registered warehouses/beekeepers in the program and over 368,445 certified colonies. Most of the inspections were conducted between November 30th and December 8th.





# Grasshopper/Mormon Cricket Program

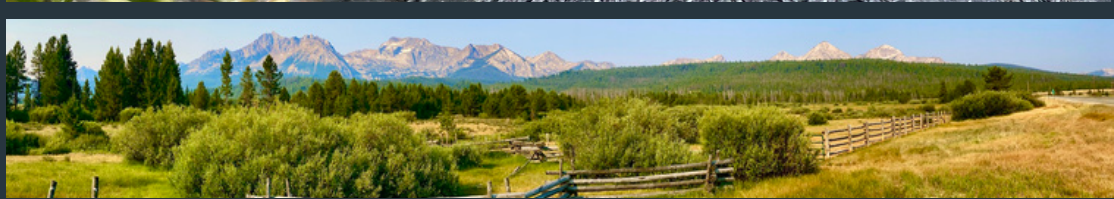
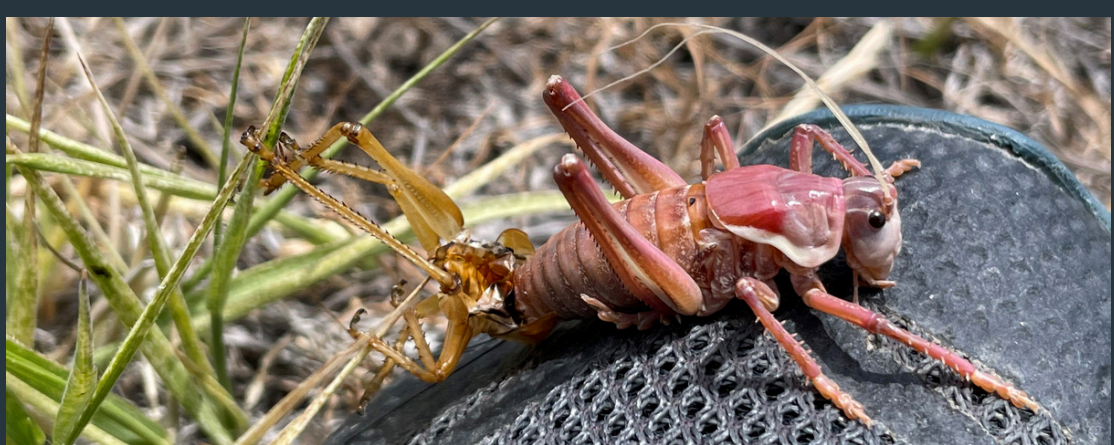
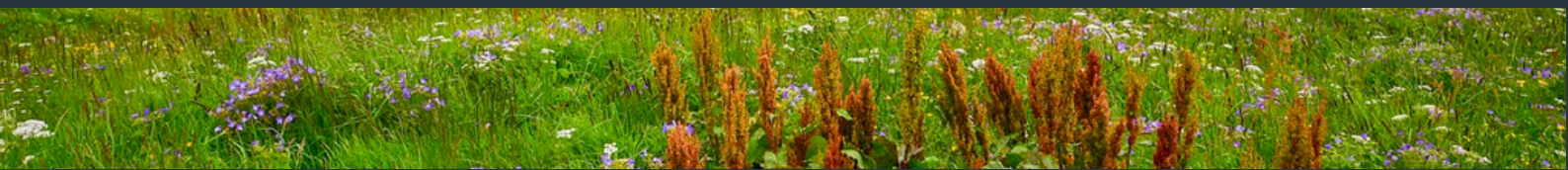
## Introduction

Although grasshoppers and Mormon crickets are a natural part of Idaho's ecosystem, under the right environmental conditions their population densities can reach levels that result in negative economic and environmental impacts. These impacts have labeled grasshoppers and Mormon crickets as some of the worst agricultural pests in Idaho. Due to the significant historical losses caused by grasshopper and Mormon crickets to Idaho's agriculture industry, The Idaho State Department of Agriculture (ISDA) implemented the Grasshopper and Mormon Cricket Control Program in 2004 to provide qualifying landowners with mitigation assistance on private range and croplands throughout the state. Since the introduction of the program, ISDA has distributed over 3 million pounds of Carbaryl insecticide bait in an effort to mitigate Idaho's agricultural losses.

## Background

The Grasshopper and Mormon Cricket Control Program provides landowner assistance to landowners on a case-by-case basis. Landowners who are actively experiencing grasshopper or Mormon cricket infestations on qualified agricultural use lands may request assistance from ISDA. The program offers two forms of assistance; 5% Carbaryl insecticide bait or a pre-approved reimbursement for insecticides purchased and applied by the landowner. The reimbursement is for situations where Carbaryl bait is not the most effective control method. The management and timely control of grasshopper and Mormon cricket populations are key to the success of the program. Based on annual surveys conducted by The U.S. Department of Agriculture, Animal and Plant Health Service (USDA-APHIS), Idaho has experienced very serious pest outbreaks in years past, and 2023 in particular may be considered a significant outbreak year. The program received 385 landowner assistance requests spanning across 35 Idaho counties, and provided assistance, by way of 5% Carbaryl bait or insecticide reimbursements, to treat approximately 100,885.88 acres\* of agricultural land in Idaho.

\*5% Carbaryl bait treatment acreages are calculated using the recommended rate of 10lbs./acre using the Reduced Agent and Area Treatment (RAAT) method.

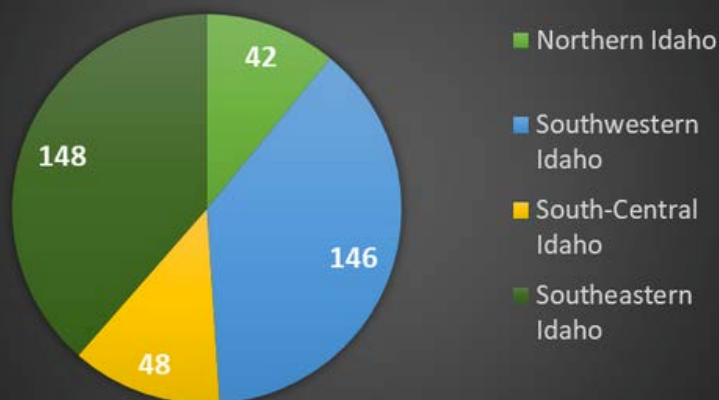




# Program Accomplishments

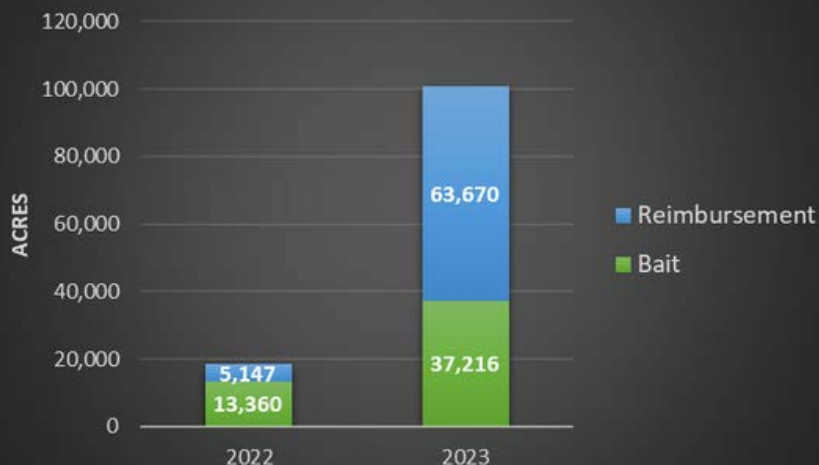
In the 2023 season, the program received 385 landowner requests for assistance which resulted in 186,080 pounds (lbs.) of bait and \$796,226.35 of reimbursements distributed to landowners in 35 counties. In comparison, in 2022 we experienced a lower number of Landowner Assistance Requests (178), resulting in \$56,641.98 of reimbursements and 128,280 pounds of bait. In situations where Carbaryl bait is not the most effective control method, ISDA may reimburse landowners for pre-approved insecticides and adjuvants purchased and applied on their own. The most notable difference between 2022 and 2023 is the sharp increase in the cost of Reimbursements, which may be attributed to the number of infested acres (63,669.88 in 2023 and 5,147 in 2022) which landowners treated through the reimbursement program.

## 2023 Requests For Assistance



In 2023 we experienced a high volume of requests for assistance across the state. Requests came from 35 counties, the majority originating from the Southeast and Southwest corners of the state.

## Total Acres Treated



\*5% Carbaryl bait treatment acreages are calculated using the recommended rate of 10lbs./acre using the Reduced Agent and Area Treatment (RAAT) method.

Additionally, program staff were able to scout 479 sites statewide and conduct surveys for both grasshoppers and Mormon crickets simultaneously. Public reports as well as survey data indicated the need to conduct a Right of Way treatment on 25 miles of Highway 51, located in Owyhee County, and 13 miles of Highway 20, located in Elmore County.

In summary, the overall cost of insecticides to assist landowners and mitigate roadway hazards statewide increased from \$200,929.98 in 2022 to \$1,032,547.95 in 2023.



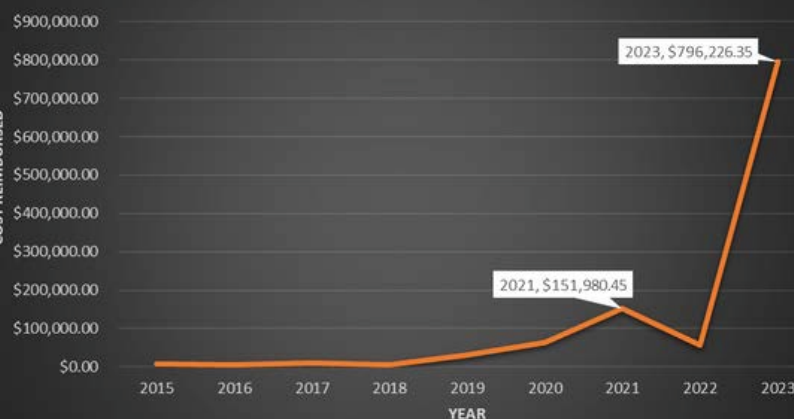
# Summary of Insecticide Treatments Statewide

Method of Application	Lbs. (\$1.27/lb)	Value
5% Carbaryl bait, landowner application, Total Private	183,880	\$233,527.60
5% Carbaryl bait, ISDA State/ROW application, Mormon cricket control	2,200	2,794.00
Total 5% Carbaryl bait distributed	186,080	\$236,321.60
Landowner reimbursement, grasshopper & Mormon cricket control	63,669.88 (acres treated)	\$796,226.35
Total cost of all treatments		\$1,032,547.95

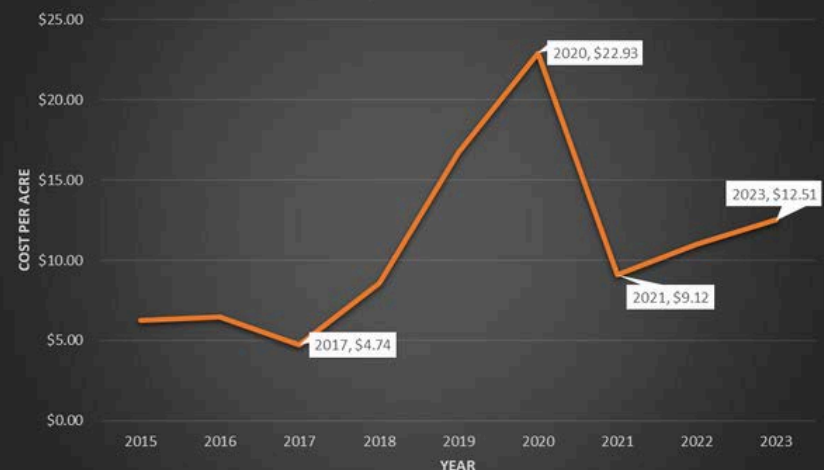
Historic 5% Carbaryl Bait Usage



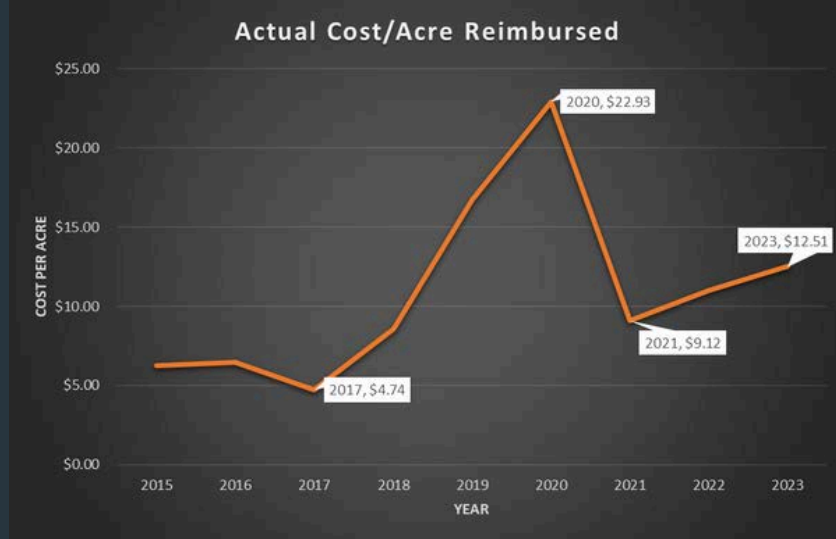
Historical Cost Reimbursed



Actual Cost/Acre Reimbursed

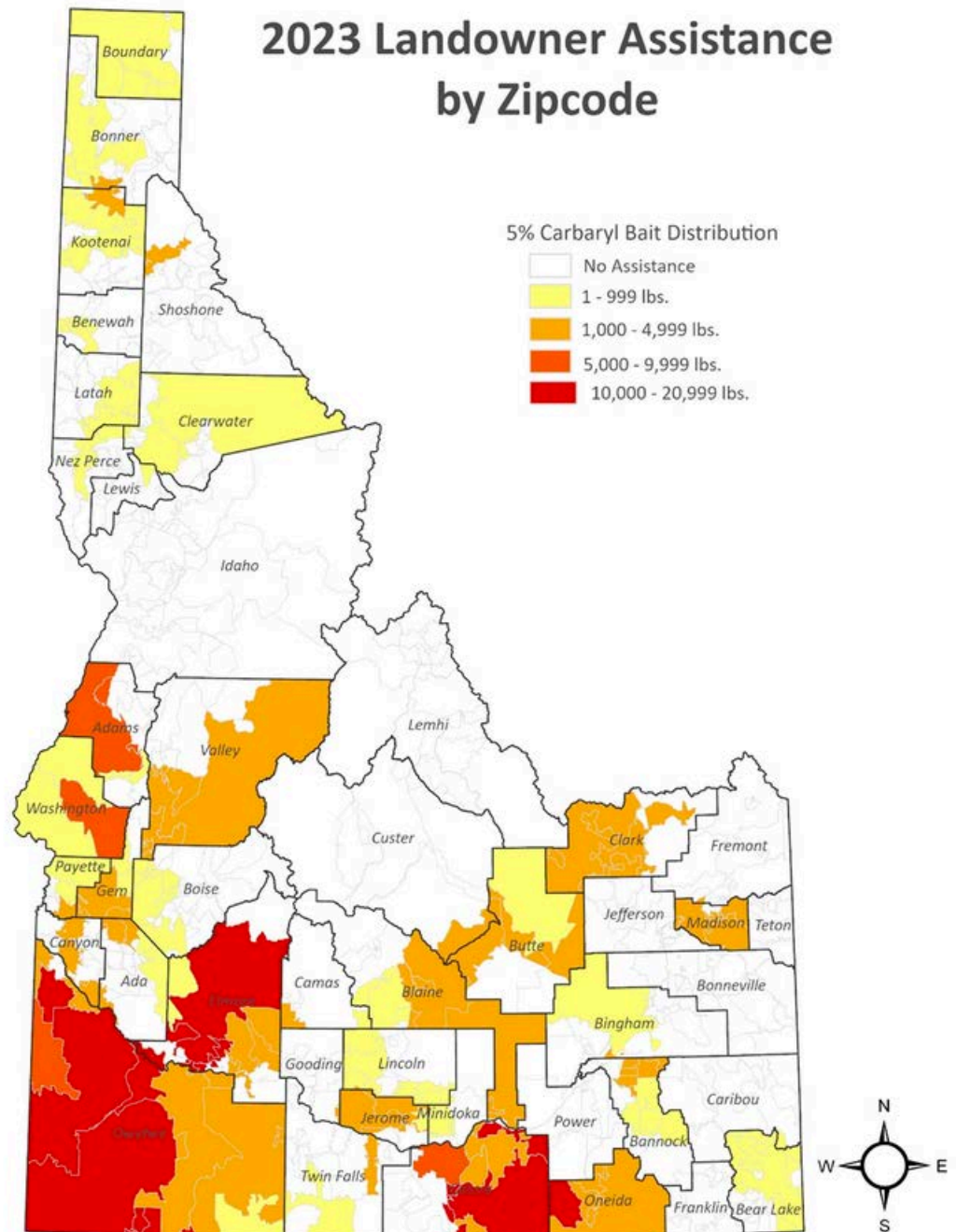






## Outbreak Areas

When severe grasshopper or Mormon cricket outbreaks occur, it is crucial to respond in a timely matter to prevent total loss of range and croplands. In these situations, the ISDA may declare specific geographic areas as outbreak areas, allowing for a swifter response. In 2022, ISDA did not declare any outbreak areas.





# Cull Onion Inspections and Actions

The deadline for disposal each year is March 15. Once the deadline was reached, visits were conducted and cull onion piles were then disposed of, resulting in compliance being reached.

In 2023, monitoring of cull onion sites began on March 15th in Ada, Canyon, Gem, Owyhee, Payette, and Washington counties. A total of 73 inspections were conducted between March and June, most for repeated monitoring, and no formal actions were required. Monitoring and inspection of these sites was conducted to identify and keep areas of high concern in compliance with IDAPA 02.06.05 Subchapter F - Disposal of Cull Onions and Potatoes.



## Export Certification for the 2023 Calendar Year

During 2023, the Division of Plant Industries issued 3632 Federal and 123 State Phytosanitary Certificates for 202 commodities to 83 countries.

The Division of Plant Industries certified over 287,393,392 pounds of seed, grain, hay, lumber, plants and other commodities for export. The ISDA operates this program under a memorandum of understanding with the USDA.

## Other Regulatory Inspections and Actions

ISDA, under the authority of Title 22, Chapters, 4, 5, 23 and 24 of the Idaho Code, and IDAPA defined pest quarantines, conducts inspections and consequently takes action against various pest threats and other violations.

In 2023, there were 2,560 licensed nurseries in the state; of those, 292 were inspected for compliance under statutes of the Idaho Nursery and Florists Law, and they were examined for the presence of plant pests as well as noxious weeds.



## Seed Lab Summary

In fiscal year 2023 the Idaho State Seed laboratory (ISSL) received 5,222 samples and completed 7,913 service tests. The most common crops submitted for service testing during this timeframe, in order of volume, beans, grains, natives/rangeland/revegetation species, vegetable/herbs/flower, peas, grasses, sagebrush, alfalfa, wheatgrass and onions.

In total, 53 regulatory enforcements were conducted for licensing and truth-in-labeling requirements and none of these checks resulted in inspector actions. A total of 783 seed dealer licenses were issued.

The ISSL maintained its national U.S.D.A. Accredited Seed Laboratory accreditation in 2023, making it one of a few state run laboratories in the country to hold this credential!





# Diseases and Pests Found During 2023 Field Inspections for Export Certification

In 2023, 77 seed companies submitted field inspection requests representing 49 crop types. The total acres submitted for inspection were 35,897 with 63,369 acres inspected due to multiple inspections required for some crop diseases. This represents 2 less firms than participated in 2022, with a 20.01% increase in submitted acreage from the 29,911 acres submitted in 2022.

Year	Number Participating Firms	Number 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
2015	62	36	28,678	64,077
2016	62	38	31,093	67,930
2017	60	34	32,485	68,040
2018	66	37	30,757	65,639
2019	68	35	33,233	68,950
2020	72	34	29,667	60,421
2021	82	49	33,237	69,383
2022	79	52	29,911	59,307
2023	77	49	35,897	63,369



**Alfalfa Seed:** A total of 825.25 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Alfalfa mosaic alfamovirus - AMV, Bacterial leaf spot (*Xanthomonas alfalfae*), Bacterial wilt of alfalfa (*Clavibacter michiganensis* subsp. *insidiosus*), Dodder (*Cuscuta* spp.), Leafy spurge (*Euphorbia esula*), Stem and bulb nematode (*Ditylenchus dipsaci*), Summer blackspot (*Cercospora medicaginis*), Verticillium wilt (*Verticillium alfalfae*), and Verticillium wilt of mint (*Verticillium dahliae*).

**Allium, Chives:** A total of 10.00 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Botrytis rot of onion (*Botrytis allii*), Botrytis stalk rot (*Botrytis aclada*), Downy mildew of onion (*Peronospora destructor*), Onion smudge (*Colletotrichum circinans*), Onion yellow dwarf potyvirus, Purple blotch (*Alternaria porri*), Sclerotinia rot (*Sclerotinia* spp.), Onion smut (*Urocystis* sp.), Stem and bulb nematode (*Ditylenchus dipsaci*), and White rot of onion (*Sclerotium cepivorum*).





Allium, Garlic: A total of 28.63 acres were submitted for inspection during the 2023 growing season. In total, there were 29.08 acres inspected due to multiple inspection requirements for certain diseases. All fields inspected were found apparently free from Botrytis rot of onion (*Botrytis allii*), Botrytis stalk rot (*Botrytis aclada*), Downy mildew of onion (*Peronospora destructor*), Onion smudge (*Colletotrichum circinans*), Purple blotch (*Alternaria porri*), Sclerotinia rot (*Sclerotinia* spp.), Onion smut (*Urocystis* sp.), Stem and bulb nematode (*Ditylenchus dipsaci*), and White rot of onion (*Sclerotium cepivorum*).

- Onion yellow dwarf potyvirus was confirmed in 0.35 acres; the remaining acres were found apparently free from Onion yellow dwarf potyvirus.

Allium, Onions: A total of 464.58 acres were submitted for inspection during the 2023 growing season. In total, there were 701.18 acres inspected due to multiple inspection requirements for certain diseases. All fields inspected were found apparently free from Downy mildew of onion (*Peronospora destructor*), Onion smudge (*Colletotrichum circinans*), Onion yellow dwarf potyvirus, Purple blotch (*Alternaria porri*), Sclerotinia rot (*Sclerotinia* spp.), Onion smut (*Urocystis* sp.), Stem and bulb nematode (*Ditylenchus dipsaci*), and White rot of onion (*Sclerotium cepivorum*).

- Neck rot (*Botrytis byssodea*) was confirmed in 34 acres.
- Botrytis rot of onion (*Botrytis allii*) was confirmed in 72 acres; the remaining acres inspected were found apparently free from Botrytis rot of onion.
- Botrytis stalk rot (*Botrytis aclada*) was confirmed in 72 acres; the remaining acres inspected were found apparently free from Botrytis stalk rot.

Allium, Ornamental: A total of 8.00 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Botrytis rot of onion (*Botrytis allii*), Botrytis stalk rot (*Botrytis aclada*), Downy mildew of onion (*Peronospora destructor*), Onion smudge (*Colletotrichum circinans*), Onion yellow dwarf potyvirus, Purple blotch (*Alternaria porri*), Sclerotinia rot (*Sclerotinia* spp.), Onion smut (*Urocystis* sp.), Stem and bulb nematode (*Ditylenchus dipsaci*), and White rot of onion (*Sclerotium cepivorum*).

Allium, Shallot: A total of 0.14 acres were submitted for inspection during the 2023 growing season. In total, there were 0.24 acres inspected due to multiple inspection requirements for certain diseases. All fields inspected were found apparently free from Botrytis rot of onion (*Botrytis allii*), Botrytis stalk rot (*Botrytis aclada*), Downy mildew of onion (*Peronospora destructor*), Onion smudge (*Colletotrichum circinans*), Onion yellow dwarf potyvirus, Purple blotch (*Alternaria porri*), Sclerotinia rot (*Sclerotinia* spp.), Onion smut (*Urocystis* sp.), Stem and bulb nematode (*Ditylenchus dipsaci*), and White rot of onion (*Sclerotium cepivorum*).

Allium, Welsh Onion: A total of 9.00 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Botrytis rot of onion (*Botrytis allii*), Botrytis stalk rot (*Botrytis aclada*), Downy mildew of onion (*Peronospora destructor*), Onion smudge (*Colletotrichum circinans*), Onion yellow dwarf potyvirus, Purple blotch (*Alternaria porri*), Sclerotinia rot (*Sclerotinia* spp.), Onion smut (*Urocystis* sp.), Stem and bulb nematode (*Ditylenchus dipsaci*), and White rot of onion (*Sclerotium cepivorum*).

Beans, Dry: A total of 811.09 acres were submitted for inspection during the 2023 growing season. In total, there were 1,737.28 acres inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Beans, all fields inspected were found apparently free from Anthracnose (*Colletotrichum lindemuthianum*), Bean bacterial wilt (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*), Brown spot (*Pseudomonas syringae* pv. *syringae*), Common blight (*Xanthomonas axonopodis* pv. *phaseoli*), Fuscus blight (*Xanthomonas fuscans* pv. *fuscans*), and Halo blight (*Pseudomonas savastanoi* pv. *phaseolicola*).





Beans, Garden: A total of 9,092.75 acres were submitted for inspection during the 2023 growing season. In total, there were 24,000.60 acres inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Beans, all fields inspected were found apparently free from Anthracnose (*Colletotrichum lindemuthianum*), Bean bacterial wilt (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*), Brown spot (*Pseudomonas syringae* pv. *syringae*), Common blight (*Xanthomonas axonopodis* pv. *phaseoli*), Fuscus blight (*Xanthomonas fuscans* pv. *fuscans*) and Halo blight (*Pseudomonas savastanoi* pv. *phaseolicola*).

Beans, Non-Phaseolus, (Faba/Fava): A total of 0.02 acres were submitted for inspection during the 2023 growing season. In total, there was 0.04 acre inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Beans, all fields inspected were found apparently free from Anthracnose (*Colletotrichum lindemuthianum*), Asian soybean rust (*Phakopsora pachyrhizi*), Bean bacterial wilt (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*), Brown spot (*Pseudomonas syringae* pv. *syringae*), Common blight (*Xanthomonas axonopodis* pv. *phaseoli*), Fuscus blight (*Xanthomonas fuscans* pv. *fuscans*), and Halo blight (*Pseudomonas savastanoi* pv. *phaseolicola*).

Beans, Trial Ground - Phaseolus sp.: A total of 286.41 acres were submitted for inspection during the 2023 growing season. In total, there were 1,430.80 acres inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Beans, all fields inspected were found apparently free from Anthracnose (*Colletotrichum lindemuthianum*), Bean bacterial wilt (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*), Brown spot (*Pseudomonas syringae* pv. *syringae*), Common blight (*Xanthomonas axonopodis* pv. *phaseoli*), Fuscus blight (*Xanthomonas fuscans* pv. *fuscans*), and Halo blight (*Pseudomonas savastanoi* pv. *phaseolicola*)

- Bean common mosaic potyvirus was confirmed in 1.93 acres.

Beans, Trial Ground - Non-Phaseolus sp. (Azuki): A total of 5.36 acres were submitted for inspection during the 2023 growing season. In total, there were 26.80 acres inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Beans, all fields inspected were found apparently free from Anthracnose (*Colletotrichum lindemuthianum*), Asian soybean rust (*Phakopsora pachyrhizi*), Bean bacterial wilt (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*), Brown spot (*Pseudomonas syringae* pv. *syringae*), Common blight (*Xanthomonas axonopodis* pv. *phaseoli*), Fuscus blight (*Xanthomonas fuscans* pv. *fuscans*), and Halo blight (*Pseudomonas savastanoi* pv. *phaseolicola*).

Beans, Trial Ground - Non-Phaseolus sp. (Cowpea): A total of 0.21 acres were submitted for inspection during the 2023 growing season. In total, there were 1.05 acres inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Beans, all fields inspected were found apparently free from Anthracnose (*Colletotrichum lindemuthianum*), Asian soybean rust (*Phakopsora pachyrhizi*), Bean bacterial wilt (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*), Brown spot (*Pseudomonas syringae* pv. *syringae*), Common blight (*Xanthomonas axonopodis* pv. *phaseoli*), Fuscus blight (*Xanthomonas fuscans* pv. *fuscans*), and Halo blight (*Pseudomonas savastanoi* pv. *phaseolicola*).

Beans, Trial Ground - Non-Phaseolus sp. (Faba/Fava): A total of 0.61 acres were submitted for inspection during the 2023 growing season. In total, there were 3.05 acres inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Beans, all fields inspected were found apparently free from Anthracnose (*Colletotrichum lindemuthianum*), Asian soybean rust (*Phakopsora pachyrhizi*), Bean bacterial wilt (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*), Brown spot (*Pseudomonas syringae* pv. *syringae*), Common blight (*Xanthomonas axonopodis* pv. *phaseoli*), Fuscus blight (*Xanthomonas fuscans* pv. *fuscans*), and Halo blight (*Pseudomonas savastanoi* pv. *phaseolicola*).





Beans, Trial Ground - Non-Phaseolus sp. (LabLab/Hyacinth): A total of 0.02 acres were submitted for inspection during the 2023 growing season. In total, there was 0.10 acre inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Beans, all fields inspected were found apparently free from Anthracnose (*Colletotrichum lindemuthianum*), Asian soybean rust (*Phakopsora pachyrhizi*), Bean bacterial wilt (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*), Brown spot (*Pseudomonas syringae* pv. *syringae*), Common blight (*Xanthomonas axonopodis* pv. *phaseoli*), Fuscus blight (*Xanthomonas fuscans* pv. *fuscans*), and Halo blight (*Pseudomonas savastanoi* pv. *phaseolicola*).

Beans, Trial Ground - Non-Phaseolus sp. (Soybeans): A total of 0.01 acres were submitted for inspection during the 2023 growing season. In total, there were 0.05 acres inspected due to multiple inspection requirements for certain diseases. To meet requirements of IDAPA 02.06.06, Rules Governing the Planting of Beans, all fields inspected were found apparently free from Anthracnose (*Colletotrichum lindemuthianum*), Asian soybean rust (*Phakopsora pachyrhizi*), Bean bacterial wilt (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*), Brown spot (*Pseudomonas syringae* pv. *syringae*), Common blight (*Xanthomonas axonopodis* pv. *phaseoli*), Fuscus blight (*Xanthomonas fuscans* pv. *fuscans*), and Halo blight (*Pseudomonas savastanoi* pv. *phaseolicola*).

Brassica, Arugula: A total of 0.63 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Bacterial blight of crucifers (*Pseudomonas cannabina* pv. *alisalensis*), Black leg (*Leptosphaeria maculans*), Black leg/Stem canker (*Leptosphaeria biglobosa*), and Black rot of crucifers (*Xanthomonas campestris* pv. *campestris*).

Brassica, Collards: A total of 31.00 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Blackleg (*Leptosphaeria maculans*), Black leg/Stem canker (*Leptosphaeria biglobosa*), Black rot of crucifers (*Xanthomonas campestris* pv. *campestris*), Club root (*Plasmodiophora brassicae*), and Crucifer bacterial leaf spot (*Pseudomonas syringae* pv. *maculicola*),

Brassica, Kale: A total of 68.00 acres were submitted for inspection during the 2023 growing season. In total there were 50.00 acres inspected. All fields inspected were found apparently free from Black leg (*Leptosphaeria maculans*), Black leg/Stem canker (*Leptosphaeria biglobosa*), Black rot of crucifers (*Xanthomonas campestris* pv. *campestris*), Club root (*Plasmodiophora brassicae*), and Crucifer bacterial leaf spot (*Pseudomonas syringae* pv. *maculicola*).

Brassica, Spinach: A total of 0.48 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Bacterial blight of crucifers (*Pseudomonas cannabina* pv. *alisalensis*), Black leg (*Leptosphaeria maculans*), Black leg/Stem canker (*Leptosphaeria biglobosa*), Black rot of crucifers (*Xanthomonas campestris* pv. *campestris*), and Downy Mildew (*Peronospora farinosa*).

Brassica, Turnip: A total of 20.07 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Black leg (*Leptosphaeria maculans*), Black leg/Stem canker (*Leptosphaeria biglobosa*), Black rot of crucifers (*Xanthomonas campestris* pv. *campestris*), Club root (*Plasmodiophora brassicae*), and Crucifer bacterial leaf spot (*Pseudomonas syringae* pv. *maculicola*).

Cantaloupe: A total of 0.29 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Angular leaf spot (*Pseudomonas amygdali* pv. *lachrymans*), Anthracnose (*Colletotrichum orbiculare*), Bacterial fruit blotch of watermelon (*Acidovorax citrulli*), Bacterial leaf spot of cucurbits (*Xanthomonas cucurbitae*), and Cucumber mosaic cucumovirus -CMV-.





Carrot: A total of 1,697.79 acres were submitted for inspection during the 2023 growing season. In total there were 1,672.79 acres inspected. All fields inspected were found apparently free from Alternaria leaf blight (*Alternaria dauci*), Bacterial blight of carrot (*Xanthomonas hortorum* pv. *carotae*), and Black rot of carrot (*Alternaria radicina*).

Corn: A total of 5,035.65 acres were submitted for inspection during the 2023 growing season. In total, there were 10,059.80 acres inspected due to multiple inspection requirements for certain diseases. All fields inspected were found apparently free from Brown spot (*Physoderma maydis*), Brown stripe downy mildew (*Sclerophthora rayssiae* var. *zeae*), Crazy top of corn (*Sclerophthora macrospora*), Eyespot (*Aureobasidium zeae*), Goss's bacterial wilt (*Clavibacter michiganensis* subsp. *nebraskensis*), Green ear downy mildew (*Sclerospora graminicola*), Head smut (*Sporisorium reilianum*), Java downy mildew (*Peronosclerospora maydis*), Late wilt (*Harpophora maydis*), Northern corn leaf spot (*Cochliobolus carbonum*), Philippine downy mildew (*Peronosclerospora philippinensis*), Sorghum downy mildew (*Peronosclerospora sorghi*), Southern corn leaf blight (*Cochliobolus heterostrophus*), Spontaneum downy mildew (*Peronosclerospora spontanea*), Stewart's wilt (*Pantoea stewartii*), Sugarcane downy mildew (*Peronosclerospora sacchari*), and Yellow leaf blight (*Mycosphaella zeae-maydis*).

- Bacterial soft spot (*Pantoea agglomerans*) was confirmed in 68.30 acres.
- Common smut (*Ustilago maydis*) was confirmed in 399.52 acres.
- High plains virus was confirmed in 65.21 acres.
- White spot of corn (*Pantoea ananatis*) was confirmed in 4.70 acres.

Corn, to Australia: A total of 151.92 acres were submitted for inspection during the 2023 growing season. In total, there were 256.24 acres inspected due to multiple inspection requirements for certain diseases. All fields inspected were found apparently free from Brown spot (*Physoderma maydis*), Brown stripe downy mildew (*Sclerophthora rayssiae* var. *zeae*), Crazy top of corn (*Sclerophthora macrospora*), Eyespot (*Aureobasidium zeae*), Goss's bacterial wilt (*Clavibacter michiganensis* subsp. *nebraskensis*), Green ear downy mildew (*Sclerospora graminicola*), Head smut (*Sporisorium reilianum*), Java downy mildew (*Peronosclerospora maydis*), Late wilt (*Harpophora maydis*), Maize dwarf mosaic potyvirus, Northern corn leaf spot (*Cochliobolus carbonum*), Philippine downy mildew (*Peronosclerospora philippinensis*), Sorghum downy mildew (*Peronosclerospora sorghi*), Southern corn leaf blight (*Cochliobolus heterostrophus*), Spontaneum downy mildew (*Peronosclerospora spontanea*), Stewart's wilt (*Pantoea stewartii*), Sugarcane downy mildew (*Peronosclerospora sacchari*), and Yellow leaf blight (*Mycosphaella zeae-maydis*).

- High plains virus was confirmed in 2.96 acres.

Corn, to Japan: A total of 397.30 acres were submitted for inspection during the 2023 growing season. In total, there were 794.60 acres inspected due to multiple inspection requirements for certain diseases. All fields inspected were found apparently free from Brown spot (*Physoderma maydis*), Brown stripe downy mildew (*Sclerophthora rayssiae* var. *zeae*), Crazy top of corn (*Sclerophthora macrospora*), Eyespot (*Aureobasidium zeae*), Goss's bacterial wilt (*Clavibacter michiganensis* subsp. *nebraskensis*), Green ear downy mildew (*Sclerospora graminicola*), Head smut (*Sporisorium reilianum*), Japan maize chlorotic mottle, Java downy mildew (*Peronosclerospora maydis*), Late wilt (*Harpophora maydis*), Northern corn leaf spot (*Cochliobolus carbonum*), Philippine downy mildew (*Peronosclerospora philippinensis*), Sorghum downy mildew (*Peronosclerospora sorghi*), Southern corn leaf blight (*Cochliobolus heterostrophus*), Spontaneum downy mildew (*Peronosclerospora spontanea*), Stewart's wilt (*Pantoea stewartii*), Sugarcane downy mildew (*Peronosclerospora sacchari*), and Yellow leaf blight (*Mycosphaella zeae-maydis*).

- Common smut (*Ustilago maydis*) was confirmed in 129.85 acres
- Bacterial soft spot (*Pantoea agglomerans*) was confirmed in 25.75 acres.





Garbanzo Beans/Chickpeas Trial Ground: A total of 3.20 acres were submitted for inspection during the 2023 growing season. In total, there were 4.09 acres inspected due to multiple inspection requirements for certain diseases. All fields inspected were found apparently free from Anthracnose (*Colletotrichum* spp.) and Ascochyta blight of Chickpeas (*Ascochyta rabiei*).

Garden Oranche: A total of 0.10 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Black leg (*Leptosphaeria maculans*) and Bacterial blight (*Pseudomonas syringae*).

Grain, Barley: A total of 6.41 acres of barley were submitted for inspection during the 2023 growing season. In total, there were 12.82 acres inspected due to multiple inspection requirements for certain diseases. All fields inspected were found apparently free from Bacterial leaf streak (*Xanthomonas translucens*) and Smut (*Urocystis* sp.).

Grain, Amaranth: A total of 0.49 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Bitter rot/Anthracnose (*Glomerella cingulata*) and Downy mildew of spinach (*Peronospora farinosa*).

Grain, Buckwheat: A total of 5.65 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Aster yellows (*Phytoplasma asteris*; Aster yellow phytoplasma group) and Sugarbeet downy mildew (*Erysiphe polygoni*).

Grain, False Flax: A total of 3.08 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Club root (*Plasmodiophora brassicae*).

Grain, Flax: A total of 0.46 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Flax rust (*Melampsora lini*).

Grain, Oat: A total of 4.73 acres were submitted for inspection during the 2023 growing season. In total there were 9.46 acres inspected due to multiple inspections. All fields inspected were found apparently free from Bacterial leaf streak (*Xanthomonas translucens*) and Smut (*Urocystis* sp.).

Grain, Wheat: A total of 15.00 acres were submitted for inspection during the 2023 growing season. In total there were 30.00 acres inspected due to multiple inspections requirements for certain diseases. All fields inspected were found apparently free from Bacterial leaf streak (*Xanthomonas translucens*) and Smut (*Urocystis* sp.).

Herb, Coriander: A total of 10.67 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Bacterial blight (*Pseudomonas syringae*), Bacterial blight of carrot (*Xanthomonas hortorum* pv. *carotae*), and Stem gall of Coriander (*Protomyces macrosporus*).

Herb, Dill: A total of 8.00 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Alternaria leaf blight (*Alternaria dauci*).

Lentil: A total of 0.49 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Anthracnose (*Colletotrichum lindemuthianum*) and Anthracnose of lentil (*Colletotrichum truncatum*).

Lettuce: A total of 183.74 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Lettuce Mosaic Potyvirus -LMV-.





Mint, Peppermint: A total of 101.00 acres were submitted for inspection during the 2023 growing season. In total, there were 202.00 acres inspected due to multiple inspection requirements for certain diseases and pests. All fields inspected were found apparently free from Mint root borer (*Fumibotys fumalis*), Mint stem borer (*Pseudobaris nigrina*), Verticillium wilt (*Verticillium non-alfalfae*), and Verticillium wilt of mint (*Verticillium dahliae*).

Peas: A total of 5,117.79 acres were submitted for inspection during the 2023 growing season. In total, there were 9,863.66 acres inspected due to multiple inspection requirements for certain diseases. All fields inspected were found apparently free from Anthracnose of lentil (*Colletotrichum truncatum*) and Bacterial blight of peas (*Pseudomonas syringae* pv. *psii*).

- Root and stem wilt / Root and stem rot (*Fusarium* spp.) was confirmed in 35.00 acres.
- Alfalfa mosaic alfamovirus - AMV was confirmed in 20.00 acres.

Pepper, Bell: A total of 0.22 acres were submitted for inspection during the 2023 growing season. In total, there were 0.44 acres inspected due to multiple inspection requirements for certain diseases. All fields inspected were found apparently free from Angular leaf spot (*Pseudomonas amygdali* pv. *lachrymans*), Anthracnose (*Colletotrichum* spp.), Bacterial canker (*Clavibacter michiganensis* pv. *michiganensis*), Bacterial spot (*Xanthomonas vesicatoria*), Cucumber mosaic cucumovirus -CMV-, and Phytophthora blight (*Phytophthora capsici*).

Potato: A total of 7,492.00 acres were submitted for inspection during the 2023 growing season. In total there were 7,362.00 acres inspected. All fields inspected were found apparently free from Late blight (*Phytophthora infestans*).

Radish: A total of 263.00 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Bacterial blight of radish (*Xanthomonas campestris* pv. *raphani*), Black leg (*Leptosphaeria maculans*), Black leg/Stem Canker (*Leptosphaeria biglobosa*). Black rot of crucifers (*Xanthomonas campestris* pv. *campestris*), and Turnip/radish anthracnose (*Colletotrichum higginsianum*).

Vine, Cucumber: A total of 0.50 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Angular leaf spot (*Pseudomonas amygdali* pv. *lachrymans*), Anthracnose (*Colletotrichum orbiculare*), Bacterial fruit blotch of Watermelon (*Acidovorax citrulli*), Bacterial leaf spot of cucurbits (*Xanthomonas cucurbitae*), and Cucumber mosaic cucumovirus - CMV-.

Vine, Summer Squash: A total of 0.59 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Angular leaf spot (*Pseudomonas amygdali* pv. *lachrymans*), Anthracnose (*Colletotrichum orbiculare*), Bacterial fruit blotch of Watermelon (*Acidovorax citrulli*), Bacterial leaf spot of cucurbits (*Xanthomonas cucurbitae*), and Cucumber mosaic cucumovirus - CMV-.

Safflower: A total of 85.00 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Alternaria blight (*Alternaria carthami*), Safflower rust (*Puccinia calcitrapae* var. *centaureae*), and Sclerotinia rot (*Sclerotinia* spp.).

Sunflowers: A total of 3,649.27 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free from Downy mildew of Asteraceae (*Plasmopara halstedii*).

Tomato: A total of 0.17 acres were submitted for inspection during the 2023 growing season. All fields inspected were found apparently free Bacterial speck (*Pseudomonas syringae* pv. *tomato*).



# 2023 Phytosanity Field Inspection Acreage

2023 Inspection Acres Report (compiled 02/14/2024)

Crop	Number of Applications	Acres Submitted for Inspection	Number of Inspections Based on Diseases Requested	Actual Acres Inspected
Alfalfa Total	21	825.25	1	825.25
Amaranth Total	1	0.49	1	0.49
Arugula Total	1	0.63	1	0.63
Barley Total	36	6.41	2	12.82
Beans, Dry	62	693.29	2	1,386.58
Phaseolus	11	117.80	3	350.70
Beans, Dry Phaseolus	73	811.09		1,737.28
Total	300	3,277.65	2	6,555.30
Beans, Garden Phaseolus	126	5,815.10	3	17,445.30
Beans, Garden	426	9,092.75		24,000.60
Phaseolus Total				
Beans, Trail Ground Faba/ Fava Non Phaseolus Total	1	0.02	2	0.04
Beans, Trail Ground Azuki Non-Phaseolus Total	3	5.36	5	26.80
Beans, Trial Ground Cowpea Non Phaselus Total	1	0.21	5	1.05
Beans Trial Grounds Faba/Fava Non Phaseolus Total	4	0.61	5	3.05
Beans Trial Ground LabLab/Hyacinth Total	1	0.02	5	0.10
Beans Trial Ground -Phaseolus	2	0.03	0	0.00
	2	0.20	1	0.20
	1	0.30	4	1.20
	92	285.88		1,429.40
Beans Trial Ground - Phaseolus Total	97	286.41	5	1,430.80
Beans Trial Ground Soybeans Non-Phaseolus Total	1	0.01	5	0.05
Buckwheat Total	2	5.65	1	5.65
Cantaloupe	1	0.29	1	0.29
Carrot Total	391	1,697.79	1	1,672.79
Chives Total	1	10.00	1	10.00
Collards Total	2	31.00	1	31.00
Coriander	3	10.67	1	10.67
Corn	1	11.50	1	11.50
	539	5,024.15	2	10,048.30
Corn Total	540	5,030.65		10,059.80





Crop	Number of Applications	Acres Submitted for Inspection	Number of Inspections Based on Diseases Requested	Actual Acres Inspected
Corn To Australia, Total	17	151.92	2	256.24
Corn To Japan, Total	29	397.30	2	794.60
Cucumber, Total	1	0.50	1	0.50
Dill, Total	1	8.00	1	8.00
False Flax, Total	4	3.08	1	3.08
Flax, Total	1	0.46	1	0.46
Garbanzo Bean/ Chickpea Trial Ground	3	2.31	1	2.31
	1	0.89	2	1.78
Garbanzo Bean/ Chickpea Trial Ground, Total	4	3.20		4.09
Garden Orache, Total, Garlic	1	0.10	1	0.10
	13	28.18	1	28.18
	1	0.45	2	.90
Garlic, Total	15	28.63		29.08
Kale, Total	4	68.00	1	50.00
Lentil, Total	1	0.49	1	0.49
Lettuce, Total	28	183.74	1	183.74
Oats, Total	8	4.73	2	9.46
Onion	107	187.58	1	187.18
	12	277.00	2	514.00
Onion, Total	119	464.58		701.18
Ornamental Allium, Total	2	8.00	1	8.00
Peas	1	47	1	0.00
	345	5,070.79	2	9,863.66
Peas, Total	346	5,117.79		9,863.66
Pepper Bell, Total	1	0.22	2	0.44
Peppermint, Total	10	101.00	2	202.00
Potato, Total	54	7,492.00	1	7,362.00
Radish, Total	14	263.00	1	263.00
Safflower, Total	1	85.00	1	85.00
Shallot	1	0.04	1	0.04
	4	0.10	2	0.20
Shallot, Total	2	0.14		0.24
Spinach, Total	1	0.48	1	0.48
Squash Summer, Total	1	0.59	1	0.59
Sunflower, Total	56	3,649.27	1	3,649.27
Tomato, Total	1	0.17	1	0.17
Turnip, Total	2	20.07	1	20.07
Welsh Onion, Total	1	9.00	1	9.00
Wheat, Total	2	15.00	2.0	30.00
TOTALS	2,333	35,896.77		68,369.02



# Plant Pathology Summary Report

The Idaho State Department of Agriculture Plant Pathology Lab (ISDA-PPL) received 6032 samples (field, seed, regulatory and nursery). From these samples, we ran a total of 3610 tests.

Included in the totals above, ISDA-PPL examined 141 lots of beans or non-Phaseolus bean seeds for planting in Idaho and / or export. From these lots, we ran 846 different tests. We found 4 lots positive for regulated bacteria. These were as follows: 2 lots were contaminated with *Curtobacterium flaccumfaciens* pv. *flaccumfaciens*, 1 lot with *Pseudomonas savastanoi* pv. *phaseoli* and 1 lot with *Pseudomonas syringae* pv. *syringae*.

ISDA-PPL received 47 seed samples and ran 56 different tests on these samples. We tested 10 different species for 20 different diseases.

We also tested 1 potato "year-out" sample and 1 potato sample for viral pathogens. We tested 21 nursery samples and found no pathogens of regulatory concern.

5,821 samples from the field inspection program were tested in the ISDA-PPL lab. We ran approximately 2,685 tests on these samples. Many of these tests were visual assessments performed by the pathologist and samples did not show signs of default and / or requested diseases, so no further testing was necessary. Samples came from 16 different crop species.

The table below shows the number of fields that were positive for organisms of concern during the 2023 field season.



## Positive Field Sample Results

Crop	Number of Positive Fields	Disease
Beans	1	Bean common mosaic virus
Corn	11	High plains virus
	7	<i>Pantoea agglomerans</i>
	1	<i>Pantoea ananatis</i>
	36	<i>Ustilago maydis</i>
Garlic	2	Onion yellow dwarf virus
Onion	2	<i>Botrytis allii/aclada</i>
Pea	1	Alfalfa mosaic virus
	2	<i>Fusarium</i> spp.







# COMMERICAL FEED, FERTILIZER AND AMENMENT PROGRAM

The Commercial Feed, Fertilizer, & Amendment Program ensures a level playing field for industry through registration and label review and ensures Idaho consumers are protected in the marketplace through sampling and regulation enforcement.

	Feed	Fertilizer	Soil & Plant Amendments
Number of Labels Submitted for Registration Year	20,907	7,337	2,007
Number of Labels Reviewed	4,684 (22%)	1,048 (14%)	408 (20%)
Number of Enforcement Samples Submitted	935	741	0
Number of Enforcement Actions	85	63	0





# Noxious Weed Free Forage & Straw Certification Program

## Background

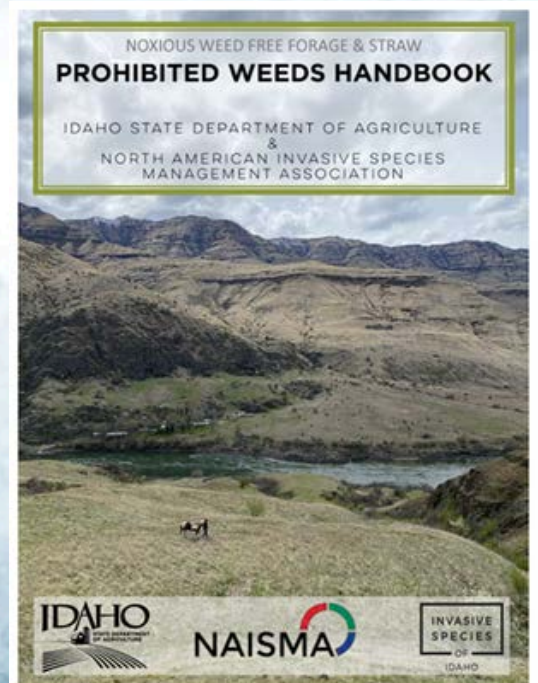
In an effort to limit the introduction and spread of noxious weeds through forage and straw onto Idaho United States Forest Service (USFS) and Bureau of Land Management (BLM) lands, the Idaho State Department of Agriculture's (ISDA) Noxious Weed Free Forage and Straw (NWFF&S) Certification Program was implemented in 1995. ISDA is a member of a voluntary national organization called the North American Invasive Species Management Association (NAISMA) and has incorporated its forage and straw inspection procedures, called the NAISMA Weed Free Forage Program, into the NWFF&S Rules. The purpose of this organization is to set minimum requirements for uniform participation of the various states in the program. The NWFF&S Certification Program allows for the transportation and sale of certified Idaho forage and straw products into and through states and other boundaries where restrictions are placed on such commodities.

## Program Updates

2023 Inspector trainings began in March and were held in Boise, Post Falls, Lapwai, Idaho Falls, Twin Falls and Challis. Any inspector who was not available for an in-person training attended a virtual presentation that was recorded and made available for any additional inspectors who wished to be certified later into the season. Training resources were added to the Invasive Species of Idaho website at <https://invasivespecies.idaho.gov/inspectors>. Several office support staff who did not seek certification also attended these trainings with the desire to have a better understanding of the program and its requirements.

A new NWFFS Prohibited Weeds Handbook was compiled and distributed to county noxious weed offices for use by inspectors as a plant identification guide. A PDF copy was made available and housed within the program's website (link above). This handbook omits information on Idaho listed aquatic noxious weeds but does include all Idaho listed terrestrial noxious weeds, along with plants identified in NAISMA's prohibited list. It was designed to be a one-stop resource for inspectors when looking for information on plant species of concern in the program. NWFF&S brochures and flyers were also updated, printed, and distributed to counties.

New vinyl bale tags were commissioned to replace the old tags, which were reportedly "tearing apart" when applied to bales. Twine size availability also changed in 2023. The manufacturer of NAISMA's custom twine is now only producing rolls in 9600/170, 6500/240, and 4000/400 strength. Growers have been notified of this change and have adjusted accordingly.



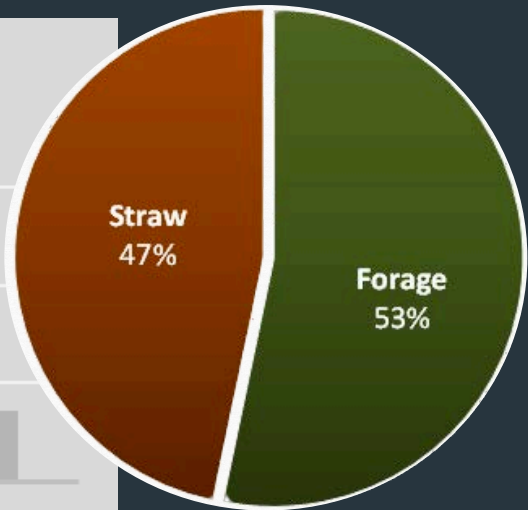
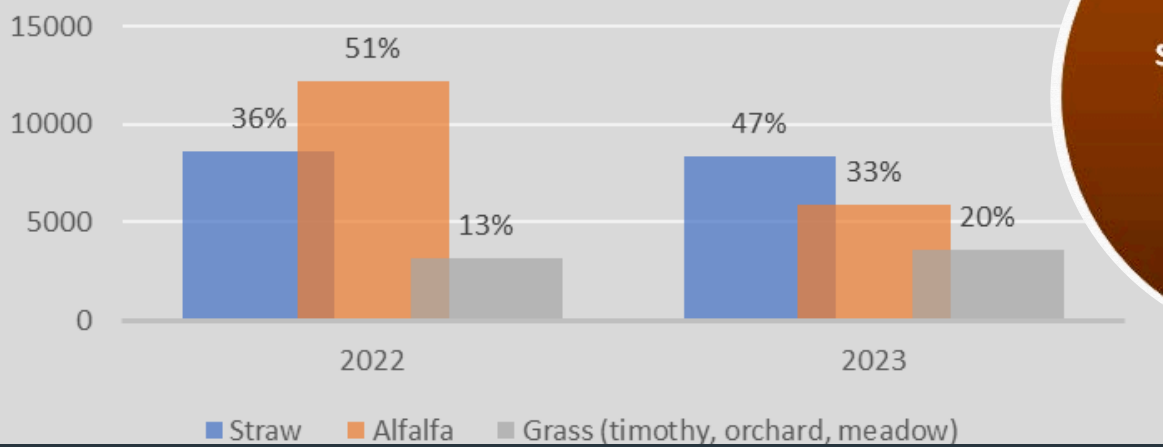


# Program Accomplishments

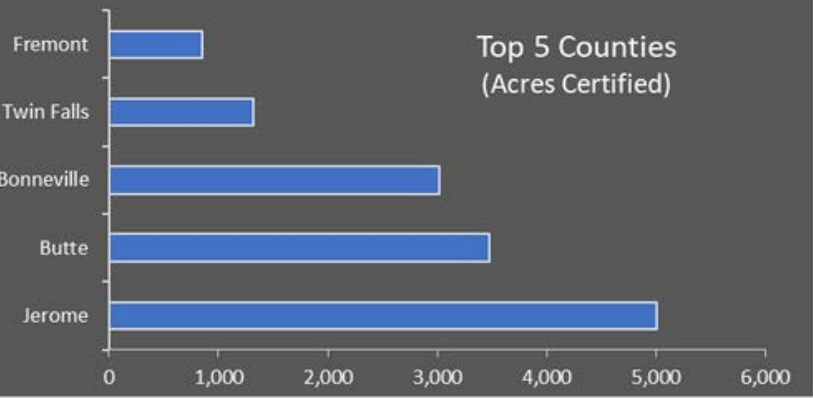
In 2023, the NWFFS Program trained 60 inspectors across the state to certify fields as noxious weed free within their respective jurisdictions. Across all 29 participating counties, 18,098 acres of forage and straw were inspected. Of the fields inspected, 17,856 acres were certified as noxious weed free with 99% of those acres certified to the NAISMA Standard.

There were 6,083 fewer acres certified in 2023 than 2022, following a trend over the last three seasons. Decreases in inspections may be correlated to drought conditions in 2021, followed by the uncharacteristic cool and wet conditions experienced in June of 2022 which caused a slow start for that season. Hay prices have also been reported as high in 2022 and leading into 2023. This may have contributed to a decreased desire/need for growers to certify products as weed free in an attempt to capture that premium.

Certified Forage Type  
2022 vs. 2023



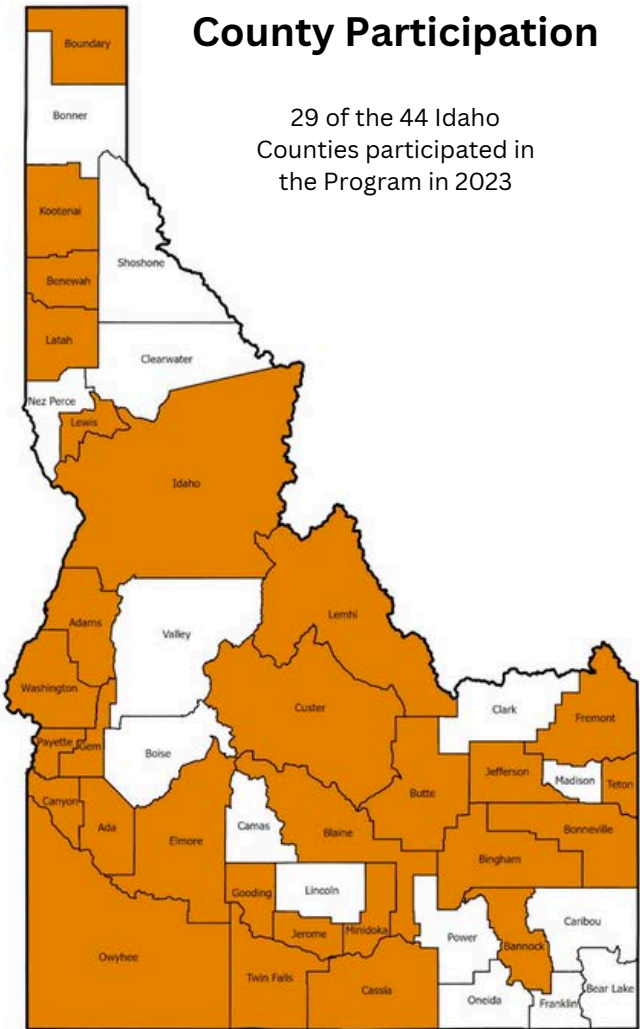
% Certified Straw vs. Forage



71.6% of all forage & straw certified was remanufactured into products such as pellets, cubes, bagged straw, & compressed forage bales.

## County Participation

29 of the 44 Idaho Counties participated in the Program in 2023







## Program Highlights

Invasive species present a significant threat to the economy and environment of Idaho. The Idaho State Department of Agriculture (ISDA) administers the Invasive Species Program for the state, managing program activities that include watercraft inspection, invasive species surveys, invasive species education, and management of the state's Noxious Weed program.

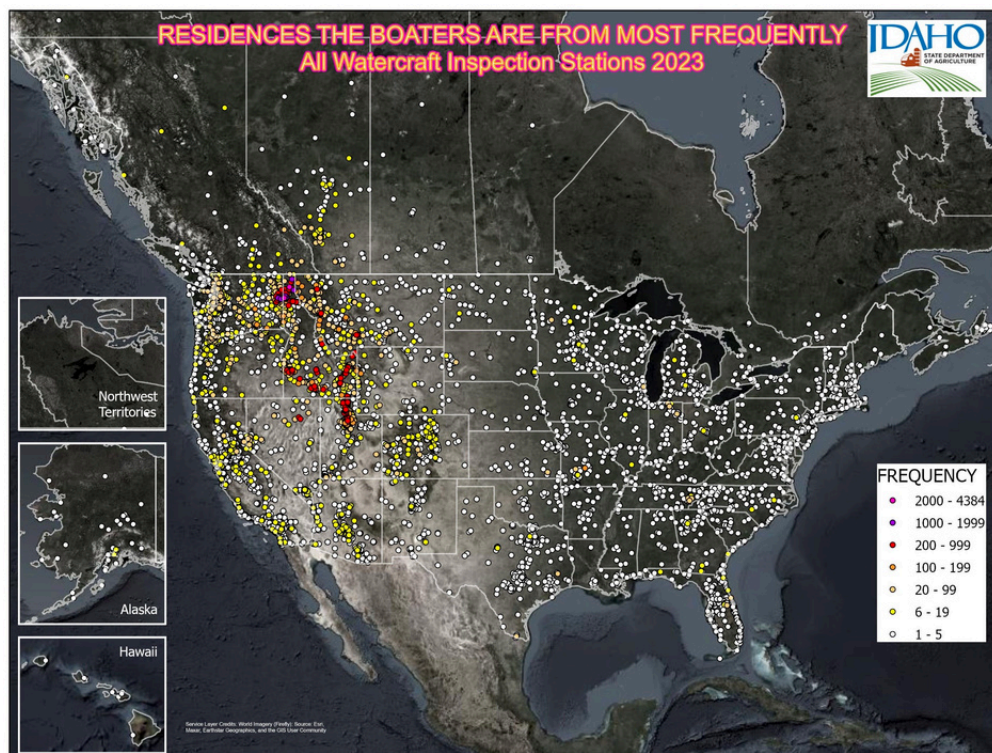
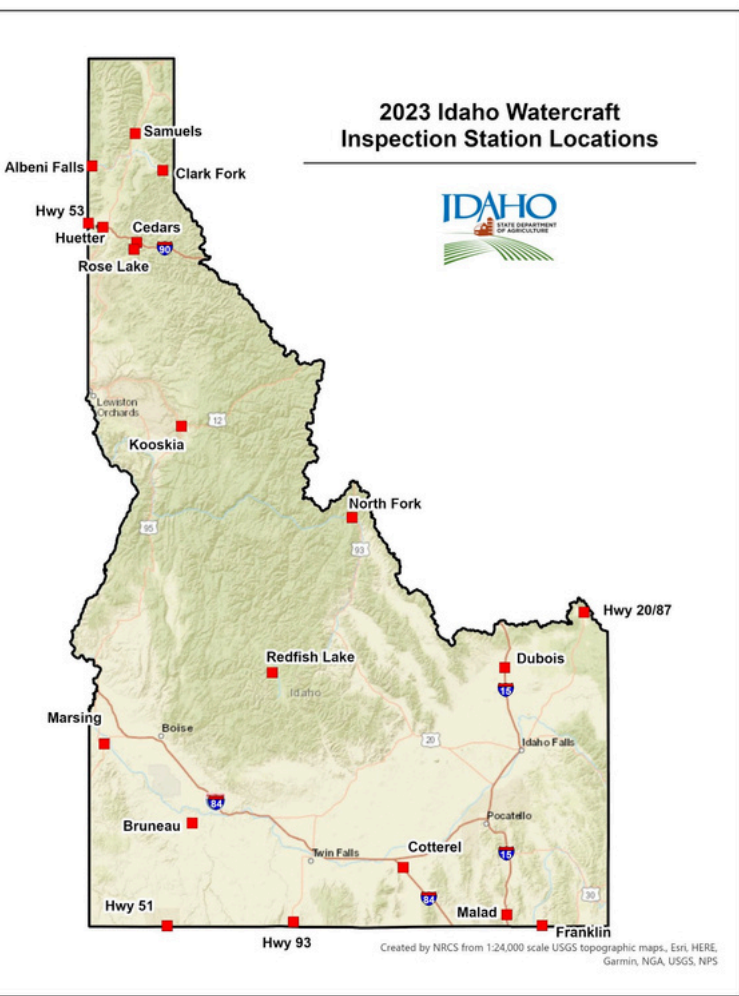
- 104,169 watercraft inspections were conducted in 2023.
- 1,172,781 watercraft inspections have been conducted in Idaho since the program began in 2009.
- 33 zebra/quagga mussel fouled vessels were intercepted in 2023 with 15 of them destined to Idaho.
- 446 zebra/quagga mussel fouled vessels have been intercepted in Idaho since the program began in 2009.
- Increased level of watercraft inspection station operations on numerous levels including:
  - 24-hour operation at the I-84 West Cotterell Watercraft Inspection Station.
  - 18-hour operations at the Cedars I-90 West, Malad I-15 North, and Jackpot Hwy 93 North Watercraft Inspection Stations.
  - Cooperative agreement with the Bear Lake Regional Commission to support two Utah Watercraft Inspection Stations.
  - Law enforcement support at every Idaho inspection station.
- 1,834 veliger samples for zebra/quagga mussel early detection monitoring were collected from over 80 waterbodies throughout the state in 2023.
- 312.82 acres of Aquatic Noxious Weeds were chemically treated in 2023.
- The hydrilla eradication project has continued to see a reduction in plants across all 3 active infestation areas.
- The Noxious Weeds Cost Share Program awarded \$782K State Fund dollars & \$91K Federal Fund dollars to CWMA programs statewide.
- ISDA's Noxious Weeds Cost Share Program had participation from 15 CWMAs.
- Rulemaking to add Cogon Grass (*Imperata cylindrica*) to EDRR List and to remove Buffalo burr from the Containment list as it is a native to North America species.
- 5th year of the annual Distribution Noxious Weed Distribution project, showing the active location of all of Idaho's Noxious Weed infestations. These can be viewed at <https://invasivespecies.idaho.gov/plants>.



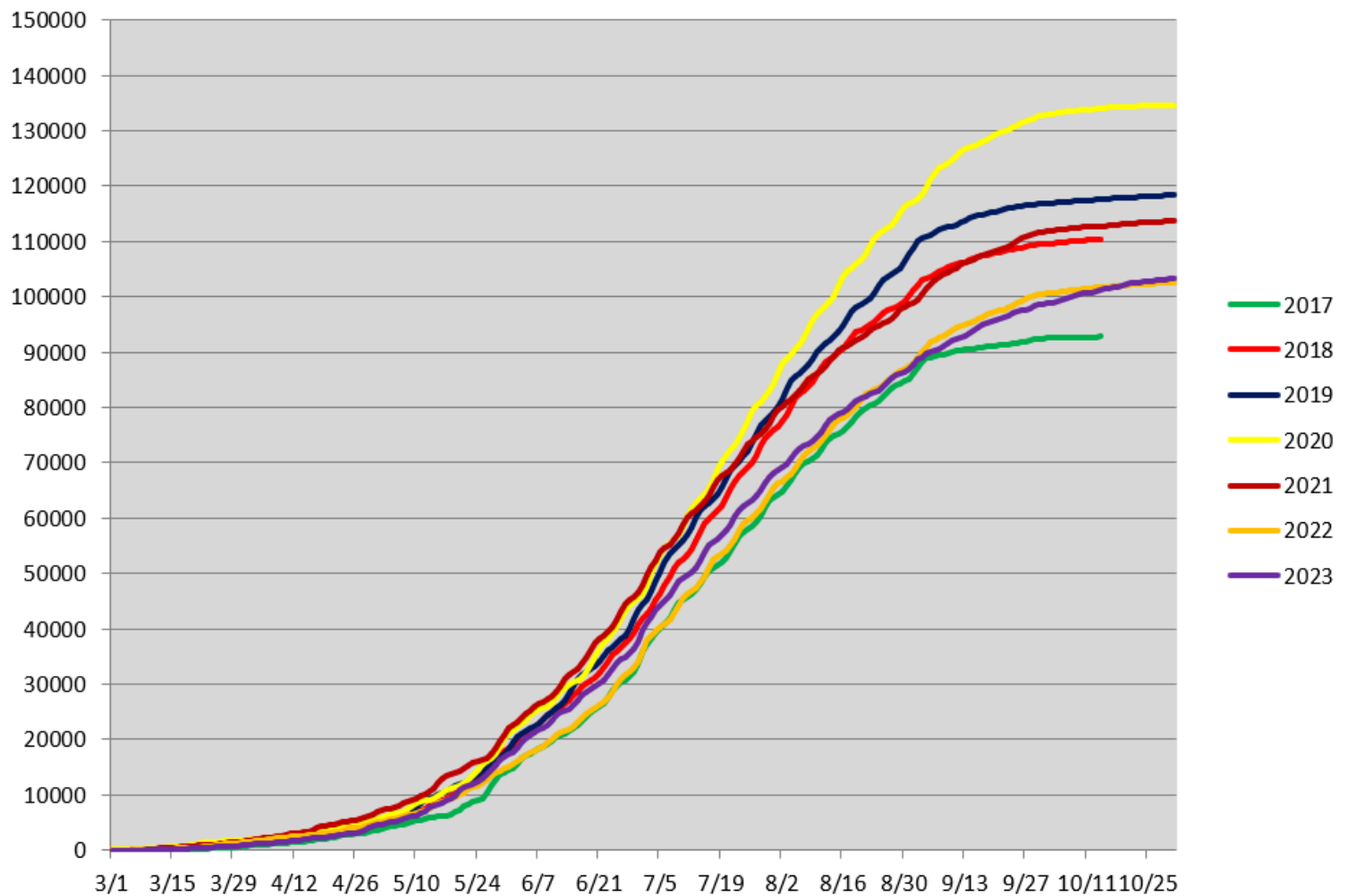


# Watercraft Inspection

Prevention of aquatic invasive species (AIS) is a significant component of the Invasive Species program. The 2023 season was the 15th year of the watercraft inspection program, with 19 inspection stations operating statewide. In 2023, stations inspected 104,169 watercraft. The continued high level of watercraft inspections was due, in part, to several factors including extending station operation to cover daylight hours, 24-hour operation at I-84 West Cotterell, 18-hour operations at the Cedars I-90 West, Malad I-15 North, and Jackpot Hwy 93 North Watercraft Inspection Stations, lighted message boards, increased signage, operating additional inspection stations and contracting with law enforcement to assist with station compliance.

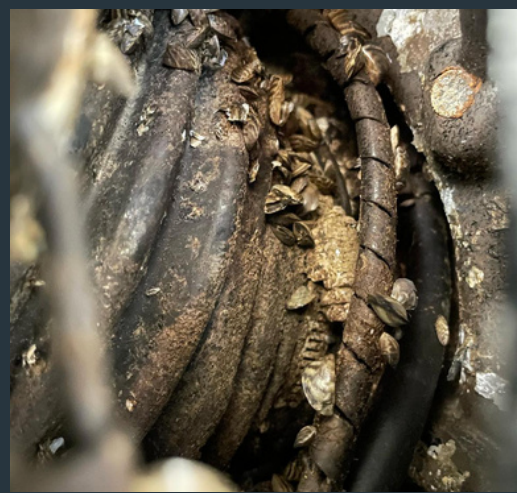






**High Risk Inspections:** 2,539 watercraft visited high-risk water bodies with known zebra/quagga mussel infestations within the previous 30 days. Watercraft traveling from these areas represent the highest risk for transporting live zebra/quagga mussels into the state. Watercraft inspections at mussel-impacted waters are the most efficient and effective way to prevent the introduction of mussels into Idaho. Vessels that were found to have recently been in mussel-impacted waters received a thorough high-risk inspection and hot wash to ensure that they were free of AIS. Following inspection, over half of these boats traveled to destinations in Idaho, with the remainder destined to locations throughout the western region. Watercraft inspection information is available online at: <http://invasivespecies.idaho.gov/watercraft-inspection-stations>

**Mussel-Fouled Watercraft:** 33 watercraft were intercepted transporting zebra or quagga mussels in 2023. These vessels originated from mussel-impacted waters in the Southwest, as well as from the Mid-West and over to the Great Lakes region. Seventeen of these vessels were destined for Idaho, with the others heading to waters in the neighboring states. Vessels that were destined for Idaho were thoroughly decontaminated by ISDA staff and remained out of the water for a minimum of 30 days. A total of 446 mussel-fouled vessels have been intercepted in Idaho since the program began in 2009. Additional watercraft inspection data from the 2023 season is displayed on the ISDA Invasive Species Program website at: <http://invasivespecies.idaho.gov/watercraftinspection-stations/>.



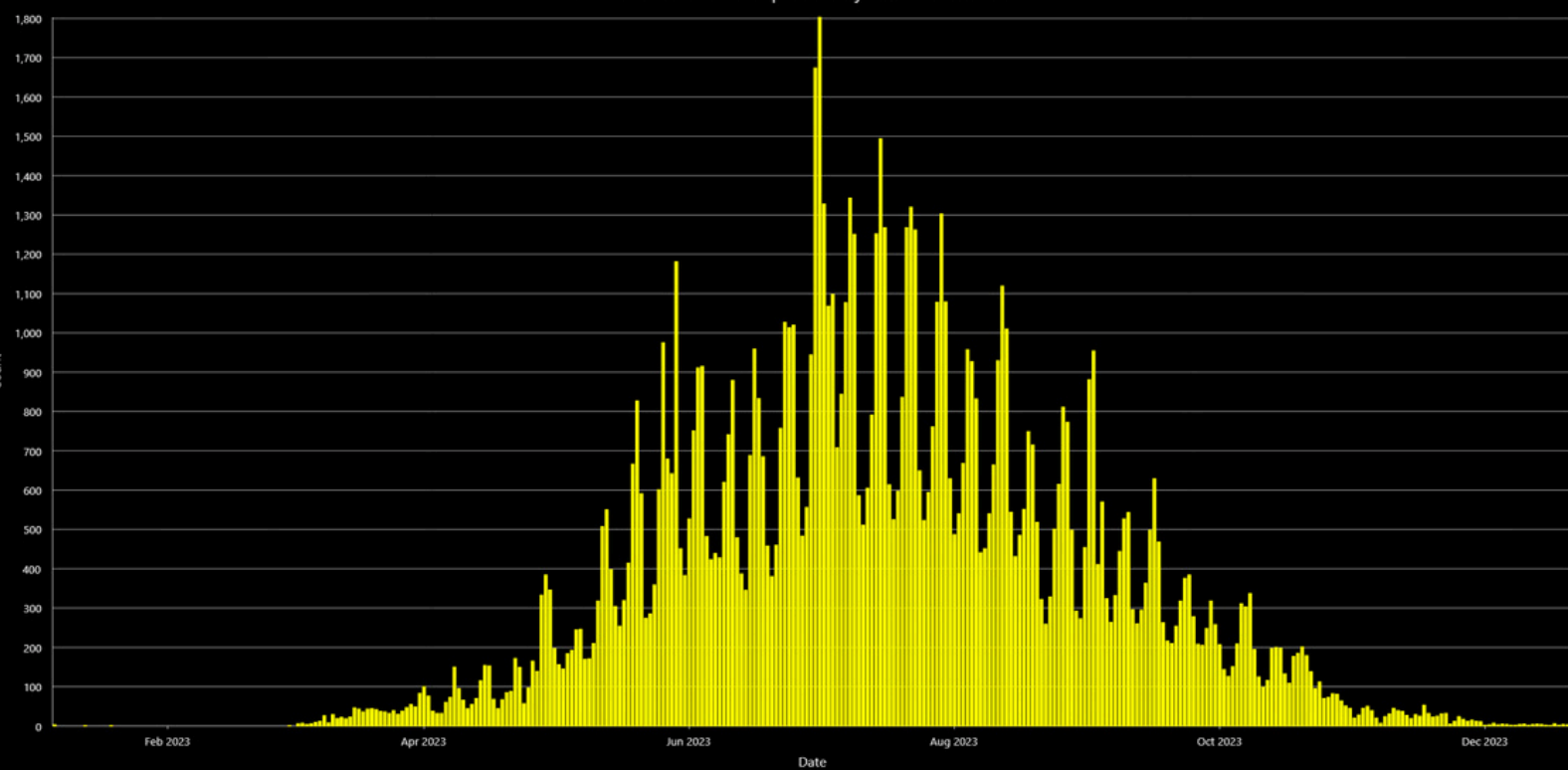


# Idaho Watercraft Inspection Numbers by Station in 2023

Inspection Station	Inspections	Hotwash	Fouled	Weeds
Albeni Falls	9,156	8	0	8
Bruneau	4,151	28	0	14
Cedars	12,862	138	13	206
Centennial Park	43	40	0	6
Clark Fork	6,942	2	0	5
Cotterel	5,503	215	2	8
Dubios	1,666	1	1	5
Franklin	6,033	53	0	7
Huetter	13,809	15	0	63
Hwy 20/87	5,986	7	1	7
Hwy 53	869	3	0	1
Hwy 51	6,073	1	0	58
Hwy 93	2,115	115	3	11
ISDA Staff	10	6	2	0
Kooskia	1,241	2	0	3
Malad	8,604	340	11	32
Marsing	2,936	13	0	9
North Fork	3,751	3	0	6
Other	5	1	0	0
Pocatello Roving Crew	578	2	0	0
Post Falls Roving Crew	281	0	0	1
Redfish Lake	1,644	1	0	1
Rose Lake	3,913	1	0	114
Samuels	5,678	6	0	7
Sandpoint Roving Crew	50	0	0	0
Twin Falls County West	84	70	0	13
Twin Falls Visitor Center	186	158	0	9
Total	104,169	1,229	33	594

## CLEAN & DRAIN & DRY

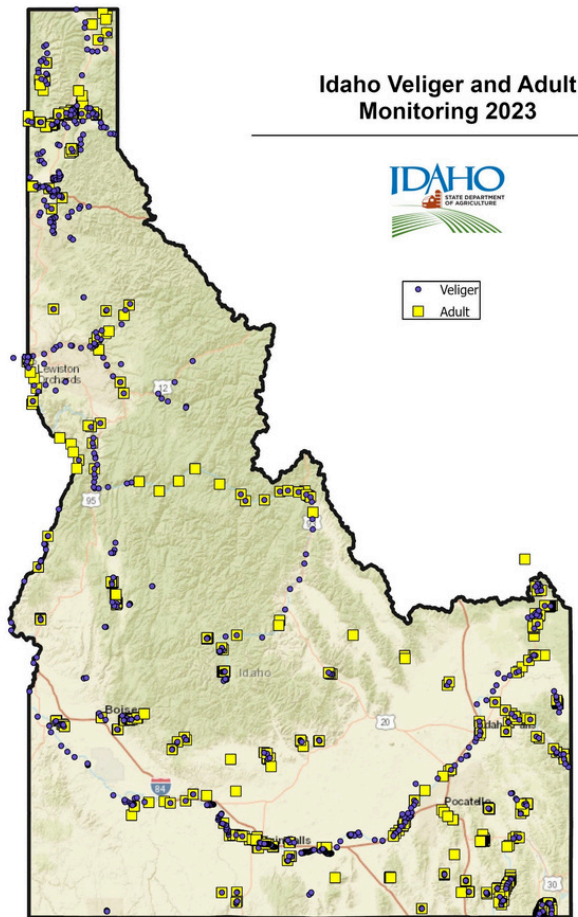
Number of Watercraft Inspections by date - All Stations



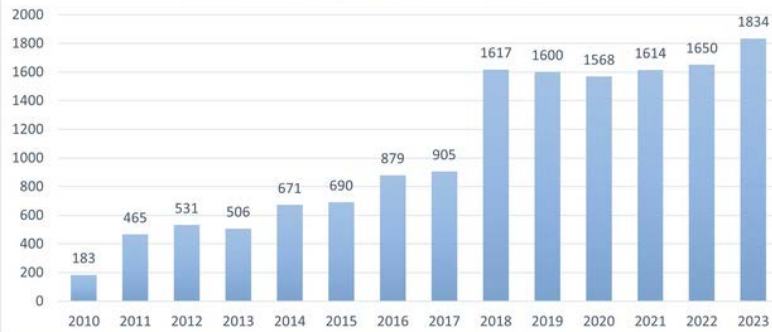


# Invasive Species Early Detection Monitoring

In September 2023, ISDA detected Quagga mussels in the Mid-Snake River near Centennial Park. This is the first time the Idaho Rapid Response Plan for Dreissenid Mussels has been deployed in the state which in turn led to a series of events from communication, containment, delineation and finally a treatment of the infested area. This rapid response was a multi-agency coordinated effort of Federal, State, local and private industry stakeholders through various collaboratives. ISDA will continue to deploy containment efforts including closures or mandatory decontamination for exiting watercraft along the Mid-Snake River within the restricted area. ISDA will also continue extensive monitoring within the treatment area to further evaluate treatment efficacy.



# of Plankton Tow Samples for Veliger Microscopy



## Education

Education is a major component of the ISDA invasive species prevention program. Watercraft inspection stations play an important role in education through one-on-one interaction with the public and reinforcing the "Clean, Drain, Dry" message. Inspectors also provided a variety of invasive species-related educational materials to the public.

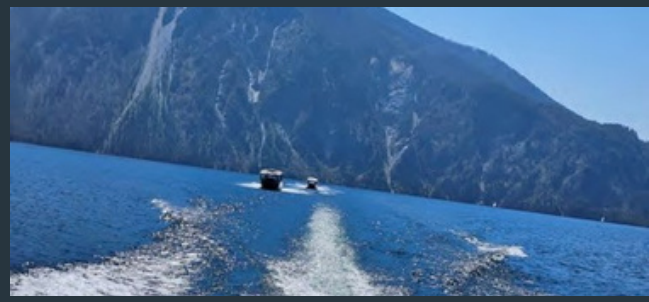
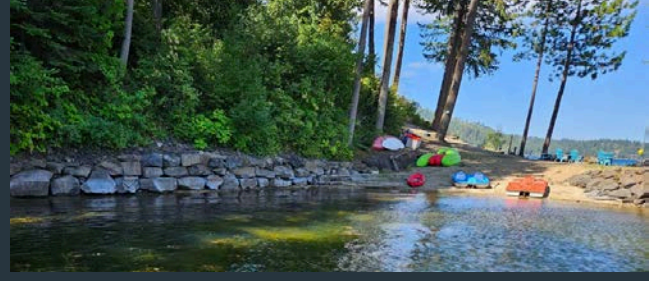
ISDA staff participated in a number of events this season which helped educate user groups and the boating public on invasive species issues and the importance of "Clean, Drain, Dry." Staff provided 20 watercraft inspection trainings, educating over 100 individuals on the threats of invasive species and watercraft inspection protocols. Staff also presented on invasive species issues to noxious weed professionals, counties, tribes, master naturalists, angling groups, marine deputies, ITD Port of Entry staff, DEQ staff, IDFG staff, lake associations, and student groups.

ISDA also unveiled a new Invasive Species of Idaho website with the help of the marketing expertise of Drake Cooper. Two additional campaign messages were created, "Knock it Off" and "Know What You Grow," to add to established messages already in use, "Clean-Drain-Dry", "Don't Let It Loose", and "Buy It Where You Buy It." An Invasive Species of Idaho Facebook page was also created and is being utilized to promote important campaign messages, form collaborative relationships, share ideas and articles, and drive internet traffic to the website for more detailed information. Other platforms utilized to drive traffic to the website included: radio spots, banner ads, and Pandora radio commercials.



# Idaho Invasive Species Council

The Idaho Invasive Species Council (IISC) was created in 2001 by Executive Order, as a forum for coordinating invasive species related efforts and initiatives in the state. Executive Order 2017-05 replaces Executive Order 2010-14, to continue this coordinated effort. The IISC holds biannual meetings for discussions and project updates. An updated copy of the IISC Strategic Plan is available online at: <https://invasivespecies.idaho.gov/idahoinvasive-species-council/>



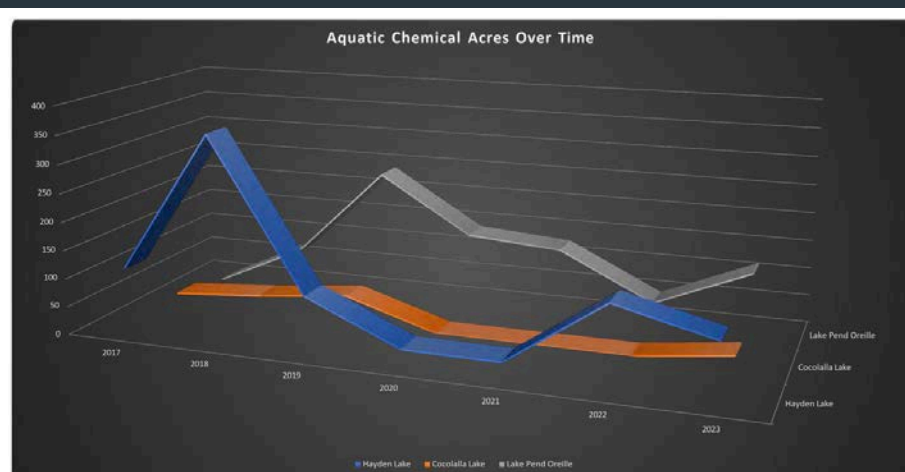
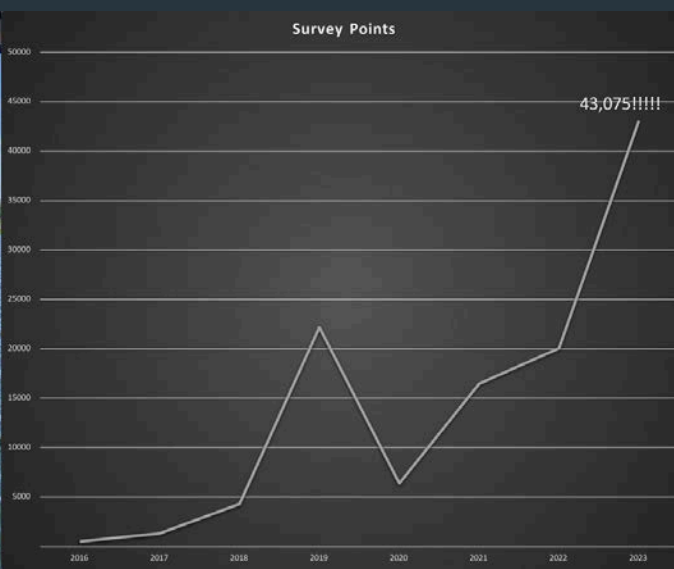
## Aquatic Noxious Weed Treatments

Aquatic noxious weed treatment plans are published annually on a map that can be accessed at <http://invasivespecies.idaho.gov/treatment-plans>.

ISDA chemically treated 312.82 acres of Aquatic Noxious Weeds in 2023. The species that were primarily targeted were: Eurasian watermilfoil, Parrotfeather milfoil.

For aquatic herbicide treatments on these species, a trend is becoming more pronounced as acres of treatment are starting to decrease due to the proper use and timing of systemic type herbicides. ISDA continues to monitor all known infestations of aquatic noxious weeds while surveying for new infestations.

In 2023, ISDA staff conducted 43,075 individual survey occurrences. By conducting a high level of surveys, ISDA is able to be more targeted and prescriptive with treatments. ISDA will continue this strategy to encourage this same trend for all aquatic noxious weed applications.





# Eurasian watermilfoil

In 2023, ISDA continued to actively work on Eurasian watermilfoil (EWM) in Hayden Lake, Lake Pend Oreille, Pend Oreille River, Priest Lake, Bear Lake, Clear Lake, and Blue Heart Springs. Blue Heart is a popular South-Central Idaho tourism destination and local favorite. ISDA staff continued removal efforts in 2023 and noted marked decreases in population densities because of effort taken in 2021 which included assistance from the Governor's Office of Species Conservation, County weed superintendents, and Idaho Power. Contractor help was again assigned in May to decrease EWM biomass to a level that was easily maintained by ISDA staff for the remainder of the season. EWM activities also extended itself into assistance with survey and removal efforts in Payette Lake to compliment Valley County Noxious Weeds well established removal program. ISDA staff circumnavigated Payette Lake and performed in water survey activities using power boat, kayaks, and snorkeling to identify populations of EWM so that this data could be used to guide activities for contractors utilizing Diver Assisted Suction Harvesting (DASH).

# Hydrilla

Hydrilla is considered one of the worst aquatic invasive plant species in North America and was placed on the Idaho Noxious Weed list as an early detection, rapid response (EDRR) species. Hydrilla was initially discovered in the Bruneau River in 2007 with additional populations discovered in Ada and Twin Falls counties. All populations are located in and around geo-thermally influenced areas with direct outflow into the Snake River. Eradication is the ultimate goal for plants on the EDRR list and ISDA coordinated an aggressive management program aimed at doing just that.

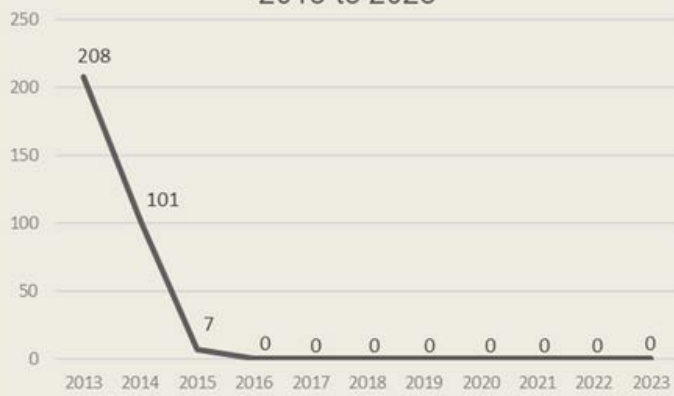
**Bruneau River** - Initial population was discovered in late 2007 in a 14-mile stretch of river which discharges into CJ Strike Reservoir. Management actions began in 2008 using an integrated pest management (IPM) approach and included chemical controls, mechanical controls, cultural control, biological controls and hand removal. Monitoring and removal activities occurred on a weekly basis with high density areas of plant occurrence visited most frequently. By 2016, plant populations had decreased to the point where hand pulling was the only control method employed, and the intensity of survey events decreased due to lack of plants found. In 2023, the Bruneau River recorded a 100% decrease in population size with 0 plants found for the third year in a row. Monitoring efforts in 2022 continued to identify a small population of hydrilla plants in an adjacent canal system (3 individual plants), however, recurring visits in 2023 observed 0 regrowth marking the first year of no plants within the canal. The entire infestation area will continue to be monitored into 2024 and plants will be removed whenever encountered.

Hydrilla Found in the Bruneau River  
2013 to 2023





Hydrilla Found in Boise Hot Ditch  
2013 to 2023

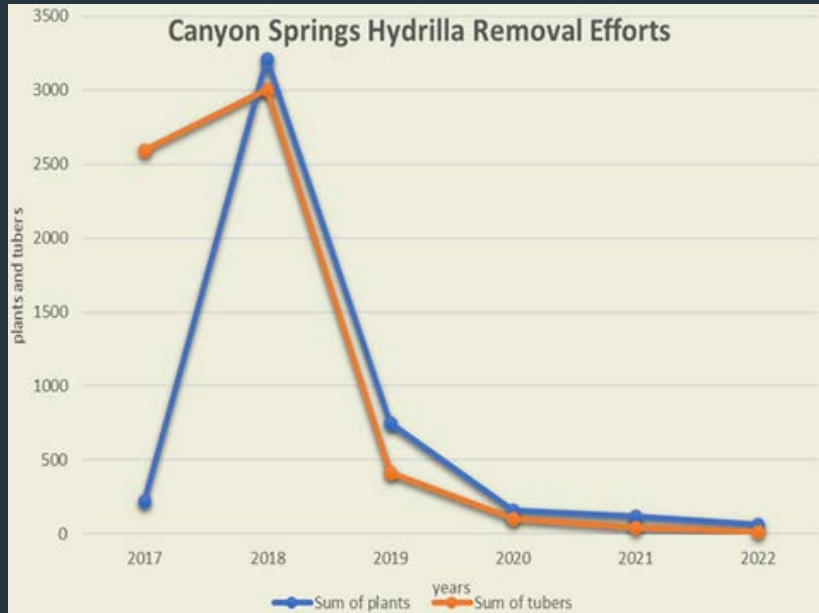


**Boise Hot Ditch** - Population discovered in 2008 and was reported by an individual who helped with initial hydrilla removal efforts in the Bruneau River. Due to the size and accessibility of this population, hand removal has been the only method utilized. This control strategy has proven effective for the site with no hydrilla plants detected since 2016. Reproductive materials can remain dormant for up to 10 years so monitoring activities will continue bi-annually to ensure that any re-growth is removed before having the chance to re-infest the area.

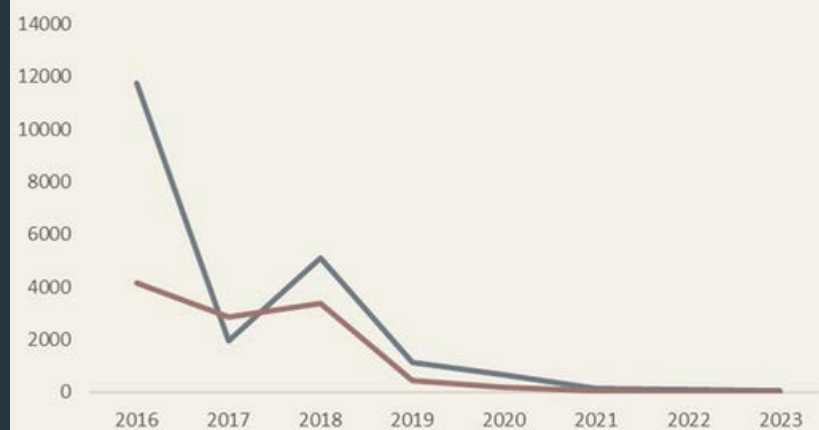
**Buhl** - Population discovered in 2015 by ISDA on a routine monitoring survey. Plants were found in several sites within this area including geothermal aquaculture facilities and private residences with decorative water features. Removal efforts included cultural controls, biological controls and hand pulling with a 99.5% percent decrease in population size since initial discovery. Monitoring and removal activities have been occurring on a monthly/weekly basis in the summer and fall and will continue during winter months at a reduced frequency. 2023 showed a resurgence of the plant in an area that had been plant free for seven years, current findings are back down to 0 and over all plants have been less than the previous year.

**Twin Falls** - Population reported by land manager approximately 1-week after discovery of the Buhl population in 2015. Hydrilla was observed in a settling pond at the outflow of a geothermal fish raceway. Removal efforts included cultural controls, biological controls and hand pulling with a 98% decrease in population size since initial discovery. In 2017, hydrilla was found in a new water course adjacent to the settling pond which led to an increase of plants observed on site. Mechanical control and hand pulling were used to remove plants in this area and decreases are again being recorded. Monitoring and removal activities have been occurring in this area on a weekly basis and some on a monthly basis during summer and fall and will continue over the winter months.

Canyon Springs Hydrilla Removal Efforts



Central Region Hydrilla Removal





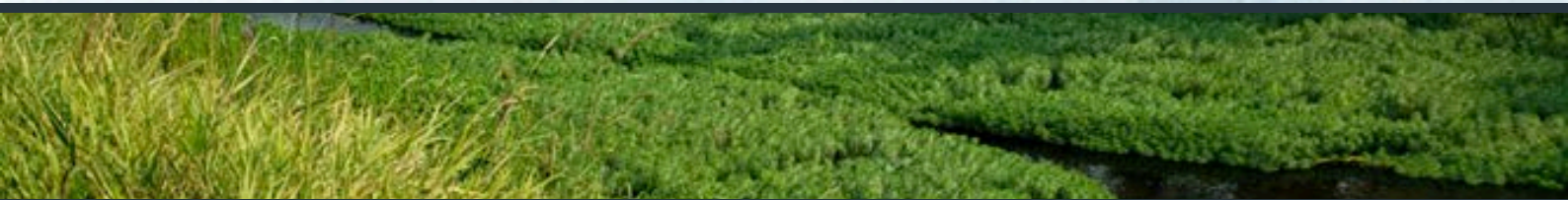
# Parrot feather Milfoil

Parrotfeather Milfoil (*Myriophyllum aquaticum*) is an emergent aquatic weed native to South America that was likely introduced into Idaho as an aquarium or aqua-garden plant which escaped containment. Studies indicate parrotfeather milfoil as a warm water species intolerant to freezing conditions, however, this milfoil has found a niche in Idaho allowing it to persist. Parrotfeather has been observed growing in areas with naturally flowing spring water capable of keeping constant, non-freezing temperatures throughout winter months. Downstream surveys in Gem County (2021) identified populations of plants along the Payette River extending down into the confluence with the Snake River. Due to the extent of spread, ISDA assigned management priority to upstream populations in an attempt to stop the infestation at its source.



**Jerome County** - Effort to remove plant populations from a known population resumed in 2019. ISDA staff coordinated team work days to remove plants from a natural spring near the Blue Lakes Country Club using mechanical control and hand removal. Monitoring and removal activities occurred and as of September 2023, no regrowth has been observed. To date, 1 parrotfeather milfoil plant has been identified in the Mid-Snake River area. Surveys were conducted and the source of the plant is still unknown.

**Gem County** - A coordinated effort with Gem County Weed Control began in 2019 utilizing chemical control and hand-removal strategies. The site is located within a seepage canal that passes through four private properties. This water course acts as a catchment for several irrigation canals in the area and is also influenced by natural spring water inputs. Hand removal was targeted in the upper areas of the canal in 2019 and 2020 with marked decreases of re-growth observed in subsequent years. In 2021, a survey of the entire infestation zone was conducted to monitor plant densities and identify areas where chemical application would be most beneficial. Landowners were notified and a coordinated chemical application using contractors began in late June and into early July 2022. ISDA staff conducted pre- and post-treatment monitoring of the infestation zone throughout the field season to remove plant materials where feasible, and to assess areas in need of additional treatment. In 2023, results from the chemical application indicated that a follow-up application will be necessary. Monitoring and hand removal activities continued in 2023, however, changing priorities and assignments prevented an additional application from being performed this season. Plans for an application are expected to be generated and executed in 2024.



**Ada County** - Ada County Weed Control shared point location data for a known parrotfeather population located in a spring fed canal which flows directly under Linder Bridge in Meridian and into the Boise River. This population has existed for several years and has undergone a variety of attempts to effectively manage; however, no lasting success has ever been observed. A joint effort between Ada County and ISDA was initiated in 2022 to apply techniques utilized on previous parrotfeather sites to see if progress could be made. The spring water source originates from the Eagle IDFG fish hatchery and meanders through and between several private properties. Survey efforts identified the source population at approximately 130 feet west of Linder Road and extended downstream approximately .5 mile before emptying into the Boise River. Kayak surveys down river identified areas of parrotfeather occurrence indicating that plant fragments were traveling into the system from this location. Initial efforts occurred in the upper 130 ft area (450 lbs. of parrotfeather removed) and staff from Ada County and ISDA continued visiting the site once a month between April and November. Removal activities were executed manually via hand pulling using snorkel equipment. Plant densities were observed to decrease with each visit, and by the last survey, only three very small plants were identified and removed. Survey and removal activities continued in 2023 with site visits in May, August and November. Only 1 plant was observed (and removed) during the August visit. Activities will resume in 2024 with the goal of working with Ada County to acquire landowner access and extend our work area to include the .5 miles of infested spring east of Linder Road.



# CWMA Cost Share Program

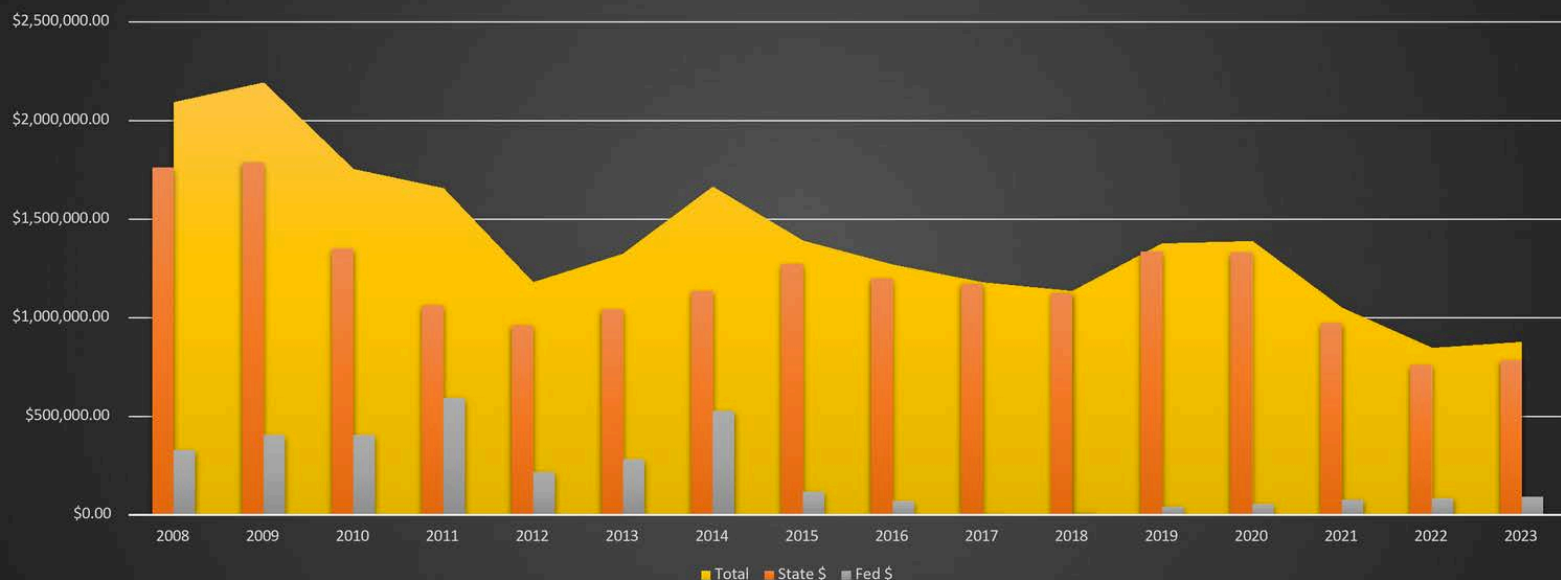
ISDA continues to provide leadership, training, and support to Cooperative Weed Management Areas (CWMAs) throughout the state. These CWMAs are comprised of county governments, federal partners, Native American Tribes, and private landowners. CWMAs work cooperatively to combat noxious weed infestations across agency and jurisdictional boundaries. Their efforts help to protect wildland habitat, ecosystem diversity, recreational opportunities, and agriculture in Idaho.

In 2023, ISDA awarded \$782k in State General Fund dollars to 15 participating CWMAs & \$91k in Federal Fund dollars to 6 participating CWMAs.



The CWMA cost share participants provided over \$1.5 million dollars in matching contributions, and treated approximately 100,000 acres of noxious weed infestations. The treatments include chemical, mechanical, cultural, and biological control methods. Cost share revenues also contributed to the mapping and monitoring of over 400 thousand acres of previously surveyed lands. CWMA's have also incorporated revegetation work in to their work plans, in effort to try and help Idaho lands to recover from the invasion of noxious weeds. The CWMAs also help to educate citizens about the threat of noxious weeds in their area, as well as, throughout the State.

CWMA Cost Share Awards Over Time



## 2023 EDRR Reports

- Idaho has 22 EDRR species listed
- 11 species are aquatic
- 11 species are terrestrial\*
- Only 3 EDRR species was reported in 2023
- Purple Starthistle- ongoing project
- Turkish Thistle- ongoing project
- Squarrose Knapweed- ongoing project
- ISDA continues work on Hydrilla





- 
- Legend**
- Special Project Work Area
  - Known Turkish Thistle Infestations
- Montana

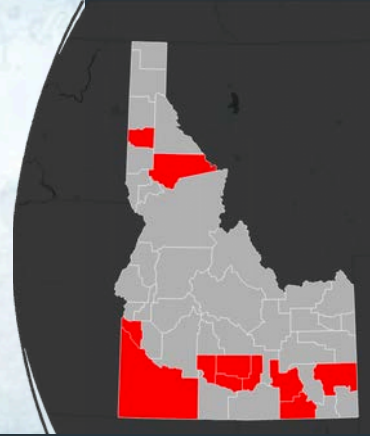
Map of the Spotted Owl Habitat in Oregon, showing the Spotted Owl Habitat (yellow), Siskiyou National Monument (orange), and Siskiyou National Forest (red). The map includes a scale bar and a north arrow.

Special Project Work Area  
Known Turkish Thistle Infestations



# Noxious Weed Distribution

- 2023 was the 5th year of this project
- 10 County reports missing out of 44



## Spotted Knapweed

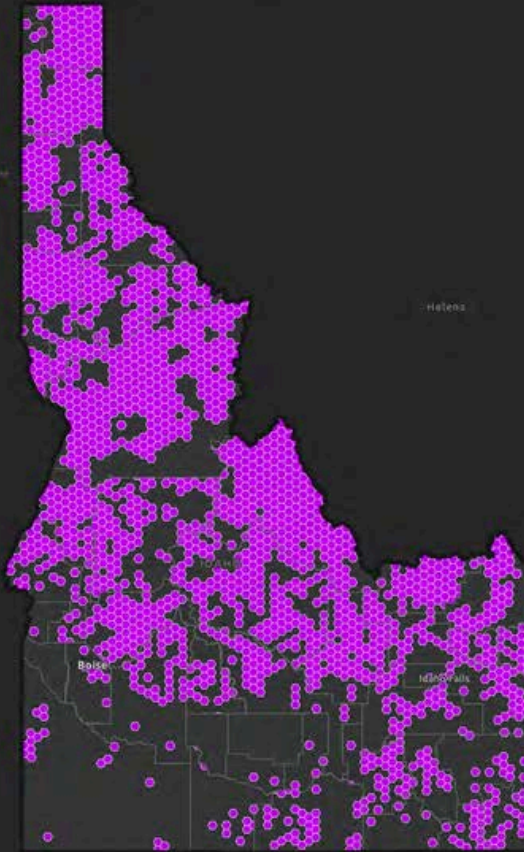
*Centaurea stoebe*



Rob Roubledge, Sault College, Bugwood.org



Esri, HERE, Garmin, FAO, NOAA, USGS, EPA



## Yellow Star Thistle

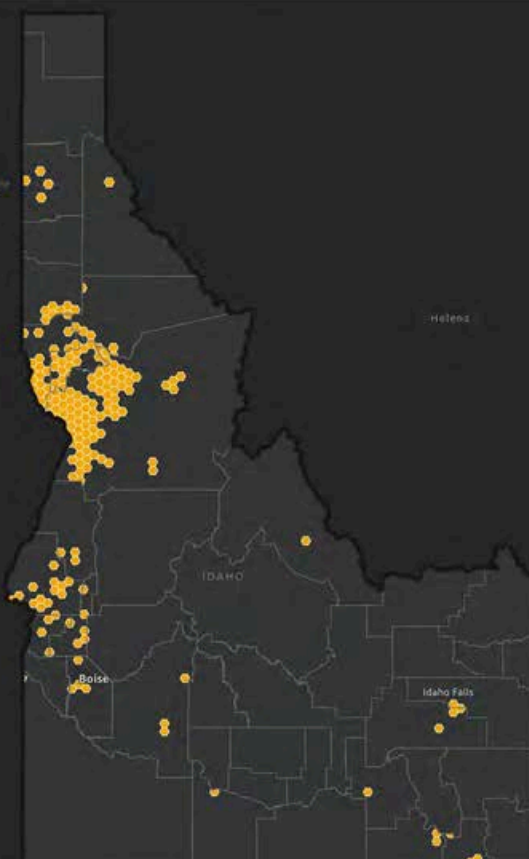
*Centaurea solstitialis*



Peggy Grib, USDA Agricultural Research Service, Bugwood.org



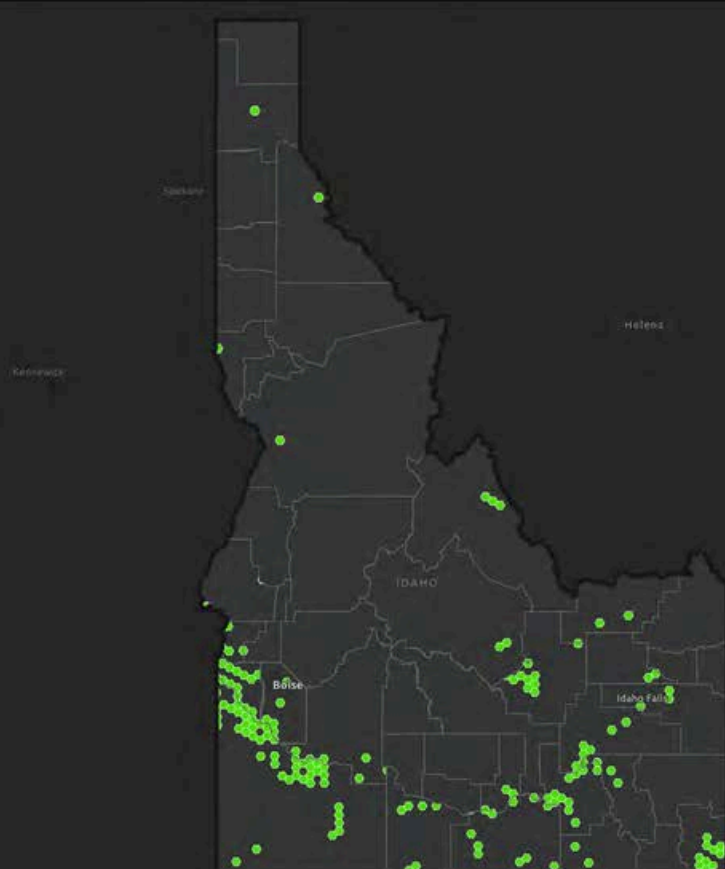
Esri, HERE, Garmin, FAO, NOAA, USGS, EPA





# Saltcedar

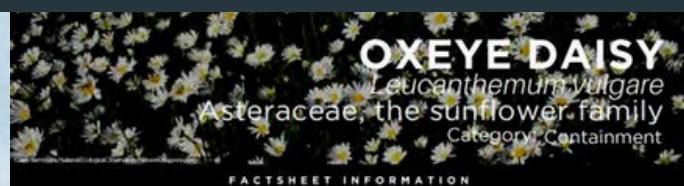
*Tamarix spp.*



Steve Dewey, Utah State University, Bugwood.org



Esri, HERE, Garmin, FAO, NOAA, USGS, EPA



## Summary of Invasiveness

- Oxeye daisy is an invasive wildflower that can form dense stands in pastures and meadows, outcompeting native flora, reducing biodiversity and degrading pasture quality.
- It produces a large number of seeds and can regenerate from rhizome fragments, making control difficult.

## Description

- Perennial with numerous stems arising from base, growing up to 3 feet tall.
- Roots arise from a short, creeping rootstock with many adventitious roots. Root tips can be reddish in color.
- Basal leaves are toothed and spatula-shaped, upper leaf stalks are short and clasp the stem.
- Solitary, 1-1½ inch wide flower heads are composed of white ray and yellow disk flowers, resembling a daisy.
- Seeds are ribbed and dark brown to black.



## Introduction and Movement

- Oxeye daisy is native to Europe and western Asia and was likely introduced as a garden ornamental.
- Inhabits disturbed areas, grasslands, meadows, pastures, and roadsides.
- The plant reproduces by seed dispersal and vegetatively by rhizome, allowing it to be easily dispersed by wind, water, and grazing animals. It is also commonly found as a contaminant in grass seed and wildflower mixes.

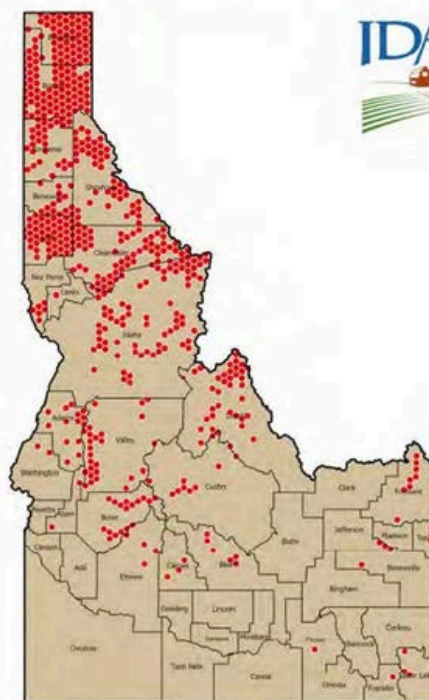
## Prevention Strategy

- To prevent accidental introductions, learn how to identify Oxeye daisy and eradicate infestations on your property.
- When gardening, always research plants before planting and purchase seeds from licensed nurseries.
- Always remove and properly dispose of all seed and plant materials on vehicles, clothing, shoes and pets before you exit or enter outdoor recreational sites.
- Always Remember To: **KNOW WHAT YOU GROW & KNOCK IT OFF!**

Sources:  
• CABI Invasive Species Compendium: <https://www.cabi.org/isc/datasheet/13357>  
• Invasive Noxious Weeds 8th Edition, University of Idaho: <http://www.extension.uidaho.edu/publishing/pdf/BLU/BLU816.pdf>

FOR ADDITIONAL INFORMATION, PLEASE VISIT: [INVASIVESPECIES.IDAHO.GOV](http://INVASIVESPECIES.IDAHO.GOV)  
TO REPORT INVASIVE SPECIES IN IDAHO, PLEASE CALL 1-877-336-8676.

## OXEYE DAISY DISTRIBUTION MAP





# Range Program

## Background

The ISDA Range program provides support, coordination, and expertise to Idaho rangeland livestock producers and land and wildlife management agencies for planning and management of vegetation and other rangeland resources utilizing the best available science and best management practices.

These services are provided per Idaho Code Title 22, Chapter 1, Section 22-103(23)  
What We Do

**Policy NEPA review** - ISDA's Range Program provides support to the livestock industry by reviewing, commenting on, and providing interpretation on all relevant state and federal rangeland-related documents. Examples include Rangeland Health Assessments; Evaluations; Determinations; Environmental Assessments (EAs); Environmental Impact Statements (EISs); grazing decisions for permit renewals; trailing/crossing permit decisions; fire rehabilitation closure decisions; Resource Management Plans; as well as any proposal that impacts vegetation management or resources of value to the livestock industry. Reviews ensure that the best available scientific information and management practices are proposed and remain consistent with federal and state regulations.

**Rangeland Monitoring** - The ISDA program allows for participation, coordination, and cooperation between ISDA, Land Management agencies, and grazing permittees in the collection and review of photo data. This program provides a framework for monitoring data to be collected by permittees and used in grazing permit renewals. It also produces a standardized and scientifically valid monitoring protocol for Idaho.

**Outreach/ technical assistance/ expertise** - Provide training and assistance to producers on public and private lands, as well as to land management agencies, for the planning and initial implementation of a monitoring program.

## Program Updates

ISDA worked with Salmon Challis National Forest to develop a Memorandum of Understanding for Cooperative Rangeland Monitoring. This agreement focuses on developing cooperative monitoring on grazing allotments administered by the U.S. Forest Service within the Salmon-Challis National Forest, consistent with the service-wide Memorandum of Understanding (MOU) agreement between the Public Lands Council and the U.S. Forest Service. It provides for the development of collaborative monitoring of annual grazing use criteria and repeat photo monitoring, and inclusion of this collaborative monitoring in Allotment Management Plans.

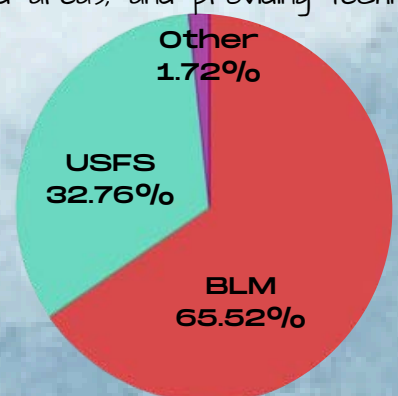
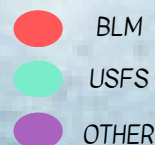
### Moose Fire and Diamond Moose Virtual Fence Project

The ISDA Range program was instrumental in securing base stations required to start the first year of this project by leveraging positive relations with external partners. The Range program developed and implemented monitoring and Challenge Cost share agreements with Salmon-Challis National Forest to facilitate and maximize federal funding to purchase base stations and equipment for upcoming phases of the project. Additionally, the Range program has been a key player in coordinating better dialogue between all parties, facilitating time sensitive monitoring, conducting plant inventories in burned areas, and providing technical assistance to all parties.

### USFS Living and Working in a Post-Wildfire Landscape

#### Policy

58 individual NEPA projects that are directly rangeland related were received and reviewed by the range program in 2023. These areas included grazing permit renewals, energy development, vegetation treatments and conservation and land rules. These projects were seen at various levels of management from national to field office level.





# Exotic Wood Boring Bark Beetle -USDA Survey

As part of USDA's 2023 National EWBB Survey, a total of 42 Lindgren Funnel traps at 21 locations in 13 counties throughout Idaho were installed and monitored. Sites included Forest Service campgrounds, National Forests, tree farms, wood recycler, and urban landscape plantings. In 2023, a variety of 5 different lure combinations were used in the traps. Current years' specimen samples are in the process of being identified. (Report provided by Brad Newbry, PHSS, USDA APHIS PPQ)

## Pale Cyst Nematode- USDA Survey

Idaho's Pale Cyst Nematode Eradication Program:

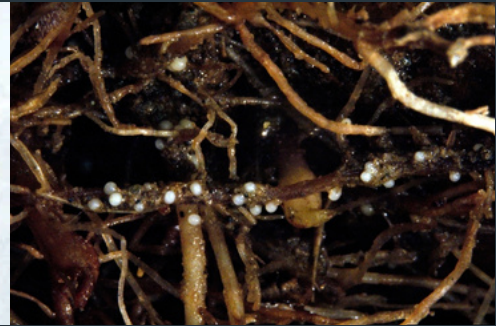
Production Acres Surveyed: 903

Seed Acres Surveyed: 329

Number of Counties Surveyed: 5 Counties

Positive: 32 fields (3,538 acres total)

Report provided by Robert Gourley, Director, PCN Program, USDA APHIS PPQ



All thirty-two known infested fields are located within an 8.5-mile radius that spans portions of northern Bingham County and southern Bonneville County. PPQ deregulated 36 acres of associated fields in 2023. PPQ also deregulated approximately 4 acres of PCN-infested fields because the landowner converted the acreage to non-agricultural use. The current regulated area is 6,495 acres; of that total 3,538 acres are infested fields, and 2,957 acres are associated fields. Viability staining analyses of cysts from 24 infested fields show no detectable viability. Of these 24 fields, 22 have successfully completed the greenhouse bioassay phase of evaluating eradication progress, making them eligible to return to potato production with certain regulatory controls in place. The remaining fields have greenhouse bioassays in progress, with the final results expected in 2025. 8 infested fields are working through the eradication process and still show some level of viable PCN in soil samples.

In 2023, potatoes were planted on 6 infested fields (712 acres, total) that were eligible to return PCN host crop production as part of the in-field bioassay test, the final test that must be passed to declare PCN eradication and deregulate an infested field. This was the first crop for three fields and the second crop for three fields since before PCN was detected on those fields.

**PCN Eradication Treatments:** The soil fumigant Telone II (1,3-dichloropropene) was applied to 754 acres (7 fields) in 2023. Soil samples were collected from the 7 fields following treatment to determine treatment efficacy. PCN viability results are expected in February 2024 for these soil samples.

**Outreach:** Stakeholder updates (Quarterly Reports) were published to the USDA APHIS PCN website in April, July, and October 2023. The 2023 fourth quarter report will be posted in January 2023.

**Sampling Information:** To date, the PCN Program has collected 543,795 soil samples in Idaho (from outside of the 32 known infested fields) to ensure Idaho's freedom from PCN. A total of 200,557 samples have been collected from the eradication fields since 2006 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 676,727 soil samples collected in Idaho, and 107,496 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 southeast Idaho. Since program inception in 2006, the PCN Program has analyzed the viability of 1,059 cyst samples collected from infested fields before and after eradication treatments.





# 2023 Plant Industries Public Outreach and Educational Presentations

## January

January 18	Sam Kellendy	GH/MC Control Program Update	APHIS GH/MC Staff
January 18	Andrea Thompson	Idaho Nursery Advisory Committee	Public
January 18	Jason Kittridge	INLA Horticulture Expo	Public
January 23	Sam Kellendy	IS & NW Program Presentation	Students

## February

February 2	Bethany Muffley	Noxious weeds ID/Jordan Valley CWMA	Noxious Weed Professionals
February 4	Sam Kellendy	Cdd/Watercraft Inspection/ISNW Booth	Public
February 16	Bethany Muffley	NWFFS/IHFA Conference	NWFFS Inspectors
February 18	Sam Kellendy	Clean Drain Dry/Invasive Species	Public
February 27	Bethany Muffley	Intro to Invasive Species & Noxious Weeds	Students
February 28	Bethany Muffley	Aquatic Noxious weed ID/Minidoka County	Idaho Water Users Assoc.

## March

March 1	Bethany Muffley	Aquatic Noxious weed ID/Twin Falls County	Idaho Water Users Assoc.
March 2	Bethany Muffley	Aquatic Noxious weed ID/Canyon County	Idaho Water Users Assoc.
March 7	Jeremey Varley	NWFFS Inspector Training/Ada County	NWFFS Inspectors
March 7	Sam Kellendy	Watercraft Inspector Training/Bruneau/Marshing #1	WIT Staff
March 14	Jeremey Varley	NWFFS Inspector Training/Kootenai County	NWFFS Inspectors
March 14	Vene Stewart	MK Nature Center Invasive Insect Education	Public
March 15	Jeremey Varley	NWFFS Inspector Training/Nez Perce County	NWFFS Inspectors
March 17	Sam Kellendy	Watercraft Inspector Training/Bruneau/Marshing #2	WIT Staff
March 20	Bethany Muffley	NWFFS Inspector Training/Bonneville County	NWFFS Inspectors
March 22	Bethany Muffley	NWFFS Inspector Training/Twin Falls County	NWFFS Inspectors
March 23	Vene Stewart	Western Emerald Ash Borer Cooperators	Nature Conservancy
March 28	Andrea Thompson	Japanese Beetle Open House Virtual	Public
March 28	Bethany Muffley	NWFFS Inspector Training/Custer County	NWFFS Inspectors
March 30	A. Thompson/T. Eiman/V. Stewart/P. Castrovillo	Japanese Beetle Open house	Public
March 30	Bethany Muffley	NWFFS Inspector Training/Statewide	NWFFS Inspectors

## April

April 20	Bethany Muffley	Aquatic Noxious Weed ID/McCall	Master Naturalist Group
April 18	Andrea Thompson	Caldwell City Council Japanese Beetle	Public
April 25	Sam Kellendy	Watercraft Inspector Training Duck Valley #1	WIT Staff

## May

May 4	Sam Kellendy	Clean Drain Dry/Invasive Species	Idaho Marine Law Enforcement
May 9	Sam Kellendy	Watercraft Inspector Training Duck Valley #2	WIT Staff
May 11	Bethany Muffley	Aquatic weed ID/Valley County	County Staff
May 11	Sam Kellendy	GH/MC Pesticide License Credit/Valley County	County Staff
May 17	Sam Kellendy	GH/MC Public Presentation/Oneida County	County Staff
May 23	Bethany Muffley	ISDA's Invasive Species & Noxious Weed Program	Seasonal Staff

## June

June 5	Bethany Muffley	ISDA's Invasive Species & Noxious Weed Program	Students
June 22	Bethany Muffley	NAISMA's Prohibited Plant ID/Adams County	County Staff

## September

September 5	Sam Kellendy	Clean Drain Dry/Invasive Species	U.S. Coast Guard Auxiliary
September 16	Vene Stewart	Bug Day Awareness of Invasive Species	Public



# 2023 Plant Industries Public Outreach and Educational Presentations

## November

November 4	Sam Kellendy/AJ Mondor	Clean Drain Dry/Invasive Species/Boise Flotilla Meeting	Public
November 22	Andrea Thompson	Idaho potato Advisory Committee	Public
November 28	Sam Kellendy/AJ Mondor	Clean Drain Dry/Invasive Species	Public
November 30	Tina Eiman/Katia Schrier	Idaho Nursery Advisory Committee	Public

## December

December 4	Sam Kellendy/AJ Mondor	GH/MC Update Winter Meeting/APHIS	APHIS GH/MC Staff
December 5	B Muffley/M Devey	Quagga Response Mid Snake/Elmore County	County Staff
December 5	AJ Mondor	Quagga Update/IPMA Pest Exp	Public
December 6	Paul Rhoades	Invasive Species & Noxious weed Program Update	County Staff
December 12	AJ Mondor	GH/MC Public Presentation/Elmore County	County Staff
December 15	Tina Eiman/Katia Schrier	Idaho Nursery Advisory Committee	Public







Page 3 - Shoshone Falls, Photo by ISDA Staff, Idaho State Dept. of Agriculture

Page 4 - Apple Maggot Photo by Joseph Berger, Bugwood.org; Apples Photo by Pixabay.com; Apple Maggot Damage Photo by Whitney Cranshaw, Colorado State University, Bugwood.org; Western Cherry Fruit Fly Photo by Utah State University Extension

Page 5 - Emerald Ash Borer Photo by Jared Spokowsky, Indiana Dept. of Natural Resources, Bugwood.org; Emerald Ash Borer Damage Photo by Ryan Armburst, Kansas Forest Service, Bugwood.org; Purple Trap Photo by Kelly Oten, North Carolina State University, Bugwood.org; Funnel Trap Photo by Pennsylvania Dept. of Conservation and Natural Resources-Forestry, Bugwood.org; Emerald Ash Borer Larvae Photo by Kenneth R. Law, USDA, APHIS PPQ, Bugwood.org

Page 6 - European Pine Shoot Moth Photo by Patrick Clement, CC BY-2.0 DEED; Tree Damage Photo by Miulan Zubrik, Forest Research Institute-Slovakia, Bugwood.org; European Pine Shoot Moth Pupa Photo by Miulan Zubrik, Forest Research Institute-Slovakia, Bugwood.org; Pine tree Photo by Pixabay.com

Page 7 - Spongy Moth Photo by John Ghent, Bugwood.org; Spongy Moth egg masses Photo by Manfred Mielke, USDA Forest Service, Bugwood.org; Spongy Moth Damage Photo by Karla Salp, Washington Dept. of Agriculture, Bugwood.org; Spongy Moth Larvae photo by Bill McMee, Wisconsin Dept. of Natural Resources, Bugwood.org

Page 8 - Japanese Beetle Photo by Jim Baker, North Carolina University, Bugwood.org; Japanese Beetle Larva Photo by David Cappart, Bugwood.org; Japanese Beetle Damage Photo by Steven Katorich, Bugwood.org; Damage & Adult JB Photo by Steven Katorich, Bugwood.org; Sod Damage Photo by M.G. Klein, USDA Agricultural Research Services, Bugwood.org

Page 9 - European Corn Borer Photo by Clemson University-USDA Cooperative Extension Slide Series, Bugwood.org; Silver Y Moth Photo by Nick Goodrum, Creative Commons 2.0; Cucurbit Beetle Photo by CAPS USDA APHIS PPQ; Black Maize Beetle Photo by Hanna Royals, Screening Aides, USDA APHIS ITP, Bugwood.org; Philippine Downy Mildew by Bob Kemmerait, University of Georgia, Bugwood.org; Late Wilt on Corn by Ran Drori and Tsafir Weinberg, researchgate.net

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Page 11 - Grain Elevator Photo by Pixabay.com; Grain Photo by Ruben Duran, Washington State University, Bugwood.org; Grain Harvest Photo by Pixabay.com; Grain kernels Photo by Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org

Page 12 - Beehive Photo by ISDA Staff; Honey Bee Photo by Pixabay.com; Beehive Photo by ISDA Staff

Page 13 - Bee Inspection Photos by ISDA Staff; Honeybee Photo by Pixabay.com; Semi-truck load of bees Photo by Sarah Yaddow, Project Apis m.

Page 14-17 - All Mormon Cricket and Grasshopper Photos by ISDA Staff, Idaho State Dept. of Agriculture; All Scenery Photos by Pixabay.com

Page 18 - Cull Onion Photo by ISDA Staff, Idaho State Dept. of Agriculture; Variety of Dry Beans, Nursery Stock, & Seed Germination Photos by Pixabay.com

Page 19-27 - Field Inspections, All Photos are from Pixabay.com

Page 28 - Plant Pathology Lab, Common Smut Photos by Daren Mueller, Iowa State University, Bugwood.org; High plains virus Photo by William M. Brown Jr., Bugwood.org

Page 29 - Feed, Fertilizer and Amendments, Lab Photo by ISDA Staff, All other photos by Pixabay.com

Page 30 & 31 - Stack of Hay Photo by Pixabay.com; Horses and Riders Photo by ISDA Staff, Idaho State Dept. of Agriculture

Page 32-44 - Invasive Species and Noxious Weeds, All Photos by ISDA Staff,

Page 45 - Range, Photo by Pixabay.com

Page 46 - Potato Field Photo by Pixabay.com; Pale cyst Nematode Photo by Bonsak Hammeraas, NIBIO-The Norwegian Institute of Bioeconomy Research, Bugwood.org