

Eco Stone Fruit Supplement

2025 growing season v. 3.4 – 03/12/2025

Participating Growers Must Also Complete Core Eco Protocol



Deadline for record submission: June 27, 2025

See Page 27 for list of revisions to this edition.

Changes to the 2025 protocols are highlighted in yellow

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EcoCertified™ is a project of:



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Download the Most Recent Protocol at <https://ipminstitute.org/services/eco-apple/>

<p>A. Minimum Requirements</p> <p>Audit guidance: The grower can describe how monitoring data, thresholds, visual observations, predictive models, Extension reports, or consultants are used to make pest- management decisions. All pesticide applications must be supported by monitoring records or predictive models (disease or insect). Records should be organized and easily interpreted by the auditor using concise statements which describe visual observations and well-organized data sheets with trap counts and dates of monitoring.</p> <p>Additional guidance for growers and scouts:</p> <ul style="list-style-type: none"> Monitoring and management practices for specific pests are described in this section and these guidelines must be used. Practices may be scored as N/A for pests not present or those which do not require direct management, monitoring is not required. This is not an exhaustive list. Pests not included in these guidelines that still require management, need to be monitored and documented to support pesticide applications. Refer to available Extension, University or consultant recommendations, or contact the IPM Institute if there are questions on how a pest not listed below should be monitored. 	<p>Pass, Fail or N/A (Explain Fail or NA)</p>
<p>1. Western flower thrips</p> <p>a. Are chemical control of thrips determined using monitoring data with observations documented in scouting reports? ^D</p> <p>Note: Monitoring should occur from pink through shuck fall. The action threshold is presence of thrips on 10% of fruit samples.</p> <p>Note: Eliminating broadleaf weeds in the fall may help to minimize overwintering populations.</p>	
<p>2. Peach scab</p> <p>a. Are peaches monitored for scab lesions from bloom through mid-July in blocks with a history of scab and observations documented in scouting reports? ^D</p> <p>Note: Scab spores overwinter on shoots and monitoring is very important to determine presence of infections. If scab is found on fruit it will quickly spread unless appropriate treatments are made.</p>	
<p>3. Green peach aphid (GPA)</p> <p>a. Are chemical control of GPA based on monitoring and thresholds documented in scouting reports? ^D</p> <p>Monitor for GPA from petal fall to one month after shuck fall.</p> <p>Note for peaches: Thresholds are an average of two or more colonies per tree between petal fall and shuck split and five or more colonies by late May.</p> <p>Note for nectarines: Threshold is one colony per tree at any given time on bearing trees.</p>	
<p>4. Japanese beetle</p> <p>a. Is chemical control for Japanese beetle not applied unless feeding injury to leaves or fruit is observed? ^D</p> <p>Note: Japanese beetle should be monitored from late summer through early fall. Control of Japanese beetle damage is important to minimize opportunity for brown rot infection from fruit feeding. Observations must be documented in scouting reports.</p>	

A. Minimum Requirements	Pass, Fail or N/A
<p>5. Greater peachtree borer (GPTB) and lesser peachtree borer (LPTB)</p> <p>a. Are pheromone traps used to monitor GPTB and LPTB? ^D</p> <p>Note: Trap catches with ten or more moths per week warrant control, or the presence of one or two larva or pupal casings per tree from scouting. Pheromone lures for GPTB are not pest-specific and other clear-wing moths, e.g., dogwood borer and lilac borer, may be caught in traps. Pheromone lures for LPTB are pest specific.</p>	
<p>6. Bacterial spot</p> <p>a. Are one or more copper applications used during the fall and/or spring to reduce bacterial spot inoculum in susceptible varieties with a history of or potential for bacterial spot? ^D</p> <p>b. Is control of bacterial spot after petal fall determined by monitoring for lesions on fruit and leaves and weather data indicating wetting periods favorable for bacterial spot infections? Document observations in scouting reports. ^D</p> <p>Note: Control of bacterial spot must be achieved preventatively through use of a protectant spray program.</p>	
<p>7. X-Disease</p> <p>a. Are broadleaf weeds, if present in blocks with varieties susceptible to X-disease controlled either through herbicide use or cultural controls, e.g., mechanical cultivators, mowing or mulching? If managed, document control methods in scouting reports ^D</p> <p>Note: Broadleaf weeds harbor leafhoppers which are X-disease vectors.</p>	
<p>8. Black knot – Plums</p> <p>a. Are black knots on vegetative terminal shoots monitored from dormancy through bloom? ^S</p> <p>b. Are infected shoots and limbs pruned during dormancy? Are pruning's destroyed, e.g., burned or buried, to eliminate inoculum? ^S</p> <p>c. Is chemical control of black knot applied between white bud and shuck split and justified by monitoring results, documented in scouting reports? ^D</p>	
<p>9. Perennial canker (Also called Valsa, Cytospora, Leucostoma canker)</p> <p>a. Are cultural controls used to prevent infections, e.g., maintaining wide branch angles, removing infected cankers during dormancy, removing wild hosts and abandoned fruit trees? ^S</p> <p>b. Are insects and diseases (greater and lesser peachtree borers, brown rot, etc.) that serve as vectors of perennial canker managed effectively? ^S</p>	

A. Minimum Requirements	Pass, Fail or N/A
<p>10. Powdery mildew</p> <p>a. Are control decisions determined by scouting for the presence of white mycelial growth on young leaves and documented in scouting reports? Are fungicides, if needed, applied between petal fall through pit hardening? ^D</p> <p>b. Are applications of chemical controls ended once pit-hardening stage is reached and all cultivars become resistant? ^D</p> <p>Note: Once fruit have reached pit-hardening stage, susceptible cultivars become resistant.</p>	
<p>11. Peach leaf curl</p> <p>a. If justified by monitoring and documented in scouting reports, is cultivar susceptibility and/or block history, chemical control for peach leaf curl applied in the fall after 90% foliage drop or in the spring before bud swell? ^D</p> <p>b. Are young leaves during bloom for foliar symptoms of peach leaf curl monitored and documented in scouting records? ^D</p> <p>Note: Monitoring should be done to determine effectiveness of chemical control and determine necessity of fall or spring pesticide application and documented in scouting records.</p> <p>Note: Treatments for peach leaf curl are not effective once symptoms are present.</p>	
<p>12. Plum curculio</p> <p>a. After the first application of pesticide for plum curculio at or after shuck split, are further treatment decisions based on sampling fruit for any sign of fresh injury, fruit diameter reaching 6-7 mm and/or a degree-day-based oviposition model? Sampling results and injury observations must be documented in scouting reports. ^D</p> <p>Note: The risk for plum curculio immigration into peach orchards likely ends at 350-degree days (base 50°F) from peach shuck split.</p> <p>Note: Peach shuck split and McIntosh petal fall occur at approximately the same time in most regions of New York and New England. Accumulation of about 308-degree days (base 50°F) from McIntosh petal fall typically signals the end of plum curculio movement from overwintering sites into orchards.</p> <p>b. Are second pesticide applications for plum curculio (and third if necessary) perimeter-row sprays determined by scouting observations documented in reports, rather than whole-block treatments? ^D</p>	

A. Minimum Requirements	Pass, Fail or N/A
<p>13. Brown rot</p> <ul style="list-style-type: none"> a. Fungicides are rotated to different modes of action between sprays to prevent brown rot resistance. ^D b. Brown rot infections and mummies are scouted and monitored throughout the growing season and documented in spray records. ^D 	
<p>14. Mites</p> <ul style="list-style-type: none"> a. Are post-bloom miticides applied only after mites and mite predators have been systematically sampled in each block and determined predators are insufficient to provide control? If post-bloom miticide necessary, sampling results must be documented in scouting reports. ^D <p>Note: Systematic sampling includes viewing a pre-determined number of leaves and trees in each block and using a quantitative threshold for determining need to treat such as those found in the <i>New England Tree Fruit Management Guide</i>, the <i>Cornell Pest Management Guidelines for Commercial Tree Fruit Production</i> or the <i>Pennsylvania Tree Fruit Production Guide</i>.</p> <ul style="list-style-type: none"> b. Are no more than two post-bloom applications of miticide made per season? ^D 	
<p>15. Oriental fruit moth and lesser appleworm</p> <ul style="list-style-type: none"> a. Are oriental fruit moth and/or lesser appleworm not treated unless need is indicated by block or region history of economic injury or by monitoring using pheromone traps or sampling for damage and documented in scouting reports? ^D b. If oriental fruit moth and/or lesser appleworm are treated, are degree days used to calculate treatment timing? ^D <p>Note: Where a larvacide is used, the first treatment is applied at 150-200 degree days (base 45°F) after the first-sustained flight (biofix) of first generation oriental fruit moth. Second and third generation oriental fruit moth may be controlled at 1150-1200 and then 2100-2200 degree days from biofix. If pressure is severe, as indicated by pheromone traps or fruit damage, additional applications may be applied 10-14 days later. The threshold for oriental fruit moth is 15 moths per week during first generation and ten moths per week during second and third generation.</p>	
<p>16. Tarnished plant bug and native stink bugs</p> <ul style="list-style-type: none"> a. Are treatments for tarnished plant bug and native stink bugs based on scouting and thresholds where available? If treatment is necessary, sampling results must be documented in scouting reports. ^D b. Is the orchard floor managed to control tarnished plant bug and stinkbugs, e.g., mow after insecticide applications and control broad-leaf weeds with mowing or herbicides? ^S <p>Note: Sample for populations of plant and stink bugs between petal fall and shuck fall. White sticky boards have minimal success in peach orchards. Sample 100 to 200 fruit per block for feeding injury. Suggested threshold: Three bleeding sites per tree at pink or petal fall or 1-2% of fruit with new injury.</p>	

A. Minimum Requirement	Pass, Fail or N/A								
<p>17. Apple maggot – Plums</p> <p>a. Are treatment decisions for apple maggot based on monitoring with three or more red sphere traps per 10-15 acre block and a threshold of an average of one per trap if using unbaited traps or an average of five per trap if using odor-baited traps? Document trap counts in scouting reports ^D</p> <p>Use more traps per acre in small blocks and other blocks with lengthy perimeters vs. area. At the end of the effective period of the pesticide, clean traps and continue to monitor.</p> <table border="0"> <tr> <td>937 +/- 132 DD</td><td>First catch on red sphere</td></tr> <tr> <td>1344 +/- 200 DD</td><td>First oviposition punctures noted</td></tr> <tr> <td>1631 +/- 214 DD</td><td>Peak adult emergence</td></tr> <tr> <td>2095 +/- 188 DD</td><td>Apple maggot flight subsiding</td></tr> </table> <p><i>Table A. Adapted from A. Agnello and H. Reissig, Cornell University</i></p> <p>Table A. Apple maggot degree-day model for predicting emergence and egg laying, using 50°F as a base. Adapted from A. Agnello and H. Reissig, Cornell University.</p>	937 +/- 132 DD	First catch on red sphere	1344 +/- 200 DD	First oviposition punctures noted	1631 +/- 214 DD	Peak adult emergence	2095 +/- 188 DD	Apple maggot flight subsiding	
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<p>18. Obliquebanded leafroller</p> <p>a. Is the overwintering generation of obliquebanded leafroller not treated unless need is indicated by systematic sampling for infested clusters or terminals, e.g., 3% infested using the sampling procedure described in the <i>Cornell Guide for Pest Management of Tree Fruit</i>? If treated, sampling results, observations and historical data must be documented in scouting reports. ^D</p> <p>b. Are degree days used to calculate treatment timing for summer generations of obliquebanded leafroller? ^D</p> <p>Note: First treatment is applied at 360 degree days (base 43°F) after the first-sustained flight (biofix) and a second applied 10-14 days later. Where oriental fruit moth is controlled chemically, control of obliquebanded leafroller should also be achieved. Where oriental fruit moth is controlled with pheromone mating disruption, additional controls for obliquebanded leafroller may be necessary.</p>									
<p>19. Spotted wing drosophila (SWD): Peach, plum and nectarine</p> <p>a. If SWD requires chemical control, is monitoring conducted with baited traps to determine when it becomes active in the orchard, and documented in scouting reports? ^D</p> <p>Note: Peaches and nectarines harvested with a firmness of 8-12 lb. (pounds of force) for wholesale or pick-your-own are not a preferred host for SWD. Research in Michigan suggests peaches, plums and nectarines become susceptible when fruit reaches 4 lb.. of firmness. Use a penetrometer with the 5/16-inch head “pear tip” to measure fruit. For guidance on monitoring visit, fruit.cornell.edu/spottedwing/monitoring/.</p>									


A. Minimum Requirements	Pass, Fail or N/A
<p>20. Spotted wing drosophila (SWD): Cherry</p> <p>b. If SWD requires chemical control, is monitoring conducted with baited traps to determine when it becomes active in the orchard? Document trap observations in scouting reports. ^D</p> <p>Note: Tart and sweet cherries become vulnerable to SWD when fruit starts to turn color. Management programs should begin once fruit has lost its green color AND one or more adult SWD are captured in traps. Make an application of an “excellent” rated product at least every seven to eight days through harvest. Research from Michigan State University Extension from 2017 has revealed additional important practices, such as row mowing and reducing canopy density that reduce risk of SWD infestation. Monitor traps from fruit set through harvest, fruit.cornell.edu/spottedwing/monitoring/.</p>	
<p>21. Brown marmorated stink bug (BMSB)</p> <p>a. Are blocks at risk for BMSB scouted for BMSB beginning after petal fall and baited traps are used to monitor BMSB through harvest? Document trap counts in scouting reports. ^D</p> <p>In blocks where one adult BMSB is observed within the orchard perimeter along 100 feet of row, or feeding injury is observed, management should begin. Note: BMSB adults disperse into peaches in New Jersey around 170 DD (base 57). Begin to accumulate degree days when day length reaches 13.5 hours; in NJ that is April 22. BMSB can complete their entire lifecycle on peach alone and second-instar nymphs through adults can cause feeding injury. Place traps on perimeter between orchard and hedgerow. Trap thresholds are not established in peaches.</p> <p>b. Are perimeter sprays used to manage BMSB until BMSB nymphs, adults or feeding damage are found in the interior of the block? ^D</p> <p>Note: The perimeter is defined as the first four rows or up to 50 feet from the orchard edge. The majority of adult BMSB stop along the border edge for seven days before going into the interior. This movement is continuous throughout the entire season. Perimeter sprays are found to be most effective on blocks up to 10 acres in size.</p> <p>c. Are alternate-row, middle or full-block cover sprays applied once BMSB nymphs, adults or feeding are found within the interior of the block or blocks that require treatment are larger than 10 acres? ^D</p> <p>d. For each insecticide application for BMSB, is efficacy against other pests considered, e.g., if also effective against apple maggot, no additional application is made for apple maggot during the effective period? ^D</p> <p>Note: See the <i>Eco Apple Quick Guide</i> for a list of approved insecticides for BMSB that have efficacy against other pests. Brown rot infections increase under high BMSB pressure.</p>	

Superscripts indicates practice-verification process. Reference the following throughout entire document:

^D Verified during desk audit via submitted paperwork. ^S Verified during site audit


B. Advanced Practices Note: Please list block ID for any blocks not earning points. Audit guidance: The grower can describe how different cultural/horticultural practices, advanced monitoring and predictive models, avoidance measures, and other non-chemical practices mitigate pesticide risk, improve crop quality and enhance the IPM system on the farm. There should be a clear rationale for why the practice was chosen; the benefits that have been observed, and how the practice is implemented and maintained.	Points eligible	Points earned
1. Are no miticides used other than an early season oil spray and observations documented in scouting reports ? Mites are managed principally by conserving natural enemies. ^D	1	
2. Are mite thresholds adjusted upwards based on varietal susceptibility, current or anticipated weather, or other factors reducing potential for economic injury? ^D	1	
3. Is apple maggot (plums) controlled without pesticide sprays, i.e., trap out, and documented in trap counts in scouting reports ? ^D	2	
4. Are all abandoned pome and stone fruit trees within 100 yards removed to reduce immigration of insect pests? ^S	1	
5. Are tree row volume applications used? ^D Note: Do not use tree-row volume (TRV) to adjust pesticide rates where label lists as a rate per acre. Use TRV to calculate the appropriate volume of water to achieve desired spray coverage. Document TRV calculations in prayer calibration records.	1	
6. Are varieties with lower susceptibility to bacterial spot grown? ^S	2	
7. Are rodents and rabbits managed without rodenticides, e.g., close mowing, mouse guards, removing drops, encouraging predators and painting trunks with white-latex paint? ^D	1	
8. Are chokecherries and wild sweet cherries within a 500 feet radius of the orchard; that are a host for X-disease, removed? ^S	1	
9. Are biopesticides used, e.g., <i>Bacillus subtilis</i> , <i>Bacillus thuringiensis</i> , granulosis virus. ^D Note: 0.5 points may be scored for each application, for a maximum of two points. Please list products and application dates:	0.5 - 2	
10. Where oriental fruit moth requires intervention, is mating disruption used? ^D Note: Mating disruption must be documented in application records. Insecticides applied after bloom for control of plum curculio will also have efficacy on first generation oriental fruit moth. Mating disruption for oriental fruit moth may be applied before second generation in mid-June. Mating disruption dispensers lasting 90 days will also provide control in areas with a third generation of oriental fruit moth. Note: Mating disruption is often still effective in blocks smaller than the minimum recommended acreage. In small blocks, use higher application rates according to the label. Use pheromone traps to determine if additional insecticide applications are necessary.	2	

B. Advanced Practices Note: Please list block ID for any blocks not earning points.	Points eligible	Points earned
<p>11. Is mating disruption used for peachtree borers? ^D</p> <p>Note: Mating disruption must be documented in application records.</p> <p>Note: Isomate PTB-Dual dispensers should be placed in orchard at shuck split prior to flight at a rate of 150 ties per acre. Higher rates (200-250 ties/A) should be used for outside edges of border blocks, areas previously without mating disruption and have high populations or in blocks less than five acres.</p> <p>Note: Mating disruption is often still effective in blocks smaller than the minimum recommended acreage. In small blocks, use higher application rates according to the label. Use pheromone traps to determine if additional insecticide applications are necessary.</p>	<p>2</p>	
<p>12. Are buildings inspected for overwintering populations of BMSB? Are large aggregations of overwintering BMSB removed and disposed of in a tightly sealed trash bag? ^S</p> <p>Note: Anecdotal evidence suggests that removal of overwintering BMSB may help reduce populations, each female may lay up to 500 eggs in a life cycle.</p>	<p>2</p>	
<p>13. Are no post-harvest fungicides used? ^D</p>	<p>1</p>	
<p>14. Are trunks painted with white latex paint to prevent trunk splitting and reduce winter sunscald? ^S</p> <p>Note: Trunk splitting can increase attractiveness of trees to dogwood borers.</p>	<p>2</p>	
<p>15. Are base of trunks kept weed-free to reduce environments attractive to borer species? ^S</p>	<p>1</p>	
<p>16. Are trees heavily infested ($\geq 75\%$ dead or dying) by borer larvae removed from the orchard and burned before the following spring? Are stumps also be removed? Are all large pruning's and brush piles either flailed or burned? ^S</p>	<p>1</p>	
<p>17. Is canker infested wood removed from trees and destroyed to promote rapid decomposition, which reduces overwintering inoculum? ^S</p>	<p>1</p>	
<p>18. Are row middles mowed and maintained to reduce risk of SWD infestation? ^S</p> <p>Note: Frequent mowing helps to reduce humidity and create a hot/dry microclimate not favored by SWD.</p>	<p>1</p>	

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<p>How to use this table</p> <p>Pesticides in the left column, when combined with the pesticide in the corresponding right column, are known tank-mix synergies. If a synergy is identified, the goal is to either substitute for a different fungicide or insecticide that will not poses the synergy risk to pollinators. This is not a list of prohibited pesticides in stone fruits, rather the goal is to avoid combining these specific tank mixtures between pink and first cover.</p> <p>Active-Ingredient Synergies</p> <p>These active ingredients, when tank mixed, have been found to synergize and increase risk to pollinators. This increase in risk includes increasing overall acute toxicity and sub-lethal affects which impact survival of developing bee larva and alter feeding behavior of worker bees. Some products may pose very little risk to pollinators when used alone. Many of the insecticides on this list still pose high risks to pollinators and may be applied safely by avoiding applications during periods of pollinator activity.</p> <p>Note:*Indicates formulated product with two active ingredients and the second active ingredient is not a synergist and therefore not listed.</p>																																																																													

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^D Verified during desk audit via submitted paperwork ^S Verified during site audit

B. Advanced Practices (Continued)	Points eligible	Points earned
<p>20. Are cherry trees with large canopies actively pruned to reduce risk of SWD infestation? ^S</p> <p>Note: Pruning helps to reduce humidity within the canopy, enhance light penetration and aids coverage of insecticide applications.</p>	1	
<p>21. Are cultural controls used, e.g., removal of thinned fruit, infected twigs, mummified fruit and all fruit at harvest to prevent Brown rot (blossom blight)? ^S</p>	1	
<p>22. Is RIMpro Cloud Service (rimpro.eu) used for pest and disease management? ^D</p> <p>Note: Grower is able to demonstrate use of Rimpro during site audit.</p>	3	
<p>23. Are glyphosate-based herbicides not used? ^D</p>	2	
<p>24. Are the nitroguanidine neonicotinoids of Actara (thiamethoxam), Belay (clothianidin), Admire Pro/Alias/Wrangler/Montana (imidacloprid) not used? ^D </p>	2	
<p>25. Are biopesticides used, e.g., <i>Bacillus subtilis</i>, <i>Bacillus thuringiensis</i>? ^D</p> <p>Note: 0.5 points may be scored for each application, for a maximum of two points. Please list products and application dates:</p>	0.5 - 2	
Total points eligible	40	
Total points earned		

Pesticide Hazard and Risk Ranking

The following practices and products are listed for Northeast fruit production. Pesticide active ingredients have been evaluated for necessity to produce quality stone fruit in the Northeast in commercial quantities, and for hazards to humans, natural enemies and other non-targets, potential to contaminate groundwater and resistance management. This is not an exhaustive list of practices or products.

Only fungicides, herbicides and insecticides which have been evaluated against our criteria and appear on the list of approved pesticides may be applied on enrolled blocks. If a fungicide, herbicide or insecticide is not included, please contact the IPM Institute to request a product evaluation. The IPM Institute will confirm receipt of requests within one business day and respond with a resolution within one to three business days.

Note: Trade names are for reference only. Additional trade names may also be available.

Pesticide hazards were analyzed using the database at www.pesticideinfo.org, which collates information from recognized authorities such as US EPA and individual State Lead Agencies (SLAs) for pesticide regulation. SLAs are housed in state departments of agriculture or state environmental management agency, depending on the state.

The Pesticide Risk Tool (pesticiderisk.org) and Windows Pesticide Screening Tool, WIN-PST (go.usa.gov/Kok), have also been used to evaluate pesticide risks.

The following criteria were used to evaluate pesticides:

Acute toxicity to wildlife, fish, aquatic invertebrates: Product label, Pesticide Risk Tool

Acute toxicity: CAUTION, WARNING or DANGER Label/US EPA, Pesticide Risk Tool
Neurotoxin: Cholinesterase inhibitor or listed on Toxics Reduction Inventory maintained by US EPA

Possible, likely, probable carcinogen: US EPA, State of California, and International Agency for Research on Cancer

Reproductive/developmental toxin: US EPA, State of California, Pesticide Risk Tool

Toxic to pollinators, key natural enemies/secondary pests: Product label, Extension recommendations, variety of published sources

Toxic to wildlife: Product label, Pesticide Risk Tool

Suspected endocrine disruptor: Illinois EPA, Keith, Colburn or Benbrook lists

Broad spectrum pesticide: Extension recommendations

Resistance risk: Extension recommendations

Potential or known groundwater contaminant: State of California, variety of published sources

The following process was used to determine use and use restrictions:

- a. Pesticide options currently in use by growers, or suggested by growers or others, are reviewed for status re the criteria listed above.
- b. There are thousands of pesticides labeled for use specialty crops in the United States. Only products currently in use or with strong potential for use, as suggested by participating growers and others, are reviewed for Eco Certified..

- c. Pesticides that are useful for our pest issues that do not have hazards as per our criteria, or pesticides with relatively readily mitigated hazards, are placed in “Low-Risk Pesticides, No Restrictions” or “Moderate to High-Risk Pesticides, No Restrictions” category. For example, for most products, aquatic toxicity is readily addressed by following label restrictions to avoid contamination of water bodies. **No pesticides may be used without justification, e.g., sampling and thresholds, or weather monitoring, or block history of a problem where sampling or monitoring methods and thresholds are not available.**
- d. Pesticides with hazards that are less readily mitigated are placed in the “Do Not Use” category. These are then reviewed for necessity in order to produce commercial quality fruit economically. Our goal is to limit the use of products with hazards to those we cannot do without.
- e. Products which are needed to address a key pest are then moved to the “Use with Restrictions (Moderate to High-Risk Pesticides)” category. Measures that we can take to mitigate hazards are included, e.g., limiting the number of applications, or limiting use to one pest issue where the product is critical for adequate control.
- f. Other products with similar hazards are not moved to the “Use with Restrictions (Moderate to High-Risk Pesticides)” category because the hazard profile is similar to those already in that category, but only if their use is a critical need that we identify as a group.
- g. Approving pesticides for Eco Certified is a subjective process. Definitive data are not available on many of the considerations here, e.g., thresholds are lacking for many pests, efficacy is variable, and development of resistance is a concern if available modes of action are limited. Above all, an important goal of the program is to identify pesticide products which balance the need for products with acceptable efficacy and minimal or acceptable levels of risk. Coming to a consensus on pesticide issues requires input from growers and experts but realize this will not be possible in all cases. The protocol belongs to Red Tomato, which delegates the final decision on contentious issues to the IPM Institute.
- h. A timeline for new products that do not have approved labels by the annual meeting will be provided, e.g., Section 18 exemption label approvals for brown marmorated stink bug and mid-season product releases. These products will be listed under their appropriate use category as per the review process and will include anticipated release date. **Products may not be used until a label has been approved for the state in which they will be used.** Applications made prior to the label approval date will be considered a protocol violation and result in disqualification of the blocks which received treatment.

Pesticide Use Restrictions

IMPORTANT: All of the following products may not be registered in every state. Please confirm the product is labeled for use in your state!

LOW-RISK PESTICIDES, NO RESTRICTIONS BEYOND THOSE ON THE PRODUCT LABEL

1. These pesticides may be used to the full extent of the pesticide label and pose minimal risk to environmental and human health.
2. Use only after systematic scouting or weather monitoring and science-based thresholds, or according to previous history where thresholds are not available.
3. Pesticides included are not a guarantee of efficacy. Some products will not be as effective as other products against specific target pests.

Trade Name	Active Ingredient	Best Practice
Insect/Mite Management		
CheckMate, Disrupt, IsoMate; Cidetrak hand- applied and sprayable pheromone mating disruption formulations	1-dodecanol, 1-tetradecanol	Pheromone mating disruption is currently available for borers and oriental fruit moth.
PFR-97	<i>Isaria fumosorosea</i>	
Spear-LEP	GS-omega/kappa-Htx-Hv1a	Improved efficacy when tank mixed with <i>Bt</i> products.
Surround	kaolin	May be applied prior to trap catches based on historical scouting data or degree day model.
Venerate	<i>Burkholderia</i> spp.	
Disease Management		
Double Nickel	<i>Bacillus amyloliquefaciens</i>	
Regalia	<i>Reynoutria sachalinensis</i>	
Serenade	<i>Bacillus subtilis</i>	
Weed Management		
Avenger AG	d-limonene	
Other		
Plantskydd	blood meal	

MODERATE to HIGH-RISK PESTICIDES, NO RESTRICTIONS BEYOND THOSE ON THE PRODUCT LABEL

1. These pesticides may be used to the full extent of the pesticide label. Moderate to high risks to environmental and human health are present.
2. Use only after systematic scouting or weather monitoring and science-based thresholds, or according to previous history where thresholds are not available.
3. Pesticides included are not a guarantee of efficacy. Some products will not be as effective as other products against specific target pests.

Trade Name	Active Ingredient	Concerns	Best Practice
Insect/Mite Management			
Acramite 50 WS	bifenazate	toxic to bees	
Avaunt	indoxacarb	toxic to mammals, birds, fish, aquatic invertebrates, highly toxic to bees	
Aza-Direct, Neemix	azadirachtin	toxic to bees, suspected endocrine disruptor, toxic to fish and aquatic invertebrates	
Agree, Biobit, Deliver, Dipel, Javelin	<i>Bacillus thuringiensis</i>	runoff risk to surface water	
Beleaf 50 SG	flonicamid	Possible carcinogen and potential groundwater contaminant.	
Centaur WDG	buprofezin	potential groundwater contaminant	
Damoil	mineral oil	toxic to fish	Performance is best when relative humidity is less than 65% and temperatures are warmer than 60°F.
Entrust	spinosad	toxic to bees	Do not apply back-to-back applications of this mode of action for SWD.
Envior 2 SC	spiroticlofen	toxic to fish and aquatic invertebrates, toxic to bees	
Esteem 35 WP	pyriproxyfen	toxic to fish and aquatic invertebrates	
Portal	fenpyroximate	highly toxic to fish and aquatic invertebrates	
Grandevo	<i>Chromobacterium subtsugae</i>	toxic to aquatic invertebrates	
Intrepid 2F	methoxyfenozide	hazardous to aquatic invertebrates, potential groundwater contaminant	
Movento	spirotetramat	toxic to aquatic invertebrates and oysters, potential groundwater contaminant, potentially toxic to honey bee larvae	
Zeal WP	etoxazole	toxic to aquatic invertebrates	

MODERATE to HIGH RISK-PESTICIDES, NO RESTRICTIONS BEYOND THOSE ON THE PRODUCT LABEL			
Trade Name	Active Ingredient	Concerns	Best Practice
Disease Management			
Captan	captan	acute toxicity to workers, toxic to fish, carcinogen under prolonged exposure to high doses	1. Tank mixtures not recommended between petal fall and first cover to reduce risk of fruit russetting. 2. Use CAUTION or WARNING labels where possible.
C-O-C-S	copper oxychloride, copper sulfate	toxic to fish and aquatic invertebrates	
Cueva	copper octanoate	leaching risk to ground and surface water	
Cuprofix Ultra 40 Disperss	copper sulfate	toxic to bees	
Elevate 50 WDG	fenhexamid	toxic to fish and aquatic invertebrates, potential groundwater contaminant	
Flowable Sulfur	sulfur	toxic to small mammals and fish	
Lime-Sulfur Solution	calcium polysulfide	toxic to birds, surface water contaminant	
Mycoshield	oxytetracycline	known developmental and reproductive toxin	
OSO 5%SC	polyoxin D zinc salt	developmental/reproductive toxin	
Phostrol, Fosphite	phosphorus acid	toxic to fish, surface water contaminant	
ProPhyt	potassium phosphite	toxic to fish, surface water contaminant	
Scholar SC	fludioxonil	toxic to fish and aquatic invertebrates	
Syllit FL	dodine	acute toxicity to workers, resistance	Do not use where resistance is suspected.
Quintec	quinoxifen	high runoff potential, toxic to fish and other aquatic invertebrates	
Vivando	metrafenone	toxic to fish and aquatic invertebrates	

MODERATE to HIGH RISK-PESTICIDES, NO RESTRICTIONS BEYOND THOSE ON THE PRODUCT LABEL			
Trade Name	Active Ingredient	Concerns	Best Practice
Weed Management			
Aim EC	carfentrazone-ethyl	acute toxicity to wildlife, fish, aquatic invertebrates	May also be used for control of root suckers.
Alion	indaziflam	acute toxicity to wildlife, fish, aquatic invertebrates, potential/ known groundwater contaminant	
Chateau	flumioxazin	toxic to aquatic invertebrates	
Fusilade DX	fluazifop-P-butyl	toxic to fish, possible reproductive/developmental toxin	
Matrix	rimsulfuron	potential groundwater contaminant	
Poast Herbicide	sethoxydim	potential groundwater contaminant	
Prowl H2O	pendimethalin	moderate aquatic toxicity, potential ground water contaminant	
Rely	glufosinate-ammonium	moderate risk bird reproductive	
Scythe	pelargonic acid	acute toxicity to workers	
Stinger	clopyralid	potential groundwater contaminant, resistance	
Treevix	saflufenacil	potential surface and groundwater contaminant	
Venue	pyraflufen-ethyl	moderate aquatic toxicity, potential groundwater contaminant	
Other			
Accede	1-aminocyclopropane	acute toxicity to workers, aquatic toxicity	

USE WITH RESTRICTIONS (MODERATE to HIGH-RISK PESTICIDES), RESTRICTIONS WHICH EXCEED THE PRODUCT LABEL

1. These pesticides have additional restrictions which supersede the pesticide label to mitigate moderate to high risks to environmental and human health.
2. Use with justification and only when less hazardous alternatives (e.g., those listed above) are not adequate.
3. Use only after systematic scouting or weather monitoring and science-based thresholds, or according to previous history where thresholds are not available.
4. Pesticides included are not a guarantee of efficacy. Some products will not be as effective as other products against specific target pests.

Trade Name	Active Ingredient	Concerns	Eco Stone Fruit Restrictions	Best Practice
Insect/Mite Management				
Insecticide-coated apple maggot spheres			May only be used through participation in Extension or USDA research.	
Delegate WG	spinetoram	toxic to bees, toxic to aquatic invertebrates	Do not expose more than one generation of the target pest to this mode of action alone.	
Versys, Sefina	afidopyropen	toxic to bees, acute-aquatic toxicity	Do not apply until after bloom.	
Diamides				
Altacor	chlorantraniliprole	toxic to aquatic organisms and certain beneficials, potential groundwater contaminant	Do not expose more than one generation of the target pest to this mode of action alone.	
Exirel	cyantraniliprole	toxic to bees, toxic to aquatic invertebrates, potential groundwater contaminant	1. Do not apply until after bloom. 2. Do not expose more than one generation of the target pest to this mode of action alone.	
Verdepryn 100 SL	cyclaniliprole	toxic to bees, toxic to aquatic invertebrates	1. Do not apply until after bloom. 2. Do not expose more than one generation of the target pest to this mode of action alone.	

USE WITH RESTRICTIONS (MODERATE to HIGH-RISK PESTICIDES), RESTRICTIONS WHICH EXCEED THE PRODUCT LABEL				
Trade Name	Active Ingredient	Concerns	Eco Stone Fruit Restrictions	Best Practice
Insect/Mite Management				
Neonicotinoids				
Assail	acetamiprid	toxic to wildlife, toxic to bees, may result in spider mite flare up, potential groundwater contaminant	1. Do not expose more than one generation of the target pest to this mode of action alone.	
Nitroguanidine Neonicotinoids				
Actara	thiamethoxam	toxic to wildlife, highly toxic to aquatic invertebrates, highly toxic to bees, potential groundwater contaminant	1. Limit to one application per season in 2025. An exemption may be applied for to allow a second application (See page 4. Core Eco Protocol). 2. Do not apply until after bloom. 3. Do not expose more than one generation of the target pest to this mode of action alone.	Additional use restrictions for New York producers, see product label.
Belay	clothianidin	toxic to aquatic invertebrates, highly toxic to bees, potential groundwater contaminant		Not registered in New York.
Admire Pro, Alias, Montana	imidacloprid	toxic to aquatic invertebrates, toxic to bees, toxic to earthworms, toxic to wildlife		
Pyrethroids				
Asana XL	esfenvalerate	extremely toxic to fish and aquatic invertebrates, highly toxic to bees, toxicity to beneficials, suspected endocrine disruptor	1. Use for tarnished plant bug, stink bugs and SWD only. 2. Do not apply back-to-back applications of this mode of action for SWD.	
Baythroid XL	beta-cyfluthrin	acute toxicity to workers, broad spectrum, highly toxic to bees, fish and aquatic invertebrates	1. Use for tarnished plant bug, stink bugs and SWD only. 2. Do not apply back-to-back applications of this mode of action for SWD.	
Brigade WSB, Bifenture 10DF, Bifenture EC	bifenthrin	toxic to bees, earthworms, aquatic invertebrates and fish, acute toxicity to workers, possible carcinogen, developmental or reproductive toxin, suspected endocrine disruptor	Use for BMSB only.	

USE WITH RESTRICTIONS (MODERATE to HIGH-RISK PESTICIDES), RESTRICTIONS WHICH EXCEED THE PRODUCT LABEL				
Trade Name	Active Ingredient	Concerns	Eco Stone Fruit Restrictions	Best Practice
Pyrethroids continued				
Danitol	fenpropathrin	toxicity to beneficials, acute aquatic toxicity, highly toxic to bees	1. Use for tarnished plant bug, stink bugs and SWD only. 2. Do not apply back-to-back applications of this mode of action for SWD.	Additional use restrictions for New York producers, see product label.
Declare, Proaxis	gamma-cyhalothrin	highly toxic to bees, toxic to wildlife, fish and aquatic organisms, suspected endocrine disruptor, broad-spectrum	Use for tarnished plant bug and stink bugs only.	
Leverage 360	beta-cyfluthrin, imidacloprid	acute aquatic toxicity, broad-spectrum, highly toxic to bees	1. Use for tarnished plant bug, stink bugs and SWD only. 2. Do not apply back-to-back applications of this mode of action for SWD.	
Mustang, Mustang Maxx	zeta-cypermethrin	highly toxic to bees, acute toxicity to workers, toxic to beneficials, suspected endocrine disruptor, possible carcinogen	1. Use for tarnished plant bug, stink bugs and SWD only. 2. Do not apply back-to-back applications of this mode of action for SWD.	
PyGanic EC	pyrethrins	toxic to aquatic invertebrates and beneficials, highly toxic to bees	Use for tarnished plant bug and stink bugs only.	
Pyrenone crop spray	piperonyl butoxide, pyrethrins	highly toxic to bees, highly toxic to fish, broad-spectrum, suspected endocrine disruptor, possible carcinogen	Use for tarnished plant bug and stink bugs only.	
Besiege	chlorantraniliprole, lambda-cyhalothrin	highly toxic to bees, acute toxicity to workers, toxic to beneficials, suspected endocrine disruptor, acute aquatic toxicity	Use for tarnished plant bug and stink bugs only.	
Warrior II	lambda-cyhalothrin	acute toxicity to workers, toxicity to beneficials, suspected endocrine disruptor, acute aquatic toxicity, highly toxic to bees	Use for tarnished plant bug and stink bugs only.	

USE WITH RESTRICTIONS (MODERATE to HIGH-RISK PESTICIDES), RESTRICTIONS WHICH EXCEED THE PRODUCT LABEL				
Trade Name	Active Ingredient	Concerns	Eco Stone Fruit Restrictions	Best Practice
Disease Management				
Badge SC	copper hydroxide, copper oxychloride	acute toxicity to workers, toxic to fish and aquatic invertebrates, toxic to bees	Use CAUTION label formulation only.	
Bravo Weather Stik, Initiate 720	chlorothalonil	acute toxicity to workers, known carcinogen, potential groundwater contaminant	Use CAUTION label formulation only.	
Champ, Kocide	copper hydroxide	acute toxicity to workers, toxic to fish and aquatic invertebrates, toxic to bees	Use CAUTION or WARNING label formulations only.	
Single-Site Fungicides – AP, MBC, SDHI and QoI Groups				
Abound	azoxystrobin ¹¹	potential groundwater contaminant, toxic to fish and aquatic invertebrates	1. Use only in rotation with a different mode of action. 2. Do not use back-to-back applications.	Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Fontelis	penthiopyrad ⁷	suspected carcinogen, reproductive/development toxin		1. Tank mixes of captan and Fontelis have been phytotoxic to foliage. 2. Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Gem	trifloxystrobin ¹¹	potential surface water contaminant, resistance		1. Do not use where resistance is known. 2. Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Miravis	pydiflumetofen	toxic to algae, aquatic invertebrates and fish.		
Rovral, Meteor	lprodione	dermal cancer high risk. toxic to aquatic invertebrates and fish.		
Topsin	thiophanate-methyl ¹	likely carcinogen, reproductive/developmental toxin, potential groundwater contaminant, resistance		
Vanguard WG	Cyprodinil ⁹	toxic to fish and aquatic invertebrates, potential groundwater contaminant		Recommended for using during cool and wet weather.

USE WITH RESTRICTIONS (MODERATE to HIGH-RISK PESTICIDES), RESTRICTIONS WHICH EXCEED THE PRODUCT LABEL				
Trade Name	Active Ingredient	Concerns	Eco Stone Fruit Restrictions	Best Practice
Disease Management				
Sterol Inhibitors (DMIs)				
Cevya	mefentrifluconazole	toxic to algae, aquatic invertebrates and fish.	Use only in rotation with a different mode of action. Do not use back-to-back applications	1. Do not use where resistance is known.
Indar 2F	fenbuconazole ³	toxic to fish, aquatic invertebrates, algae, EPA possible carcinogen related to crystalline silica content, reproductive effects on female animals	Use only in rotation with a different mode of action. Do not use back-to-back applications.	2. Do not use where resistance is known. 3. Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Orius 45 DF	tebuconazole ³	toxic to estuarine and marine invertebrates, suspected endocrine disruptor	Use only in rotation with a different mode of action. Do not use back-to-back applications.	1. Do not use where resistance is known. 2. Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Rally 40 WSP	myclobutanil ³	developmental/reproductive toxicity, acute aquatic toxicity, resistance	1. Maximum of four applications per season. 2. Use only in rotation with a different mode of action. Do not use back-to-back applications.	1. Do not use where resistance is known. 2. Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Topguard Specialty	flutriafol ³	suspected endocrine disruptor, potential groundwater contaminant	Use only in rotation with a different mode of action. Do not use back-to-back applications.	1. Do not use where resistance is known. 2. Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Quash	metconazole ³	acute toxicity to workers	Use only in rotation with a different mode of action. Do not use back-to-back applications.	1. Do not use where resistance is known. 2. Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.

^{3, 7, 9, 11} FRAC codes may be used for brown rot resistance management.

USE WITH RESTRICTIONS (MODERATE to HIGH-RISK PESTICIDES), RESTRICTIONS WHICH EXCEED THE PRODUCT LABEL				
Trade Name	Active Ingredient	Concerns	Eco Stone Fruit Restrictions	Best Practice
Disease Management				
Premix Fungicides				
Adament 50 WG	trifloxystrobin ¹¹ , tebuconazole ³	toxic to mammals, fish and aquatic invertebrates, potential groundwater contaminant	1. Use only in rotation with a different mode of action. 2. Do not use back-to-back applications.	Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Inspire Super	difenoconazole ³ , cyprodinil ⁹	possible carcinogen, suspected endocrine disruptor, potential groundwater contaminant		1. Do not use where resistance is known. 2. Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Pristine	pyraclostrobin ¹¹ , boscalid ⁷	possible carcinogen, toxic to fish and aquatic invertebrates		Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Quadris Top	azoxystrobin ¹¹ , difenoconazole ³	potential ground and surface water contaminant, toxic to fish and aquatic invertebrates, possible carcinogen		1. Do not use where resistance is known. 2. Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Luna Experience	fluopyram ⁷ , tebuconazole ³	high risk to avian reproductive, carcinogen, potential groundwater contaminant, suspected endocrine disruptor		Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Luna Sensation	fluopyram ⁷ , trifloxystrobin ¹¹	possible carcinogen, developmental and reproductive toxin		Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.
Merivon	fluxapyroxad ⁷ , pyraclostrobin ¹¹	potential groundwater contaminant		Recommended to tank mix with a protectant fungicide, e.g., Bravo or captan.

^{3, 7, 9, 11} FRAC codes may be used for brown rot resistance management.


USE WITH RESTRICTIONS (MODERATE to HIGH-RISK PESTICIDES), RESTRICTIONS WHICH EXCEED THE PRODUCT LABEL				
Trade Name	Active Ingredient	Concerns	Eco Stone Fruit Restrictions	Best Practice
Weed Management				
Roundup, Cornerstone, Makaze, Credit	glyphosate	resistance, surface water contaminant, probable carcinogen	Open cab, backpack and hand-wand applications require additional PPE of chemical-resistant boots, pants, and gloves.	Recommended to apply using a tractor with an enclosed cab.
Select (CAUTION label)	clethodim	potential groundwater contaminant	Use CAUTION label formulations only.	
Simazine, Princep, Sim-Trol	simazine	possible carcinogen, reproductive toxin, known groundwater contaminant, acute aquatic toxicity	Limited to one application per season of either simazine or terbacil (not both).	
Sinbar	terbacil	developmental toxin, potential groundwater contaminant	Limited to one application per season of either simazine or terbacil (not both).	
2,4-D	2,4-D	acute toxicity to workers, possible carcinogen	Application restrictions vary between labels.	

DO NOT USE		
Trade Name	Active Ingredient	Concerns
Insect/Mite Management		
Ambush, Pounce	permethrin	acute toxicity to workers, toxicity to beneficials, possible carcinogen, suspected endocrine disruptor, acute aquatic toxicity, highly toxic to bees and broad spectrum
Apollo	clofentezine	possible carcinogen, suspected endocrine disruptor
Apta	tolfenpyrad	highly toxic to fish and aquatic invertebrates, highly toxic bees
Imidan 70-W	phosmet	acute toxicity to workers, cholinesterase inhibitor and broad spectrum, highly toxic to bees
Lannate	methomyl	highly toxic to bees, PAN bad actor chemical, high acute toxicity to workers, cholinesterase inhibitor, potential groundwater contaminant, suspected endocrine disruptor
Lorsban	chlorpyrifos	acute toxicity to workers, cholinesterase inhibitor, suspected endocrine disruptor, broad spectrum, highly toxic to bees
Diazinon	diazinon	acute toxicity to workers, cholinesterase inhibitor, suspected endocrine disruptor, developmental/reproductive toxin, broad spectrum, highly toxic to bees
Malathion	malathion	highly toxic to bees, cholinesterase inhibitor, broad spectrum
Nexter	pyridaben	acute toxicity to workers and acute aquatic toxicity, highly toxic to bees
Proclaim	emamectin benzoate	toxic to fish, birds, mammals and aquatic invertebrates, Restricted Use Pesticide
Rimon 0.83 EC	novaluron	acute toxicity to freshwater and estuarine/marine invertebrates and fish, runoff potential – especially in poorly drained soils and toxic to bees
Savey 50 DF, Onager	hexythiazox	possible carcinogen and moderate aquatic toxicity
Tourismo	buprofezin, flubendiamide	groundwater contaminant and possible carcinogen
Vendex	fenbutatin-oxide	known developmental and reproductive toxin, suspected endocrine disruptor
Vydate L	oxamyl	acute toxicity to workers, broad spectrum and highly toxic to bees

DO NOT USE		
Trade Name	Active Ingredient	Concerns
Disease Management		
Badge X2 (DANGER label)	copper hydroxide, copper oxychloride	acute toxicity to workers, toxic to fish and aquatic invertebrates, toxic to bees
Bravo Ultrex (DANGER label)	chlorothalonil	acute toxicity to workers, known carcinogen, potential groundwater contaminant
Champ WG (DANGER label)	copper hydroxide	acute toxicity to workers, toxic to fish and aquatic invertebrates, toxic to bees
Echo 720, Initiate ZN (WARNING label)	chlorothalonil	acute toxicity to workers, known carcinogen, potential groundwater contaminant
Ferbam	ferbam	acute aquatic toxicity
Mertect 340-F	thiabendazole	possible carcinogen, developmental toxin
Ridomil Gold SL	mefenoxam	acute aquatic toxicity
Scala SC	pyrimethanil	possible carcinogen and suspected endocrine disruptor
Thiram Granuflo	thiram	reproductive/developmental toxin and suspected endocrine disruptor
Tilt	propiconazole	potential surface and groundwater contaminant
Ziram 76 DF	ziram	acute toxicity to workers, likely carcinogen, developmental/reproductive toxin and suspected endocrine disruptor
Weed Management		
Diquat SPC 2L	diquat dibromide	potential groundwater contaminant, moderate aquatic toxicity
Direx 4L, Karmex DF	diuron	known carcinogen, developmental toxin, acute aquatic toxicity, toxic to birds, potential ground and surface water contaminant
Gallery 75 DF	isoxaben	possible carcinogen, potential groundwater contaminant, moderate aquatic toxicity
Goal 2XL	oxyfluorfen	possible carcinogen, acute aquatic toxicity
Gramoxone	paraquat dichloride	acute toxicity to workers, potential groundwater contaminant, moderate aquatic toxicity
Kerb	propyzamide	probable carcinogen, potential groundwater contaminant, moderate aquatic toxicity
Select 2 EC (WARNING label)	clethodim	acute toxicity to workers, potential groundwater contaminant
Solicam DF	norflurazon	possible carcinogen, known groundwater contaminant, moderate aquatic toxicity
Surflan AS	oryzalin	likely carcinogen, potential groundwater contaminant, acute aquatic toxicity

Revisions to the 2025 Edition

- Page 2: A. Audit guidance:
 - Added and documented in spray and/or scouting reports.
 - Additional guidance, bullet point 2:
 - Reworded but did not change, “Practices may be scored as N/A for pests not present, those which do not require direct management or monitoring is not required in the orchard.”

-  Pollinator Bee Icon indicates a practice which supports pollinator protection. Pollinator protection in Eco Certified is defined as any practice which prevents pesticide exposure and/or habitat loss to pollinators. This icon has been added to clearly identify practices outside of Section 4. Pollinator Protection, which support pollinator conservation, reduce habitat loss and mitigate the risk of pesticide exposure to pollinators. The Icon was added for the following practices:
 - Page. 10. B. 19, Are pesticide synergy tank mixes avoided during First pink to First cover?
 - Page 11. B. 24. Are the nitroguanidine neonicotinoids of Actara (thiamethoxam), Belay (clothianidin), Admire Pro/Alias/Wrangler/Montana (imidacloprid) not applied?

- Minimum Requirements: Documenting pests in scouting reports, either trap counts or visual observations added/clarified in practice definitions for the following pests:

<ul style="list-style-type: none">○ Western flower thrips, pg. 2○ Peach scab, pg. 2○ Green peach aphid, pg. 2○ Japanese beetle, pg. 2○ Bacterial spot, pg. 3○ X-Disease, pg. 3○ Black knot – plums, pg. 3○ Powdery mildew, pg. 4○ Peach leaf curl, pg. 4○ Plum curculio, pg. 4○ Brown rot, pg. 5○ Mites, pg. 5	<ul style="list-style-type: none">○ Oriental fruit moth and lesser appleworm, pg. 5○ Tarnished plant bug, pg. 5○ Apple maggot, pg. 6○ Obliquebanded leafroller, pg. 6○ Spotted wing drosophila (Peach, plum and nectarine), pg. 6○ Spotted wing drosophila (cherry), pg. 7○ Brown marmorated stink bug, pg. 7
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- Advanced Practices: Documentation required in spray records or scouting reports, i.e., trap counts or visual observations, added/clarified in practice definitions for the following pests:
 - Page 8. B1
 - Page 8, B3
- Page 8. Note added: Do not use tree-row volume (TRV) to adjust pesticide rates where label lists as a rate per acre. Use TRV to calculate the appropriate volume of water to achieve desired spray coverage. Document TRV calculations in prayer calibration records.
- Page 11. B.22. Note added: Grower is able to demonstrate use of Rimpro during site audit.
- Page 19: Updated nitroguanidine neonicotinoid use restrictions, “Limit to one application per season in 2025. An exemption may be applied for to allow a second application.”
- Page 26. Gramoxone (paraquat dichloride) added to the DO NOT USE List

References

Spotted wing drosophila

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Brown marmorated stink bug

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