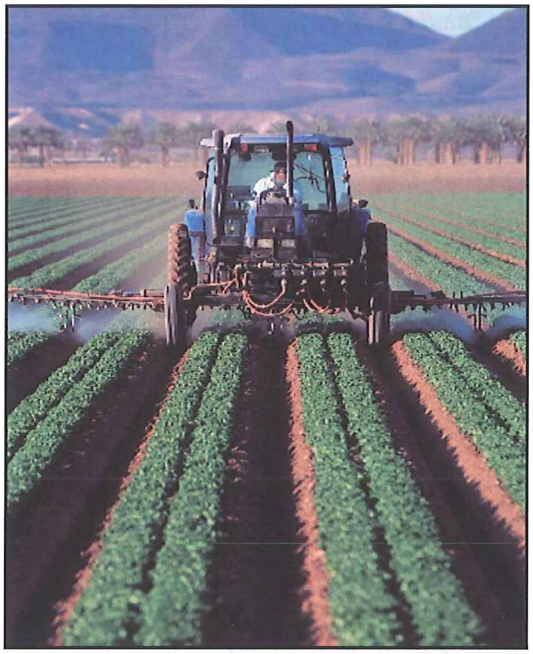
USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

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.

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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Conservation Stewardship Program

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Reference:

- ***595 – Pest Management***

1. Rationale for all IPM decisions must be based on scouting and monitoring.

2. Preventive pest management should only be used where:

   - High annual weed populations are known to exist;
   - Potential for high levels of an insect pest are known to exist;
   - Protecting the host plant prior to infection is desired when conditions are conducive for infection; and/or
   - Seed treatments are appropriate.

3. The need for control must be based on economic thresholds (if available) as determined by the University of Minnesota, including its regional Research and Outreach Centers or surrounding Land Grant Universities. Industry developed thresholds, if available, can be used when University guidance is not available.

4. Chemical controls and chemical control modes of action should be rotated to prevent buildup of pest resistance.

5. Lowest risk chemical controls are determined using NRCS' Windows Pesticide Screening Tool (WIN-PST).
   - http://www.mn.nrcs.usda.gov/technical/ecs/pest/win_PST/win_pst.html
   - Chemical controls with very high human hazard ratings should not be used.

- Chemical controls are limited to those with medium or lower Human Hazard Ratings (as found in WIN-PST) on land within boundaries of Drinking Water Supply Management Areas (DWSMAs) having high or very high vulnerability to contamination DWSMA locations and vulnerabilities found at:
  a. http://www.health.state.mn.us/divs/eh/water/swp/index.htm and/or
  b. http://www.mda.state.mn.us/protecting/waterprotection/waterprotectionmapping.htm

- Mitigation practices should be implemented if chemical controls with high human hazard ratings are used outside of vulnerable DWSMA boundaries.
  a. Mitigation practices that have a positive 4 impact should be implemented.
  b. Mitigation practices and their impacts can be found at: http://www.mn.nrcs.usda.gov/technical/ecs/pest/standards/NPPH25%20P st%20Management%20Planning.pdf