

Spray Program for Multi-Small Fruit Plantings



Many local farms are composed of multi-small fruit combinations producing for fresh market blackberries, raspberries, blueberries, strawberries and grapes. Aggressive fruit spray programs are required to achieve high quality fruit. These multi-small fruit plantings create many spray management challenges for the achievement of good pest control in accordance to label guidelines.

Therefore, the following multi-small fruit spray program for the control of major small fruit pests and diseases may offer some assistance:

Labeled as noted in 2016 for All Small Fruit – Strawberries, Brambles: Blackberries, Raspberries, Blueberries, and Grapes.

<u>FUNGICIDES: [FRAC]</u>	<u>*RATE</u>	<u>NOTES</u>
Lime Sulfur [M2]	10.0 gals	Dormant Fall Sanitizer
JMS® Stylet Oil [NC]	1.0 gal	Apply Temp 35-85° F
Kocide® DF [M1]	2.0 lbs	Other Fixed Coppers
Captan® 50W [M4]	2.0 lbs	General Protectant
Ziram® 76DF [M3]	5.0 lbs	General Protectant
(Except for Strawberry use Thiram®)		
Sulfur 95W [M2]	3.0 lbs	General Protectant
(Grape variety sensitivity)		
Rally® 40W [3]	4.0 ozs	Powdery Mildew & Black Rot
(Except for blueberry use Tilt®)		
Pristine® [7/11]	14.5 ozs	Fruit Rots, Fruit Spots, Powdery & Downy Mildew & Cane Blight
Elevate® 50 WG [17]	1.5 lbs	Botrytis & Powdery Mildew
Switch® 62.5 WG [9/12]	11.0 ozs	Anthraco-nose, Mummy Berry, Phomopsis, Sour Rot & Botrytis
Phostrol® [33]	4.0 pts	Downy Mildew & Red Stele

<u>INSECTICIDES: [IRAC]</u>	<u>*RATE</u>	<u>NOTES</u>
Provado® Admire® [4A]	4.0 ozs	SWD, Grubs, Aphids, Hoppers, Curculio & Whitefly
or Actara® [4A]		
Brigade® WSB [3]	12.0 ozs	BMSB, SWD, Clipper Beetle, Plant Bug, Mites & Root Weevil
Malathion [1B]	2.0pts	SWD, Scale, Fruit Moths & Whitefly
Sevin® 50W [1A]	4.0 lbs	SWD, Japanese Beetles, Hornets & Sap Beetles

*Rate for 50-100gal Acre Concentrate Spray

**Be sure to follow all labels closely for PHI and REI!

Multi-Small Fruit Spray Calendar*

March 5 -	Spring Dormant Spray JMS® Stylet Oil 1.0 gal (Scales & Mites)
April 10 -	Early Strawberry Bloom Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI) Thiram® 75WDG 5.0 lbs (Strawberry Only)
April 15 -	Strawberry Bloom/ Blueberry Early Bloom Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI) Ziram 76DF 5.0 lbs (Except Strawberry) Brigade® WSB 12.0 ozs (Clipper Beetle, 0-3-day PHI)
April 25 -	Strawberry Full bloom/Blueberry Mid-Bloom/ Grape Bud Break Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI) Pristine® 14.5 ozs Brigade® WSB 12.0 ozs (Clipper Beetle, 0-3-day PHI)
May 5 -	Strawberry 1st Cover & Early Harvest Spray/ Blueberry Full Bloom/Grape & Bramble Shoot Growth Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI) Elevate® 1.5 lbs (0-day PHI) Provado® 4.5 ozs (Curculio & Aphids; 7-Day PHI)
May 15 -	Strawberry 2nd Cover & Harvest Spray/ Blueberry 1st Cover/Grape Bloom Spray/Bramble Cane Development Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI) Switch® 11.0 ozs (0-day PHI) Malathion® 2.0 pts (Curculio, Scale & Fruit Moths; 0-3-day PHI)
June 1 -	Strawberry 3rd Cover & Harvest Spray/Blueberry 2nd cover/Grape 1st Cover/Bramble Bloom Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI) Pristine® 14.5 ozs (0-day PHI) Malathion® 2.0 pts (Curculio, Scale & Fruit Moths; 0-3-day PHI)

June 15 - **Strawberry 4th Cover & Harvest Spray/Blueberry 3rd Cover & Early Harvest/ Bramble 1st Cover/ Grape 2nd Cover**

Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI)
Elevate® 1.5 lbs (0-day PHI)
Sevin® 50W 4.0 lbs (sap beetle, 5-Day PHI)

July 1- **Strawberry Renovation/Blueberry 4th Cover & Harvest/ Bramble 2nd Cover & Early Harvest/ Grape 3rd Cover**

Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI)
Pristine® 14.5 ozs (0-day PHI)
Rally 40 W 4.0 ozs (Except Blueberry, 0-day PHI))
Brigade® WSB 12.0 ozs (0-3-day PHI)

July 15 - **Strawberry Post Harvest/ Blueberry 5th Cover & Harvest/ Bramble 3rd Cover & Harvest/ Grape 3rd Cover & Veraison**

Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI)
Switch® 11.0 ozs (0-day PHI)
Sulfur 95W 3.0 lbs (0-day PHI)
or Kocide DF 2.0 lbs (0-day PHI)
Malathion 2.0 pts (0-3-day PHI)

August 1- **Strawberry Post Harvest/ Blueberry 6th Cover & Harvest/ Bramble 4th Cover & Harvest/ Grape 4th Cover & Early Harvest**

Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI)
Pristine® 14.5 ozs (0-day PHI)
Sevin® 50W 4.0 lbs (Japanese Beetle, 5-Day PHI)

August 15 - **Strawberry, Blueberry & Bramble Post Harvest/ Grape 5th Cover & Harvest**

Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI)
Elevate® 1.5 lbs (0-day PHI)
Phostrol® 4.0 pts (0-day PHI)
Sevin® 50W 4.0 lbs (Hornets – 5-Day PHI for All Fruit)

September 1 - **Strawberry Post Harvest/ Grape 6th Cover & Harvest**

Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI)
Phostrol® 4.0 pts (0-day PHI)
Sevin® 50W 4.0 lbs (Hornets – 5-Day PHI for All Fruit)

November 25 **Fall Dormant**

Lime Sulfur 10.0 gals
Kocide DF 2.0 lbs (0-day PHI)

<u>HERBICIDES: [HRAC]</u>	<u>*RATE</u>	<u>NOTES</u>
Gramoxone® [22]	1.0 qts	Burndown, Directed Spray
Roundup® [9]	1.0 qts	Burndown, Shielded & Directed Spray
Devrinol® 50 DF [15]	4.0 lbs	Spring/Summer 35-day PHI
Princep® 4L [5]	1.0 qts	Spring Dormant, Avoid High pH Soils
Solicam® [12]	2.5 lbs	Spring/Fall Dormant, 1-yr Established
(Except strawberry)		
Aim® [14] or Shark® [14]	2.0 ozs	Directed Spray to Weeds, 3-day PHI
Venue [14] (Grapes only)	2.0 ozs	Directed Spray, 0-day PHI
Chateau [14]	12.0 ozs	After Harvest to Spring Bud Swell
(Except brambles)		
Surflan® [3]	2.0 qts	Spring/ Summer, Prowl 60-day PHI
(Except strawberry)		
Poast® [1]	1.5 pts	Summer Grasses, Variable PHI
Sinbar® [5]	4.0 ozs	Fall Dormant, 1-yr Established

*Lowest Use Rate Recommended Initially

Organic Approach Substitutions:

Conventional Product	Organic Certified Product (OMRI)
Captan®	Surround® or Sulfur or Lime Sulfur
Rally®	Kaligreen (Powdery Mildew Eradicant)
Listed Insecticides	Neem® or Pyganic® or Entrust® or Dipel®
Gramoxone® or Roundup®	Avenger®, Burnout® or Scythe® (no OMRI label)

* Important Note: The calendar spray dates given are an average estimate for Anne Arundel and Prince George's County small fruit production, and may vary by location in Southern Maryland. Be sure to adjust your spray schedule application dates accordingly. The above recommendations very closely reflect the current spray program utilized at the University of Maryland Research and Education Center, Upper Marlboro Facility for its research fruit plots. Remember to always "Read the Label".

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