THE STATE OF PEST MANAGEMENT IN LEGAL CANNABIS PRODUCTION IN WASHINGTON

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Cannabis production is no different from other agricultural crops in that it can become infested with a variety insect, mites and disease. Cannabis production is different from all other agriculture because it is illegal to federally register a pesticide for control of insects and disease. The Washington State Department of Agriculture has developed a list of products that are considered not illegal to use on cannabis in Washington. Many of these products have no practical pest management value. Many other of these products have limited efficacy, short residual or other attributes that limit their usefulness to cannabis growers. Due to the expectation of superior quality and the extremely high value of their crop, cannabis growers are under heavy pressure to control insects, mites and diseases. Due to the combination of these factors growers are using a wide array of pest management products and practices, some of which may be illegal and may pose a risk to pesticide applicators, cannabis workers and cannabis consumers. This situation is exacerbated by a federal probation on Washington State University and USDA conducting pest management research, development of alternatives to pesticides, pesticide applicator training or training on worker protection from pesticides.

The lack of appropriate mechanisms for pesticide applicator and worker protection standards training, the lack of adequate crop protection tools and the absence of traditional research and extension outreach programs has created a “Wild West” mentality where any kind of pest management tactics can occur. The void of traditional pest management research, extension and appropriate tools has created serious and potentially dangerous conditions in cannabis production. This is not a new occurrence. Following a pesticide label has historically not been among the most important considerations in the illegal production of cannabis. What is difference is the cannabis is legally available for medical purposes for the large majority of the U.S population and is completely legal in several states. The widespread legalization of cannabis is bringing historical cannabis pest management practices into public view.

Recent state investigations in Colorado, Oregon and Washington has indicated that illegal pesticide use is not uncommon in the cannabis industry. Below are pesticide residues from flower and concentrate cannabis products in Oregon medical cannabis as reported by an Oregon based cannabis testing facility.

Table 2 is a list of individual samples with the highest levels of pesticides observed so far. These results clearly demonstrate that many products, especially concentrates, have levels of pesticides that greatly exceed EPA tolerances for these compounds on any commodities. It can also be clearly seen that the highest levels of pesticides observed in concentrates greatly exceeds the highest levels found on Cannabis flowers.

Flowers			Concentrates		
Matrix	Pesticide	Conc (ppb)	Matrix	Pesticide	Conc (ppb)
Flower	Imidacloprid	64,000	Concentrate	Carbaryl	415,000
Flower	Azadirachtin	36,000	Concentrate	PBO	407,000
Flower	PBO	2,700			
			Concentrate	Myclobutanil	392,000
Flower	Azadirachtin	16,700	Concentrate	PBO	220,000
Flower	Imidacloprid	15,300	Concentrate	PBO	180,000
Flower	Azadirachtin	14,274	Concentrate	Myclobutanil	160,000
Flower	PBO	13,500	Concentrate	PBO	137,000
Flower	Azadirachtin	13,200	Concentrate	Azadirachtin	123,000
Flower	Azadirachtin	11,450	Concentrate	Myclobutanil	110,000
Flower	Azadirachtin	11,300	Concentrate	PBO	106,700
Flower	PBO	9,040	Concentraate	Chlorfenapyr	100,000
Flower	Dichlorvos	8,058	Concentrate	Myclobutanil	64,310
Flower	Myclobutanil	8,039	Concentrate	PBO	52,000
Flower	Azadirachtin	7,200	Concentrate	PBO	48,160
Flower	Bifenthrin	5,621	Concentrate	PBO	46,440
Flower	Bifenthrin	4,925	Concentrate	PBO	44,500
Flower	PBO	4,450	Concentrate	Myclobutanil	43,600

This table is from Pesticide Use on Cannabis. Prepared by the Cannabis Safety Institute ,June 2015. Authors and Contributors Rodger Voelker, PhD, Mowgli Holmes, PhD