

Technical Guide about pest encountered in KAUST and how it is being controlled.

FUNGUS: Facts and Notes | Control | Prevention

Facts and Notes

Fungi cause most plant diseases. To infect plants, pathogenic fungi employ an array of strategies. Some fungi destroy their hosts and subsist on dead material (*necrotrophs*), while others reside in living tissue (*biotrophs*). To invade plant organs, pathogenic growth and specialized infection structures are tightly regulated. Multiple virulence factors are used by fungal pathogens to colonize and induce disease. Virulence factors vary based on the method of infection. Necrotrophs injure plant tissue via poisons. In contrast, biotrophs use effector molecules to inhibit plant cell death and manipulate plant metabolism to the pathogen's advantage.

Common Fungi - Caused Plant Diseases in KAUST



Block Spot



Powdery Mildew



Botrytis Blight



Downy Mildew



Rust



Anthracnose

Pest Control procedures in managing pests

1. Recognize mid-to-late summer fungal plant disease. Fungal infections are ugly but harmless to plants. Prevent most fungal issues! Plants can recover from fungus.
2. Implement control following the applicable IPM principles, starting with:
 - **Cultural Control-** Water plants properly. Water on leaves causes fungus. "Water the pot, not the plant!" Avoid fungal patches and wasted water by watering the pot's soil instead of the plants' leaves.
 - **Mechanical Control-** If the plant's leaves are infected with pathogens, prune and discard the infected leaves away from the compost pile. Removing weeds and spacing plants reduces humidity and improves air circulation.
 - **Chemical Control-** Other alternatives such as Neem oil and baking soda might be an option especially in small-scale infestations. If other methods fail, apply fungicides in a highly diluted mixture as a spot treatment to the affected area in accordance with the instructions provided by the manufacturer. Use Tebuzole 250 EC - Tebuzole 25 % (WHO Class: II, Local Reg.: 493-960-936) , or Coprex 50 WP - Copper Oxichloride 85 % WP (HWO Class: III, Local Reg.: 41-3320-2927), or Coprex 50WP – Copper oxychloride 5.0% (WHO Class: III, Local Reg.: 41-3320-2927), or Talen 250 EC – Tebuconazole 25% (WHO Class: II, Local Reg.: 49-96-496), or Ridoxyl 240 EC – Metalaxyl-M 24% (WHO Class II, Local Reg.: 79-96-323).
3. Monitor the plants condition after the treatment. Keep record for future evaluation.

What you can do Fungus prevention at home

- Morning watering gives plant leaves all day to dry. Only constantly moist foliage can harbor fungal infections.
- Ensure that the sprinkler systems in your garden do not result in puddles or ponding.
- Cooperate with the service provider during treatment activities by keeping yourself and your pets in a safe place.