



AEM Tier 2 Worksheet

Pesticide Use

Glossary

Biological Control: Biological control involves an active human management role in the control of pests using other organisms. Pests are controlled by predation, parasitism, antagonism, herbivory, and other natural mechanisms.

Certified Applicator: A commercial or private pesticide applicator who is certified by the NYS Department of Environmental Conservation (DEC) to use, supervise the use of, or train another individual in the use of any pesticide for agricultural use; or any individual who is certified to sell restricted-use pesticide.

Certified Commercial Pesticide Applicator: A certified applicator who is certified by the NYS Department of Environmental Conservation to use or supervise the use of any commercial application of pesticides, or to sell or supervise the sale of a restricted-use pesticide.

Certified Private Pesticide Applicator: A certified applicator at least 17 years old and uses or supervises the private application of restricted-use pesticides for purposes of producing any agricultural commodity.

Commercial Application of Pesticides: Any application of any pesticide except as defined in “Residential or Private Application of Pesticides (see “Private Application of Pesticides,” below).

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Background

Pesticides play an important role in the management of crop and livestock pests. Although many producers use a combination of practices, including Integrated Pest Management (IPM), to manage pests, pesticides may be needed to keep pests below acceptable levels to maintain crop quality and profitability. However, if pesticides are not carefully selected and properly applied, they have the potential to contaminate surface and groundwater.

IPM strategies should include prevention, avoidance, monitoring and suppression. These strategies should be employed to identify alternative crop production and crop protection practices which help minimize or avoid pest problems, reduce or eliminate pesticide use and costs, and maximize potential net profitability of crop production. These practices include, but are not limited to, crop rotation, use of disease-resistant varieties, cultivation, timing of planting or harvest, appropriate soil pH and fertility, biological control and pest monitoring and forecasting.

AEM Principle:

IPM elements are employed on the farm to minimize the use of pesticides. When pesticides are needed methods and procedures for the selection and application of pesticides should ensure that their potential discharge to surface and groundwater is prevented to the greatest practical extent. In addition, farm operations must be in compliance with state and federal laws and regulations, and with the applicable label requirements.

Glossary Continued...

Cultural Practices: Control of pests through tillage or cultivation.

Direct Supervision: The act or process in which the application of a pesticide is made by an individual acting under the instruction and control of a certified private pesticide applicator who is responsible for the actions of that individual. Direct supervision may be off-site (applicator must be able to contact the certified private applicator within a reasonable time) when a farm employee applies a pesticide that does not require on-site supervision on the label. Direct supervision must be on-site (within voice contact of the applicator) when so specified by the pesticide label, or whenever a farm employee applies a federally restricted -use pesticide.

Integrated Pest Management (IPM): A systematic approach to managing pests which focuses on long-term prevention or suppression with minimal impact on human health, the environment and non-target organisms. IPM incorporates all reasonable measures to prevent pest problems by properly identifying pests, monitoring population dynamics and utilizing cultural, physical, biological or chemical pest control methods to reduce pests to acceptable levels.

Leaching Potential: The possibility of downward movement through the soil of chemical substances dissolved in water.

Pesticide: Any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any insects, rodents, fungi, weeds or other forms of plant life, animal life or viruses, which the NYS Department of Environmental Conservation has declared to be a pest; and any substance or mixture of substances intended as a plant regulator, defoliant or desiccant.

Private Application of Pesticides: The application of a restricted-use pesticide for the purpose of producing an agricultural commodity: (1) on property owned or rented by the applicator or the applicator's employer, or (2) if applied without compensation other than the barter of personal services between producers of agricultural commodities, on property owned or rented by a party to such a barter transaction.

Recharge Area: Land area where water readily seeps into a water-bearing soil or rock formation (aquifer).

Restricted-Use Pesticide: A pesticide that is classified for restricted use under the provisions of Article 33 of the Environmental Conservation Law, or under Section 3(d)(1)(C) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended. A confirmation of a DEC-restricted pesticide may be obtained by referencing the NYS Pesticide Registration Data Base at [http:// pims.psur.cornell.edu/](http://pims.psur.cornell.edu/).

Runoff Potential: The possibility for substances to move from a field in runoff water.

Setback Zone: Distances from a waterbody or other environmentally-sensitive area within which pesticides should not be applied.

U.S. EPA Worker Protection Standard (WPS): A regulation issued by the U.S. Environmental Protection Agency (EPA) under the authority of the 1992 Federal Worker Protection Standard (40CFR, Part 170) covering pesticides that are used in the production of agricultural plants on farms, forests, nurseries and greenhouses. The WPS requires producers to take steps to reduce the risk of pesticide-related illness and injury if they: (1) use pesticides with WPS requirements on the label, or (2) employ workers or pesticide handlers who are exposed to such pesticides.

AEM Tier 2 Worksheet: Pesticide Use		Potential Concern		
Factors Needing Assessment:	Lower 1	2	3	Higher 4
Does the farm have a written IPM plan? If so, when was it last updated? How closely is it followed?				
What criteria are used in decisions to apply pesticides?	Pests are identified and levels/severity is monitored or forecasted for need. <p style="text-align: center;">AND</p> Lowest hazard rating chemical is used.			Pesticides are applied without regard to site-specific needs.
What types of non chemical practices are used for pest prevention (e.g. crop rotation, insect/disease resistant plant varieties)?				
Have practices been scored for level of IPM adoption (e.g. Cornell IPM Elements, NRCS or other industry accepted method)?				
Is the owner/operator a Certified Pesticide Applicator? If so, Private or Commercial?				

AEM Tier 2 Worksheet: Pesticide Use		Potential Concern		
Factors Needing Assessment:	Lower 1	2	3	Higher 4
What is the level of training of the owner/operator and the pesticide applicator?	The applicator is appropriately certified as a pesticide applicator AND Pesticide labels are followed.	The owner is a commercial certified applicator and meets all supervision training requirements for employees doing the application. OR The owner is a private certified pesticide applicator and provides direct supervision to appropriately-trained employees doing the application. AND Pesticide labels are followed.	The owner is a certified pesticide applicator with appropriately-trained employees doing the application. AND Pesticide labels are followed.	No one involved in application is certified AND Pesticide labels are not always followed.
Is the EPA Worker Protection Standard followed?	Owner and employees are familiar with and fully complies with the U.S. EPA Worker Protection Standard program.		Owner and employees are aware of the US EPA Worker Protection Standard program but needs additional information.	Owner and employees do not know about the U.S. EPA Worker Protection Standard program.
Are weather conditions considered before applying pesticides?	Weather conditions are considered. Wind, storms, humidity and temperature are at levels favorable for spraying.			Pesticides are sprayed according to a pre-set schedule. Weather conditions are not considered.

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Factors Needing Assessment:	Lower 1	2	3	Higher 4
What criteria are used for pesticide selection?	Pesticide selections are made with consideration of efficacy, environmental risk (assessed by a resource professional using WIN-PST), restricted re-entry interval, and preservation of the natural enemies of the specified pest and days to harvest.	Pesticide selections are made with consideration of efficacy, consultation with a trade professional on environmental risk, restricted re-entry interval, and preservation of the natural enemies of the specified pest and days to harvest.	Pesticide cost and efficacy are considered when making pesticide selections.	Only product cost is considered when making pesticide selections.
Is application equipment properly and regularly calibrated?	Spray equipment is calibrated before each application.	Spray equipment is calibrated after changes of products, target pests, crop, and change in application equipment.	Spray equipment is calibrated at the beginning of each season only.	Regular calibration of equipment is not practiced.
Are well and springs in and near cropped fields identified?	All wells and springs are noted on field maps. AND Are visibly marked in the fields. AND Applicator is aware of presence and location of neighbor wells.	All wells and springs are noted on field maps AND Applicator has field maps while applying pesticides. AND Applicator is aware of presence of neighbor wells.	All wells and springs are noted on field maps AND Applicator knows all locations. AND Applicator is aware of presence of neighbor wells.	Wells and springs are not noted on field maps AND/OR Possibly unknown wells or springs exist on owned or rented fields.
What is the distance of applications from a well, spring or surface watercourse?	Applications are not made within the recharge area of a well or spring OR Applications exceed label restriction setbacks of a surface watercourse.	All geographic use restrictions and label precautions regarding groundwater and surface water are followed including minimum setback zones.		Applications are made adjacent to or over a well or spring. OR Setback requirements are not followed.

AEM Tier 2 Worksheet: Pesticide Use		Potential Concern		
Factors Needing Assessment:	Lower 1	2	3	Higher 4
What pesticide use records are kept?	Pesticide use records include: -restricted pesticides purchased -crops treated -product name -EPA Reg. Number -address of application -place of application -date applied -quantity applied -rates applied -method of application -applicator's name -target pests -pest monitoring records -weather conditions -stage of crop growth -stage of pest growth -apparent effectiveness AND Records are kept for at least 3 years.	Pesticide use records include: -restricted pesticides purchased -crops treated -product name -EPA Reg. Number -address of application -place of application -date applied -quantity applied -rates applied -method of application -applicator's name -target pests AND Records are kept for at least 3 years.	Pesticide use records include: -restricted pesticides purchased -crops treated - product name -EPA Reg. Number -address of application -place of application -date applied -quantity applied -rates applied -method of application -applicator's name -target pests AND Records of unrestricted pesticides are not retained (not acceptable for commercial certified applicators).	No records are kept. Chemicals used are known by memory and invoices only. OR Records for restricted pesticides are not kept for the required time period.
Are the pesticides used on the farm currently registered for use in New York State?				
Are pesticide drift and odor considered during application?				
Are neighboring crop fields considered during application?				

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Factors Needing Assessment:	Lower 1	2	3	Higher 4
Is there a history of pesticides in wells of nearby properties or nearby waterbodies?				
Have neighbors ever asked about the farms pesticide use?				
<p>Benefits to other resources can also be possible while working toward improved water quality. Taking stock of how existing and future management affect soil, water, air, plants, animals, energy, greenhouse gases, people, and economics can result in more effective plans and additional benefits to farms and communities both now and into the future.</p> <p>Additional Comments:</p>				