# **Squash Fungicide Spray Programs 2019**

### Bhabesh Dutta Extension Vegetable Pathologist – University of Georgia

As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, discing and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any on practice and gives growers more disease management options at lower risk. Once plants are in the field, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many diseases that attack squash during the growing season(s) in Georgia and is not intended to be followed literally but to give an idea of the chronology of disease pressure in relation to fungicide choice. Each field in each year has different situations that call for different actions.

		Spray Scr	iedule = 7 day
	Spring		Fall
Spray number	Fungicide/disease activity	Spray number	Fungicide/disease activity
1	Chlorothalonil <sup>1</sup> or mancozeb/DOW	1	Orondis (soil app)/PCAP Chorothalonil or Ariston/DOW
2	Orondis (soil app)/PCAP Chorothalonil or Ariston/DOW	2	Chlorothalonil <sup>1</sup> or Ariston/DOW
3	Presidio or Revus/PCAP Chorothalonil or mancozeb/DOW	3	Orondis (soil app) or Presidio or Revus/PCAP Chorothalonil or Ariston/DOW
4	Orondis (soil app)/PCAP Cholrothalonil or Ariston/DOW Torino or Fontelis/POW	4	Orondis (soil app)/PCAP Cholrothalonil or Ariston/DOW Gatten or Quintec or Torino/POW
5	Gatten orTorino/POW Presidio or Revus/ PCAP Chlorothalonil+(Elumin or Ranman or or Previcur Flex) / DOW	5	Gatten or Proline/POW
6	Quintec or Gatten/POW Orondis (soil app)/ PCAP Chlorothalonil+(Elumin or Ranman or or Previcur Flex) / DOW	6	Torino or Gatten/POW Orondis (soil app)/ PCAP Chlorothalonil+ (Elumin or Ranman or Previcur Flex)/ DOW
7	Gatten or Proine or Quintec /POW Presidio or Revus/ PCAP Chlorothalonil+(Elumin or Ranman or Previcur Flex) / DOW	7	Presidio or Revus/ PCAP + DOW Chlorothalonil or mancozeb+Elumin or Ranman or Previcur Flex/ DOW
8	Presidio or Revus/ PCAP Chlorothalonil or mancozeb+Elumin or Ranman or Previcur Flex / DOW	8	Gatten or Quintec or Torino/POW  Presidio or Revus/ PCAP Chlorothalonil+ (Elumin or Ranman or Previcur Flex)/ DOW

<sup>1</sup>Chlorothalonil (Bravo, Echo, Equus, etc...). Always read the label for detailed application instructions or consult the Georgia Pest Control Handbook.

Disease Acronyms: GSM = gummy stem blight; RHIZ=Rhizoctonia belly rot; DOW = downy mildew; ANTH = anthracnose; PCAP = Phytophthora crown and fruit rot.

### **Cantaloupe Fungicide Spray Programs 2019**

# Bhabesh Dutta Extension Vegetable Pathologist – University of Georgia

As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, discing and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any on practice and gives growers more disease management options at lower risk. Once plants are in the field, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many diseases that attack cantaloupe during the growing season(s) in Georgia.

### Spray Schedule = Start 1 week after transplanting, then use 7 day schedule if raining once a week.

Spri		Fall		
Spray		Spray		
No.	Fungicide(s)/disease activity	No.	Fungicide(s)/disease activity	
1.	Chlorothalonil/GSB copper at lowest labeled rate 1/BFB	1	Chlorothalonil + Proline <sup>2</sup> /GSB copper at lowest labeled rate <sup>1</sup> /BFB Ranman, or Elumin or Ariston/DOW	
2.	Chlorothalonil/GSB copper at lowest labeled rate /BFB		Chlorothalonil/GSB copper at lowest labeled rate 1/BFB	
3.	Chlorothalonil/GSB copper at lowest labeled rate 1/BFB	2	Orondis (soil app), Presidio or Revus/ PCAP	
4.	Miravis Prime or Proline or Inspire Super or Aprovia top/GSB; Orondis (soil app), Presidio or Revus/ PCAP; Ranman or Previcur flex, or Curzate/DOW	3	Chlorothalonil + Miravis Prime or Inspire Super or Aprovia top/GSB; copper at lowest labeled rate <sup>1</sup> /BFB; Ranman or Previcur flex or Curzate/DOW	
5.	Chlorothalonil + Luna Experience/GSB; Quintec or Gatten or Proline or Procure/POW; Elumin (soil app) or Presidio or Revus / PCAP; Ranman or Ariston or Previcur flex or		Chlorothalonil/GSB Orondis (soil app) or Presidio or Revus/ PCAP; Ranman or Elumin or Curzate/DOW	
6.	Curzate/DOW  Miravis Prime or Proline or Inspire Super or Aprovia top/GSB; Quintec or Torino or Gatten or Proline or Procure/POW; Orondis (soil app) or Presidio or Revus/PCAP	4	Chlorothalonil + Miravis Prime or Proline or Aprovia top/GSB; Quintec or Gatten or Torino or Procure/POW; Presidio or Revus / PCAP; Ranman or Previcur flex, or Curzate/DOW Chlorothalonil + Aprovia Top/GSB;	
7.		5	Quintec or Torino or Procure/POW; Presidio or Revus/ PCAP; Ranman or Previcur flex or Curzate/DOW	
8 <sup>3</sup> .	Ariston or Ranman or Previcur flex or Curzate/DOW Chlorothalonil + Luna Experience/GSB; Quintec, Torino, Proline or Procure/POW; Elumin (soil app) or Presidio or Revus/ PCAP; Ranman, Zampro, or Curzate/DOW	6	Chlorothalonil + Miravis Prime OR Inspire Super/GSB; Quintec or Gatten or Torino /POW Orondis (soil app) or Elumin or Presidio or Revus /PCAP; Ranman or Curzate/DOW	
	Chlorothalonil/GSB; Quintec or Gatten or Proline/POW; Orondis (soil app) or Presidio or Revus/ PCAP; Ranman or Previcur flex or Curzate/DOW	7.	Chlorothalonil + Proline/GSB + POW Presidio, Revus / PCAP; Ranman or Previcur flex, or Curzate/DOW	

Always read the label for detailed application instructions or consult the Georgia Pest Control Handbook.

<sup>&</sup>lt;sup>1</sup> Copper is used prior to fruit set at lowest labeled rate if bacterial fruit blotch is an issue. <sup>2</sup> Proline should be used at 5.7 fl oz when sprayed each time.

<sup>&</sup>lt;sup>3</sup> Be mindful of preharvest intervals (PHIs) for later sprays as many may have a 7-14 day PHI. Disease Acronyms: BFB = bacterial fruit blotch; GSB = gummy stem blight; POW = powdery mildew; DOW = downy mildew; ANTH = anthracnose; PCAP = Phytophthora crown and fruit rot.

### Succulent Legume (snap, lima, pole bean) Fungicide Spray Programs 2019

# Bhabesh Dutta Extension Vegetable Pathologist – University of Georgia

As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, discing and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any practice and gives growers more disease management options at lower risk. Once plants are in the fields, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many disease that attack succulent pod legumes during the growing season(s).

### Spray Schedule = 7 - 14 day

Spring/Summer		Fall		
Spray No.	Fungicide(s)/disease activity	Spray No.	Fungicide(s) /disease activity	
1.	Chlorothalonil <sup>1</sup> of Folicur/R + CERC + ALT	1.	Chlorothalonil <sup>1</sup> of Folicur/R + CERC + ALT	
2.	Chlorothalonil <sup>1</sup> of Folicur/R + CERC + ALT	2.	Chlorothalonil <sup>1</sup> of Folicur/R + CERC + ALT	
3.	Chlorothalonil <sup>1</sup> of Folicur/R + CERC + ALT	3.	Chlorothalonil <sup>1</sup> of Folicur/R + CERC + ALT	
4.	Quadris/RHIZ + R CERC + ALT	4.	Quadris/RHIZ + R CERC + ALT	
5.	Topsin / ANTH (mainly lima bean) Quadris/RHIZ + R + CERC + ALT	5.	Topsin / ANTH (mainly lima bean) Quadris/RHIZ + R + CERC + ALT	
6.	Ridomil Gold Copper <u>or</u> Headline/PYTH <u>or</u> Quadris/PYTH + RHIZ + R + CERC + ALT Phosphite-type product/PYTH	6.	Ridomil Gold Copper <u>or</u> Headline/PYTH <u>or</u> Quadris/PYTH + RHIZ + R + CERC + ALT Phosphite-type product/PYTH	
7.	Rally/R + RHIZ Ridomil Gold Copper or Headline / PYTH or Quadris / PYTH + RHIZ + R + CERC + ALT Phosphite-type product /PYTH	7.	Rally/R + RHIZ Ridomil Gold Copper or Headline / PYTH or Quadris / PYTH + RHIZ + R + CERC + ALT Phosphite-type product /PYTH	
8.	Ridomil Gold Copper <u>or</u> Headline/PYTH <u>or</u> Quadris/PYTH + RHIZ + R + CERC + ALT Phosphite-type product/PYTH	8.	Priaxor or Omega 500 or Rovral or Topsin or Fontelis/ SCR	

<sup>&</sup>lt;sup>T</sup> Chlorothalonil (Bravo, Echo, Equus, etc...).

Always read the label for detailed application instructions of consult the Georgia pest Control handbook.

Disease Acronyms: RHIZ=Rhizoctonia belly rot; R = rust; ANTH = anthracnose; ALT = Alternaria pod and leaf spot: CERC = Cercospora leaf spot; PYTH = Pythium cottony leak; SCR = Scelerotinia or "white mold".

# **Pumpkin Fungicide Spray Programs 2019**

# Bhabesh Dutta Extension Vegetable Pathologist – University of Georgia

As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, discing and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any on practice and gives growers more disease management options at lower risk. Once plants are in the field, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many diseases that attack squash during the growing season(s) in Georgia and is not intended to be followed literally but to give an idea of the chronology of disease pressure in relation to fungicide choice. Each field in each year has different situations that call for different actions.

	Spring	Schedule	Fall
Spray number	Fungicide/disease activity	Spray number	Fungicide/disease activity
1	Chlorothalonil <sup>1</sup> or mancozeb/DOW	1	Orondis (soil app)/PCAP Chorothalonil or mancozeb/DOW
2	Orondis (soil app)/PCAP Cholrothalonil/DOW	2	Chlorothalonil <sup>1</sup> or mancozeb/DOW
3	Presidio or Revus/PCAP Chlorothalonil/DOW	3	Elumin or Presidio or Revus/PCAP Chorothalonil/DOW
4	Orondis (soil app)/PCAP Chlrothalonil/DOW Quintec or Torino or Proline/POW	4	Orondis (soil app)/PCAP Cholrothalonil/DOW Torino or Fontelis or Proline/POW
5	Torino or Quintec or Proline/POW Presidio or Revus or Elumin/ PCAP + DOW Chlorothalonil or mancozeb or Elumin or Ranman or Previcur Flex/ DOW	5	Torino or Quintec/POW
6	Quintec or Torino or Proline /POW Orondis (soil app)/ PCAP + DOW Chlorothalonil or mancozeb or Elumin or Ranman or Previcur Flex or Aristion/ DOW	6	Quintec or Torino or Proline/POW Orondis (soil app)/ PCAP + DOW Chlorothalonil or Elumin or Ranman or Previcur Flex/ DOW
7	Quintec or Torino/POW; Presidio or Revus/ PCAP + DOW; Chlorothalonil or Elumin or Ranman or Previcur Flex/ DOW	7	Orondis (app) or Presidio or Revus/ PCAP Chlorothalonil or Elumin or Ranman or Previcur Flex/ DOW
8	Orondis (soil app) or Presidio or Revus/ PCAP + DOW Chlorothalonil or Elumin or Ranman or Previcur Flex/ DOW	8	Torino or Quintec or Proline/POW Presidio or Revus/ PCAP; Chlorothalonil or Elumin or Ranman or Previcur Flex/ DOW

<sup>1</sup>Chlorothalonil (Bravo, Echo, Equus, etc...).

Always read the label for detailed application instructions or consult the Georgia Pest Control Handbook.

Disease Acronyms: GSM = gummy stem blight; RHIZ=Rhizoctonia belly rot; DOW = downy mildew; ANTH = anthracnose; PCAP = Phytophthora crown and fruit rot.

### South Georgia Tomato Fungicide Spray Programs 2019

# Bhabesh Dutta Extension Vegetable Pathologist – University of Georgia

As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, disking and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any on practice and gives growers more disease management options at lower risk. Once plants are in the field, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many diseases that attack tomato during the growing season(s) in Georgia.

### Spray Schedule = 3.5 day

Fall or Winter/Spring			
Spray No.	Fungicide(s)/disease activity		
Pre-plant	Georgia 3-way or WSP or Paladin Pic		
1.	Actigard at 0.33 oz/acre in 30-50 gallons of water copper		
	fungicide + mancozeb + chlorotalonil <sup>1</sup> /BS + EB		
2.	copper fungicide + mancozeb/BS		
3.	Actigard at 0.33 oz/acre in 30-50 gallons of water/Leap copper fungicide + mancozeb + (Quadris or Cabrio or TopGuard EQ)/BS + EB + TS		
4.	copper fungicide + mancozeb/BS		
5.	Actigard at 0.5 oz/acre in 60-70 gallons of water/Leap copper fungicide + mancozeb + chlorothalonil 1/BS + EB		
6.	copper fungicide + mancozeb/BS		
7.	Actigard at 0.5 oz/acre in 60-70 gallons of water/Leap copper fungicide + mancozeb + (Quadris or Cabrio or TopGuard EQ)/BS + EB + TS		
8.	copper fungicide + mancozeb/BS		
9.	Actigard at 0.75 oz/acre in 70-100 gallons of water copper		
	or Leap/TopGuard EQ + mancozeb + chlorothalonil <sup>1</sup> /BS + EB		
10.	copper fungicide + mancozeb/BS		
11.	Actigard at 0.75 oz/acre in 70-100 gallons of water /Leap copper fungicide + mancozeb + (Quadris or Cabrio or TopGuard EQ)/BS + EB + TS		
12.	copper fungicide + mancozeb/BS		
13.	copper fungicide + mancozeb + Endura or Switch or Fontelis/BS + EB + BOT + TS		
14.	copper fungicide + mancozeb/BS		
15.	copper fungicide + mancozeb + Endura or Switch or Fontelis/BS + EB + BOT + TS		
1	and so on until harvest or pre-harvest interval		

<sup>&</sup>lt;sup>1</sup> Chlorothalonil (Bravo, Echo, Equus, etc)

Always read the label for detailed application instructions or consult the Georgia Pest Control Handbook.

 $Disease\ Acronyms:\ BS=bacterial\ spot;\ EB=early\ blight;\ TS=target\ spot;\ BOT=Botrytis\ fruit\ rot.$ 

# **Cucumber Fungicide Spray Programs 2019**

# Bhabesh Dutta Extension Vegetable Pathologist – University of Georgia

As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, discing and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any on practice and gives growers more disease management options at lower risk. Once plants are in the field, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many diseases that attack squash during the growing season(s) in Georgia and is not intended to be followed literally but to give an idea of the chronology of disease pressure in relation to fungicide choice. Each field in each year has different situations that call for different actions.

Spring		Fall	
Spra	Fungicide/disease activity	Spra	Fungicide/disease activity
y # 1	Chlorothalonil <sup>1</sup> or mancozeb/DOW + ANTH + GSB Ridomil Gold (PYTHIUM)	y # 1	Cabrio or Topsin/ANTH Elumin or Ranman or Previcur Flex/DOW Chlorothalonil/GSB
2	Chlorothalonil <sup>1</sup> or mancozeb/DOW + ANTH + GSB	2	Orondis (soil app) or Presidio or Revus/PCAP Chlorothalonil+(Elumin or Ranman)
3	Chlorothalonil <sup>1</sup> or mancozeb/DOW + ANTH + GSB Orondis (soil app)/PCAP	3	Cabrio/ANTH Presidio or Elumin or Ranman or Revus/DOW + PCAP Chlorothalonil or mancozeb/ANTH + DOW + GSB
		4	(Miravis Prime or Aprovia top or Inspire Super) + chlorothalonil/GSB
4	Quadris + Miravis Prime/RHIZ + ANTH + GSB		Elumin or Ranman or Previcur flex/DOW Orondis (soil app)/PCAP
5	Orondis (soil app) or Presidio or Revus/PCAP Elumin or Ranman or Previcur Flex Ariston/DOW Chlorothalonil or mancozeb/ ANTH + DOW + GSB	5	Quadris/RHIZ + ANTH Elumin or Ranman or Previcur flex/DOW Presidio or Revus/ PCAP (Miravis Prime or Aprovia top or Inspire Super) + chlorothalonil/GSB
6	Aprovia top or Inspire super or Miravis Prime+ chlorothalonil/GSB Elumin or Ranman or Previcur flex DOW Chlorothalonil + Quadris + (Elumin or Ranman or Ariston)/ANTH + DOW	6	Cabrio or Topsin/ANTH Ariston+Inspire Super/ DOW + GSB Elumin or Ranman or Previcur flex/DOW Orondis (soil app)/PCAP
7	Orondis/Presidio/Ranman/ Previcur flex/Revus/DOW + PCAP Chlorothalonil/ANTH + DOW + GSB	7	Aprovia top + Ariston/ GSB + DOW

			Elumin or Presidio or Ranman or Previcur flex or Revus/ DOW + PCAP Chlorothalonil+Quadris+(Miravis Prime or Aprovia top or Inspire Super) /ANTH + GSB
8	Cabrio or Topsin/ANTH Presidio/Elumin/Ranman/Previcur Flex/Revus/ DOW + PCAP Chlorothalonil/ANTH + DOW + GSB	8	Ranman or Elumin or Ariston/DOW Orondis (soil app) or Presidio or Revus/PCAP

<sup>&</sup>lt;sup>1</sup>Chlorothalonil (Bravo, Echo, Equus, etc...).

Always read the label for detailed application instructions or consult the Georgia Pest Control Handbook.

Disease Acronyms: GSM = gummy stem blight; RHIZ=Rhizoctonia belly rot; DOW = downy mildew; ANTH = anthracnose; PCAP = Phytophthora crown and fruit rot.

### Pepper Fungicide Spray Programs 2019

# Bhabesh Dutta Extension Vegetable Pathologist – University of Georgia

As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, discing and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any one practice and gives growers more disease management options at lower risk. Once plants are in the field, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many diseases that attack peppers in Georgia.

Spray Schedule = 3.5 day

Chlorothalonil (Bravo, Echo, Equus, etc.). Always read the label for detailed application instructions or consult the Georgia Pest Control handbook. Disease Acronyms: BS = bacterial spot; ANTH = anthracnose; PCAP = Phytophthora crown rot.

### Collard, Kale, Mustard, Turnip (greens) Fungicide Spray Programs 2019

# Bhabesh Dutta Extension Vegetable Pathologist – University of Georgia

As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, discing and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any on practice and gives growers more disease management options at lower risk. Once plants are in the field, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many diseases that attack greens during the growing season(s) in Georgia.

#### Spray Schedule = 7 day

Fall or Winter/Spring		
Spray No.	Fungicide(s)/disease activity	
Pre-plant	Besides deep-turning, use Terraclor/RHIZ + CR or Quadris/RHIZ	
1.	ProPhyt or KPHITE or Forum or Revus <sup>2</sup> or Reason <sup>3</sup> /DOW; copper fungicide <sup>1</sup> /BR; Cabrio/ALT + CERC	
2.	Prophyt or KPHITE or Forum or Revus or Reason/DOW; copper fungicide/BR; Tebuconazole/ALT + CERC	
3.	Zampro or KPHITE or Forum or Revus or Reason/DOW copper fungicide/BR; Fontelis or Endura/ALT + SCR	
4.	Prophyt or KPHITE or Forum or Revus or Reason/DOW; copper fungicide/BR Switch/ALT + CERC	
5.	Prophyt or KPHITE or Forum or Revus or Reason /DOW; copper fungicide/BR; Fontelis or Endura/ALT + SCR	
6.	Prophyt or KPHITE or Forum or Revus or Reason/DOW copper fungicide/BR Switch/ALT + CERC	

<sup>1</sup> Copper is used to suppress spread of black rot caused by the bacterium *Xanthomonas campetris* pv. *campestris*.

Always read the label for detailed application instructions or consult the Georgia Pest Control Handbook.

Disease Acronyms: DOW = downy mildew; ALT = Alternaria leaf spot; CERC = Cercospora leaf spot; BR = black rot; SCR = Sclerotinia (raisin head); CR = club root.

<sup>&</sup>lt;sup>2</sup> Forum and Revus have the same mode of action, so don't spray them back-to-back. Use one or the other.

<sup>&</sup>lt;sup>3</sup> If Reason is used you don't need to use Quadris or Cabrio as all three control Alternaria and Cercospora. Don't spray Reason, Cabrio or Quadris back-to-back as they have the same mode of action.

### Broccoli/Cabbage Fungicide Spray Programs 2019

### Bhabesh Dutta Extension Vegetable Pathologist – University of Georgia

As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, discing and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any on practice and gives growers more disease management options at lower risk. Once plants are in the field, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many diseases that attack these brassicas during the growing season(s) in Georgia.

### Spray Schedule = 7 day

Fall or Winter/Spring				
Spray No.	Fungicide(s)/disease activity			
Pre-plant	Besides deep-turning, use Terraclor/RHIZ + CR or Quadris/RHIZ			
1.	Chlorothalonil <sup>1</sup> /DOW copper fungicide <sup>2</sup> /BR			
2.	Prophyt or Ridomil Gold Bravo <sup>3</sup> or Forum or Revus <sup>4</sup> or Reason <sup>5</sup> or Presidio + chlorothalonil/DOW; copper fungicide/BR; Cabrio/ALT + CERC			
3.	Prophyt or Ridomil Gold Bravo or Forum or Revus or Reason or Presidio + chlorothalonil/DOW; copper fungicide/BR; Switch/ALT + CERC; Fontelis/SCR			
4.	Ridomil Gold Bravo or Forum or Revus or Reason or Presidio + chlorothalonil/DOW; copper fungicide/BR; Endura/ALT + SCR			
5.	Prophyt or Ridomil Gold Bravo or Forum or Revus or Reason or Presidio + chlorothalonil/DOW; copper fungicide/BR; Switch/ALT + CERC + SCR or			
6.	Ridomil Gold Bravo or Forum or Revus or Reason or Presidio + chlorothalonil/DOW; copper fungicide/BR; Fontelis or Endura/ALT + SCR			
1	il (Duesco Esha Essura etc. )			

Chlorothalonil (Bravo, Echo, Equus, etc...).

Always read the label for detailed application instructions or consult the Georgia Pest Control Handbook.

Disease Acronyms: DOW = downy mildew; ALT = Alternaria leaf spot; CERC = Cercospora leaf spot; BR = black rot; SCR = Sclerotinia (raisin head); CR = club root.

<sup>&</sup>lt;sup>2</sup> Copper is used to suppress spread of black rot caused by the bacterium *Xanthomonas campetris* pv. *campestris*.

<sup>&</sup>lt;sup>3</sup> Ridomil Gold Bravo and/or Presidio need to be rotated with Forum, Revus, and/or Reason.

<sup>&</sup>lt;sup>4</sup> Forum and Revus have the same mode of action, so don't spray them back-to-back. Use one or the other.

<sup>&</sup>lt;sup>5</sup> If Reason is used you don't need to use Quadris or Cabrio as all three control Alternaria and Cercospora. Don't spray Reason, Cabrio or Quadris back-to-back as they have the same mode of action.

# **Onion Fungicide Spray Programs 2018-19**

# Bhabesh Dutta Extension Vegetable Pathologist – University of Georgia

The effective management of onion diseases begins prior to planting. By using integrated methods such as disease-free seed and transplants, proper crop rotation, disking and deep ploughing of plant debris, and use of resistant varieties, growers can minimize the amount of disease epidemic by either reducing the amount of initial inoculum or the rate of disease development. Integrated use of management practices reduces the weight on individual management option and provides growers disease management options at lower risk. Chemical management using fungicides should be the last resort after using the other management options. Most of the fungicides are effective when used as protectants, only handful of fungicides have curative actions.

Spray No.	<sup>1</sup> Fungicide(s)/target disease
Two weeks after	Overhead drench application of Fontelis/RHIZ, WM, PR + Copper fungicide
transplanting	(foliar pathogens)
1	<sup>2</sup> Chlorothalonil/BNR, BLB, PB/ BLB, PB
2	Pristine or Merivon or Fontelis/BLB, BNR, SLB, PB
3	Chlorothalonil/BNR, BLB, PB/ BLB, PB
4	Pristine or Merivon or Fontelis or Scala/BLB, BNR, SLB, PB; (Scala do not
	have activity against SLB)
5	Chlorothalonil/BNR, BLB, PB/ BLB, PB
6	Pristine or Merivon or Fontelis/BLB, BNR, SLB, PB
7	Chlorothalonil/BNR, BLB, PB/ BLB, PB
8	Scala or Luna tranquility or Inspire super or Omega 500 or Quadris top or
	Switch or Zing!/BLB, BNR, SLB, PB (Omega 500 and Scala do not have SLB
	activity)
9	Chlorothalonil/BNR, BLB, PB + ManKocide (bacterial blight)
10	Scala or Luna tranquility or Inspire super or Omega 500 or Quadris top or
	Switch/BLB, BNR, SLB, PB (Omega 500 and Scala do not have SLB activity)
11	Chlorothalonil/BNR, BLB, PB + ManKocide (bacterial blight)
12	Scala or Luna tranquility or Inspire super or Omega 500 or Quadris top or
	Switch/BLB, BNR, SLB, PB (Omega 500 and Scala do not have SLB
	activity)+ Pristine or Merivon or Fontelis or Scala/BLB, BNR, SLB, PB;
	(Scala do not have activity against SLB)
13	Chlorothalonil/BNR, BLB, PB + ManKocide (bacterial blight)
14	Scala or Luna tranquility or Inspire super or Omega 500 or Quadris top or
	Switch or Zing!/BLB, BNR, SLB, PB (Omega 500 and Scala do not have SLB
	activity)
15	Chlorothalonil/BNR, BLB, PB + ManKocide (bacterial blight)

16	Scala or Luna tranquility or Inspire super or Omega 500 or Quadris top or
	Switch/BLB, BNR, SLB, PB (Omega 500 and Scala do not have SLB activity)

The fungicide spray for **downy mildew (DM)** will be based on a forecasting model. Alerts for the DM spray will be communicated by the Vidalia Onion and Vegetable Research Center and the UGA, Tifton. **Fungicides with some degree of efficacy on DM are: Reason, Zampro, Orondis Opti and Omega 500.** 

Disease acronyms: BNR=Botrytis neck rot; BLB=Botrytis leaf blight; PB=Purple blotch; RHIZ=Rhizoctonia root rot; WM=White mold; PR=Pink root; SLB=Stemphylium leaf blight;

<sup>&</sup>lt;sup>1</sup>Please use the labeled rate of recommended fungicide. Rotate fungicides for good disease control.

<sup>&</sup>lt;sup>2</sup>Chlorothalonil (Bravo, Echo, Equus etc)

### Watermelon Fungicide Spray Programs 2019

# **Bhabesh Dutta** Extension Vegetable Pathologist - University of Georgia

As with most crops, disease management begins prior to planting the crop to be protected. By using such methods as disease-free seed and transplants, proper rotation, discing and plowing, and use of resistant varieties, growers can minimize the amount of disease that is available to attack their crop. Using many practices takes all the weight off of any on practice and gives growers more disease management options at lower risk. Once plants are in the field, however, fungicide sprays are relied on heavily for effective and economical management of plant diseases. This spray guide is designed to encompass many diseases that attack watermelon during the growing season(s) in Georgia.

# Spray Schedule = Start 1 week after transplanting, then use 7 day schedule if raining once a week.

Spring			Fall		
Spray	• 5	Spray			
No.	Fungicide(s)/disease activity	No.	Fungicide(s)/disease activity		
0.	Proline at-plant drench/FW	1.	Chlorothalonil <sup>1</sup> /GSB		
	1		Actigard and/or copper fungicide <sup>2</sup> /BFB		
1.	Chlorothalonil <sup>1</sup> /GSB				
	Actigard and/or copper fungicide <sup>2</sup> /BFB	2.	Chlorothalonil/GSB		
2	G11 11 11/GGP		copper fungicide/BFB		
2.	Chlorothalonil/GSB		Chlorotholonil + (Mirovio Drimo on America ton on		
	copper fungicide/BFB	3.	Chlorothalonil + (Miravis Prime or Aprovia top or Inspire Super)/GSB		
	Proline/FW	3.	Actigard and/or copper fungicide/BFB		
	110mic/1 W		Actigate and/or copper rangicide/ BTB		
3.	Chlorothalonil/GSB	4.	Chlorothalonil/GSB		
٥.	Actigard and/or copper fungicide/BFB	7.	copper fungicide/BFB		
4	T E . (CGD	~	Chlorothalonil + (Miravis Prime or Aprovia top or		
4.	Luna Experience/GSB copper fungicide/BFB	5.	Inspire Super)/GSB copper fungicide/BFB		
	copper rungicide/BFB		copper fullgicide/BFB		
5.	Inspire Super or Aprovia top or Miravis Prime/GSB	6.	Luna Experience/POW + GSB		
٥.	Copper fungicide/BFB		Orondis Ultra or Presidio or Revus/DOW or PCAP		
			Copper fungicide/BFB		
6.	Luna Experience/POW + GSB				
	Orondis Ultra (foliar) or Presidio or Revus/DOW or				
	PCAP	7.	Miravis Prime or Aprovia top or Inspire Super /GSB		
	Copper fungicide/BFB		Quintec or Torino + Quadris or Cabrio/POW+ANTH		
			Presidio, Revus or Zampro/DOW or PCAP		
			copper fungicide/BFB		
	Miravis Prime or Proline or Inspire Super or Aprovia top				
7.	/GSB				
	Quintec or Torino or Procure + Quadris or				
	Cabrio/POW+ANTH				
	Orondis Ultra (foliar)/PCAP	2			
	Elumin or Ranman or Previour flex/DOW	8 <sup>3</sup> .	Proline/POW + GSB		
	Copper fungicide/BFB		Orondis Ultra or Presidio, Revus or Elumin/DOW or PCAP		
	Copper rangional Di D				
$8^{3}$ .	Orondis (foliar) or Presidio or Revus/PCAP	93	Proline OR Aprovia Top OR Inspire Super/GSB		
٠.	Ranman or Elumin or Previour flex/DOW	,	Quintec or Torino + Quadris or Cabrio/POW+ANTH		
			Procidio or Povus/DOW or DCAP		

Presidio or Revus/DOW or PCAP

Proline OR Aprovia Top OR Inspire Super/GSB Quintec or Torino + Quadris or Ĉabrio/POW+ANTH

9.

# Presidio or Revus/PCAP Ranman or Elumin or Previcur flex/DOW

Always read the label for detailed application instructions or consult the Georgia Pest Control Handbook.

Disease Acronyms: BFB = bacterial fruit blotch; GSB = gummy stem blight; POW = powdery mildew; DOW = downy mildew; ANTH = anthracnose; PCAP = Phytophthora crown and fruit rot. FW=Fusarium wilt.

<sup>&</sup>lt;sup>1</sup> Chlorothalonil (Bravo, Echo, Equus, etc...) may cause rind burn if sprayed within 21 day of harvest.

<sup>&</sup>lt;sup>2</sup> Actigard and/or Copper is used prior to fruit set if bacterial fruit blotch is an issue.

<sup>&</sup>lt;sup>3</sup>Be mindful of preharvest intervals (PHIs) for later sprays as many may have a 7-14 day PHI.