TRENDS IN WISCONSIN SPECIALTY CROPS AND HERBICIDE DRIFT RISK

Jed Colquhoun [1]

Pesticide drift to sensitive sites is a very rare occurrence, but can involve a high liability when it does occur given the value of specialty crops. The topic of pesticide drift has been addressed for many years in Wisconsin, and applicators are generally very aware of such risk. However, the landscape is changing in Wisconsin and therefore warrants a reminder of the extent and distribution of sensitive specialty crops in the state.

In general, the number of Wisconsin specialty crop producers has increased in recent years, while the number of grain growers has decreased over a similar time period (Table 1). There are a few common threads among these farms that increase risk when considering pesticide drift. The average specialty crop farm is small, ranging from an average size of 0.9 acre in floriculture to 90 acres for vegetables. Given the small acreage, these farms are not often "on the radar." These farms are also interspersed among agronomic crops throughout the state. There is no consolidated specialty crop production area. Finally, specialty crops tend to be tremendously high in value. Cranberries, for example, cost about $35,000 per acre to establish, and production may exceed up to $24,000 per acre in gross value.

Table 1. Grain and specialty crop production in Wisconsin in 2002 and 2007 according to the 2007 USDA Census of Agriculture.

	2002		2007		
Crop	Farms (#)	Production (A)	Farms (#)	Production (A)	Avg. farm (A)
GRAINS					
Corn	29,021	2.9 million	27,505	3.3 million	120
Soybean	15,245	1.5 million	14,513	1.4 million	96
SPECIALTY CROPS					
Vegetables	2,850	252,693	3,319	297,238	90
Orchards	1,009	9,683	1,135	9,730	9
Floriculture	814	644	953	864	0.9
Nursery	624	14,334	637	12,177	19
Fruit	--	--	1,132	9,719	9
Grape	--	--	253	479	2
Berry	--	--	1,019	20,485	20

The number and acreage of organic farms is also increasing rapidly in Wisconsin. The number of organic farms in Wisconsin increased from 712 in 2005 to 1,099 in 2009. Wisconsin ranks second, behind California, in the number of organic farms. The acreage has similarly increased, from 41,245 acres in 1997 to 147,120 acres in 2007. Herbicide use near certified organic production can be particularly challenging. Herbicide drift to any non-target crop, grown "conventionally" or organically, is illegal. However, organic production can be particularly at risk given that farm certification, and subsequently the ability to sell the crop as organic, can be compromised by pesticide drift. Recent cases demonstrate the high liability associated with pesticide drift on organic farms. For example, the Jacobs Farm in California recently won a $1 million dollar judgment against the applicator based on a case of organophosphate drift to organic Brussels sprouts.

[1] Associate Professor, Dept. of Horticulture, Director of Agricultural Systems Programming, College of Agricultural & Life Sciences, Univ. of Wisconsin-Madison, 1575 Linden Dr., Madison, WI 53706.

Landscapes and ornamental production are also sensitive to pesticide drift. The Association of American Pesticide Control Officials (AAPCO) conducted a national survey of suspected pesticide drift cases in 2005 (AAPCO 2005). Nationally, agricultural crops were the intended target of 70% of confirmed drift cases, and lawns and landscapes were the most frequent recipient (43%) of drift. Fifty-three percent of cases involved commercial applicators for hire, and 22% involved certified private applicators. In Wisconsin, it is worth noting that more confirmed drift cases occurred from applications to non-agricultural land (51%) than agricultural crops (42%). The five most common active ingredients involved in drift cases in Wisconsin were 2,4-D, glyphosate, dicamba, atrazine, and mesotrione.

Again, the intent of this presentation is to serve as a gentle reminder to get to know your neighbors and areas surrounding a pesticide application. While no application technique or equipment can completely mitigate the risk for drift, awareness of surroundings can go a long way to understanding the risks in the changing Wisconsin landscape. Please reference the following presentation on pesticide-related investigations by the Department of Agriculture, Trade and Consumer Protection, as well as subsequent presentations on nozzle selection and application techniques.

Reference

Association of American Pesticide Control Officials. 2005. Pesticide drift survey. Accessed online (December 2, 2009): http://aapco.ceris.purdue.edu/htm/survey.htm.