NRCS

Natural Resources Conservation Service

WASHINGTON

WQL13 – High level integrated pest management to reduce pesticide environmental risk

CSP Enhancement Washington State Supplement

Land Use Applicability: Cropland, Pastureland, Rangeland, Forestland January 2014

Client/Operating Unit:		Tract Number:	
Farm/Ranch Location:		Farm Number:	
Specifications Date:		Field Number(s):	
Planned Installation Date:		Proposed Treatment Acres:	

Enhancement Description: Table of Contents

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.

Benefits

This enhancement will improve water and air quality by reducing pesticide runoff, leaching, drift and volatilization, while also reducing pesticide impacts on pollinators and other beneficial insects. Additionally, there are reduced human health and safety risks to farmers, farm workers and consumers.

Conditions Where Enhancement Applies

This enhancement applies to all land uses where pesticide environmental risks are present that need mitigation options to meet or exceed the criteria detailed below.

Criteria for high level integrated pest management to reduce pesticide environmental risk

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 material and practices on human health and environmental resources. High level IPM suppression systems include the combination of cost effective biological, physical and cultural controls, and effective, low risk, agro-chemicals that can sustain the cropping system when pests exceed economic thresholds.

High level IPM requires:

1. A written IPM plan and implementation of mitigation 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 soils and healthy, diverse plant communities, using pest resistant varieties, crop rotation, refuge management, strip cropping, intercropping, etc.

   c. Monitoring techniques such as pest scouting, degree-day modeling, weather forecasting, etc. to help target suppression strategies and avoid routine treatments. Pest scouting protocols should include key natural enemies of each target species, as well as the pests themselves.

d. Suppression techniques such as cultural, biological, physical and low risk chemical control methods, used judiciously to reduce or manage a pest population or its impacts while minimizing risks to non-target organisms.

e. Land Grant University guidance, if available, should be followed for acceptable prevention, avoidance, monitoring and suppression techniques.

2. A minimum mitigation index score of > 45 for the identified environmental risk but not less than specified by NRCS Agronomy Technical Note #5.

3. Mitigation index scores are quantified using NRCS Agronomy Technical Note #5, Pest Management in the Conservation Planning Process.

Layout Sketch & Drawing (Provide sketch, drawings, maps, and/or aerial photographs.)

- Geo-referenced field map with all delineated treatment areas where CSP Enhancement WQL13 is to be applied.

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 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:

a. Pest prevention techniques,

b. Pest avoidance techniques,

c. Pest and beneficial organisms monitoring (scouting) techniques,

d. Economic pest thresholds and records demonstrating applications occurred subsequent to an exceeded threshold,

e. Pesticide environmental risk analysis tool that was utilized (e.g., the NRCS Windows Pesticide Screening Tool - WIN-PST), and

f. 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, timing to avoid exposure of pollinators and other beneficial organisms, etc.).

g. Map showing location of fields, acreage, beneficial insect habitat, management technique, etc.,

h. Any measures implemented to ameliorate impact of non-chemical suppression methods.

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.

References*:

Ignazi,J.C. 1991. Prevention of Water Pollution by Agriculture and Related Activities. Proceedings of the FAO Expert Consultation – Water Report 1, pp 247-261.

USDA-NRCS. 2010. Conservation Practice Standard: Integrated Pest Management-Code 595

USDA-NRCS. 2011. Agronomy Technical Note No. 5 – Pest Management in the Conservation Planning Process.

Field Office Technical Guide:

eFOTG, http://www.nrcs.usda.gov/technical/efotg/

*** Some online documents may take several minutes to download.**

State Supplemental Information

States need to identify what constitutes the minimum mitigation index score requirement.

High Level Integrated Pest Management program is defined in Washington as: Development and Maintenance of an operation specific Integrated Pest Management Plan (IPM plan). A template for this plan outline is found in Washington NRCS eFOTG, section IV, under Pest Management 595 Folder, Listed as "supporting document". This template is available at each NRCS Field office if needed. A High Level IPM addresses ALL pest populations that impact a specific land use system.

The IPM planning Worksheet is a tool for Land Managers to improve success rate and sustainability of pest management for improving land use economics and environmental quality. The IPM plan is a growing document that improves each year as technology, experience, pest populations and new research results develop over time.

One goal is to integrate multiple strategies for managing identified pest problems rather than reliance on a single (silver bullet) approach. Integration is important because pest diversity and populations adapt and change. The Prevention, Avoidance and suppression techniques you adopt for your land use will impact the site specific resource concerns and objectives you have identified.

IPM plan Table of contents:

Operation description and summary:

- IPM Table 1. IPM Target Pests and Beneficial species
- IPM Table 2. IPM Monitoring Strategies and Treatment Thresholds
- IPM Table 3. IPM Prevention and Avoidance Techniques
- IPM Table 4. IPM Suppression Techniques – 1 (mechanical, biological, cultural)
- IPM Table 5. IPM Suppression Techniques – 2 (chemical)
- IPM Table 6. Example Record of Monitoring activities and results
- IPM Table 7. Example Record of Suppression Techniques applied
- IPM Table 8. IPM Review, Evaluation and Modification; References

IPM worksheet with supporting references: http://efotg.nrcs.usda.gov/efotg_locator.aspx?map=WA

When chemical suppression techniques are utilized, WinPST Risk assessment model is used to identify potential risks to Animal, Soil and Water quality resources. The suppression technique is modified if needed to reduce, mitigate or eliminate the identified risks and maintain desired efficacy within the IPM plan objectives.

http://www.wsi.nrcs.usda.gov/products/W2Q/pest/winpst.html

Documentation Form

Producer: Date:

Tracts: County:

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:

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 utilized (e.g., the NRCS Windows Pesticide Screening Tool - WIN-PST), and

f. 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.

Prevention Techniques Used	Avoidance Techniques Used	Montitoring (scouting) Techniques Used	Target Pest	Economic Pest Threshold

Attach the Pest Management Worksheet with WinPST Ratings

Client's Acknowledgement (To be signed before the Enhancement is applied.)

By signing below, I acknowledge that I:

- **have reviewed and understand the site specific design, installation specifications and operation/maintenance requirements in this State Supplemental Sheet and have an understanding of the purpose(s) of this Enhancement;**
- **will install, operate, and maintain this Enhancement in accordance with the National Sheet, the Washington State Supplemental Sheet and the site specific specifications.**
- **will make no changes to the planned design and installation without prior written approval of the Natural Resources Conservation Service.**
- **will obtain all necessary permits and/or rights, and comply with all ordinances and laws pertaining to the installation, operation, and maintenance of this Enhancement, prior to the start of installation; and**
- **will assume responsibility for notifying all Utilities affected by the installation, operation and maintenance of this Enhancement.**

Signature	**Date**