



This is a section from the

2023/2024

New Jersey Commercial Tree Fruit Production Guide

The recommendations are **NOT** for home gardener use.

The **full guide** can be found on the Rutgers New Jersey Agricultural Experiment Station (NJAES) website at: <https://njaes.rutgers.edu/pubs/publication.php?pid=e002>. The guide is revised biennially.

Cooperating Agencies: Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and New Jersey Board of County Commissioners. Rutgers Cooperative Extension, a unit of the Rutgers New Jersey Agricultural Experiment Station, is an equal opportunity program provider and employer.

PESTICIDE USE DISCLAIMER

THE LABEL IS THE LAW

A pesticide applicator is legally bound by the labeling found on and with the pesticide container in their possession. Before using a pesticide, check and always follow the **labeling distributed with the product at the point of sale for legally enforceable rates and restrictions.**

In addition to the pesticide products listed in this Production Guide, other formulations or brands with the same active ingredient(s) may be commercially available.

ALWAYS CHECK THE LABELING ON THE PRODUCT CONTAINER ITSELF:

- a) to ensure a pesticide is labeled for the same use,
- b) to ensure the pesticide is labeled for the desired crop,
- c) for differences in rates and percent active ingredient, and
- d) additional restrictions.

Check the physical product label for the maximum amount of pesticide per application and the maximum number of applications per year.

IMPORTANT: DO NOT RELY ON ELECTRONIC LABELING (unless it is “web labeling” found directly on the product container). *Online pesticide labels may not be the same as the labeling distributed with the product. Some services include: Proagrica’s CDMS <http://www.cdms.net/>; Agworld DBX powered by Greenbook <https://www.greenbook.net/>; or Agrian <https://www.agrian.com/labelcenter/results.cfm>.*

These electronic label services provide use disclaimers, and in some cases legally binding User Agreements assigning ALL liability to USER of service. For example, Agrian’s webpages* cite (in red): *The material and content contained in the Agrian Label Database is for general information only. Agrian Inc. does not provide any guarantee or assurance that the information obtained through this service is accurate, current, or correct, and is therefore not liable for any loss resulting, directly or indirectly, from reliance upon this service. This Label Database does not replace the official manufacturer issued label. Users of this database must read and follow the actual product label affixed to the container before use of the product. Use of the Label Database is subject to the Terms of Use and Privacy Policy * [date accessed: 12/23/2022].*

See a detailed regulatory discussion of this and other essential information on Pesticide Safety and the Pesticide Label in Chapter 1. Electronic labeling is discussed in section 1.3.1.

If you are having a **medical emergency** after using pesticides, always **call 911** immediately.



In Case of an Accident

- Remove the person from exposure
- Get away from the treated or contaminated area immediately
- Remove contaminated clothing
- Wash with soap and clean water
- Call a physician and/or the National Poison Control Center (1-800-222-1222).
Your call will be routed to your State Poison Control Center.
- **Have the pesticide label with you!**
- Be prepared to give the **EPA registration number** to the responding center/agency

8 Cherries

8.1 Limitations to Cherry Production in New Jersey

There are a number of limitations to growing cherries in New Jersey. Despite these limitations, meticulous growers have had success in growing them throughout the state.

Bacterial Canker

Bacterial Canker can be a serious bacterial disease of sweet cherry in New Jersey. Bacterial canker or bacterial gummosis of sweet cherry is caused by a *Pseudomonas* bacterium.

Pruning practices can be modified to reduce the risk of canker. Only summer pruning should be done. Immediately after harvest, perform dormant pruning. Refer to the spray schedule for special control measures. Also, see section 6.1.1, Diseases of Stone Fruit, for a description of Bacterial Canker. Multiple applications of Bordeaux mix and additional copper sprays have been found to help manage bacterial canker infections.

Cracking of Cherry Fruit

Aside from bacterial canker, and bird damage, fruit cracking is one of the most significant limitations to cherry production in the Eastern United States. Fruit cracking is more prevalent in sweet than in sour cherries. There are two primary reasons why fruit cracking occurs: rain/standing water on fruit and over-saturated soil.

1) Standing Water on Fruit

Standing water on fruit, as the fruit nears harvest is one cause of fruit cracking. The longer the water sits on the fruit the greater the chance that cracking will occur. Control methods include:

a) Varieties and rootstocks less susceptible to cracking

b) High tunnels or row covers: Both can help reduce fruit damage by preventing water from raining down and sitting on fruit. However, there are a number of downsides to consider before installing these systems. High tunnels can be expensive, and they can cause disease issues, notably powdery mildew and brown rot. If tunnels are covered during flowering, it can result in poor pollination unless hives are placed close to the tunnel entrance.

c) Foliar nutrient sprays: Applications of iron III chloride or calcium chloride as fruit grow have been shown to decrease cracking.

d) Cuticle protectants: These products prevent water from being taken up into the fruit skin, and have been shown to reduce rain cracking by up to 50%. When using these products it is critical to ensure that the entire fruit surface is covered. This can be achieved by keeping tractor speeds low and droplet sizes large. The following cuticle protectants are used:

RainGard®: RainGuard® is an inelastic cuticle protectant coating. However, as fruit grows, small cracks occur in the coating thus it must be re-applied several times through a season according to the label.

Parka™: Parka™ is an elastic cuticle coating that will expand as fruit grows, thus fewer applications are needed throughout a season than for RainGuard.

2) Over-Saturated Soil

Over-saturated soil is the other primary cause of fruit cracking. This occurs as increased saturation of the soil creates pressure build-up in fruit. The following control methods are specific to preventing over-saturated soil:

a) Gutters on high tunnels

b) Raised beds

Both measures can aid in directing rain away from the tree root zone.

For more details on fruit cracking prevention see 'Understanding and Preventing Sweet Cherry Fruit Cracking' OSU EM 9227 (2019) <https://catalog.extension.oregonstate.edu/em9227/html>

8.2 Cultivar and Pollinator Choices for Sweet Cherries

Sweet cherries can be more challenging to grow than sour cherries in part due to cracking (described above) and pollination requirements. In addition, NJ growers should be mindful that many new self-fertile cultivars that were bred in dry environments (*i.e.*, Washington and British Columbia) may have a greater tendency to crack in NJ. The harvest season for sweet cherries grown in NJ is approximately early June through mid-July.

Pollination

Nearly all older cherry varieties are self-unfruitful. However, recent breeding advances have resulted in a number of self-fruitful (also called self-fertile) sweet cherry cultivars available for commercial production. If a pollinizer is required for a cultivar to fruit, it is critical to ensure that the pollinizer is both compatible with the cultivar of interest and that it blooms at the same time as the cultivar of interest. Consult with a local county agricultural agent prior to purchasing sweet cherries to ensure the cultivars chosen will provide adequate pollination.

Note: Compatible pollinizer lists are not exclusive. In the table below, each cultivar may be pollinated by a number of other cultivars not listed.

Table 8.1 Recommended White or Yellow Fleshed Sweet Cherry Cultivars

Cultivar	Notes	Self-Fruitful	Compatible Pollinizers
Blushing Gold (NY 8182)	yellow skinned mid-season cherry; good resistance to cracking	No	Black Pearl, Burgundy Pearl, Ebony Pearl, Hartland, Kristin, Sandra Rose
Gold	exceptionally hardy cultivar; pollination compatibility with many other cultivars; tends to produce small fruit	No	Hartland, Royalton, Sandra Rose, Skeena
White Gold	White Gold: late bloomer harvested during the early to mid-growing season; universal pollinator for many other sweet cherries; resistance to cracking, bacterial canker and leaf spot	Yes	Not Required

Table 8.2 Recommended Red or Black Fleshed Sweet Cherry Cultivars

Cultivar	Notes	Self-fruitful	Compatible Pollinizers
Atika	dark red to black skinned cherry with red flesh; vigorous growth habit that blooms later in the season. Late blooms aid in spring frost avoidance	No	Benton, Tamara
Benton	dark red skin that resembles a Bing; self-fruitful, but lower yielding; some resistance to cracking; late season bloom which aids in frost avoidance	Yes	Not Required
Black Gold™ (NY 13791)	dark red skinned and fleshed variety; late season bloom; frost hardiness; heavy producer	Yes	Not Required
Black Pearl	dark mahogany fruit; moderate resistance to cracking; harvested early in the season; very productive tree, heavy pruning required for more vigorous rootstocks	No	Burgundy Pearl
Burgundy Pearl	large mahogany fruit with mild sweet flavor; harvested early in the season; moderate resistance to cracking; some bacterial canker resistance; very productive tree that requires heavy pruning on vigorous rootstocks	No	Burgundy Pearl, Ebony Pearl
Ebony Pearl	mahogany fruit that ripen in the middle of the season; excellent flavor and very large fruit; bacterial canker and rain cracking resistance	No	Black Pearl, Ebony Pearl
Hartland	dark red cultivar with crack resistant skin; flowers in early to mid-season; winter hardiness	No	Gold, Hudson, Kristin, Sweetheart

Table 8.2 Recommended Red or Black Fleshed Sweet Cherry Cultivars - continued on next page

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Table 8.2 Recommended Red or Black Fleshed Sweet Cherry Cultivars - continued

Cultivar	Notes	Self-fruitful	Compatible Pollenizers
Hudson	dark red skin, with resistance to cracking; productive cultivar and one of the latest ripening varieties; cold hardiness and rot resistance	No	Gold, Kristin, Sweetheart
Kristin	dark red/black skinned cultivar with very large fruit; productive trees; some resistance to fruit cracking; late ripening variety; very winter hardy	No	Gold, Hudson, Sweetheart
Regina	late ripening; large mahogany colored fruit; tends to have lower productivity but moderate resistance to powdery mildew; excellent rain cracking resistance	No	Attika
Royalton (NY 11390)	exceptionally large fruit that ripen mid-season; vigorous growth habit	No	Black Pearl, Burgundy Pearl, Ebony Pearl, Hartland, Kristin, Sandra Rose
Sandra Rose	large mahogany colored fruit with excellent flavor; mid-late season bloomer; good pollinizer; somewhat low productivity	Yes	Not Required
Selah	large, firm mahogany fruit; early to mid-season bloomer; moderate yields ripen late in the season	Yes	Not Required
Skeena™	large, firm and flavorful mahogany colored fruit harvested in the mid- to late season; moderate productivity; moderate rain cracking	Yes	Not Required
Sweetheart	bright red cherries with good flavor; harvested late in the season; heavy crops and spreading branches; moderately susceptible to rain cracking	Yes	Not Required

Table 8.3 Recommended Blush Sweet Cherry Cultivars

Cultivar	Notes	Self-Fruitful	Compatible Pollenizers
Stardust	heart shaped fruit with clear flesh and yellow skin with a light red overcolor; late blooming; harvested late in the season; some cracking tolerance; excellent pollinizer	Yes	Not Required

8.3 Cultivar Choices for Tart Cherries

Tart or sour cherries are a different species than sweet cherries. Tart cherries are all self-fertile and do not require cross pollination to produce fruit. Sour cherries are harvested from mid-June to mid-July. The vast majority of sour cherries produced in North America are Montmorency.

Table 8.4 Tart Cherries Cultivars

Cultivar	Notes
Balaton	large red fleshed fruit with intense red/purple skin; cherries reach 16% sugar content, making it more of a semi-tart variety; harvested later in the season; very vigorous variety, but slightly more susceptible to winter injury than other sour cherries
Danube	a cross between a sweet and a tart cherry; large dark red fruit with some sweetness; harvested early to mid-season
Jubileum	dark red variety with very high sugar content (18-19%) making it a semi-tart cultivar; harvested early to mid-season
Montmorency	productive cultivar with bright red skin and white flesh, harvested mid- to late season

Table 8.4 Tart Cherries Cultivars - continued on next page

Table 8.4 Tart Cherries Cultivars - continued

Cultivar	Notes
Meteor	bright red fruit; semi-dwarf, hardy and vigorous variety; harvested in the late season
North Star	mahogany red fruit with yellow juicy tender flesh; smaller tree but still productive; harvested mid- to late season; some resistance to leaf spot and brown rot
Surefire™	medium sized bright red fruit with classic tart cherry flavor; harvested mid- to late season

8.4 Cherry Rootstocks

Both tart and sweet cherries have historically been grafted to seedlings of Mahaleb *Prunus mahaleb* L. or Mazzard, *Prunus avium*. Both have grown out of favor due after the introduction of a number of precocious, dwarfing, and disease resistant rootstocks.

Gisela rootstocks have gained a significant amount of notoriety in the industry. The Gisela series of rootstocks were bred at the Justus Liebig University in Germany. A number of these rootstocks are suitable for both sweet and tart cherry production in New Jersey, and are widely commercially available in the United States. It is important to note though that Gisela rootstocks require intense cultural management. This includes, regular irrigation, and consistent annual training and pruning, to retain fruit size and yields.

Table 8.5 Gisela Series Rootstocks to consider in New Jersey

Rootstock	Notes
Gisela 5	Gisela 5 grows to 40-50% the size of seedling rootstocks, and is not suitable for sandy or dry soils. Production is heavy in the early years, thus heavy pruning is necessary early to ensure the trees to not runt out. Trees have nice wide lateral branch angles. This rootstock is also tolerant to many viruses and heavy soils.
Gisela 6	Gisela 6 grows to 65-95% the size of seedling rootstocks. It is adapted to a wide range of soil types. It is a heavy early producer so care must be taken to ensure desired shoot extension is maintained. This rootstock has good wide and lateral branching in addition to excellent resistance to viruses
Gisela 12	Gisela 12 grows to about 60% the size of seedling rootstocks. It is slightly more vigorous, and anchors slightly better than Gisela 6, and adapted to a wide range of soils. This rootstock has an open spreading branch structure and good virus resistance
Gisela 3	Gisela 3 is best adapted to be grown in covered orchards or high tunnels. It requires deep moist fertile soils to attain its dwarfing capabilities. Yields are high early in the season and it produces wide branch angles.

8.5 References Cherry Cultivation

- Lezzoni, A., J. Nugent. Growing Balaton® - Horticultural Considerations, Michigan State University https://www.canr.msu.edu/uploads/files/Research_Center/NW_Mich_Hort/Training_Pruning_Varities/Growing_Balaton.pdf
- Long, L. E., C. Kaiser. 2010. Sweet Cherry Rootstocks. Pacific Northwest Extension Publication PW 619.
- Long, L., A. Thompson, M. Whiting. Sweet Cherry Cultivars for the Fresh Markets 2021. PNW 604 <https://catalog.extension.oregonstate.edu/pnw604>
- Marini, R. P., S. Sherif, A. Smith. 2020. Growing Cherries in Virginia. VA Cooperative Extension Publication 422-018.
- Penn State Tree Fruit Production Guide 2020-2021. Penn State Extension University of Minnesota Hardy Stone Fruit <https://mnhardy.umn.edu/cherries>
- Washington State University Tree Fruit. 2021. <http://treefruit.wsu.edu/varieties-breeding/cultivar-guide/>

8.6 Cherry Disease and Pest Management

Cherries Disease Management Program – Fungicide and Bactericide Timing

DISEASE	Delayed Dormant	Pre-bloom	Bloom	Petal-Fall	Shuck-Fall	Covers	Pre-Harvest	Post-Harvest
Bacterial Canker								
Botrytis Blossom Blight								
Brown Rot Blossom Blight								
Leaf Spot								
Brown Rot								

Cherries Insect and Mite Pest Management Program – Insecticide and Acaricide Timing

INSECT AND MITE PESTS	Delayed Dormant	Pre-Bloom	Bloom	Petal-Fall	Shuck-Fall	Covers	Pre-Harvest	Post-Harvest
Scale Insects								
Black Cherry Aphid								
Leafrollers								
Plum Curculio								
Peach Tree Borer								
Lesser Peach Tree Borer								
Spotted Wing Drosophila								
European Red Mite								
Two-Spotted Spider Mite								

Key: = Optimum timing

The Label is the Law

A pesticide applicator is legally bound by the labeling found on and with the pesticide container in their possession. Before using a pesticide, check and always follow the **labeling distributed with the product at the point of sale** for legally enforceable rates and restrictions. See the Pesticide Use Disclaimer on page 2.

Observe cautions on the product label to minimize potential exposure to bees and other pollinating insects.

Abbreviations			
Stone Fruit Preharvest Interval Key		Units of Measurement	
D	Dormant application only	/A	per acre
PB	No later than prebloom	d	day(s)
FB	No later than full bloom	fl oz	fluid ounce(s)
PF	No later than petal-fall	gal	gallon(s)
SS	No later than shuck-split	h	hour(s)
SF	No later than shuck-fall	lb	pound(s)
FC	No later than first cover	oz	ounce(s)
NTL	No time limit (usually up to the day of harvest) - consult label	pt	pint(s)
		qt	quart(s)
NA	Not applicable		

DELAYED DORMANT					CHERRY
DISEASE	Bacterial Canker				
Product and Formulation	Product Efficacy Rating ¹ and Rate/A ²				REI PHI
Bordeaux mixture ³ (lb/100 gal)	++ 5, 7.5				24 h D
Copper, fixed ³	++ various rates				12-48 h various

¹ ++++ = excellent, +++ = good, ++ = fair, + = poor, - = ineffective or not rated.

² Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

³ Some copper materials only labeled for sour cherry (see postharvest for sweet cherry). Apply first spray at bud break and weekly thereafter. To reduce phytotoxicity, decrease concentration as leaves emerge.

DELAYED DORMANT					CHERRY
INSECT PEST	Scale Insects				
Product and Formulation	Product Efficacy Rating ¹ and Rate/A ²				REI PHI
Centaur WDG (oz)	++++ 34.5-46.0				12 h 14 d
Esteem 35WP (oz)	++++ 4.0-5.0				12 h 14 d
Superior Oil, 60 or 70 second viscosity (gal)	++++ 4.0				4 h 0 d
Venerate XC (qt)	+++ 2.0-4.0				4 h 0 d

¹ ++++ = excellent, +++ = good, ++ = fair, + = poor, - = ineffective or not rated.

² Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

PREBLOOM					CHERRY
DISEASE	Bacterial Canker	Botrytis Blossom Blight	Brown Rot Blossom Blight		
Product and Formulation ¹	Product Efficacy Rating ² and Rate/A ³				REI PHI
Abound 2F ⁴ (fl oz)	-	-	+++ 12.0-15.5		4 h 0 d
Bravo Weather Stik 6F ^{5,7} (pt)	-	++ 3.0-4.0	++ 3.0-4.0		12 h SS ⁸
Bumper/Tilt ⁵ (fl oz)	-	-	+++ 4.0		24 h 0 d
Cabrio 20EG (oz)	-	-	++ 9.5		12 h 0 d
Captan 80WDG ⁵ (lb)	-	++ 2.5	++ 2.5		24 h 0 d
Cevya 3.34SC (fl oz)	-	-	+++ 3.0-5.0		12 h 0 d
Copper, fixed	++ various rates	-	-		12-48 h various
Cuprofix Ultra 40DF ⁶ (lb)	++ 5.0-8.0	-	-		12 h FC ⁸
Elevate 50WDG (lb)	-	++++ 1.0-1.5	+++ 1.0-1.5		12 h 0 d

Prebloom DISEASE - continued on next page

CHERRIES

Prebloom DISEASE - continued

PREBLOOM				CHERRY	
DISEASE	Bacterial Canker	Botrytis Blossom Blight	Brown Rot Blossom Blight		
Fontelis 1.67SC (fl oz)	–	++++ 14.0-20.0	++++ 14.0-20.0		12 h 0 d
Flint Extra 4.05SC (fl oz)	–	–	+++ 2.5-3.8		12 h 1 d
Indar 2F (fl oz)	–	–	++++ 6.0		12 h 0 d
Luna Experience 3.34SC (fl oz)	–	–	+++ 6.0 - 10.0		12 h 0 d
Luna Sensation 4.2SC (fl oz)	–	–	++++ 5.0-7.6		12 h 1 d
Merivon 4.18SC (fl oz)	–	++++ 4.0-6.7	++++ 4.0-6.7		12 h 0 d
Miravis 1.67SC (fl oz)	–	–	++ 3.4-5.1		4 h 0 d
Orius AQ 1.67F (fl oz)	–	++ 8.6-17.2	+++ 8.6-17.2		12 h 0 d
Pristine 38WG (oz)	–	+++ 10.5-14.5	++++ 10.5-14.5		12 h 0 d
Quadris Top 2.72SC (fl oz)	–	–	++++ 12.0-14.0		12 h 0 d
Quash 50WDG (oz)	–	–	+++ 2.5-3.5		12 h 14 d
Rovral 4F ⁵ (pt)	–	+++ 1.0-2.0	++++ 1.0-2.0		24 h PF ⁸
Sulfur, actual (lb)	–	–	++ 10.0-12.0		24 h NTL ⁸
Topguard EQ (fl oz)	–	–	++ 6.0-8.0		12 h 7 d
Topsin M WSB (lb)	–	++++ 1.5	++++ 1.5		48 h 1 d
Topsin M WSB (lb) plus Captan 80WDG (lb) ⁷	–	–	++++ 0.5-0.75 plus 1.25-2.5		48 h 1 d
Vanguard 75WG ⁶ (oz)	–	++++ 5.0	+++ 5.0		12 h 2 d
Ziram 76DF (lb)	–	–	++ 5.0-6.0		48 h 14 d

¹ Alternate products of different chemistry for resistance management; see peach and nectarine efficacy Table 7.7 for details.

² +++++ = excellent, +++ = good, ++ = fair, + = poor, – = ineffective or not rated.

³ Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

⁴ Abound is very phytotoxic on apples. Do not use near apple orchards.

⁵ Generic products and/or other formulations available.

⁶ Vanguard and Cuprofix are labeled for sour cherry only; do not apply to sweet cherry, as phytotoxicity may occur. Spray copper at bud break and weekly thereafter. To reduce phytotoxicity, decrease concentration as leaves emerge.

⁷ If Black Knot is present, use Bravo or Topsin M + Captan combination sprays.

⁸ PHI Key: PF=No later than petal-fall, FC=No later than first cover, NTL= No time limit (usually up to the day of harvest) - consult label.

PREBLOOM		CHERRY
INSECT PEST	Do not apply insecticides during prebloom!	

BLOOM					CHERRY
DISEASE	Bacterial Canker	Botrytis Blossom Blight	Brown Rot Blossom Blight	Leaf Spot ¹	
Product and Formulation ²	Product Efficacy Rating ³ and Rate/A ⁴				REI PHI
Abound 2F ⁵ (fl oz)	–	–	+++ 12.0-15.5	+++ 12.0-15.5	4 h 0 d
Bravo Weather Stik 6F ^{6,8} (pt)	–	++ 3.0-4.0	++ 3.0-4.0	++++ 3.0-4.0	12 h SS ⁹
Bumper/Tilt ⁶ (fl oz)	–	–	+++ 4.0	++ 4.0	24 h 0 d
Cabrio 20EG (oz)	–	–	++ 9.5	–	12 h 0 d
Captan 80WDG ⁶ (lb)	–	++ 2.5	++ 2.5	++ 2.5	24 h 0 d
Cevya 3.34SC (fl oz)	–	–	+++ 3.0-5.0	–	12 h 0 d
Copper, fixed	++ various rates	–	–	++ various rates	12-48 h various
Cuprofix Ultra 40DF ⁷ (lb)	++ 5.0-8.0	–	–	++ 4.0-5.0	12 h FC ⁹
Elevate 50WDG (lb)	–	++++ 1.0-1.5	+++ 1.0-1.5	–	12 h 0 d
Fontelis 1.67SC (fl oz)	–	++++ 14.0-20.0	++++ 14.0-20.0	+ 14.0-20.0	12 h 0 d
Flint Extra 4.05SC (fl oz)	–	–	+++ 2.5-3.8	++++ 2.5 - 3.8	12 h 1 d
Indar 2F (fl oz)	–	–	++++ 6.0	+++ 6.0	12 h 0 d
Luna Experience 3.34SC (fl oz)	–	–	+++ 6.0 - 10.0	–	12 h 0 d
Luna Sensation 4.2SC (fl oz)	–	–	++++ 5.0-7.6	++++ 5.0-7.6	12 h 1 d
Merivon 4.18SC (fl oz)	–	++++ 4.0-6.7	++++ 4.0-6.7	++++ 4.0-6.7	12 h 0 d
Miravis 1.67SC (fl oz)	–	–	++ 3.4-5.1	–	4 h 0 d
Orius AQ 1.67F (fl oz)	–	+ 8.6-17.2	+++ 8.6-17.2	+++ 8.6-17.2	12 h 0 d
Pristine 38WG (oz)	–	+++ 10.5-14.5	++++ 10.5-14.5	++++ 10.5-14.5	12 h 0 d
Quadris Top 2.72SC (fl oz)	–	–	++++ 12.0-14.0	–	12 h 0 d
Quash 50WDG (oz)	–	–	+++ 2.5-3.5	–	12 h 14 d
Rally 40WSP (oz)	–	–	++++ 2.5-6.0	+++ 2.5-6.0	24 h 0 d
Rovral 4F ⁶ (pt)	–	+++ 1.0-2.0	++++ 1.0-2.0	–	24 h PF ⁹
Sulfur, actual (lb)	–	–	++ 10.0-12.0	–	24 h NTL ⁹
Topguard EQ (fl oz)	–	–	++ 6.0-8.0	–	12 h 7 d
Topsin M WSB (lb)	–	++++ 1.5	++++ 1.5	+++ 1.5	48 h 1 d

Bloom DISEASE - continued on next page

CHERRIES

Bloom DISEASE - continued

BLOOM					CHERRY
DISEASE	Bacterial Canker	Botrytis Blossom Blight	Brown Rot Blossom Blight	Leaf Spot ¹	
Topsin M WSB (lb) plus Captan 80WDG (lb) ⁸	–	–	++++ 0.5-0.75 plus 1.25-2.5	++++ 0.5-0.75 plus 1.25-2.5	48 h 1 d
Vanguard 75WG ⁷ (oz)	–	++++ 5.0	+++ 5.0	+++ 6.0-12.0	12 h 2 d
Ziram 76DF (lb)	–	–	++ 5.0-6.0	+ 5.0-6.0	48 h 14 d

¹ Applications for Leaf Spot should begin as first leaves unfold. Sour Cherry is much more susceptible to Leaf Spot than Sweet Cherry.

² Alternate products of different chemistry for resistance management; see peach and nectarine efficacy Table 7.7 for details.

³ ++++ = excellent, +++ = good, ++ = fair, + = poor, – = ineffective or not rated.

⁴ Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

⁵ Abound is very phytotoxic on apples. Do not use near apple orchards.

⁶ Generic products and/or other formulations available.

⁷ Vanguard and Cuprofix are labeled for sour cherry only; do not apply to sweet cherry, as phytotoxicity may occur. Spray copper at bud break and weekly thereafter. To reduce phytotoxicity, decrease concentration as leaves emerge.

⁸ If Black Knot is present, use Bravo or Topsin M + Captan combination sprays.

⁹ PHI Key: PF=No later than petal-fall, FC=No later than first cover, SS=No later than shuck-split, NTL= No time limit (usually up to the day of harvest) - consult label.

BLOOM		CHERRY
INSECT PEST	Do not apply insecticides during bloom!	

PETAL-FALL				CHERRY
DISEASE	Botrytis Blossom Blight	Brown Rot Blossom Blight	Leaf Spot ¹	
Product and Formulation ²	Product Efficacy Rating ³ and Rate/A ⁴			REI PHI
Abound 2F ⁵ (fl oz)	–	+++ 12.0-15.5	+++ 12.0-15.5	4 h 0 d
Bravo Weather Stik 6F ^{6,8} (pt)	++ 3.0-4.0	++ 3.0-4.0	++++ 3.0-4.0	12 h SS ⁹
Bumper/Tilt ⁶ (fl oz)	–	+++ 4.0	++ 4.0	24 h 0 d
Cabrio 20EG (oz)	–	++ 9.5	–	12 h 0 d
Captan 80WDG ⁶ (lb)	++ 2.5	++ 2.5	++ 2.5	24 h 0 d
Cevya 3.34SC (fl oz)	–	+++ 3.0-5.0	–	12 h 0 d
Copper, fixed	–	–	++ various rates	12-48 h various
Cuprofix Ultra 40DF ⁷ (lb)	–	–	++ 4.0-5.0	12 h FC ⁹
Elevate 50WDG (lb)	++++ 1.0-1.5	+++ 1.0-1.5	–	12 h 0 d

Petal-Fall DISEASE - continued on next page

Petal-Fall DISEASE - continued

PETAL-FALL				CHERRY	
DISEASE	Botrytis Blossom Blight	Brown Rot Blossom Blight	Leaf Spot ¹		
Fontelis 1.67SC (fl oz)	++++ 14.0-20.0	++++ 14.0-20.0	+ 14.0-20.0		12 h 0 d
Flint Extra 4.05SC (fl oz)	–	+++ 2.5 - 3.8	++++ 2.5 - 3.8		12 h 1 d
Indar 2F (fl oz)	–	++++ 6.0	+++ 6.0		12 h 0 d
Luna Experience 3.34SC (fl oz)	–	+++ 6.0-10	–		12 h 0 d
Luna Sensation 4.2SC (fl oz)	–	++++ 5.0-7.6	++++ 5.0-7.6		12 h 1 d
Merivon 4.18SC (fl oz)	++++ 4.0-6.7	++++ 4.0-6.7	++++ 4.0-6.7		12 h 0 d
Miravis 1.67SC (fl oz)	–	++ 3.4-5.1	–		4 h 0 d
Orius AQ 1.67F (fl oz)	++ 8.6-17.2	++++ 8.6-17.2	+++ 8.6-17.2		12 h 0 d
Pristine 38WG (oz)	+++ 10.5-14.5	++++ 10.5-14.5	++++ 10.5-14.5		12 h 0 d
Quadris Top 2.72SC (fl oz)	–	++++ 12.0-14.0	–		12 h 0 d
Quash 50WDG (oz)	+++ 2.5-3.5	+++ 2.5-3.5	–		12 h 14 d
Rally 40WSP (oz)	–	++++ 2.5-6.0	+++ 2.5-6.0		24 h 0 d
Rovral 4F ⁶ (pt)	+++ 1.0-2.0	++++ 1.0-2.0	–		24 h PF ⁹
Sulfur, actual (lb)	–	++ 10.0-12.0	–		24 h NTL ⁹
Topguard EQ (fl oz)	–	++ 6.0-8.0	–		12 h 7 d
Topsin M WSB (lb)	++++ 1.5	++++ 1.5	+++ 1.5		48 h 1 d
Topsin M WSB (lb) plus Captan 80WDG (lb) ⁸	–	++++ 0.5-0.75 plus 1.25-2.5	++++ 0.5-0.75 plus 1.25-2.5		48 h 1 d
Vintage 1SC (oz)	–	–	+++ 6.0-12.0		24 h 0 d
Ziram 76DF (lb)	–	++ 5.0-6.0	+ 5.0-6.0		48 h 14 d

¹ Applications for Leaf Spot should begin as first leaves unfold. Sour Cherry is much more susceptible to Leaf Spot than Sweet Cherry.

² Alternate products of different chemistry for resistance management; see peach and nectarine efficacy Table 7.7 for details.

³ +++++ = excellent, +++ = good, ++ = fair, + = poor, – = ineffective or not rated.

⁴ Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

⁵ Abound is very phytotoxic on apples. Do not use near apple orchards.

⁶ Generic products and/or other formulations available.

⁷ Cuprofix is labeled for sour cherry only; do not apply to sweet cherry, as phytotoxicity may occur. Spray copper at bud break and weekly thereafter. To reduce phytotoxicity, decrease concentration as leaves emerge.

⁸ If Black Knot is present, use Bravo or Topsin M + Captan combination sprays.

⁹ PHI Key: PF=No later than petal-fall, FC=No later than first cover, SS=No later than shuck-split, NTL= No time limit (usually up to the day of harvest) - consult label.

CHERRIES

PETAL-FALL					CHERRY
Avoid killing bees on blooming ground cover.					
INSECT PEST	Black Cherry Aphid	Leafrollers	Plum Curculio		
Product and Formulation	Product Efficacy Rating ² and Rate/A ³				REI/PHI
Actara (oz)	++++ 3.0-4.0	–	+++ 4.5-5.5		12 h 14 d
Admire Pro (fl oz)	++++ 4.0-8.0	–	–		12 h 7 d
Altacor (oz)	–	++++ 3.0-4.5	–		4 h 10 d
Ambush 25W (oz)	++ 8.0-12.8	++++ 8.0-12.8	++ 10.0-12.8		12 h 3 d
Apta/Bexar (fl oz)	+++ 17.0-27.0	++ 21.0-27.0	+++ 21.0-27.0		12 h 14 d
Asana XL ¹ (fl oz)	++ 8.0-14.0	++++ 4.8-10.0	++ 8.0-14.0		12 h 14 d
Assail 30SG (oz)	++++ 2.5-5.3	–	++ 5.3-8.0		12 h 7 d
Avaunt (oz)	–	+++ 5.0-6.0	++++ 5.0-6.0		12 h 14 d
Baythroid XL (fl oz)	+ 2.4-2.8	++++ 2.4-2.8	++ 2.4-2.8		12 h 7 d
Beleaf 50SG (oz)	+++ 2.0	–	–		12 h 14 d
Besiege (fl oz)	+ 6.0-12.0	++++ 6.0-12.0	++ 9.0-12.0		24 h 14 d
Cormoran (fl oz)	++++ 20.0	+++ 20.0-28.0	++ 20.0-28.0		12 h 8 d
Danitol 2.4 EC (fl oz)	–	++++ 10.6-21.3	+++ 10.6-21.3		24 h 3 d
Delegate 25WG (oz)	–	++++ 4.5-6.0	+ 6.0-7.0		4 h 7 d
Diazinon 50W ⁹ (lb)	–	++ 2.0-3.0	+++ 3.0-4.0		96 h 21 d
Endigo ZC (fl oz)	++++ 5.5-6.0	++++ 5.5-6.0	++ 5.5-6.0		24 h 14 d
Entrust SC (fl oz)	–	++++ 4.0-8.0	–		4 h 1 d
Exirel (fl oz)	–	–	+++ 13.5-20.5		12 h 3 d
Imidan 70W ⁴ (lb)	+ 2.0-2.5	+++ 2.0-2.5	++++ 2.0-2.5		3/14 d ⁴ 7 d
Intrepid 2F (fl oz)	–	++++ 8.0-16.0	–		4 h 7 d
Lambda-Cy (fl oz)	+ 2.56-5.12	++++ 2.56-5.12	++ 2.56-5.12		24 h 14 d
Leverage 360 (fl oz)	+++ 2.4-2.8	++++ 2.4-2.8	++ 2.4-2.8		12 h 7 d
Malathion 5EC (pt)	+++ 2.8 pt	–	+++ 2.8 pt		12 h 3 d
Movento (fl oz)	++++ 6.0-9.0	–	–		24 h 7 d
Mustang Maxx (fl oz)	+ 1.28-4.0	++++ 1.28-4.0	+++ 1.28-4.0		12 h 14 d

Petal-Fall INSECT PESTS - continued on next page

Petal-Fall INSECT PESTS - continued

PETAL-FALL				CHERRY	
INSECT PEST	Black Cherry Aphid	Leafrollers	Plum Curculio		
Perm-UP 3.2EC (fl oz)	++ 6.0-8.0	++++ 4.0-8.0	++ 8.0		12 h 3 d
Venerate XC (qt)	–	–	S 1.0-2.0		4 h 0 d
Verdepryn 100SL (fl oz)	–	++++ 5.5-11.0	+++ 5.5-11.0		4 h 7 d
Versys (fl oz)	++++ 1.5	–	–		12 h 7 d
Voliam Flexi WG (oz)	++++ 4.0-7.0	++++ 4.0-7.0	+++ 6.0-7.0		12 h 14 d
Warrior II ¹ (fl oz)	+ 1.28-2.56	++++ 1.28-2.56	++ 1.28-2.56		24 h 14 d

¹ When noted, generic products are available.

² +++++ = excellent, +++ = good, ++ = fair, + = poor, S=suppressive, – = ineffective or not rated.

³ Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

⁴ Imidan not labeled for sweet cherries, for tart cherries only. REI 3 d for farm labor, but 14 d for u-pick operations.

CHERRIES

SHUCK-FALL				CHERRY
DISEASE	Brown Rot	Leaf Spot		
Product and Formulation ¹	Product Efficacy Rating ² and Rate/A ³			REI PHI
Abound 2F ⁴ (fl oz)	+ 12.0-15.5	+++ 12.0-15.5		4 h 0 d
Bumper/Tilt ⁵ (fl oz)	+++ 4.0	++ 4.0		24 h 0 d
Cabrio 20EG (oz)	++ 9.5	–		12 h 0 d
Captan 80WDG ⁵ (lb)	++ 2.5	++ 2.5		24 h 0 d
Cevya 3.34SC (fl oz)	++++ 3.0-5.0	–		12 h 0 d
Copper, fixed	–	++ various rates		12-48 h various
Cuprofix Ultra 40DF ⁶ (lb)	–	++ 3.75		12 h FC ⁸
Elevate 50WDG (lb)	++ 1.0-1.5	–		12 h 0 d
Fontelis 1.67SC (fl oz)	+++ 14.0-20.0	+ 14.0-20.0		12 h 0 d
Flint Extra 4.05SC (fl oz)	+++ 2.5-3.8	++++ 2.5-3.8		12 h 1 d
Indar 2F (fl oz)	++++ 6.0	+++ 6.0		12 h 0 d
Luna Experience 3.34SC (fl oz)	+++ 6.0-10	–		12 h 0 d
Luna Sensation 4.2SC (fl oz)	++ 5.0-7.6	++++ 5.0-7.6		12 h 1 d
Merivon 4.18SC (fl oz)	+++ 4.0-6.7	++++ 4.0-6.7		12 h 0 d
Miravis 1.67SC (fl oz)	+++ 3.4-5.1	–		4 h 0 d
Orius AQ 1.67F (fl oz)	++++ 8.6-17.2	+++ 8.6-17.2		12 h 0 d
Pristine 38WG (oz)	++++ 10.5-14.5	++++ 10.5-14.5		12 h 0 d
Quadris Top 2.72SC (fl oz)	++++ 12.0-14.0	–		12 h 0 d
Rally 40WSP (oz)	+++ 2.5-6.0	+++ 2.5-6.0		24 h 0 d
Sulfur, actual (lb)	+ 10.0-12.0	–		24 h NTL ⁸
Topguard EQ (fl oz)	++ 6.0-8.0	–		12 h 7 d
Topsin M WSB (lb)	+++ 1.5	+++ 1.5		48 h 1 d
Topsin M WSB (lb) <u>plus</u> Captan 80WDG (lb) ⁷	+++ 0.5-0.75 <u>plus</u> 1.25-2.5	++++ 0.5-0.75 <u>plus</u> 1.25-2.5		48 h 1 d
Vintage 1SC (oz)	–	+++ 6.0-12.0		24 h 0 h
Ziram 76DF (lb)	++ 5.0-6.0	+ 5.0-6.0		48 h 14 d

Shuck-Fall DISEASE - footnotes on next page

Shuck-Fall DISEASE - footnotes

- ¹ Alternate products of different chemistry for resistance management; see peach and nectarine efficacy Table 7.7 for details.
- ² ++++ = excellent, +++ = good, ++ = fair, + = poor, – = ineffective or not rated.
- ³ Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.
- ⁴ Abound is very phytotoxic on apples. Do not use near apple orchards.
- ⁵ Generic products and/or other formulations available.
- ⁶ Cuprofix is labeled for sour cherry only; do not apply to sweet cherry, as phytotoxicity may occur. Spray copper at bud break and weekly thereafter. To reduce phytotoxicity, decrease concentration as leaves emerge.
- ⁷ If Black Knot is present, use Topsin M + Captan combination sprays.
- ⁸ PHI Key: FC=No later than first cover, NTL= No time limit (usually up to the day of harvest) - consult label.

SHUCK-FALL Avoid killing bees on blooming ground cover.					CHERRY
INSECT PEST	Leafrollers	Plum Curculio			
Product and Formulation ¹	Product Efficacy Rating ¹ and Rate/A ²				REI PHI
Actara (oz)	–	+++ 4.5-5.5			12 h 14 d
Altacor (oz)	++++ 3.0-4.5	–			4 h 10 d
Ambush 25W ³ (oz)	++++ 8.0-12.8	++ 10.0-12.8			12 h 3 d
Asana XL ³ (fl oz)	++++ 4.8-10.0	++ 8.0-14.0			12 h 14 d
Assail 30SG (oz)	–	++ 5.3-8.0			12 h 7 d
Avaunt (oz)	+++ 5.0-6.0	++++ 5.0-6.0			12 h 14 d
Baythroid XL (fl oz)	++++ 2.4-2.8	++ 2.4-2.8			12 h 7 d
Besiege (fl oz)	++++ 6.0-12.0	++ 9.0-12.0			24 h 14 d
Danitol 2.4 EC (fl oz)	++++ 10.6-21.3	+++ 10.6-21.3			24 h 3 d
Delegate 25WG (oz)	++++ 4.5-6.0	+ 6.0-7.0			4 h 7 d
Imidan 70W ⁴ (lb)	+++ 2.0-2.5	+++ 2.0-2.5			3/14 d ⁴ 7 d
Intrepid 2F (fl oz)	++++ 8.0-16.0	–			4 h 7 d
Lambda-Cy (fl oz)	++++ 2.56-5.12	++ 2.56-5.12			24 h 14 d
Leverage 360 (fl oz)	++++ 2.4-2.8	++ 2.4-2.8			12 h 7 d
Perm-UP 3.2EC (fl oz)	++++ 4.0-8.0	++ 8.0			12 h 3 d
Voliam Flexi WG (oz)	++++ 4.0-7.0	+++ 6.0-7.0			12 h 14 d
Warrior II ³ (fl oz)	++++ 1.28-2.56	++ 1.28-2.56			24 h 14 d

- ¹ ++++ = excellent, +++ = good, ++ = fair, + = poor, – = ineffective or not rated.
- ² Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.
- ³ When noted, generic products are available.
- ⁴ Imidan not labeled for sweet cherries, for tart cherries only. REI 3 d for farm labor, but 14 d for u-pick operations.

CHERRIES

COVERS				CHERRY
DISEASE	Brown Rot	Leaf Spot ¹		
Product and Formulation ²	Product Efficacy Rating ³ and Rate/A ⁴			REI PHI
Abound 2F ⁵ (fl oz)	+ 12.0-15.5	+++ 12.0-15.5		4 h 0 d
Bumper/Tilt ⁶ (fl oz)	+++ 4.0	++ 4.0		24 h 0 d
Cabrio 20EG (oz)	++ 9.5	–		12 h 0 d
Captan 80WDG ⁶ (lb)	++ 2.5	++ 2.5		24 h 0 d
Cevya 3.34SC (fl oz)	++++ 3.0-5.0	–		12 h 0 d
Copper, fixed	–	++ various rates		12-48 h various
Cuprofix Ultra 40DF ⁷ (lb)	–	++ 4.0-5.0		12 h FC ⁸
Elevate 50WDG (lb)	++ 1.0-1.5	–		12 h 0 d
Fontelis 1.67SC (fl oz)	+++ 14.0-20.0	+ 14.0-20.0		12 h 0 d
Flint Extra 4.05SC (fl oz)	+++ 2.5-3.8	++++ 2.5-3.8		12 h 1 d
Indar 2F (fl oz)	++++ 6.0	+++ 6.0		12 h 0 d
Luna Experience 3.34SC (fl oz)	+++ 6.0-10	–		12 h 0 d
Luna Sensation 4.2SC (fl oz)	+++ 5.0-7.6	++++ 5.0-7.6		12 h 1 d
Merivon 4.18SC (fl oz)	+++ 4.0-6.7	++++ 4.0-6.7		12 h 0 d
Miravis 1.67SC (fl oz)	+++ 3.4-5.1	–		4 h 0 d
Orius AQ 1.67F (fl oz)	++++ 8.6-17.2	+++ 8.6-17.2		12 h 0 d
Pristine 38WG (oz)	++++ 10.5-14.5	++++ 10.5-14.5		12 h 0 d
Quadris Top 2.72SC (fl oz)	++++ 12.0-14.0	–		12 h 0 d
Rally 40WSP (oz)	+++ 2.5-6.0	+++ 2.5-6.0		24 h 0 d
Sulfur, actual (lb)	+ 10.0-12.0	–		24 h NTL ⁸
Topguard EQ (fl oz)	++ 6.0-8.0	–		12 h 7 d
Topsin M WSB (lb)	+++ 1.5	+++ 1.5		48 h 1 d
Topsin M WSB (lb) plus Captan 80WDG (lb)	+++ 0.5-0.75 plus 1.25-2.5	++++ 0.5-0.75 plus 1.25-2.5		48 h 1 d
Vintage 1SC (oz)	–	+++ 6.0-12.0		24 h 0 h
Ziram 76DF (lb)	++ 5.0-6.0	+ 5.0-6.0		48 h 14 d

¹ If Leaf Spot pressure is high, apply sprays at 7-14 day intervals to provide continual coverage of foliage.
Covers DISEASE - footnotes continued on next page

Covers DISEASE - footnotes continued

² Alternate products of different chemistry for resistance management; see peach and nectarine efficacy Table 7.7 for details.

³ ++++ = excellent, +++ = good, ++ = fair, + = poor, - = ineffective or not rated.

⁴ Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

⁵ Abound is very phytotoxic on apples. Do not use near apple orchards.

⁶ Generic products and/or other formulations available.

⁷ Cuprofix is labeled for sour cherry only; do not apply to sweet cherry, as phytotoxicity may occur. Spray copper at bud break and weekly thereafter. To reduce phytotoxicity, decrease concentration as leaves emerge. ⁸ PHI Key: FC=No later than first cover, NTL= No time limit (usually up to the day of harvest) - consult label.

COVERS						CHERRY
INSECT OR MITE PEST	INSECTS			MITES		REI PHI
	Leafrollers	Plum Curculio	Spotted Wing Drosophila	European Red Mite	Two-Spotted Spider Mite	
Product and Formulation ¹	Product Efficacy Rating ² and Rate/A ³					
Acramite 50WS (oz)	-	-	-	++++ 12.0-16.0	++++ 12.0-16.0	12 h 3 d
Admire Pro ¹ (fl oz)	-	-	+++ 2.0-2.8	-	-	12 h 7 d
Altacor (oz)	++++ 3.0-4.5	-	-	-	-	4 h 10 d
Ambush 25W ¹ (oz)	++++ 8.0-12.8	++ 10.0-12.8	+++ 8.0-10.0	-	-	12 h 3 d
Apollo SC (oz)	-	-	-	++++ 4.0-6.0	++++ 4.0-6.0	12 h 21 d
Apta/Bexar (fl oz)	++ 21.0-27.0	+++ 21.0-27.0	-	-	-	12 h 14 d
Asana XL ¹ (fl oz)	++++ 4.8-10.0	++ 8.0-14.0	+++ 4.8-10.0	-	-	12 h 14 d
Assail 30SG (oz)	-	++ 5.3-8.0	++++ 2.5-5.3	-	-	12 h 7 d
Avaunt (oz)	+++ 5.0-6.0	++++ 5.0-6.0	-	-	-	12 h 14 d
<i>Bacillus thuringiensis</i> ^{1,4} (lb)	++++ 0.5-2.0	-	-	-	-	4 h - ⁴
Baythroid XL (fl oz)	++++ 2.4-2.8	++ 2.4-2.8	+++ 2.4-2.8	-	-	12 h 7 d
Besiege (fl oz)	++++ 6.0-12.0	++ 9.0-12.0	+++ 6.0-12.0	-	-	24 h 14 d
Cormoran (fl oz)	+++ 20.0-28.0	++ 20.0-28.0	++ 20.0	-	-	12 h 8 d
Danitol 2.4 EC (fl oz)	++++ 10.6-21.3	++ 10.6-21.3	+++ 10.6-21.3	++ 10.6-21.3	++ 10.6-21.3	24 h 3 d
Delegate 25WG (oz)	++++ 4.5-7.0	+ 6.0-7.0	+++ 4.5-7.0	-	-	4 h 7 d
Endigo ZC (fl oz)	++++ 5.5-6.0	S 5.5-6.0	+++ 5.5-6.0	-	-	24 h 7 d
Entrust SC (fl oz)	++++ 4.0-8.0	-	+++ 4.0-8.0	-	-	4 h 7 d
Envidor 2SC (fl oz)	-	-	-	++++ 16.0-18.0	++++ 16.0-18.0	12 h 7 d
Exirel (fl oz)	+++ 13.5-20.5	+++ 13.5-20.5	++++ 13.5-20.5	-	-	12 h 3 d

Covers INSECT OR MITE PESTS - continued on next page

CHERRIES

Covers INSECT OR MITE PESTS - continued

COVERS				CHERRY		
INSECT OR MITE PEST	INSECTS			MITES		
	Leafrollers	Plum Curculio	Spotted Wing Drosophila	European Red Mite	Two-Spotted Spider Mite	
Imidan 70W ⁵ (lb)	+++ 2.0-2.5	++++ 2.0-2.5	++++ 2.0-2.5	–	–	3/14 d ⁵ 7 d
Intrepid 2F (fl oz)	+++ 8.0-16.0	–	–	–	–	4 h 7 d
Lambda-Cy (fl oz)	++++ 2.56-5.12	++ 2.56-5.12	+++ 2.56-5.12	–	–	24 h 14 d
Leverage 360 (fl oz)	+++ 2.4-2.8	++ 2.4-2.8	+++ 2.4-2.8	–	–	12 h 7 d
Malathion 5EC (pt)	++ 2.8	–	++++ 2.8	–	–	12 h 3 d
Mustang Maxx (fl oz)	++++ 1.28-4.0	++ 1.28-4.0	++++ 1.28-4.0	–	–	12 h 14 d
Perm-UP 3.2EC (fl oz)	++++ 4.0-8.0	++ 8.0	+++ 4.0-8.0	–	–	12 h 3 d
Pounce 3.2EC ¹ (oz)	++++ 4.0-8.0	++ 4.0-8.0	+++ 4.0-8.0	–	–	12 h 3 d
Savey 50DF (oz)	–	–	–	++++ 3.0-6.0	++++ 3.0-6.0	12 h 28 d
Sevin XLR Plus (lb)	++ 2.0-3.0	++ 2.0-3.0	+++ 2.0-3.0	–	–	12 h 1 d
Vendex 50WP (lb)	–	–	–	+++ 1.5-3.0	+++ 1.5-3.0	48 h 14 d
Verdepryn 100SL (fl oz)	++++ 5.5-11.0	+++ 5.5-11.0	+++ 5.5-11.0	–	–	4 h 7 d
Voliam Flexi (oz)	++++ 4.0-7.0	+++ 6.0-7.0	+++ 4.0-7.0	–	–	12 h 14 d
Warrior II ¹ (fl oz)	++++ 1.28-2.56	+++ 1.28-2.56	+++ 1.28-2.56	–	–	24 h 14 d
Zeal (oz)	–	–	–	++++ 2.0-3.0	++++ 2.0-3.0	12 h 7 d

¹ When noted, generic products are available.

² ++++ = excellent, +++ = good, ++ = fair, + = poor, – = ineffective or not rated.

³ Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

⁴ Various products are available. See label.

⁵ Imidan not labeled for sweet cherries, for tart cherries only. REI 3 d for farm labor, but 14 d for u-pick operations.

PREHARVEST			CHERRY		
DISEASE	Brown Rot	Leaf Spot			
Product and Formulation ¹	Product Efficacy Rating ² and Rate/A ³				REI PHI
Abound 2F ⁴ (fl oz)	+++ 12.0-15.5	+++ 12.0-15.5			4 h 0 d
Bumper/Tilt ⁵ (fl oz)	++++ 4.0	++ 4.0			24 h 0 d
Cabrio 20EG (oz)	++ 9.5	–			12 h 0 d
Captan 80WDG ⁵ (lb)	++ 2.5	++ 2.5			24 h 0 d
Cevya 3.34SC (fl oz)	++++ 3.0-5.0	–			12 h 0 d
Elevate 50WDG (lb)	++ 1.0-1.5	–			12 h 0 d
Fontelis 1.67SC (fl oz)	+++ 14.0-20.0	+ 14.0-20.0			12 h 0 d
Flint Extra 4.05SC (fl oz)	+++ 2.5-3.8	++++ 2.5-3.8			12 h 1 d
Indar 2F (fl oz)	++++ 6.0	+++ 6.0			12 h 0 d
Luna Experience 3.34SC (fl oz)	+++ 6.0-10	–			12 h 0 d
Luna Sensation 4.2SC (fl oz)	+++ 5.0-7.6	++++ 5.0-7.6			12 h 1 d
Merivon 4.18SC (fl oz)	+++ 4.0-6.7	++++ 4.0-6.7			12 h 0 d
Miravis 1.67SC (fl oz)	+++ 3.4-5.1	–			4 h 0 d
Orius AQ 1.67F (fl oz)	++++ 8.6-17.2	+++ 8.6-17.2			12 h 0 d
Pristine 38WG (oz)	++++ 10.5-14.5	++++ 10.5-14.5			12 h 0 d
Quadris Top 2.72SC (fl oz)	++++ 12.0-14.0	–			12 h 0 d
Rally 40WSP (oz)	+++ 2.5-6.0	+++ 2.5-6.0			24 h 0 d
Sulfur, actual (lb)	+ 10.0-12.0	–			24 h NTL ⁶
Topguard EQ (fl oz)	++ 6.0-8.0	–			12 h 7 d
Topsin M WSB (lb)	+++ 1.5	+++ 1.5			48 h 1 d
Topsin M WSB plus Captan 80WDG	+++ 0.5-0.75 plus 1.25-2.5	++++ 0.5-0.75 plus 1.25-2.5			48 h 1 d
Vintage 1SC (oz)	–	+++ 6.0-12.0			24 h 0 h
Ziram 76DF (lb)	++ 5.0-6.0	+ 5.0-6.0			48 h 14 d

¹ Alternate products of different chemistry for resistance management; see peach and nectarine efficacy Table 7.7 for details.

² ++++ = excellent, +++ = good, ++ = fair, + = poor, – = ineffective or not rated.

³ Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

⁴ Abound is very phytotoxic on apples. Do not use near apple orchards.

⁵ Generic products and/or other formulations available.

⁶ PHI Key: NTL= No time limit (usually up to the day of harvest) - consult label.

CHERRIES

PREHARVEST Avoid killing bees on blooming ground cover.					CHERRY	
INSECT OR MITE PEST	INSECTS			MITES		REI PHI
	Leafrollers	Plum Curculio	Spotted Wing Drosophila	European Red Mite	Two-Spotted Spider Mite	
Product and Formulation ¹	Product Efficacy Rating ² and Rate/A ³					
Acramite 50WS (oz)	–	–	–	++++ 12.0-16.0	++++ 12.0-16.0	12 h 3 d
Altacor (oz)	++++ 3.0-4.5	–	–	–	–	4 h 10 d
Admire Pro ¹ (fl oz)	–	–	+++ 2.0-2.8	–	–	12 h 7 d
Ambush 25W ¹ (oz)	++++ 8.0-12.8	++ 10.0-12.8	+++ 8.0-10.0	–	–	12 h 3 d
Apollo SC (oz)	–	–	–	++++ 4.0-6.0	++++ 4.0-6.0	12 h 21 d
Assail 30SG (oz)	–	++ 5.3-8.0	++++ 2.5-5.3	–	–	12 h 7 d
<i>Bacillus thuringiensis</i> ^{1,4}	++++ various rates	–	–	–	–	4 h – ⁴
Baythroid XL (fl oz)	++++ 2.4-2.8	++ 2.4-2.8	+++ 2.4-2.8	–	–	12 h 7 d
Cormoran (fl oz)	+++ 20.0-28.0	++ 20.0-28.0	++ 20.0	–	–	12 h 8 d
Danitol 2.4 EC (fl oz)	++++ 10.6-21.3	++ 10.6-21.3	–	++ 10.6-21.3	++ 10.6-21.3	24 h 3 d
Delegate 25WG (oz)	++++ 4.5-7.0	+ 6.0-7.0	+++ 4.5-7.0	–	–	4 h 7 d
Entrust SC (fl oz)	++++ 4.0-8.0	–	–	–	–	4 h 7 d
Endigo ZC (fl oz)	++++ 5.5-6.0	S 5.5-6.0	+++ 5.5-6.0	–	–	24 h 7 d
Envidor 2SC (fl oz)	–	–	–	++++ 16.0-18.0	++++ 16.0-18.0	12 h 7 d
Exirel (fl oz)	+++ 13.5-20.5	+++ 13.5-20.5	++++ 13.5-20.5	–	–	12 h 3 d
Imidan 70W ⁵ (lb)	+++ 2.0-2.5	++++ 2.0-2.5	+++ 2.0-2.5	–	–	3/14 d ⁵ 7 d
Intrepid 2F (fl oz)	++++ 8.0-16.0	–	–	–	–	4 h 7 d
Leverage 360 (fl oz)	+++ 2.4-2.8	++ 2.4-2.8	+++ 2.4-2.8	–	–	12 h 7 d
Malathion 5EC (pt)	++ 2.8	–	++++ 2.8	–	–	12 h 3 d
Onager EC (oz)	–	–	–	+++ 12.0-24.0	++++ 12.0-24.0	12 h 28 d
Perm-UP 3.2EC (fl oz)	++++ 4.0-8.0	++ 8.0	+++ 4.0-8.0	–	–	12 h 3 d
Pounce 3.2EC ¹ (oz)	++++ 4.0-8.0	++ 4.0-8.0	+++ 4.0-8.0	–	–	12 h 3 d
Savey 50DF (oz)	–	–	–	++++ 3.0-6.0	++++ 3.0-6.0	12 h 28 d
Sevin 80S (lb)	++ 2.5 -3.75	++ 2.5 -3.75	+++ 2.5	–	–	12 h 1 d
Vendex 50WP (lb)	–	–	–	+++ 1.5-3.0	+++ 1.5-3.0	48 h 14 d

Preharvest INSECT OR MITE PEST - continued on next page

Preharvest INSECT OR MITE PEST - continued

PREHARVEST Avoid killing bees on blooming ground cover.						CHERRY
INSECT OR MITE PEST	INSECTS			MITES		
	Leafrollers	Plum Curculio	Spotted Wing Drosophila	European Red Mite	Two-Spotted Spider Mite	
Verdepryn 100SL (fl oz)	++++ 5.5-11.0	+++ 5.5-11.0	+++ 5.5-11.0	–	–	4 h 7 d
Zeal (oz)	–	–	–	++++ 2.0-3.0	++++ 2.0-3.0	12 h 7 d

¹ When noted, generic products are available.

² ++++ = excellent, +++ = good, ++ = fair, + = poor, – = ineffective or not rated.

³ Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

⁴ Various products are available. See label.

⁵ Imidan not labeled for sweet cherries, for tart cherries only. REI 3 d for farm labor, but 14 d for u-pick operations.

CHERRIES

POSTHARVEST				CHERRY	
DISEASE	Bacterial Canker	Leaf Spot ¹			
Product and Formulation ²	Product Efficacy Rating ³ and Rate/A ⁴				REI PHI
Bravo Weather Stik 6F ⁵ (pt)	–	++++ 3.0-4.0			12 h SF ⁷
Captan 80WDG ⁵ (lb)	–	++ 2.5			24 h 0 d
Copper, fixed ⁶	++ various rates	++ various rates			12-48 h various
Indar 2F (fl oz)	–	+++ 6.0			12 h 0 d
Orius AQ 1.67F (fl oz)	–	+++ 8.6-17.2			12 h 0 d
Pristine 38WG (oz)	–	++++ 10.5-14.5			12 h 0 d
Rally 40WSP (oz)	–	+++ 2.5-6.0			12 h 0 d

¹ Apply postharvest spray within 7 days after fruit removal. If incidence is high, apply a second spray 10-14 days later.

² Alternate products of different chemistry for resistance management; see peach and nectarine efficacy Table 7.7 for details.

³ ++++ = excellent, +++ = good, ++ = fair, + = poor, – = ineffective or not rated.

⁴ Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

⁵ Generic products and/or other formulations available.

⁶ Apply two sprays at 10% and 80% leaf drop. If canker has been a problem, apply 4 sprays at 14 day intervals. ⁷ PHI Key: SF= No later than shuck-fall

POSTHARVEST Avoid killing bees on blooming ground cover.				CHERRY	
INSECT OR MITE PEST	INSECTS		MITES		REI PHI
	Lesser Peach Tree Borer	Peach Tree Borer	European Red Mite	Two-Spotted Spider Mite	
Product and Formulation	Product Efficacy Rating ¹ and Rate/A ²				REI PHI
Acramite 50WS (oz)	–	–	++++ 12.0-16.0	++++ 12.0-16.0	12 h 3 d
Apollo SC (oz)	–	–	++++ 4.0-6.0	++++ 4.0-6.0	12 h 21 d
Asana XL ³ (fl oz/100 gal)	+++ 5.8	+++ 5.8	–	–	12 h 14 d
Envidor 2SC (fl oz)	–	–	++++ 16.0-18.0	++++ 16.0-18.0	12 h 7 d
Isomate PTB Dual ⁴ (dispenser)	++++ 150-250	++++ 150-250	–	–	NA ⁵ NA ⁵
Savey 50DF (oz)	–	–	++++ 3.0-6.0	++++ 3.0-6.0	12 h 28 d
Vendex 50WP (lb)	–	–	+++ 1.5-3.0	+++ 1.5-3.0	48 h 14 d
Zeal (oz)	–	–	++++ 2.0-3.0	++++ 2.0-3.0	12 h 7 d

¹ ++++ = excellent, +++ = good, ++ = fair, + = poor, – = ineffective or not rated.

² Rates are in amount of formulated product per acre, unless otherwise noted. REI=Restricted Entry Interval. PHI=Preharvest Interval.

³ Per acre rate by handgun in minimum of 100 gal/A; apply after harvest during early September in south Jersey, slightly later in the northern parts of the state. Thoroughly wet trunks and scaffold limbs. Avoid contact with sweet cherry foliage to prevent defoliation.

⁴ Various formulations available. See product label for instructions. ⁵ Not Applicable.

