

Basic Biosecurity Advice



There are a number of ways that pests and diseases can enter your property and crops, but there are some basic biosecurity measures that can be implemented to give good defense against these issues.

Early warnings:

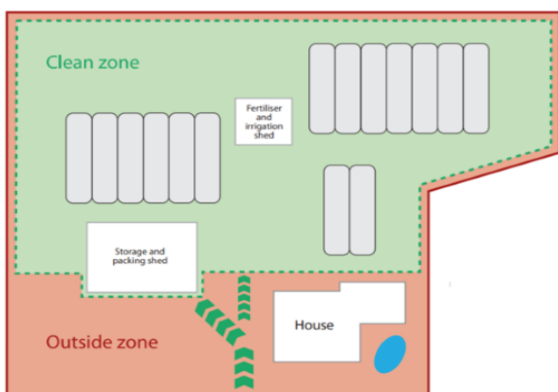
WARNING **FARM BIOSECURITY** **IN PLACE**

Please contact the office before entering.

Do not enter property without prior approval.
Keep to roadways and laneways.
Do not enter growing areas.

Limiting the number of visitors to the property can be a fairly simple process by placing early warning signs at the entrance to the property. These signs are clear, simple and support your farm's biosecurity message. They are generally readily available through local suppliers or government agencies and can be easily displayed at the perimeter of the farm, giving advance notice of the conditions of entry etc. Keeping a register of all visitors to the farm is another sound practice, and having an active security camera system on the property will also allow you to track visitors and vehicles to the property

Establishing a clean zone:



By separating your farm into two separate zones - a 'clean' zone and an 'outside' zone. The designated clean zone should be the area around your greenhouse and general production areas. This zone should also include your packing areas and storage areas/sheds, as well as access roads. Anything being taken into the clean zone including vehicles, equipment and tools should be cleaned before access is allowed in to the area. The clean zone should be kept free of any vegetative material such as crop debris and weeds, as

well as general rubbish. This ensures that there are no host areas for pests and diseases, The outside zone also needs to be kept clean to reduce the risk of pests and diseases transferring into the clean zone.

Entering the crop area:

Pedestrian and vehicle access to crop areas has the potential to spread diseases via the soles of footwear and wheels of trolleys and machinery. A simple aid to combatting the spread of diseases etc is via the installation of disinfection mats. The mats themselves are able to contain



disinfection solutions ensuring that the soles of feet and machinery wheels are thoroughly disinfected. The mats should be cleaned on a regular basis to avoid the potential build up of any pathogens.

Automated hygiene stations:



Whilst the mats offer a good level of protection, it is possible to install a hygiene station to the entry of the crop area that will give a greater level of control. These devices have the potential to rigorously clean the soles of workers shoes via rotating brushes. Anyone entering the crop area is also required to submerge their hands in a disinfectant solution, in which are located two buttons that need to be pressed to release the turnstile, and thus admitting the person to the crop area,



The hygiene stations can be used for hand cleansing only, in conjunction with the hygiene mats if required as opposed to investing in a unit with the automated brushes. Whatever the choice of equipment, it should ensure that all workers and visitors follow the hygiene protocol for the crop area.



Coveralls:

Disposable coveralls offer an additional layer of protection in the battle against potential pest and disease transfer. The coveralls are usually made from a Tyvek material that are worn over the workers everyday clothing. The Tyvek material allows for air movement within the clothing. In addition, plastic 'overboots' can be placed over the shoes of the person entering the crop area, and latex gloves can also be worn. It should be noted that coveralls, overboots and gloves should only have a single use, and should be safely disposed of after exiting the designated crop area.



Crop operations:

Where crops such as Tomatoes are being deleafed etc, pruning knives or secateurs should be dipped in a sterilizing solution between each cut. This will greatly reduce the risk of disease transfer between plants.

New material entering the property:

Companies or individuals making deliveries to the property should be made aware of biosecurity measures before they are allowed onto the property. There is always a risk of disease transfer via a vehicle if it has previously entered a property with diseases issues. Individuals and/or delivery drivers should initially contact the displayed phone number on the biosecurity warning sign at the entrance to seek permission to enter the property. Vehicles entering the property should be restricted to the outside zone and should not be allowed to enter the clean zone. New plants that are being delivered to the property should be thoroughly inspected upon delivery for any signs of pests and diseases before they are planted. Ideally these plants should be held in a quarantine zone away from the general production area for a few days to allow for further inspection. Any plants showing signs of any disease should be subjected to diagnostic testing.

Reuse of growing media:

Some growers reuse substrates for crops, and while this has a financial benefit, this practice does come with an increased risk of both pest and disease issues. Residual pests and diseases in the growing media can easily be transferred to new plants and continue to attack crops. Ideally growing media should be sterilized before reuse.

Drain water:

In completely closed hydroponic systems, it is possible to capture drain water and re introduce the nutrient rich water back into the irrigation system. Whilst this can realise a fertiliser saving of some 30% the practice does come with an inherent risk of reintroducing diseases to healthy plants. Ideally all recycled water should be subjected to a sterilization process such as U.V. treatment to kill pathogens.

The measures highlighted in this document are designed as guidelines, and measures adopted for biosecurity will largely be at the growers discretion. However, PCA would urge all growers to revisit current biosecurity measures in light of recent developments in relation to notifiable disease outbreaks.