

## 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 2020 for All Small Fruit – Strawberries, Brambles: Blackberries, Raspberries, Blueberries, and Grapes.**

<b>FUNGICIDES: [IRAC]</b>	<b>*RATE</b>	<b>NOTES</b>
<b>Lime Sulfur [M2]</b>	10.0 gals	Dormant Fall Sanitizer
<b>JMS® Stylet Oil [NC]</b>	1.0 gal	Apply Temp 35-85° F
<b>Kocide® DF [M1]</b>	2.0 lbs	Other Fixed Coppers
<b>Captan® 50W [M4]</b>	2.0 lbs	General Protectant
<b>Ziram® 76DF [M3]</b>	5.0 lbs	General Protectant
(Except for Strawberry use <b>Thiram®</b> )		
<b>Sulfur 95W [M2]</b>	3.0 lbs	General Protectant
(Grape variety sensitivity)		
<b>Rally®40W [3]</b>	4.0 ozs	Powdery Mildew & Black Rot
(Except for blueberry use <b>Tilt®</b> )		
<b>Pristine® [7/11]</b>	14.5 ozs	Fruit Rots, Fruit Spots, Powdery & Downy Mildew & Cane Blight
<b>Elevate® 50 WG [17]</b>	1.5 lbs	Botrytis & Powdery Mildew
<b>Switch® 62.5 WG [9/12]</b>	11.0 ozs	Anthraco-nose, Mummy Berry, Phomopsis, Sour Rot & Botrytis
<b>Phostrol® [33]</b>	4.0 pts	Downy Mildew & Red Stele
<b>Ph-D® WDG [19]</b>	6.2 ozs	Botrytis & Powdery Mildew
(Strawberries and grapes only)		
<b>INSECTICIDES: [IRAC]</b>	<b>*RATE</b>	<b>NOTES</b>
<b>Provado® Admire® [4A]</b>	4.0 ozs	SWD, Grubs, Aphids, Hoppers, Curculio & Whitefly
<b>or Actara® [4A]</b>		
<b>Brigade® WSB [3]</b>	12.0 ozs	BMSB, SWD, Clipper Beetle, Plant Bug, Mites & Root Weevil
<b>Malathion [1B]</b>	2.0pts	SWD, Scale, Fruit Moths & Whitefly
<b>Sevin® 50W [1A]</b>	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\*

<b>March 5 -</b>	<b>Spring Dormant Spray</b> JMS® Stylet Oil 1.0 gal (Scales & Mites)
<b>April 10 -</b>	<b>Early Strawberry Bloom</b> Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI) Thiram® 75WDG 5.0 lbs (Strawberry Only)
<b>April 15 -</b>	<b>Strawberry Bloom/ Blueberry Early Bloom</b> 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)
<b>April 25 -</b>	<b>Strawberry Full bloom/Blueberry Mid-Bloom/ Grape Bud Break</b> 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)
<b>May 5 -</b>	<b>Strawberry 1<sup>st</sup> Cover &amp; Early Harvest Spray/ Blueberry Full Bloom/Grape &amp; Bramble Shoot Growth</b> 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)
<b>May 15 -</b>	<b>Strawberry 2<sup>nd</sup> Cover &amp; Harvest Spray/ Blueberry 1<sup>st</sup> Cover/Grape Bloom Spray/Bramble Cane Development</b> 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)
<b>June 1 -</b>	<b>Strawberry 3<sup>rd</sup> Cover &amp; Harvest Spray/Blueberry 2<sup>nd</sup> cover/Grape 1<sup>st</sup> Cover/Bramble Bloom</b> 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)

<b>June 15 -</b>	<b>Strawberry 4<sup>th</sup> Cover &amp; Harvest Spray/Blueberry 3<sup>rd</sup> Cover &amp; Early Harvest/ Bramble 1<sup>st</sup> Cover/ Grape 2<sup>nd</sup> Cover</b> Captan® 50W 2.0 lbs (0-3 Day PHI & 2-Day REI) Ph-D® 6.2 ozs (0-day PHI) Sevin® 50W 4.0 lbs (sap beetle, 5-Day PHI)
<b>July 1-</b>	<b>Strawberry Renovation/Blueberry 4<sup>th</sup> Cover &amp; Harvest/ Bramble 2<sup>nd</sup> Cover &amp; Early Harvest/ Grape 3<sup>rd</sup> Cover</b> 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)
<b>July 15 -</b>	<b>Strawberry Post Harvest/ Blueberry 5<sup>th</sup> Cover &amp; Harvest/ Bramble 3<sup>rd</sup> Cover &amp; Harvest/ Grape 3<sup>rd</sup> Cover &amp; Veraison</b> 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)
<b>August 1-</b>	<b>Strawberry Post Harvest/ Blueberry 6<sup>th</sup> Cover &amp; Harvest/ Bramble 4<sup>th</sup> Cover &amp; Harvest/ Grape 4<sup>th</sup> Cover &amp; Early Harvest</b> 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)
<b>August 15 -</b>	<b>Strawberry, Blueberry &amp; Bramble Post Harvest/ Grape 5<sup>th</sup> Cover &amp; Harvest</b> 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)
<b>September 1 - October 30</b>	<b>Strawberry Post Harvest/ Grape 6<sup>th</sup> Cover &amp; Harvest</b> 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)
<b>November 25</b>	<b>Fall Dormant</b> Lime Sulfur 10.0 gals Kocide DF 2.0 lbs (0-day PHI)

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