Botrytis

Understanding the disease

Grey mold or Botrytis blight is a fungal disease caused by *Botrytis cinerea* and closely related species. Many plants are susceptible hosts of Botrytis, including most of our common ornamental varieties. Symptoms usually start on dying or dead tissues, such as spent flowers and may quickly spread to other tender plant tissues. When conditions are favorable for sporulation, heavy masses of gray mold consisting of millions of spores may be present on leaves, stems and flowers.

Botrytis diseases are common during periods of cool (60°F), cloudy and rainy weather. It is especially damaging on flowering crops such as geraniums and impatiens during extended periods of cloudy or rainy spring weather.

Botrytis on Oregano

Botrytis on Hydrangea

Botrytis on Osteospermum

Photos courtesy of Dr. Ann Chase

Managing Botrytis

Sanitation and airflow are critical to Botrytis management. Spent blossoms should be removed if possible, but more importantly plants showing symptoms should be removed from the area before they become a secondary source of infection. Increased air circulation using HAV or other fans has shown to reduce disease pressure.

To protect susceptible plants during prolonged wet periods it is usually necessary to apply fungicides. Since most fungicides prevent infections from spreading and do not eradicate the pathogens, best disease management is obtained with preventive and repeated applications before symptoms develop, during disease-favorable conditions.

Management of plant diseases like those caused by Botrytis starts with good crop management practices to reduce the risk of disease epidemics. Sanitation of growing areas, equipment and tools is critical as pathogens can survive for long periods of time until the right environmental conditions arise. To reduce the risks of infection it is important to irrigate early in the day and to promote good air circulation (plant spacing) to avoid long leaf-wetness periods, especially overnight. Over-fertilization with nitrogen may increase plant susceptibility to the disease and should be avoided. Frequently inspect and monitor the crop to quickly detect signs and symptoms of pests diseases or any other problems. Quickly remove and destroy any plant that is suspected of carrying the disease or treat as necessary. Even the best cultural practices are often not enough to prevent infections when the environmental conditions favor disease development.

Chemical control is challenging. Most fungicides only offer protection from the disease but not eradication once it is established in the plant. When conditions remain favorable for Botrytis diseases it is important to use fungicides in a rotation program based on their mode of action, to reduce the risk of fungicide resistance development and disease control failure. Under disease- favorable conditions, fungicide applications may be made on 7-day intervals, using one or two fungicides at a time, for the duration of the high risk period.

OHP Products Labeled for Control of Botrytis

OHP Products	Chemical Class	MOA Group	Residual	REI	OMRI
Astun®	SDHI	7	7 to 14 days	12	
Kalmor™	Inorganic Copper Hydroxide	M 01	7 to 14 days	24 to 48	✓
OHP Chipco® 26019	Dicarboxamides	2	7 to 14 days	12	
OHP 6672® 50WP or **OHP 6672® 4.5F**	Benzimidazoles	1	7 to 14 days	12	
Triathlon® BA	Microbial, *Bacillus* sp. and the fungicidal lipopeptides produced	44	7 to 14 days	4	✓

OHP Suggested Recipe for Botrytis Control

Application	Rate per 100 gallons	Rate per gallon	Remarks
1. **Astun®**	13.5 fl. oz.	4.0 mL	After 2 consecutive sprays rotate to another fungicide with a different MOA. Astun works best as a preventative but is also very effective against active infestations. Do not rotate with other FRAC 7 products.
2. **OHP Chipco® 26019**	1 lbs.	4.5 grams	Use shorter intervals under heavy disease pressure.
3. **Triathlon® BA**	4 qts.	38 mL	Use shorter intervals under heavy disease pressure. OMRI listed so can be used on edible crops.
4. **Kalmor™** + **OHP 6672® 50WP** or **OHP 6672® 4.5F**	1.5 lbs. 16 oz. 14.5 fl. oz	5 mL 3 tsp (WP) 4.5 grams 1 tsp (F) 4.35 mL	The combination of Kalmor + OHP 6672 complements the control of Botrytis especially under heavy disease pressure. Addition of a spreader sticker additive may improve control.
5. Program remarks	Repeat spray program if disease or conditions continue.		Under high disease pressure a spray interval of no more than 7 days is suggested. Under lighter pressure the spray schedule may be reduced to 14 days.

TBS = tablespoon tsp = teaspoon mL = milliliter 1 fl oz = 29.6 mL 1 TBS = 15 mL

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