

Scored Crop Specific Standards

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4.01-a FARM/RANCH has access to IPM information resources.

Possible Score 100

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

4.01-a Verify Resources on hand and in use may include:

Crop: _____

- Crop and region-specific production guides
- In-season update bulletins, newsletters
- Association publications
- Industry publications
- Bookmarks to on-line resources
- Extension bulletins
- USDA crop profiles
- Other: _____

Crop: _____

- Crop and region-specific production guides
- In-season update bulletins, newsletters
- Association publications
- Industry publications
- Bookmarks to on-line resources
- Extension bulletins
- USDA crop profiles
- Other: _____

4.02-a FARM/RANCH identifies key pests (those which usually require action to prevent economic losses) and understands key pest biology

Possible Score 100

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

Scored Crop Specific Standards

4.02-a Verify FOR FULL POINTS, FARM/RANCH should be able to identify pest life cycle in relation to crop growth stages, crop-damaging life stage and important behaviors related to pest management. Key pest lists may include:

Crop: _____

- Insect pests
- Diseases
- Weeds
- Other: _____

Crop: _____

- Insect pests
- Diseases
- Weeds
- Other: _____

4.03-a FARM/RANCH identifies effective non-chemical and chemical strategies to prevent losses by each key pest.

Possible Score 100

Crop: _____

- Points Earned

Score: _____

Memo: _____

Crop: _____

- Points Earned

Score: _____

Memo: _____

4.03-a Verify FOR FULL POINTS, strategies should include both chemical and non-chemical options for each key pest, such as the following:

Crop: _____

- Cultural
- Mechanical
- Biological
- Chemical
- Other: _____

Crop: _____

- Cultural
- Mechanical
- Biological
- Chemical
- Other: _____

Scored Crop Specific Standards

4.04-a FARM/RANCH implements effective scouting, sampling and monitoring techniques for all key pests for which these techniques are available.

Possible Score 100

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

4.04-a Verify Strategies should include systematic application of one or more of the following for each key pest:

Crop: _____

- Visual sampling
- Insect traps, sweep nets
- Weed mapping
- Weather conditions
- Extension crop/region pest alerts/forecast
- Other: _____

Crop: _____

- Visual sampling
- Insect traps, sweep nets
- Weed mapping
- Weather conditions
- Extension crop/region pest alerts/forecast
- Other: _____

4.05-a FARM/RANCH uses science-based action thresholds to determine when to take action for each key pest for which thresholds are available.

Possible Score 100

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

Scored Crop Specific Standards

4.05-a Verify Thresholds may include the following:

Crop: _____

- Visual sampling counts for pests or damage
- Trap, sweep net counts
- Specific weather conditions favorable to disease development
- Economic Threshold
- Other: _____

Crop: _____

- Visual sampling counts for pests or damage
- Trap, sweep net counts
- Specific weather conditions favorable to disease development
- Economic Threshold
- Other: _____

4.06-a Pesticide applications are tied to a documented need.
Possible Score 40

Crop: _____

- Points Earned

Score: _____

Memo: _____

Crop: _____

- Points Earned

Score: _____

Memo: _____

4.06-a Verify Documented need may includes the following:

Crop: _____

- Pest over threshold based on scouting
- Specific weather conditions favorable to disease
- Written document supporting the need for preventative application
- Extension regional pest alerts
- Crop and site-specific history of pest problems
- Other: _____

Crop: _____

- Pest over threshold based on scouting
- Specific weather conditions favorable to disease
- Written document supporting the need for preventative application
- Extension regional pest alerts
- Crop and site-specific history of pest problems
- Other: _____

Scored Crop Specific Standards

4.06-b Pesticide use efficiency, e.g., use per unit of production, is measured and recorded.
Possible Score 20
Crop: _____
 Points Earned
Score: _____
Memo: _____

Crop: _____
 Points Earned
Score: _____
Memo: _____

4.06-c Pesticide use is tracked and reduced over time by transitioning to non-chemical strategies.
Possible Score 40
Crop: _____
 Points Earned
Score: _____
Memo: _____

Crop: _____
 Points Earned
Score: _____
Memo: _____

4.06-c Verify Non-chemical strategies may include:
Crop: _____
 Application techniques: e.g., auto-steering, spot application
 Cultural: e.g., insect trapping, barriers
 Biological: conserving, importing beneficials
 Other: _____

Crop: _____
 Application techniques: e.g., auto-steering, spot application
 Cultural: e.g., insect trapping, barriers
 Biological: conserving, importing beneficials
 Other: _____

Scored Crop Specific Standards

4.07-a Nutrient application rates reflect available nutrients and projected crop need, i.e., by nutrient management planning.

Possible Score 40

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

4.07-a Verify FOR FULL POINTS, nutrient application rates must be determined by one or more of the

Crop: _____

- Soil sampling
- Foliar analysis
- Nutrient crediting from prior to concurrent crops
- Crop nutrient removal and requirements
- Other science-based techniques (describe)

Crop: _____

- Soil sampling
- Foliar analysis
- Nutrient crediting from prior to concurrent crops
- Crop nutrient removal and requirements
- Other science-based techniques (describe)

4.07-b Nutrient use efficiency, e.g., use per unit of production, is measured and recorded.

Possible Score 20

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

Scored Crop Specific Standards

4.07-c Nutrient use efficiency is tracked and improved over time by transitioning to alternative strategies.
Possible Score 40
Crop: _____
 Points Earned
Score: _____
Memo: _____

Crop: _____
 Points Earned
Score: _____
Memo: _____

4.07-c Verify Strategies may include the following:
Crop: _____
 Auto-steering
 Variable rate application
 Cover crops, green manures
 Crop rotations with legumes
 Reduced tillage
 Timing application to match crop need, split applications
 Other: _____

Crop: _____
 Variable rate application
 Cover crops, green manures
 Crop rotations with legumes
 Reduced tillage
 Timing application to match crop need, split applications
 Other: _____

4.08-a FARM/RANCH meets minimum continuing education requirements for pesticide applicator
Possible Score 20
Crop: _____
 Points Earned
Score: _____
Memo: _____

Crop: _____
 Points Earned
Score: _____
Memo: _____

Scored Crop Specific Standards

4.08-b FARM/RANCH participated in IPM/sustainable ag training events in the previous year beyond minimum legal requirements.

Possible Score 40

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

4.08-b Verify FOR FULL POINTS, FARM/RANCH representatives must have participated in one or more events. Training events may include the following:

Crop: _____

Sustainable ag/IPM training sessions at industry association meetings

Field days held on farms in season

Certified Web based training

Extensions

Other: _____

Crop: _____

Sustainable ag/IPM training sessions at industry association meetings

Field days held on farms in season

Certified Web based training

Extensions

Other: _____

4.08-c Multiple IPM/sustainable ag topics were covered in specific crop training within the last year.

Possible Score 20

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

Scored Crop Specific Standards

4.08-c Verify FOR FULL POINTS, training within the past year must include three or more topics. Training topics may include:

Crop: _____

- Soil health/quality management
- Biological controls
- Scouting, monitoring and/or thresholds
- New pests
- Resistance management
- Other: _____

Crop: _____

- Soil health/quality management
- Cultural, mechanical and/or biological controls
- Scouting, monitoring and/or thresholds
- New pests
- Resistance management
- Other: _____

4.08-d Training records are written and include staff attending, name of session, topics addressed and date.

Possible Score 10

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

4.08-e FARM/RANCH provides, host or support events that include IPM/sustainable ag training.

Possible Score 10

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

Scored Crop Specific Standards

4.09-a FARM/RANCH can identify specific pesticide uses most at risk for pest resistance and can identify pesticides with different modes of action.

Possible Score 40

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

4.09-a Verify FOR FULL POINTS, both of the following should be true:

Crop: _____

Staff or consultant responsible for pesticide selection can group pesticides used by modes of action

These staff are aware of pesticide uses most at risk of resistance

Other: _____

Crop: _____

Staff or consultant responsible for pesticide selection can group pesticides used by modes of action

These staff are aware of pesticide uses most at risk of resistance

Other: _____

4.09-b In addition to reducing reliance on pesticides through scouting, monitoring, thresholds and/or spot treatments, other strategies are used to delay resistance.

Possible Score 50

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

Scored Crop Specific Standards

4.09-b Verify Other strategies to delay resistance to pesticides may include:

Crop: _____

- Rotate annual crops where appropriate
- Establish refuges (untreated areas) where appropriate
- Rotate or combine modes of action for pesticide uses most at risk of resistance
- Use maximum application rates for pesticide uses most at risk where appropriate
- Rotate chemical controls with non-chemical methods where appropriate
- Biological control
- Other: _____

Crop: _____

- Rotate annual crops where appropriate
- Establish refuges (untreated areas) where appropriate
- Rotate or combine modes of action for pesticide uses most at risk of resistance
- Use maximum application rates for pesticide uses most at risk where appropriate
- Rotate chemical controls with non-chemical methods where appropriate
- Biological control
- Other: _____

4.09-c FARM/RANCH formally assesses performance of pesticides most at risk of resistance to detect and report problems early.

Possible Score 10

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

4.09-c Verify Performance assessment may include:

Crop: _____

- In-field check or comparison strips
- Post-treatment pest counts in field
- Laboratory testing of samples collected on site
- Other: _____

Crop: _____

- In-field check or comparison strips
- Post-treatment pest counts in field
- Laboratory testing of samples collected on site
- Other: _____

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4.10-a FARM/RANCH rank pesticides used by potential for residue on crop at harvest or post-harvest, and reduce/restrict use of those with greatest residue potential.

Possible Score 20

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

4.10-b

FARM/RANCH rank pesticides used by acute toxicity to mammals and reduce use of most toxic.

Possible Score 20

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

4.10-b Verify Pesticide ranking by acute toxicity to mammals includes:

Crop: _____

Using signal word on product label, "Caution" signifying least-toxic

Other: _____

Crop: _____

Using signal word on product label, "Caution" signifying least-toxic

Other: _____

Scored Crop Specific Standards

4.10-c FARM/RANCH rank pesticides used by toxicity to beneficials, including pollinators, and reduce use of most toxic.

Possible Score 20

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

4.10-c Verify Pesticide ranking by toxicity to beneficials may include:

Crop: _____

Pollinator safety information on pesticide labels and/or EPA Pollinator Protection Box

New York State IPM Environmental Impact Quotient (EIQ) Calculator output

How to Reduce Bee Poisoning from Pesticides (Table 4), Pacific Northwest Extension Publication

Wild Pollinators of Eastern Apple Orchards and How to Conserve Them (page 17), Northeastern IPM Center, Cornell University, Penn State University, Xerces Society for Invertebrate Conservation

The Pesticide Manual by the British Crop Production Council

Windows Pesticide Screening Tool: Win-PST (<http://go.usa.gov/Kok>)

Pesticide Risk Mitigation Engine (www.ipmprime.com)

Other: _____

Crop: _____

Pollinator safety information on pesticide labels and/or EPA Pollinator Protection Box

New York State IPM Environmental Impact Quotient (EIQ) Calculator output

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Wild Pollinators of Eastern Apple Orchards and How to Conserve Them (page 17), Northeastern IPM Center, Cornell University, Penn State University, Xerces Society for Invertebrate Conservation

The Pesticide Manual by the British Crop Production Council

Pesticide Risk Mitigation Engine (www.ipmprime.com)

Other: _____

Scored Crop Specific Standards

4.10-d FARM/RANCH rank pesticides used by chronic toxicity to mammals and reduce use of most toxic.
Possible Score 20
Crop: _____
 Points Earned
Score: _____
Memo: _____

Crop: _____
 Points Earned
Score: _____
Memo: _____

4.10-d Verify Pesticide ranking by chronic toxicity to mammals may include:
Crop: _____
 MSDS information on chronic hazards
 US EPA Carcinogenicity rating, international agency for cancer research and/or California Proposition 65
 Reproductive/developmental toxicity (EPA, CA Prop 65)
 Endocrine system hazard rating
 Other: _____

Crop: _____
 MSDS information on chronic hazards
 US EPA Carcinogenicity rating, international agency for cancer research and/or California Proposition 65
 Reproductive/developmental toxicity (EPA, CA Prop 65)
 Endocrine system hazard rating
 Other: _____

4.10-e FARM/RANCH rank pesticides used by eco-toxicity and reduce use of those with greatest hazards.
Possible Score 20
Crop: _____
 Points Earned
Score: _____
Memo: _____

Crop: _____
 Points Earned
Score: _____
Memo: _____

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4.10-e Verify Pesticide ranking by eco-toxicity hazards may include:

Crop: _____

- Groundwater contamination
- Surface water contamination
- Birds
- Aquatic organisms
- Amphibians
- Ozone depleter
- Volatile organic compounds (VOCs)
- Other: _____

Crop: _____

- Groundwater contamination
- Surface water contamination
- Birds
- Aquatic organisms
- Amphibians
- Ozone depleter
- Volatile organic compounds (VOCs)
- Other: _____

4.11-a FARM/RANCH protects bees and other pollinators from pesticide applications.

Possible Score 40

Crop: _____

Points Earned

Score: _____

Memo: _____

Crop: _____

Points Earned

Score: _____

Memo: _____

Scored Crop Specific Standards

4.11-a Verify Strategies to protect pollinators from pesticide applications may include:

Crop: _____

- IPM practices are implemented to minimize pesticide use and risk to pollinators
- Pesticides toxic to bees are not applied to crops in bloom
- Pesticides are not allowed to drift onto adjacent blooming plants that are attractive to pollinators
- Pollinator habitat outside of cropped areas is identified, and if present, \geq 20 ft. buffers are maintained around habitat to reduce risk from pesticide drift
- Forecasted low temperatures or dew are considered when applying pesticide toxic to bees to cropped areas where bees are expect to be foraging; residues may remain toxic to bees at least twice as long under these conditions
- Pesticides toxic to bees are applied when pollinators are not active, e.g., evening, night
- When managed hives are present on the farm, beekeepers are informed when, where, how and what pesticide(s) are being applied
- Apiaries and sites on the farm containing crops sensitive to pesticide drift and are registered online at www.driftwatch.org or a similar system by the supplier/sub-supplier to enhance communication between growers and pesticide applicators to reduce drift incidents
- Other: _____

Crop: _____

- IPM practices are implemented to minimize pesticide use and risk to pollinators
- Pesticides toxic to bees are not applied to crops in bloom or to adjacent blooming plants that are attractive to pollinators
- Pollinator habitat outside of cropped areas is identified, and if present, \geq 20 ft. buffers are maintained around habitat to reduce risk from pesticide drift
- Forecasted low temperatures or dew are considered when applying pesticide toxic to bees to cropped areas where bees are expect to be foraging; residues may remain toxic to bees at least twice as long under these conditions
- Pesticides toxic to bees are applied when most pollinators are less active, e.g., evening, night
- When managed hives are present on the farm, beekeepers are informed when, where, how and what pesticide(s) are being applied
- Apiaries and sites on the farm containing crops sensitive to pesticide drift and are registered online at www.driftwatch.org or a similar system by the supplier/sub-supplier to enhance communication between growers and pesticide applicators to reduce drift incidents
- Other: _____