

BIOSECURITY IS IMPORTANT IN HORTICULTURE CROPS TOO

THERE ARE BASIC INTERVENTIONS YOU COULD IMPLEMENT TO KEEP YOUR FARM BIOSECURE

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FARM PROPERTY MANAGEMENT:

Are there people and personal vehicles traveling on your farm arriving from other farms or areas that have pests, weeds, or diseases that you don't have?

Let visitors and service providers know the risk they bring and have them park in designated areas. If possible have visitors travel around the farm in one of your vehicles. Make sure any signs posted are clear and restricted areas are gated. If visitors pose a significant risk, provide washdown/clean up stations, disposable boot covers, and protective clothing for them (Figure 1).

REMEMBER: Diseases and pests can be inadvertently carried on clothes and boots



Figure 1. Disposable boot covers can reduce the amount of disease and pests transferred around your farm

ON-FARM MANAGEMENT:

Do areas on your farm have pests/diseases/weeds that other areas on your farm don't have?

Keep your equipment clean: Remove soil and plant material from equipment before moving to the next field. If the potential for transmission is high, use designated locations with a catchment area to wash down the equipment (high-pressure washer), or disinfect equipment with 1-2% bleach solution.

Be strategic: Complete all field operations on clean fields first before moving to infected fields. A farm map showing which fields are a biosecurity risk (fields with nematodes or clubroot, for example) can be helpful.

If the risk of transmission is high, assign one piece of equipment to infected areas.

**Do you purchase, rent or contract custom equipment?
Do you rent or swap land with others?**

Protect yourself!

- Discuss your biosecurity expectations with your leasor or leasee.
- Inspect the equipment before its arrival. Has soil/plant material been removed?
- Ask the custom operator to clean the equipment prior to its arrival at your farm.
- If the risk of transmission is high, consider not purchasing or renting the equipment or land.

PLANT HEALTH MANAGEMENT:

Plant certified disease-free seeds and rootstock!

Managing culls: Make sure you dispose of culls and crop residue in such a way that they will not become a hot bed of inoculum that can contaminate next year's crop.

WEEDS: For descriptions and photos of noxious weeds in Nova Scotia please visit: <http://novascotia.ca/agri/programs-and-services/industry-protection/#weeds>

Specific weeds of concern could include yellow nutsedge, wild chervil (Figure 2) and wild parsnip.



Figure 2. Yellow nutsedge (left) and wild chervil (right) can be difficult to control weeds and very challenging to eradicate. Be careful to not spread it between fields!

Photo credit: Angela Gourd, Plant Protection Coordinator, Nova Scotia Department of Agriculture

SOIL-BORNE PESTS: Nematodes, clubroot, crown gall, and Verticillium wilt (Figure 3) are examples of diseases that can be transmitted from field to field in soil clinging to equipment. *The less soil that is moved from field to field, the lower the risk of pest transmission!*

DISEASE: Many diseases can be picked up on your clothes, gloves, or boots and spread to the rest of your fields, for example, downy mildew (Figure 4), late blight, angular leaf spot, etc.



Figure 3. Verticillium wilt on eggplant. Verticillium is a soil-borne disease that can be devastating to many crops and it can persist in the soil for years.



Figure 4. Diseases like downy mildew (above) or late blight can attach to clothes and be spread from field to field. They can also be spread by the wind; carefully placed windbreaks can help keep your fields biosecure.