



Martin-Gatton
College of Agriculture, Food and Environment
Cooperative Extension Service

Plant Pathology Fact Sheet

PPFS-VG-37

Commercial Spray Schedule for Production of Melons

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INTRODUCTION

In Kentucky, muskmelons (cantaloupe and honeydew) and watermelon are common cucurbit crops grown in open field production. Numerous plant pathogens can cause disease, resulting in plant damage and yield loss. Applications of fungicides and bactericides are often necessary to limit plant diseases. Fungicides and bactericides provide the greatest efficacy when applied preventively (prior to disease onset), rather than after observing disease symptoms. Growers can develop a spray schedule for each season to limit the impact of diseases on crop production. This document provides information on the timing of the most common muskmelon and watermelon diseases, as well as an example spray schedule. Fungicides and bactericides recommended here include a few of the most common products. A complete list of registered fungicides can be found in the *Vegetable Production Guide for Commercial Growers* (ID-36) and the *Southeast U.S. Vegetable Crop Handbook* (SEVEW); generic products may also be available.

TABLE 1. TIMELINE OF COMMON AND IMPORTANT DISEASES OCCURRING ON MUSKMELON AND WATERMELON.

Muskmelon		Watermelon	
Disease	Time Period	Disease	Time Period
Pythium root rot	May – July	Pythium root rot	May – July
Bacterial wilt	June – Aug	Pythium cottony leak	June – July
Anthracnose	July – Aug	Gummy stem blight	June – Aug
Powdery mildew	July – Aug	Anthracnose	July – Aug
Alternaria blight	July – Aug	Powdery mildew	July – Aug
Cercospora leaf spot	July – Aug	Southern blight	July - Aug
Southern blight	July – Aug		



ANTHRACNOSE (*left*)
AND FRUIT ROTS
(*right*) ARE COMMON
DISEASES OF MELONS
IN KENTUCKY.

Disease Management for Melon Production

GENERAL NOTES

The following list includes an example of products, but is not comprehensive. A complete list of fungicides and their efficacy can be found in the *Vegetable Production Guide for Commercial Growers* (ID-36) and the *Southeast U.S. Vegetable Crop Handbook* (SEVEW). See Additional Resources section. Always read product labels for specific use instructions. The label is the law.

PREPLANT

To help prevent disease, do not plant melons or other cucurbit crops in the same field year after year. For sites with a history of soilborne diseases, rotate out of cucurbit crops for at least 3 years. When possible, use resistant cultivars (for example, to powdery mildew). Space and prune plants for maximum air circulation. Follow cultural practices, such as rotating crops, planting in well-drained soil, selecting resistant cultivars, and practicing good sanitation. Use treated and/or certified seed when available.

AT PLANTING (Approximately early May to mid-June)

Apply Previcur Flex or Ridomil for Pythium root rot and damping-off if disease emerges. If field has a history of belly rot, cottony leak, or Fusarium fruit rot, pre-plant or at-plant treatments may be required. To prevent bacterial wilt, manage cucumber beetles beginning at seedling stage (See *Cucumber Beetles* Entfact-311 publication).

VEGETATIVE GROWTH AND FLOWERING (Approximately June and July)

Practice good sanitation. Avoid moving soil from contaminated fields via tools or equipment.

Application Timing <i>Weeks after seeding</i>	Application Notes	Fungicides/Bactericides ²	Target Diseases
Week 1 to 8	Use fungicides preventatively before disease develops. Applications should be made every 1 to 2 weeks.	Chlorothalonil Mancozeb	Anthracnose, leaf diseases

HARVEST (Approximately early July through September)

Application Timing <i>Weeks after transplant</i>	Application Notes	Fungicides/Bactericides ²	Target Diseases
Week 9 to 16	Applications should be made every 1 to 2 weeks. Rotate products between applications to avoid resistance development.	Chlorothalonil ³ Fontelis Pristine Quadris Top	Alternaria blight, anthracnose, Cercospora, downy mildew, powdery mildew
Week 9 to 16	Applications should be made when disease is severe. Rotate products between applications to avoid resistance development.	Rally Torino Vivando	Powdery mildew
As needed ¹	Applications should be made every 1 to 2 weeks when risk is high. Monitor disease via ipmpipe.org forecasting site.	Orondis Opti/Ultra Previcur Ranman	Downy mildew
As needed ¹	Applications should be made every 1 to 2 weeks.	Proline ⁴ Mettle	Gummy stem blight (watermelon)

¹ Application necessary when diagnostic results confirm presence of disease or if field has a history of disease.

² See SEVEW Table 3-53 Biopesticides for alternative products. (Note: This production guide is revised annually, and the location of this information could change with updates.)

³ Chlorothalonil may cause phytotoxicity on fruit.

⁴ Preharvest interval (PHI) is 7 days and may not be compatible with harvest schedule.

EXAMPLE FIELD SPRAY SCHEDULE FOR MELONS

Weeks after Planting	Fungicide(s)	Target Diseases
1-8	Mancozeb	A, LS
Weeks during Harvest	Fungicide(s)	Target Diseases
9	Inspire Super	AB, C, GSB, PM
10	Chlorothalonil ¹	AB, A, C, GSB, PM
11	Quadris Top	AB, A, C, PM
12	Chlorothalonil ¹	AB, A, C, GSB, PM
13	Pristine	AB, C, GSB, PM
14	Chlorothalonil ¹	AB, A, C, GSB, PM
15	Quadris Top	AB, A, C, PM
16	Chlorothalonil ¹	AB, A, C, GSB, PM
17	Pristine	AB, C, GSB, PM

AB - Alternaria; A - Anthracnose; C - Cercospora; LS - leaf spots; PM - powdery mildew

¹ Chlorothalonil may cause phytotoxicity on fruit.

DISCLAIMER

Fungicides listed here include a few of the most common products available and were selected to simplify information in this publication. No endorsement is intended nor is criticism implied of similar products that are not named.

ADDITIONAL RESOURCES

Additional information can be found on the UK Plant Pathology Extension Publications webpage

<https://plantpathology.ca.uky.edu/extension/publications>

Fact Sheets

- Bacterial Wilt of Cucurbits (PPFS-VG-11)
- Cucumber Beetles (EntFact-311)
- Cucurbit Downy Mildew in Kentucky (PPFS-VG-27)
- Leaf Spot Diseases of Cucurbits (PPFS-VG-10)
- Powdery Mildew (PPFS-GEN-02)
- Southern Blight (PPFS-VG-11)

Production & Spray Guides

- Southeast U.S. Vegetable Crop Handbook (SEVEW)
- Vegetable Production Guide for Commercial Growers (ID-36)

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