GROWERTALKS

Pest Management

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Prepare & Protect

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Pansy production for the fall market occurs when insect and disease pressure is high. Knowing the key disease and insect problems you may encounter can help you be prepared with preventive and corrective measures to ensure a high-quality crop.

Foliar diseases

Cercospora leafspot

• Infections begin as small, purple-black spots on the older leaves.

• As spots enlarge, they'll develop brown-tan centers with dark, purple margins and a distinctive feathery appearance.

• Infected leaves will turn yellow, shrivel and drop as the disease progresses.

Tips: Avoid warm and wet conditions by limiting overhead irrigation. Extended periods of leaf wetness allow spores to spread to nearby leaves and germinate, infecting healthy foliage.

Anthracnose

• Infections begin as small, tan spots with a solid dark, thick border, often along the leaf margin.

• A concentric ring pattern may develop, creating tan spots with papery centers that appear slightly sunken.

• In humid conditions, reproductive structures of the fungus will appear as tiny black spots scattered throughout the papery lesion.

• This disease also can progress to petioles and stems, resulting in plant death.

Tips: Adjust irrigation and temperature to limit warm, wet conditions. Prevent water from splashing, as the fungus can spread to adjacent plants. Discard all plant material at end of season because this fungus survives in infected plant debris.

Pictured: A pansy with signs of Anthracnose.

Botrytis

• Initial infections will cause small white spots or flecks on flower petals.

• Coarse tannish-gray or web-like growth can cover the affected plant part in damp weather.

• New leaves may have brown, "V"-shaped lesions at the leaf margins and plant tissue can appear discolored and fuzzy.

Tips: Pansy blooms are highly susceptible to infection. It can be most severe near the end of production when the temperatures are cooler, plants are larger and relative humidity increases in the plant canopy. Increase plant spacing for better ventilation, provide light access to lower leaves and limit overhead irrigation.

Palladium and Mural fungicides can provide strong protection against Botrytis and additional foliar diseases. Apply both with a low rate of an adjuvant, such as CapSil to reduce spotting/residue. Botrytis is an especially high-risk pathogen for developing fungicide resistance, so rotating products with different modes of action is essential.

Root & stem rots

Infections by root and stem rots generally result in plants that are stunted, wilt during higher temperatures and exhibit signs of nutritional deficiencies. Provide a clean growing area, utilize good cultural and sanitation practices, and reduce heat stress on the plants to reduce infections.

A laboratory confirmation of root and stem diseases is advised because symptoms are often indistinguishable. Root mass alone may not be a sign of a healthy root system. Pythium root rot species can feed for an extended period before symptoms are obvious. If the root system doesn’t appear healthy and vigorous, it's worth obtaining a disease diagnosis from a qualified lab.

Rhizoctonia root & stem rot

• Infections commonly start at the soil line, causing a dark brown discoloration of the lower stem.

• As the disease progresses, the stem will become girdled, leading to plant wilt and collapse.

• Rooted liners planted too deeply are more prone to infection.

Tips: High temperatures and saturated media conditions can promote this disease. Avoid plant stress such as high-soluble salts and wet or dry cycles. Drench applications of Medallion WDG fungicide can help control these infections. Re-apply after 21 days or rotate with a product containing thiophanate-methyl, such as Cleary's 3336 WP fungicide if needed.

Pythium root & stem rot

• Stressed or damaged roots are highly susceptible to these infections.

• Infected seedlings will appear water-soaked and plant tissue will become slimy.

• As symptoms progress, wilting, stunting, chlorosis and leaf drop can occur.

Tips: Keep media well-drained and avoid over-irrigating, as this can cause the disease to spread. Monitor the electrical conductivity (EC) level, as high-soluble salts favor infection. Irrigation water may be a source of Pythium. Check and treat water if required. Drench applications of Subdue Maxx and Truban WP fungicides can be rotated and used on a four-week interval to prevent infections.

Black root rot (*Thielaviopsis basicola*)

• Plants will be stunted and have yellow lower foliage.

• Roots will have dark or black lesions and remain intact.

• Alkaline soil conditions favor disease development. Maintaining a lower pH of 5.5 to 5.8 can help suppress this disease.

Tips: As with all root and soil diseases, be sure to start with clean pots, liners and media. Avoid adverse temperatures, excessive moisture in the root zone and high levels of soluble salts. Spot-check all plugs for healthy, white roots prior to transplanting to protect from contamination.

Drench rotations on a 21-day interval using products containing thiophante methyl, such as Cleary's 3336 WP, Medallion WDG and Terraguard 75 WP fungicides, can be used to prevent this disease.

Pansy pest problems

Close monitoring and correct identification can be the keys to preventing insect build-up during pansy production. The temperature and humidity levels can lead to pest pressure and provide an opportunity for population growth. Insects pose a threat to a pansy crop due to unsightly residues, damage to stems or foliage, and, in some cases, the vectoring of disease pathogens the insects transmit.

Aphids

• Aphids are found on new growth, the base of buds or undersides of leaves.

• Less than 1/8-in. long, they’re soft-bodied and pear-shaped, with long legs and antennae.

• They excrete waste as a sugar-rich liquid, which attracts ants and promotes the growth of black sooty mold.

• They’re important vectors of plant diseases and viruses.

Tips: Inspect incoming plant material for signs of aphids. Infested weeds under benches or surrounding production areas are frequently a source of pest problems. Inspect and remove weeds promptly.

Whitefly

• Nymphs can be found on the underside of leaves. They’re flat, almost clear, and less than 1/16-in. across.

• Adults are small, powdery insects with four white wings.

• Whiteflies secrete honeydew, a sweet sugary sap that can cause black, sooty mold to develop.

Tips: Use yellow sticky cards, random foliar plant inspections and pest-susceptible indicator plants to monitor whitefly populations.

Mainspring GNL insecticide can be used to prevent aphids and whiteflies in production and will provide two to three weeks of control as a spray. Drench applications can lead up to 10 weeks of protection.

Growing pansies for the spring market means managing the pathogens and pests that fall and winter can bring. Protecting your pansy crop requires a knowledge of both pathogens and pests, as well as the symptoms they cause, and choosing products that can provide effective prevention and control.

Learn more about solutions for pansy production at www.GreenCastOnline.com/Ornamentals. **GT**

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