Water Quality Enhancement Activity – WQL21 – Integrated pest management for organic farming

Enhancement Description
Managing pests on an organic farm, including farms transitioning to organic, with an Integrated Pest Management (IPM) system that relies on high level prevention, avoidance, monitoring, and suppression techniques that are based on an understanding of pest ecology. Organic IPM relies primarily on ecologically-based cultural and biological practices that result in healthy soil and habitat for beneficial organisms. Appropriate mitigation techniques are utilized to improve environmental risks from selected suppression techniques.

Land Use Applicability
Cropland, pastureland and rangeland

Benefits
Environmental benefits will be operation specific. Benefits may include but are not limited to improved water and air quality achieved through minimizing suppression risk to natural resources. This will include reducing pesticide risks in runoff, leaching, drift and volatilization, as well as impacts on pollinators, beneficial insects and wildlife. It may also include reduced soil erosion and sediment loss from tillage for weed control. Implementing IPM increases biodiversity on the farm while improving soil quality, resulting in a more stable farming system that helps to prevent pests from overwhelming the system.

Criteria
IPM is a sustainable approach to pest management that combines the use of prevention, avoidance, monitoring and suppression strategies, to maintain pest populations below economically damaging levels, to minimize pest resistance, and to minimize harmful effects of pest control on human health and environmental resources. Components of a high level Organic IPM include proactive cultural and biological controls.

High level Organic IPM includes:

1. A written IPM plan and implementation of activities that include:
    a. Prevention techniques such as cleaning equipment and gear when leaving an infested area, using pest-free seeds and transplants, irrigation scheduling to avoid situations conducive to disease development, etc.
    b. Avoidance techniques such as maintaining healthy and diverse plant communities, using pest resistant varieties, crop rotation, refuge management, strip cropping, interplanting, intercropping, multiple cropping, etc.

   c. Monitoring techniques such as pest scouting, degree-day modeling, weather forecasting, use of economic thresholds, etc. to help target suppression strategies and avoid routine preventative treatments.
   d. Suppression techniques such as cultural and biological methods to reduce or eliminate a pest population or its impacts while minimizing risks to non-target organisms.
2. Only those substances listed in the National Organic Program regulations §205.601 and §205.603 may be used in the IPM program.
3. Acreage must be certified organic or in the transition to organic process.

Documentation Requirements

1. A written organic IPM system plan for all of the offered acres. This plan should include each of the following items:
   a. Pest prevention techniques
   b. Pest avoidance techniques
   c. Pest monitoring (scouting) techniques
   d. Economic pest thresholds
   e. Pesticide environmental risk analysis tool that was used for pesticides selected from the NOP Prohibited and Allowed Substance list (e.g., the NRCS Windows Pesticide Screening Tool - WIN-PST)
   f. Approved pesticide application records with the specific management techniques that were utilized to reduce pesticide environmental risk (i.e., spot treatment, banding, pheromone traps, pesticide incorporation, etc.)
   g. Land Grant University guidance, if available, should be followed for acceptable prevention, avoidance, monitoring and suppression techniques.
   h. Map showing location of fields, acreage, beneficial insect habitat, etc.
   i. Environmental assessment of non-chemical suppression methods, e.g. cultivation, burning
2. Copies of scouting reports and other IPM records used to monitor and evaluate the plans effectiveness
3. If formal IPM Guidelines with a numeric scoring system have been developed and approved by Extension, a completed set of those guidelines can be substituted for the documentation requirements in number 1 above.

United States Department of Agriculture
Natural Resources Conservation Service

IDAHO ADDENDUM 2010
Water Quality Enhancement Activity – WQL21
Integrated Pest Management for Organic Farming

The producer may document his/her IPM system using *Idaho's Guidance\Checklist for Integrated Pest Management* located at:

http://www.id.nrcs.usda.gov/technical/guidance_ipm.html

If some other format is used, it must contain ALL the elements discussed in the *Idaho Guidance*. A high level IPM system involves the use of multiple strategies to manage pests and reduce reliance on pesticides. A successful organic IPM program will maximize the use of prevention and avoidance strategies. High level organic IPM includes all of the following:

1. Field scouting and use of economic thresholds and pest forecasting when available,
2. Use of non-chemical avoidance, suppression and prevention techniques,
3. Environmental risk assessment, and implementation of mitigating practices to reduce potential for off-site transport of NOP approved substances or to mitigate the impact of pest suppression activities on other resources.
4. Any use of pesticides listed on the NOP Allowed Substances list must be after all other management strategies have failed.

Specific Requirements for High Level IPM

FOR CROPLAND:

- Scouting method is 1, 2 or 3 (*Checklist/Guidance* – Question A)
- Record keeping method is 1 or 2 (*Checklist/Guidance* – Question B)
- Use economic thresholds, where available, or describe your rationale for determining when pest control is needed
- Use pest resistant-varieties wherever feasible
- Use a crop rotation that helps control pests
- Maintain healthy crops with proper irrigation and nutrient cycling, and good sanitation practices
- Utilize multiple non-chemical methods to address pests. Ideally, use both cultural and biological methods to prevent, avoid and suppress pests.

- Reduce off-site transport of approved substances by implementing mitigation practices when needed
- Consider the impacts of pest management strategies on other resources (e.g., cultivation for weed control and the impact to soil and water quality)

FOR PASTURE/RANGELAND/FOREST:

- Scouting method is 1, 2, 3 or 4 (Checklist/Guidance – Question A)
- Record keeping method is 1 or 2 (Checklist/Guidance – Question B)
- Use economic thresholds, where available, or describe your rationale for determining when pest control is needed. For noxious weeds, there is no threshold – noxious weeds should be treated when discovered.
- Use spot treatment (non-chemical where applicable) on a regular basis to control new weed infestations and keep them from spreading
- Participate in the local Cooperative Weed Management Area or county-level programs for noxious weed management.
- Utilize multiple non-chemical methods to address pests. Ideally, you use both cultural and biological methods to prevent, avoid and suppress pests. Remember that prescribed grazing contributes to pest management and reduces off-site transport of approved substances by maintaining healthy rangelands/pasturelands. Similarly, good forestry practices help reduce pest problems and promote healthy, sustainable forests.