

## Cantaloupe Fungicide Spray Programs 2020

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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 cantaloupe during the growing season(s) in Georgia.

**This is a generalized sequence of fungicide spray. A 5-7 day schedule can be followed; however, frequency, type and sequence of fungicide spray may vary situation to situation and field to field. Growers are advised to communicate with their respective county extension agents if they have any queries regarding this spray guide.**

**Spray 1:** Chlorothalonil – GSB; copper fungicide at lowest labeled rate<sup>1</sup> – BFB

**Spray 2:** Chlorothalonil – GSB; copper fungicide at lowest labeled rate – BFB

**Spray 3:** Chlorothalonil – GSB; copper fungicide at lowest labeled rate – BFB

**Spray 4:** Miravis Prime or Proline<sup>2</sup> or Inspire Super or Aprovia top - GSB;  
Orondis Gold (soil app) or Presidio or Revus - PCAP;  
Ranman or Ariston – DOW

**Spray 5:** Chlorothalonil + Luna Experience - GSB;  
Vivando or Gatten or Proline - POW;  
Elumin (soil app) or Presidio or Revus - PCAP;  
Ranman or Ariston or Previcur flex – DOW

**Spray 6:** Miravis Prime or Proline or Inspire Super or Aprovia top - GSB;  
Vivando or Gatten or Proline - POW;  
Orondis Gold (soil app) or Presidio or Revus- PCAP

**Spray 7:** Ariston or Ranman or Previcur flex or Curzate - DOW  
Chlorothalonil + Proline - GSB;  
Vivando or Gatten or Procure – POW

**Spray 8:** Elumin (soil app) or Presidio or Revus - PCAP;  
Ranman or Ariston or Curzate - DOW

<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.

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.

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

## South Georgia Tomato Fungicide Spray Programs 2020

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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 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 tomato during the growing season(s) in Georgia.

### Spray Schedule = 5 day

Fall or Winter/Spring	
Spray No.	Fungicide(s)/disease activity
Pre-plant	Georgia 3-way
1.	Actigard at 0.33 oz/acre in 30-50 gallons of water copper fungicide + mancozeb + chlorothalonil <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 <sup>1</sup> /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

<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.

## Pepper Fungicide Spray Programs 2020

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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 = 5 day

<b>Fall or Winter/Spring</b>	
Spay No.	Fungicide(s)/disease activity.
Pre-plant	Georgia 3-way
1.	Actigard at 0.75 oz/acre/BS Ridomil at plant drench/PYTH copper fungicide/BS
2.	Copper fungicide/BS
3.	Quintec and copper fungicide/BS
4.	Actigard at 0.5 oz/acre/Leap/BS copper fungicide/BS
5.	Orondis Gold or Presidio through the drip/PCAP Quintec and copper fungicide/BS
6.	Cabrio or Quadris/ANTH copper fungicide/BS
7.	Actigard at 0.33 oz.acre/BS Quintec and copper fungicide/BS Elumin/PCAP
8.	Presidio foliar/PCAP; copper fungicide/BS
9.	Orondis Gold (drip)/PCAP; Quintec and copper fungicide/BS
10.	Cabrio or Quadris/ANTH copper fungicide/BS
11.	Copper fungicide/BS Elumin/PCAP
12.	Copper fungicide/BS
13.	Cabrio or Quadris/ANTH copper fungicide/BS
14.	Copper fungicide/BS

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

## Collard, Kale, Mustard, Turnip (greens) Fungicide Spray Programs 2020

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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 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 greens during the growing season(s) in Georgia.

### Spray Schedule = 7 day

<b>Fall or Winter/Spring</b>	
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/CERC
2.	Prophyt or KPHITE or Forum or Revus or Reason/DOW; copper fungicide/BR; Tebuconazole/ALT + CERC (Phosphite fungicides for DOW will also help with ALT)
3.	ProPhyt or KPHITE or Forum or Revus or Reason/DOW; copper fungicide/ <u>BR</u> ; 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 campestris* pv. *campestris*.

<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>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.

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.

## Broccoli/Cabbage Fungicide Spray Programs 2020

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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 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 these brassicas during the growing season(s) in Georgia.

### Spray Schedule = 7 day

<b>Fall or Winter/Spring</b>	
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> /DOW; copper fungicide/BR; chlorothalonil+Cabrio <sup>6</sup> /ALT + CERC
3.	Prophyt or Ridomil Gold Bravo or Forum or Revus or Reason + 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
6.	Ridomil Gold Bravo or Forum or Revus or Reason or Presidio + chlorothalonil/DOW; copper fungicide/BR; Fontelis or Endura/ALT + SCR

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

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

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

<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>5</sup> If Reason is used you don't need to use Quadris or Cabrio as all three control *Alternaria* and *Cercospora*.

<sup>6</sup> Resistance to Quadris and Cabrio has been documented in *Alternaria* in GA; however, these fungicides are still effective on *Cercospora* leaf spot

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.

## Watermelon Fungicide Spray Programs 2020

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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 watermelon during the growing season(s) in Georgia.

**This is a generalized sequence of fungicide spray. A 7-10 day schedule can be followed; however, frequency, type and sequence of fungicide spray may vary situation to situation and field to field. Growers are advised to communicate with their respective county extension agents if they have any queries regarding this spray guide.**

**Spray 1:** Proline at-plant drench

**Spray 2:** Chlorothalonil<sup>1</sup> - GSB; Actigard and/or copper fungicide<sup>2</sup> - BFB

**Spray 3:** Copper - BFB

**Spray 4:** Chlorothalonil - GSB; Actigard and/or copper fungicide – BFB

**Spray 5:** Luna Experience – GSB; copper fungicide – BFB

**Spray 6:** Inspire Super or Aprovia top or Miravis Prime – GSB; Copper fungicide – BFB

**Spray 7:** Vivando or Gatten or Quintec – POW; Orondis Ultra (foliar) - DOW and PCAP; Copper – BFB

**Spray 8:** Inspire Super or Aprovia top or Miravis Prime – GSB; Vivando or Gatten or Quintec – POW; Quadris or Cabrio – ANTH

**Spray 9:** Orondis Ultra<sup>3</sup> (foliar) – PCAP; Elumin or Ranman or Previcur flex – DOW

**Spray 10:** Proline or Aprovia Top OR Inspire Super - GSB; Vivando or Gatten or Quintec – POW; Quadris or Cabrio – ANTH; Presidio – PCAP; Elumin or Previcur flex - DOW

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

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

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

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.

**Onion Fungicide Spray Programs 2019-20**  
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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 Schedule = 7 day**

Spray No.	<sup>1</sup> Fungicide(s)/target disease
Two weeks after transplanting	Overhead drench application of Fontelis/RHIZ, WM, PR + Copper fungicide (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 Miravis Prime or Switch or Zing!/BLB, BNR, SLB, PB (Omega 500 and Scala do not have SLB activity)
9	Chlorothalonil/BNR, BLB, PB + ManKocide or Kocide or Nordox (bacterial diseases)
10	Scala or Luna tranquility or Inspire super or Omega 500 or Miravis Prime or Switch/BLB, BNR, SLB, PB (Omega 500 and Scala do not have SLB activity)
11	Chlorothalonil/BNR, BLB, PB + ManKocide or Kocide or Nordox (bacterial diseases)
12	Scala or Luna tranquility or Inspire super or Omega 500 or Miravis Prime or Switch/BLB, BNR, SLB, PB (Omega 500 and Scala do not have SLB activity)
13	Chlorothalonil/BNR, BLB, PB + ManKocide or Kocide or Nordox (bacterial diseases)

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 or Kocide or Nordox (bacterial diseases)
16	Scala or Luna tranquility or Inspire super or Omega 500 or Miravis Primer 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: Zampro, Orondis Ultra, Omega 500 and Chlorothalonil.**

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

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

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;