



PURPOSE

This program aims to improve and protect pollinators and their habitats in and around apple orchards. By reducing risk factors, this practice will help to support a more abundant pollinator population to orchard pollination services. Work will be carried out within an integrated pest management framework that ensures economically and environmentally sustainable production of apples, while avoiding the use of unnecessary pesticide applications. Cost-sharing from the NRCS seeks to reward conservation practices that improve habitat conditions, and offsets the costs associated with eliminating practices which detract from habitat conditions.

IMPLEMENTATION REQUIREMENTS

Unless growers already meet the requirements of Tier 1 (below), it is highly recommended that all growers start at Tier 1. This practice can be implemented for 3 years at the Tier 1 level. After 3 years, to continue to receive annual cost-share payments producers must increase the level of protection by satisfying the requirements for Tier 2. After 3 years at a Tier 2 level, to continue to receive cost-share payments, growers must increase the level of protection by satisfying the requirements at Tier 3. After 3 years of receiving cost-share payments at Tier 3, no further payments can be made.

Recordkeeping is a requirement of this practice. Participating producers must record pesticide applications, and all activities done to satisfy the requirements of this practice in their pesticide applicator logs or an equivalent. In some cases, photo documentation is required to verify conservation actions.

CONSIDERATIONS

Cost-sharing payments will be based on acreage. While we hope that producers commit their whole farm to pollinator conservation, we understand that there is risk associated with changing practices, and that producers may want to do a trial run on a portion of your total acreage. Additional acreage can be included in subsequent years of participation and will be reflected in cost-sharing payments.

Producers may be required to apply for and be awarded multiple contracts in order to proceed through all 3 Tiers of this practice.

This program was developed with cooperation and coordination from the University of New Hampshire Cooperative Extension and the Xerces Society for Invertebrate Conservation. Planners and participating producers can rely on either or both of these entities for assistance through the planning, implementation, and checkout of this practice.

This practice is a Core Practice of the New England Pollinator Partnership (NEPP). Participants of this practice have the option of, in addition, following NEPP Best Management Practices, and receiving Endangered Species Act liability protection from endangered pollinator species take from the Fish and Wildlife Service. This take protection can be maintained beyond the practice life, provided that the producer continue to adhere to the requirements of the practice, and maintain the appropriate records.



Tier 1: *Producer must be able to demonstrate that at least two of the items on the list below have not been adhered to over the three years prior to signing a contract.*

Required Action	Description	Required Documentation	Completed?		
			Yr 1	Yr 2	Yr 3
Pest Scouting and Monitoring	Refer to attached scouting and monitoring sheet for details	Pesticide applicator log or equivalent			
Eliminate Chlorpyrifos	Refer to UNH Extension plan to eliminate Chlorpyrifos	Pesticide applicator log or equivalent			
High risk pesticides during bloom	Do not spray Bee Precaution rated level I (high risk) pesticides from late pink to petal fall.	Pesticide applicator log			
Spray drift onto flowering understory	Eliminate blooming weeds from orchard floor prior to applications of pesticides that fall in the level I (high risk) category for pollinators according to Bee Precaution.	Photo documentation and Pesticide applicator log that records bloom removal methods and dates.			
Sanitation	Remove and dispose of leaf and apple drop each fall to break pest cycles. Follow UNH guidance.	Photo documentation			

Tier 2: *Except for continuing to meet Tier 1 requirements, all Action Items must be new to the operation.*

Required Action	Description	Required Documentation	Completed?		
			Yr 1	Yr 2	Yr 3
Meet Tier 1 Requirements	Meet all requirements described above for IPPM (595) Tier 1, and continue to satisfy those requirements	All documentation from past implementation of Tier 1. All documentation as described for Tier 1 in table above demonstrating continued adherence.			
Moderate risk pesticides during bloom	Do not spray Bee Precaution rated <u>level II (moderate risk)</u> pesticides from late pink to petal fall	Pesticide applicator log			
Adopt 1 UNH Extension IPPM Plan	Adopt 1 new UNH Extension prescribed IPPM Plan. Refer to UNH plans (e.g., Apple Scab IPPM) associated with this practice.	Pesticide Applicator logs or equivalent that attest to following the guidelines described in the selected UNH IPPM Plan.			
Achieve 4 Conservation Measure points <u>OR</u> Adopt an additional UNH Extension IPPM Plan (refer to row above)	Refer to the Conservation Measures table below. Satisfy the requirements for a total of 4 points each year. Conservation measures selected can change or remain the same each year.	Refer to the requirements documentation associated with the selected Conservation Measure.			



Tier 3: *Except for continuing to meet Tier 1 and Tier 2 requirements, all Action Items must be new to the operation*

Required Action	Description	Required Documentation	Completed?		
			Year 1	Year 2	Year 3
Meet Tiers 1 and 2 Requirements	Meet all requirements described above for IPPM (595) <u>Tiers 1 and 2</u> , and continue to satisfy those requirements	All documentation from past implementation of Tiers 1 and 2. All documentation as described for Tiers 1 and 2 in table above demonstrating continued adherence.			
Spray drift onto flowering understory	Eliminate blooming weeds from orchard floor prior to applications of pesticides that fall in the <u>level II (moderate risk)</u> category for pollinators according to Bee Precaution.	Photo documentation and Pesticide applicator log that records bloom removal methods and dates.			
Adopt 1 UNH Extension IPPM Plan	Adopt 1 new UNH Extension prescribed IPPM Plan. Refer to UNH plans (e.g., Apple Scab IPPM) associated with this practice.	Pesticide Applicator logs or equivalent that attest to following the guidelines described in the selected UNH IPPM Plan.			
Achieve 4 New Conservation Measure points <u>OR</u> Adopt an additional UNH Extension IPPM Plan (refer to row above)	Refer to the Conservation Measures table below. Satisfy the requirements for a total of 4 points each year. Conservation measures selected can change or remain the same each year.	Refer to the requirements documentation associated with the selected Conservation Measure.			



OPTIONAL SELF-SELECT POINTS FOR TIERS 2 AND 3: *Achieve at least 4 points in each implementation year. When moving from Tier 2 to 3, producer must continue to achieve 4 points used to satisfy Tier 2 requirements and achieve 4 new points each year for Tier 3.*

Conservation Measures	Description	Required Documentation	Points
Fungicides during bloom	Do not spray ANY fungicides during bloom.	Pesticide applicator log or equivalent	2
Insecticides during bloom	Do not spray ANY insecticides during bloom. Most are toxic to pollinators and even sublethal amounts can accumulate in honeybee hives or affect learning and behavior of native bees.	Pesticide applicator log or equivalent	2
Create Habitat	Create pollinator habitat. Pollinator habitat must be at least 0.5 acres, or 5% of the cropped area, whichever is larger. Planting must be protected from pesticide drift by distance from sprayed areas (buffers: 10 ft hand-applied, 40 feet ground applied, 60 feet airblast). Functioning windbreaks reduce distance requirements by 50%. Implementation can be supported by NRCS practices, 327, 647, 422, 340, or 386. Conservation measure is good for 2 points each year of 595 provided the habitat is maintained and protected from pesticides.	NRCS 327, 647, 422, 340, or 386 Job Sheet with checkout signatures OR photo documentation.	2
Buffer Zones	With the assistance of a State Biologist or Pollinator Partner Biologist, identify potential flowering habitats and surface water within 60 feet of the orchard and maintain no-spray zones around these habitats (10 foot no spray zone for hand sprayer, 40 feet for ground applied booms sprayer, 60 feet for airblast).	Photo documentation of signage indicating no spray zones	2
Avoid bee-toxic insecticides	Do not use bee-toxic insecticides (Bee Precaution toxicity ratings of Level 1 High Toxicity) except if low residual toxicity pesticides (RT25; Table #) are applied in the evening or at night with low residual toxicity). Because bees forage during the day, nighttime applications of bee-toxic pesticides can decrease exposure of chemical pesticides, particularly for products with RT25 < 3 h.	Pesticide applicator log or equivalent	1
Wettable powders	Eliminate wettable powder formulations of pesticides, which adhere more easily to bees and are transferred back to the nest.	Pesticide applicator log or equivalent	1
Tank Mixing	Do not tank mix (or spray within 3 days of each other), pesticides which synergistically increase toxicity to pollinators (Table #).	Pesticide applicator log or equivalent	1
Sprayer Calibration	Calibrate sprayers once per year. Calibration is critical to pesticide efficacy and can help to eliminate the need for additional pesticide applications.	Pesticide applicator log or equivalent	1
Drift Reduction: Wind speed	Apply pesticides when wind speeds are 2 to 9 mph. Under windier conditions, pesticide droplets can be transported by wind currents onto nearby habitat. Do not apply during a temperature inversion, as indicated by the presence of ground fog or wind speeds under 2 mph. During temperature inversions, pesticides can move long distances.	Pesticide applicator log or equivalent	1
Drift Reduction: Technology	Install insecticide deflector on spray application equipment to reduce drift. Additional points could be awarded when new spray tech is adopted that reduces drift.	Photo documentation and/or receipts	1



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Conservation Practice Job Sheet NRCS, New Hampshire 595

Honey Bee Hives	If honey bee hives are on site contact beekeeper prior to spraying bee toxic pesticides. Do not spray until hives are closed or removed from the risk area.	Documentation from beekeeper attesting to this	1
Nest Habitat	Create at least 5 nesting habitats for stem-nesting native bees per acre of crop. Implementation of this measure can be supported by the NRCS practice 649. Bee blocks should be placed at least 60 feet from sprayed areas.	Photo documentation	1
Applicator Credits	Attend a pollinator workshop, talk, or seminar for which New Hampshire Board of Pesticides offers pesticide applicator credit.	Carbon copy of pesticide credit sheet	1

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