SURVEY OF INSECTICIDE USE IN SUGARBEET IN WESTERN NORTH DAKOTA AND EASTERN MONTANA IN 2009

Aaron L. Carlson[1], John L. Luecke[1], Mark A. Boetel[2], Mohamed F.R. Khan[1], and Jeff M. Stachler[1]

[1]Sugarbeet Research Technician, Sugarbeet Research Specialist, Extension Sugarbeet Specialist, and Extension Sugarbeet Specialist
North Dakota State University - University of Minnesota, Fargo, ND
and
[2]Associate Professor, Dept. of Entomology, North Dakota State University

Herbicide- and fungicide-use portions of this survey are presented in the Weed Control and Plant Pathology sections

This biennial survey of sugarbeet growers was conducted to assess insecticide usage and to determine growers' opinions of insecticide performance at controlling key insect pests of sugarbeet in western North Dakota and eastern Montana. Results indicate that Poncho Beta insecticidal seed treatment was used on 86% of planted acres in 2009 (Table 1). Counter 15G, Lorsban 4E, and Asana in 2009 were used on substantially less acres than in 2007.Counter 15G was used on 65% of the acreage in 2007, and its usage in previous years ranged from 46% in 1990 to 93% in 2003. Prior to 2009, it had been reported as being applied to more sugarbeet acres than any other insecticide in each of the twelve years this survey had been conducted. The high adoption rate of Poncho Beta appeared to play a major role in the significant reduction in Counter 15G use during 2009. Overall, insecticide-treated acres decreased by 33% in 2009 when compared to 2007 usage. However, the level of insecticide usage in 2009 was 118% of planted acres and was similar to usage in 2005, 2003, and 2001, which ranged from 111 to 115%.

Sugarbeet root maggot control was rated as excellent or good by 69% of the respondents in 2009 (Table 2), as compared to79% in 2007, 90% in 2005, 81% in 2003, and 79% in 2001. Other insect control was rated as excellent or good by 58% of respondents in 2009. Poncho Beta was rated as providing good to excellent control of sugarbeet root maggot by 64% of survey respondents in 2009. Similarly, 63% of respondents rated Poncho Beta as providing good to excellent control of pests in the "other insect" category. Three respondents in 2009 indicated the name of the 'other insect' they were targeting was cutworms. Sixteen survey respondents reported 21 insecticide applications or 1.3 applications per respondent. One grower reported using no insecticide use on 420 acres in 2009.

Table 1. A summary of insecticides applied by respondents in sugarbeet from 1989 to 2009.

		Insecticide treated acres									
Year	Acres Planted	Counter 15G	Counter 20CR	Lorsban 4E	Lorsban 15G	Mustang	Asana	Poncho Beta	Temik	Other[1]	Total
		----------% of acres planted----------									
2009	3,441	-	-	-	-	30	2	86	-	-	118
2007	8,346	65	-	15	-	37	31	-	-	3	151
2005	7,733	59	1	-	-	52	2	-	-	-	114
2003	11,732	93	1	13	3	3	-	-	-	2	115
2001	22,125	61	13	<1	2	-	31	-	<1	3	111
1999	13,061	83	-	31	5	-	12	-	1	1	138
1997	11,059	84	-	11	5	-	-	-	6	3	113
1995	12,338	76	-	6	9	-	-	-	10	1	104
1993	9,242	85	-	8	-	-	-	-	5	2	100
1992	12,791	72	-	8	3	-	-	-	10	2	95
1991	15,784	80	-	-	-	-	-	-	10	-	90
1990	12,607	46	-	-	-	-	-	-	14	3	63
1989	15,857	55	-	-	-	-	-	-	20	10	85

[1]Other include 1989: Dyfonate, Malathion, and Furadan; 1990: Dyfonate and Furadan; 1992: Malathion and Furadan; 1993: Furadan; 1995: Furadan; 1997: Dyfonate and Thimet; 1999: unknown; 2001: Gaucho and Thimet; 2003: Gaucho; 2007: Poncho

Table 2. Number of insecticide applications and insect control rating by survey respondents in 2009.

		Root Maggot					Other Insects				
Insecticide	Insecticide applications reported	Number of responses	Exc[1]	Good	Fair	Poor	Number of responses	Exc	Good	Fair	Poor
			-----% of responses-----					-----% of responses-----			
Poncho Beta	14	11	46	18	27	9	8	38	25	12	25
Mustang	6	5	20	60	20	-	3	-	33	67	-
Asana	1	0	-	-	-	-	1	100	-	-	-
Total	21	16	38	31	25	6	12	33	25	25	17

[1]Exc = Excellent