



TIPS FOR GREENHOUSE BIOSECURITY MANAGEMENT

Biosecurity concerns in a greenhouse are primarily centred around materials (growing media, plant material, etc.) coming into the greenhouse, as well as the surrounding environment. It is crucial to maintain a clean production and packing area as well as the surroundings to mitigate pest risks. The incidence and severity of a pest occurrence is a function of the relationship between the crop, the pest, and the environment (**Figure 1**), so all three areas must be considered to determine a suitable course of action.

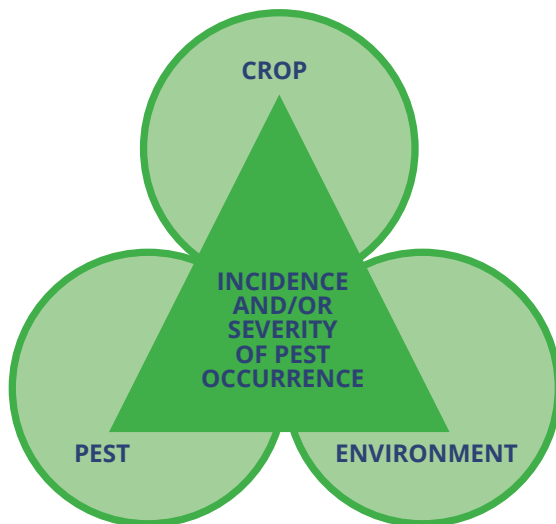


Figure 1. Plant Pest Triangle (CFIA, Greenhouse Vegetable Sector Biosecurity Guide)

Consider the following tips when thinking about managing the biosecurity of greenhouses.

WATER CONSIDERATIONS

- **Test water for pathogens, nutrient levels, pH, salts, chlorine**
- **Recirculated wastewater should be treated**
- **Monitor irrigation system for buildup of biofilms, chelated nutrients, etc.**

Keep areas around water sources clean of crop wastes and other sources of infestation

CROP CONSIDERATIONS

- **Minimize plant stress**
 - » Avoid nutrient deficiencies or toxicities by managing nutrients
 - » Avoid salt stress
 - » Avoid water stress (too little or too much)
 - » Ensure adequate airflow
- **Use crop rotation to disrupt pest lifecycles**
 - » Sanitize in between crops as much as possible
- **Monitor for insects and diseases on the parent material and the established crop**

SOIL AND GROWING MEDIA CONSIDERATIONS

- **Do not re-use growing media**
- **Soil may be treated by heat pasteurization, solarisation, or fumigation if soilborne pests are present above threshold levels**
- **Ensure materials coming in (growing media) are clean and use certified products whenever possible**
- **Have growing media tested to make informed decisions on fertility plans**

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