



Idaho State Department of Agriculture 2010 Grasshopper and Mormon Cricket Suppression Program Summary

Introduction

Grasshoppers and Mormon crickets continue to be one of the most serious pest problems for Idaho rangelands and adjacent croplands. Based on annual surveys conducted by the United States Department of Agriculture (USDA), Animal Plant Health Inspection Service (APHIS), Idaho has experienced very serious pest outbreaks during the last few years. The management and the timely control of grasshopper and Mormon cricket populations are high priorities for the Idaho State Department of Agriculture (ISDA) and our cooperators at USDA, APHIS. Congress has addressed this issue with special funding to the impacted states of Idaho, Utah and Nevada.

Background

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

Summary of Grasshopper Survey Results

Idaho experienced major grasshopper outbreaks in 2010 with damage to crops from moderate to very heavy depending on location and the time of year. The cool wet weather from April to Mid June kept soil temperatures lower than normal. Emergence of first instar grasshoppers was delayed throughout the state resulting in many infestations of both young instars and adult grasshoppers in a given location. Infesting populations were primarily a mixture of the *Melanoplus sanguinipes*, and *Camnula pellucida* grasshopper species. ISDA increased the number of aerial applications, from one treatment in 2009 to nine treatments in 2010, that were concentrated in the southern Idaho counties of Ada, Jerome and Lincoln, to protect crop production on over 24,000 acres in response to increased grasshopper infestations. Ada and Elmore Counties had significant increases in the distribution of bait for grasshopper control in 2010 as well. No environmental factors occurred that would significantly reduce the grasshopper numbers from laying eggs this fall. It is reasonable to expect significant grasshopper outbreaks to continue in several areas of the state during the 2011 season.

Summary of Mormon Cricket Survey Results

The Mormon cricket, *Anabrus simplex*, outbreak decreased in 2010, compared to 2009, with the primary infestations still occurring in Owyhee and Washington Counties. The Owyhee County infestation was primarily along the eastern slope of the Owyhee Mountains. A late hatch and migration of Mormon crickets did occur in September on the Murphy plains area near Oreana. The Washington County infestation was significantly less in 2010, compared to 2009.

The long-legged cricket, *Anabrus longipes*, was found for the third consecutive year, but in fewer numbers per acre in Kootenai County. The shield-backed katydid, of the genus *Stieroxys*, was found for the second consecutive season in the Rathrum Prairie of Kootenai County, but in fewer numbers than in 2009. The probable species was *Stieroxys borealis*, or the boreal grass katydid. The coulee cricket, *Peranabrus scabricollis*, was found in reduced numbers in 2010, compared to 2009, on the Joseph Plains near Canfield, in Idaho County.

Summary of ISDA Program

In 2010, ISDA continued to suppress outbreaks of grasshopper and Mormon crickets statewide. Over 300 landowners in 27 counties received assistance in the form of bait or cost-share spray projects. A total of 326,350 lbs. of bait, valued at \$254,500 was distributed to private landowners in 2010, a decrease of 101,650 lbs. from the bait distributed in 2009, but still the third highest distribution of bait in 11 years. Nine cost-share projects were conducted to protect 24,769 acres from grasshopper infestations with ISDA assistance of \$24,957.07 to cover 1/2 of the treatment costs. In addition, ISDA protected 428 acres on impacted state lands and county road rights-of-way in Owyhee and Washington Counties. For additional information, go to the ISDA website www.agri.idaho.gov and search under the Plants and Insects tab for the Grasshopper/Mormon Cricket Program.

2010 – COST SHARE PROJECTS WITH PRIVATE LANDOWNERS FOR GRASSHOPPER SUPPRESSION

Project Location	Acres Treated	Total Protected Acres	Insecticide	Cost to ISDA (1/2)	Cost to Private Landowner (1/2)	Total Project Cost	Cost Per Acres Protected
Ada County	335	335	Malathion ULV	\$1,047	\$1,047	\$2,094	\$6.25
Blaine County	320	320	Malathion ULV	\$637	\$637	\$1,274	\$3.98
Gem County	320	320	Dimilin 2L	\$800	\$800	\$1,600	\$5.00
Gem County	322	322	Malathion ULV	\$886	\$885	\$1,771	\$5.50
Jerome County	1,133	2,266	Dimilin 2L	\$2,011	\$2,011	\$4,022	\$1.78
Lincoln County	3,440	6,880	Dimilin 2L	\$5,848	\$5,848	\$11,696	\$1.70
Lincoln County	5,075	10,150	Dimilin 2L	\$9,769	\$9,769	\$19,538	\$1.93
Lincoln County	1,237	2,475	Dimilin 2L	\$2,196	\$2,195	\$4,391	\$1.77

Project Location	Acres Treated	Total Protected Acres	Insecticide	Cost to ISDA (1/2)	Cost to Private Landowner (1/2)	Total Project Cost	Cost Per Acres Protected
Lincoln County	850	1,701	Dimilin 2L	\$1,764	\$1,764	\$3,528	\$2.07
Totals	13,032	24,769		\$24,957	\$24,957	\$49,914	

2010 CARBARYL GROUND TREATMENTS ON COUNTY ROAD RIGHTS-OF-WAY AND STATE LANDS

Owyhee	100 lbs.	8 Acres
Washington	4,200 lbs.	420 Acres
Total	4,300 lbs.	428 Acres

MULTI-YEAR SUMMARY OF CARBARYL TREATMENTS ON COUNTY ROAD RIGHTS-OF-WAY AND STATE LANDS

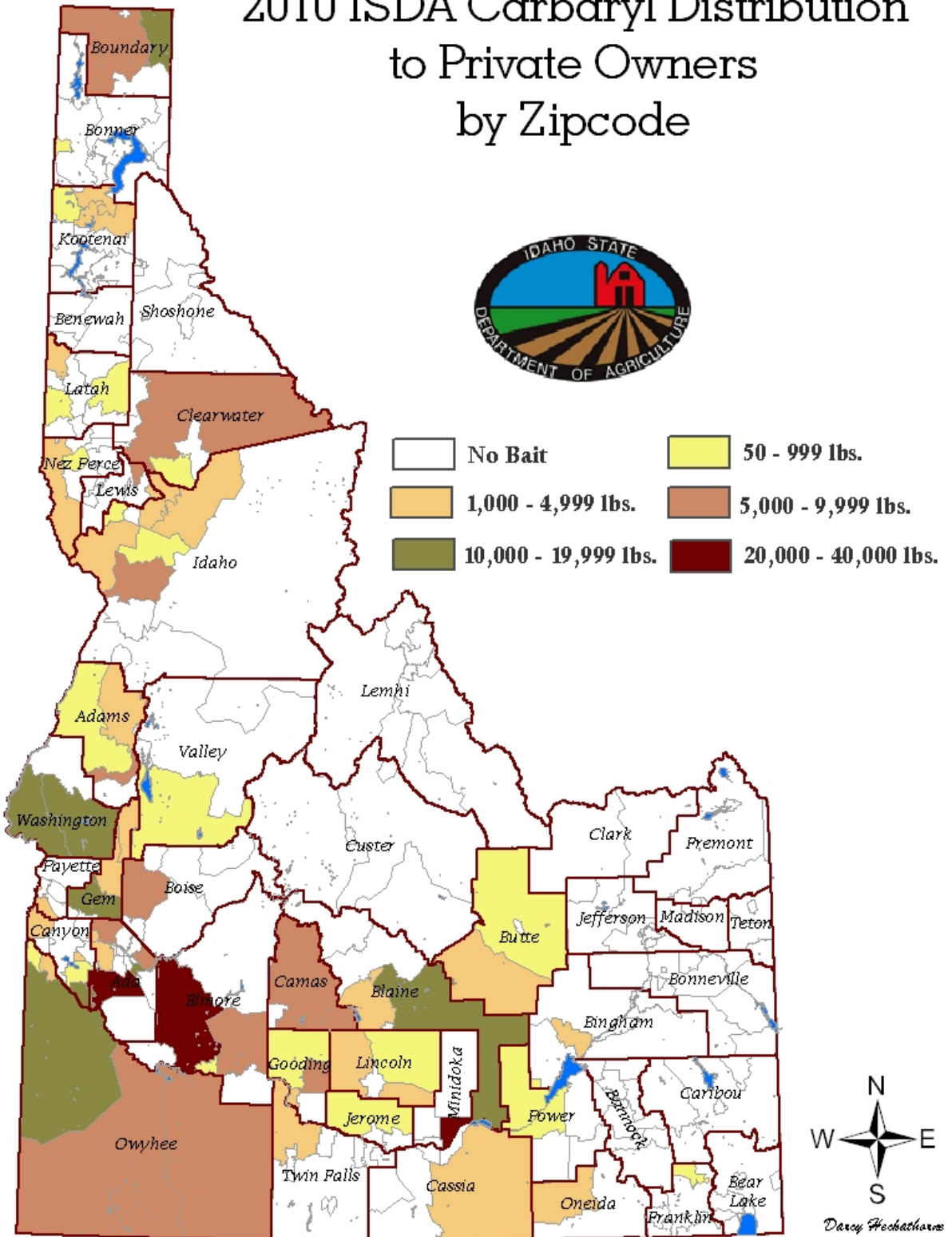
Year	Total Pounds Applied	Acres Treated
2005	12,175	1,218
2006	6,612	661
2007	3,906	340
2008	3,750	194
2009	21,200	1,446
2010	4,300	428

2010 - BAIT DISTRIBUTIONS TO PRIVATE LANDOWNERS FOR MORMON CRICKET AND GRASSHOPPER SUPPRESSION

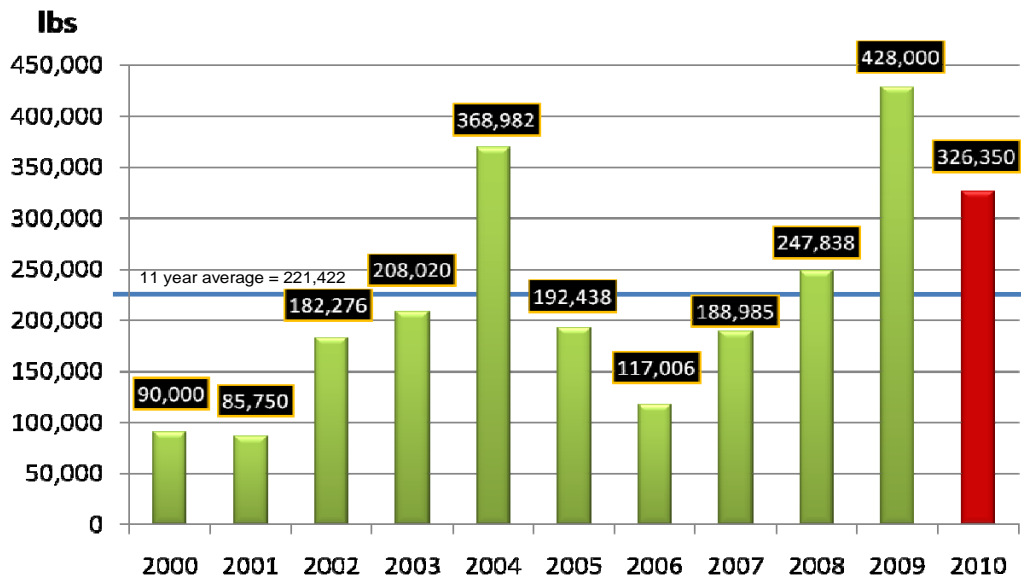
Rank	County	Carbaryl Bait Distributed (lbs)	Number of Distributions
1	Ada	60,900	31
2	Elmore	47,500	55

Rank	County	Carbaryl Bait Distributed (lbs)	Number of Distributions
3	Owyhee	35,150	24
4	Washington	25,450	20
5	Gem	23,000	12
6	Minidoka	20,600	6
7	Idaho	15,550	32
8	Kootenai	13,650	21
9	Blaine	10,600	7
10	Boundary	8,900	6
11	Adams	7,650	5
12	Boise	6,950	30
	Twin Falls	6,950	5
14	Canyon	6,050	7
15	Lincoln	5,500	7
16	Camas	5,000	1
	Clearwater	5,000	7
	Nez Perce	5,000	8
19	Gooding	4,750	4
20	Latah	4,400	7
21	Oneida	3,800	2
22	Bingham	1,400	1
23	Butte	1,250	2
24	Power	650	1
25	3 Other Counties	700	3
Totals	27 Counties	326,350	304

2010 ISDA Carbaryl Distribution to Private Owners by Zipcode



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



MAJOR COOPERATORS FOR THE GRASSHOPPER/MORMON CRICKET PROGRAM

During the 2010 season the following cooperators provided significant help in bait distributions and overall program delivery:

- University of Idaho, Extension Service, Elmore County
- University of Idaho, Extension Service, Franklin County
- University of Idaho, Extension Service, Jefferson County
- University of Idaho, Extension Service, Latah County
- University of Idaho, Extension Service, Lincoln County
- University of Idaho, Extension Service, Nez Perce County
- University of Idaho, Extension Service, Oneida County
- Randy Rowe Trucking Company, Twin Falls, ID.
- Boise County Road Department, Gardena, ID.
- Midvale Phone Company, Midvale, ID.
- Primeland Cooperative – Grangeville, ID.
- Primeland Cooperative – Lewiston, ID.
- Primeland Cooperative – Moscow, ID.
- Wilbur Ellis Company – Caldwell, ID
- Wilbur Ellis Company – Potlatch, ID
- Wilbur Ellis Company – Spokane, WA
- Pineview Garden Center – Hayden, ID

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