Water Quality Enhancement Activity – WQL21 - Integrated Pest Management for Organic Farming

The term "organic" has a legal definition based on the USDA National Organic Program (NOP) Rule, based on the Organic Foods Production Act of 1990. The NOP Rule, in effect since 2002, applies to the production, handling and labeling of agricultural and processed food products that are sold as organic. The NOP Rule established uniform production standards for crops and livestock as well as after harvest product handling and processing standards.

A copy of the NOP Rule is posted at http://www.ams.usda.gov/nop. Some of the key provisions of the rule are as follows:

- Most farmers and handlers must be certified by a USDA accredited certifying agent
- Most synthetic fertilizers, pesticides, animal drugs, feed additives and ingredients are prohibited. Those that are allowed may be used only with restrictions.
- Organic farmers and handlers must prepare an Organic System Plan that a certifier must review, evaluate and approve.
- Land cannot be certified as "organic" until three years after the date of application of the last prohibited material.
- Farmers and handlers need to use and document proactive and preventative management practices before they can use pesticides.

Organic farm systems protect crop damage by insect pests primarily through the use of biological and cultural practices such as: crop rotation; diversification; habitat management; beneficial organism releases; sanitation and timing. Some natural substances, such as botanicals, and a few relatively non-toxic synthetic pesticides such as soap are permitted by the NOP standards when used in conjunction with the Organic System Plan and used according the restrictions found on the National List

Weed management on organic farms consist of cultural and mechanical techniques such as crop rotation, mulching, tillage, water management and manual weeding. Plastic mulches are permitted provided they are removed at the end of the season. A few natural substances are also used to manage weeds, but the efficacy of these substances is still subject to question.

Soil-borne diseases are managed by improving soil organic matter and biological activity. Cultural, biological and physical methods such as crop rotation, sanitation, pruning and selection of disease-resistant varieties are all part of organic disease management. Some natural substances such as clays and a few synthetic fungicides such as copper sulfate are permitted by the NOP standards when used in conjunction with the Organic System Plan and according to National List restrictions.

The 'National List' is on the NOP website and contains the allowed synthetic and prohibited natural (non-synthetic) substances that are the exceptions to the general rule of organic. It is not a comprehensive list of all approved materials, rather it can be described as an "open" list since it contains only 1) the synthetic materials allowed for use in crop and livestock production and 2) non-synthetic (natural) materials prohibited fur use in crop and livestock production. All inert ingredients must be non-synthetic or classified as inerts of minimal concern by the EPA.

Growers are required to keep records of all products applied to crop and soil. The records should identify the source and/or manufacturer of every material, including a product label with a list of ingredients including inerts. Documentation of every input material purchase and application should be maintained for five years.

The organic certifying agencies determine whether or not the use of a given input on a farm complies with organic standards. It is important for growers to consult with their organic certifier before using any product.

For more sources of information on pest management in organic farming, refer to Michigan Agronomy Technical Note #8, Transitioning to Organic Resources, found in Section I of the FOTG