

Pesticides in Marijuana Production? Safety Concerns, Sustainable Options

A word about our special investigation in this issue of PAY into the production of cannabis (marijuana) and questions of the practices used in its cultivation. We do not wade into the debate on legalization of marijuana; we do advance production practices, where it has been legalized by a state, that are protective of health and the environment.

When we first considered the wave of legalization that was occurring across the country for medical marijuana, it became evident that the crop was being grown without adequate attention to the pesticides being used in its production. This has serious ramifications, because exposure to the crop in its cultivation and through inhalation, ingestion and absorption through the skin has become more and more widespread. How is the crop produced? Who is evaluating the production practices? Given that cannabis is defined as a narcotic by the U.S. government, does EPA's lack of registration and associated health and environmental reviews for pesticide use in legalized marijuana production create a clear pesticide application and residue ban? Could this be an opportunity to require that legalized marijuana be grown without any registered pesticides in organic production systems? What are the states doing to ensure that legalized marijuana production practices do not harm people, the environment and workers?

State Action as the Fed Bows Out

Our investigation raises important public health and environmental issues as well as pesticide and organic policy issues concerning cannabis production. Our initial analysis led us to the conclusion that no pesticides registered for use in the U.S. by EPA are legal for use in the production of cannabis. It seems simple. EPA has and will not (until the crop is reclassified from its current status as a narcotic) label any pesticide for use in cannabis production. However, as we investigated what states are doing to enforce this, we found a range of state laws in 23 states and the District of Columbia that sought to define allowed pesticide uses and management practices in cannabis production. Some states are silent on the matter, among them California. This either means that they are ignoring what is going on in production practices or they are enforcing against any registered pesticide use. It is not clear, although the official line is that they are enforcing a no pesticide use policy. Other states, led by the Washington State, have reached out to EPA for clarification. EPA's response has muddied the waters, telling the states that, while marijuana does not fit into any general group, such as an herb, spice, or vegetable, "[I]t may be legally used on marijuana under certain general types of crops/sites when there is an exemption from tolerance," tolerance being the standard set by EPA for allowable pesticide residues in food. States have interpreted as acceptable in cannabis production, with EPA concurrence, broad spectrum herbicide and fumigant use outdoors as long as the pesticide label does not specify the food crop to be planted after the application.

This led us to question use and exposure issues associated with pre-planting uses in soil, where exposure can occur by uptake in the plant (ignored by EPA and the states). Ultimately, EPA and states

have identified a group of pesticide products, called 25(b) pesticides (named after the section of the *Federal Insecticide Fungicide and Rodenticide Act* (FIFRA) that governs) as exempt from registration and therefore allowed under federal law. EPA defines 25(b) as "demonstrably safe for its intended use," exempt from federal registration, and required to provide full disclosure on the product label of all ingredients in these products.

The bottom line is that some states do and more states should require that legalized marijuana be grown without pesticides (and in this case we're saying grown without *registered* pesticides). Interestingly, it is not sufficient to require certified organic practices because organic, under the *Organic Foods Production Act*, allows some registered pesticides, like pheromones, copper, and sulfur. So, in requiring organic production practices, these must by law be prohibited.

While this topic is particularly relevant to those who are using medical marijuana under a doctor's care because of the exposure that occurs through inhalation, ingestion, and absorption, there are also large questions about environmental impacts where the crop is cultivated and exposure for those who produce the crop.

As crop production of cannabis increases, we have an opportunity to restrict all pesticide use at the front end of a growing market, require the adoption of organic systems plans, and set a course to protect health and the environment.

Agricultural Justice

How food is grown and whether the operations are just and fair is another topic important to production systems, and particularly organic. Organic and fair trade are two of the fastest growing sectors in agriculture. This issue of PAY reprints a talk from our 2014 conference, *Advancing Sustainable Communities: People, pollinators, and practices*, which explains ongoing work to incorporate social justice standards into organic systems so that they fully reflect the values and principles that helped to nurture it.

Michael Sligh, founding member of the Rural Advancement Fund International (RAFI) and its director of policy, research and education, explains the development of a label and standard by the Agricultural Justice Project —supported by the Domestic Fair Trade Association. As Michael says, "We . . . know that farmworkers, processing workers or even retail workers are left out of the organic standard. . . we don't



have public policy to support this. . . there is growing interest on the part of consumers who want this. . . [and] businesses want to differentiate in the market." This is all part of continuous improvement and embraces the underlying principle of sustainability.

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