

Water Quality Enhancement Activity – WQL13 – High Level Integrated Pest Management to Reduce Pesticide Environmental Risk.



Enhancement Description

Utilize advanced Integrated Pest Management (IPM) prevention, avoidance, monitoring, and suppression techniques, and only apply the lowest risk pesticides available (or if higher risk pesticides are used appropriate mitigation techniques are used to ameliorate the risk) in an environmentally sound manner when monitoring indicates that an economic pest threshold has been exceeded. Pesticide applications must follow all label requirements.

Land Use Applicability

This enhancement is applicable on crop, pasture, forest and range land.

Benefits

This enhancement will improve water and air quality by reducing toxic pesticide runoff, leaching,

drift and volatilization, and also reduce pesticide impacts on pollinators and other beneficial insects.

Criteria for utilizing high level Integrated Pest Management (IPM)

IPM is a sustainable approach to pest control 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. High level IPM suppression systems include effective agro-chemicals and cost effective biological and cultural controls as well as the lowest risk pesticides available that can sustain the cropping system.

High level IPM includes:

1. This enhancement requires 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.



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- 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.

Documentation Requirements for utilizing high level Integrated Pest Management (IPM)

1. A description of the high level IPM system that is utilized on all of the offered acres. This description should include each of the following items:
 - Pest prevention techniques
 - Pest avoidance techniques
 - Pest monitoring (scouting) techniques
 - Economic pest thresholds
 - Pesticide environmental risk analysis tool that was utilized (e.g., the NRCS Windows Pesticide Screening Tool - WIN-PST)
 - 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.)
2. 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.



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IDAHO ADDENDUM 2009

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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. 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 to reduce potential for off-site transport.
4. Resistance management by alternating pesticide chemical class, and use of lower risk pesticides when appropriate.

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
- Utilize at least 1 additional non-chemical method to address pests (besides resistant varieties and crop rotations). Ideally, use both cultural and biological methods to prevent, avoid and suppress pests.
- Reduce off-site transport by implementing mitigation practices when needed
- Rotate chemical class of insecticides and herbicides to avoid pest resistance

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 on a regular basis to control new weed infestations and keep them from spreading
- 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 at least 2 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 by maintaining healthy rangelands/pasturelands. Similarly, good forestry practices help reduce pest problems and promote healthy, sustainable forests.
- Rotate chemical class of herbicides used to avoid weed resistance.

NOTE: Scouting, pest forecasting, economic thresholds, and non-chemical alternatives must be based on defensible information sources. If pesticide applications are your primary means to control pests and are based on infrequent scouting, OR, if your control pests by pesticide applications based solely on calendar or stage of plant growth, then YOU DO NOT QUALIFY FOR THIS ENHANCEMENT. This enhancement does not preclude the use of pesticides where used as part of an integrated pest management approach.