

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, 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.

Conditions Where Enhancement Applies

This enhancement applies to all crop, pasture, or range land uses in an organic system where pesticide environmental risks are present that need mitigation options to meet or exceed the criteria detailed below.

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. If available, Land Grant University guidance should be followed for acceptable prevention, avoidance, monitoring and suppression techniques. Components of a high level Organic IPM include proactive cultural and biological controls.



High level IPM requires:

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, etc.
 - c. Monitoring techniques such as pest scouting, degree-day modeling, weather forecasting, etc. to help target suppression strategies and avoid routine preventative treatments.
 - d. Suppression techniques such as cultural, biological and low risk chemical control methods, used judiciously 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.
4. A minimum mitigation index score of ≥ 35 for the identified environmental risk but not less than specified by NRCS Agronomy Technical Note #5.
5. Mitigation index scores are quantified using NRCS Agronomy Technical Note #5, [Pest Management in the Conservation Planning Process](#).

Adoption Requirements

This enhancement is considered adopted when a management system has been implemented on the land use acreage that meets or exceed the minimum mitigation index criteria.

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. Map showing location of fields, acreage, beneficial insect habitat, etc., and
 - h. 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 2012

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

The Idaho Pest Management worksheet will be used to document mitigation points. A minimum of 35 points is required for the identified environmental risk.

This IPM system should be based on information from credible sources, or should be provided by an organic pest management specialist. 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. High level 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 (IPM techniques) to reduce potential for off-site transport.
4. Use of only NOP Allowed Substances list.

Specific Requirements for High Level IPM

FOR CROPLAND:

- Scouting should be performed a minimum of three times per year, and more frequently for intensive cropping or situations where multiple pests (weeds, insects, disease) are a concern. Pests of concern and timing and frequency of effective scouting should be described in your IPM plan. Results of each scouting activity MUST be recorded.
- Record keeping for all IPM activities is required.
- Utilize NRCS Agronomy Technical Note #5 and the Idaho Pest Management worksheet to assist with identifying appropriate IPM techniques to mitigate risk. These should include the following types of activities:

- 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
- Utilize prevention and avoidance techniques to address pests. Ideally, use both cultural and biological methods to prevent, avoid and suppress pests when needed.

FOR PASTURE/RANGELAND/FOREST:

- Scouting should be performed a minimum of three times per year, and more often where as needed, depending on pest biology. This should be described in your IPM plan. Results of each scouting activity MUST be recorded.
- Record keeping for all IPM activities is required.
- Participate in and/or follow the weed management plan for the local Cooperative Weed Management Area or county-level programs for noxious weed management
- Utilize NRCS Agronomy Technical Note #5 and the Idaho Pest Management worksheet to assist with identifying appropriate IPM techniques to mitigate risk. These should include the following types of activities:
 - 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 on a regular basis to control new weed infestations and keep them from spreading
 - Utilize prevention and avoidance techniques 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 by maintaining healthy rangelands/pasturelands. Similarly, good forestry practices help reduce pest problems and promote healthy, sustainable forests.

NOTE: Scouting, pest forecasting, economic thresholds, and non-chemical alternatives must be based on defensible information sources. Only those substances listed in the National Organic Program regulations Section 205.601 and Section 205.603 may be used in the IPM program. Acreage must be certified organic or transitioning to organic.

**This activity may NOT be used with the following enhancements:
AIR04, AIR07, ANM21, WQL13**

**Potential Duplicate Practices:
595- Integrated Pest Management**