



Canadian Food  
Inspection Agency

Agence canadienne  
d'inspection des aliments

## Plant Biosecurity

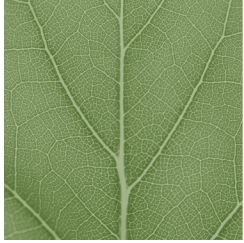
# National Farm-Level Biosecurity Planning Guide

## Proactive Management of Plant Resources



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# A

## Background

Crop biosecurity is a general description for a set of measures designed to protect Canada's plant resources from crop pests at the national, regional, and individual farm levels. A pest is considered any thing that is injurious or potentially injurious, whether directly or indirectly, to plants, or to products or by-products of plants, and includes any plant prescribed as a pest.

### Why is biosecurity important?

Maintenance of the highest possible plant health status is vitally important to the sustainability and profitability of the Canadian agricultural sector. The success of Canada's agricultural exports is linked to the excellent phytosanitary status of our crops and crop products. Ongoing access to existing markets and to new and emerging markets will increasingly depend on our ability to demonstrate the minimal phytosanitary risk that Canadian products pose to our trading partners. Increasingly, crop biosecurity standards may be needed to meet processor demands, retain market access, and ensure market competitiveness for Canada's agricultural products. It is important to keep pests away from your operation as they:

- reduce productivity
- complicate pest management
- increase production costs
- reduce the value of farmland
- close or limit export markets
- affect domestic consumption
- reduce the prices that producers receive for their products

The best defence against pests is to implement sound biosecurity practices at the farm level.

### What is farm-level crop biosecurity?

The focus of this guide is farm-level biosecurity, although it is recognized that biosecurity interventions are necessary along the continuum of production systems, at all levels: regional, national, and international.

Farm-level crop biosecurity is a series of management practices designed to minimize the introduction (bioexclusion) and spread (biocontainment) of pests onto a farm, within a farm, and beyond the farm. This includes pests not established in Canada, pests established in limited areas

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of Canada, and pests widely distributed and that can spread from farm to farm. Pests can reduce productivity, affect farm incomes, increase labour costs, reduce the value of farmland, close export markets, affect domestic consumption, and reduce prices that producers receive for their products. In addition to adverse effects on the agricultural economy, pests can negatively affect the environment and human health.

### **Who is responsible for farm-level crop biosecurity?**

All owners and managers have the ultimate responsibility to protect the health of the crops under their care, and therefore should consider developing a written farm-level biosecurity plan for their operation. This can be accomplished by working in close cooperation with crop specialists and consultants, local universities, as well as with provincial and federal departments of agriculture. Quick and simple measures built into your everyday management practices will go a long way toward protecting your farm and your future from the costly consequences of a pest.

Biosecurity may be considered as a whole-farm approach to good crop management. The cooperation of visitors and agri-service personnel is an important part of the plan, but, ultimately, the owner or manager must be willing to do what is necessary to ensure that family members, employees, and visitors follow protocols.

### **Why is farm-level crop biosecurity planning and implementation important?**

Implementing biosecurity practices to keep crops healthy has been a long-standing and successful practice on many Canadian farms. Today's more intensive farm operations may be more susceptible to economically damaging crop pests, and thus will often require stricter biosecurity protocols. Agricultural best management practices – including crop rotation, along with the use of resistant varieties and pesticides – have traditionally played a major role in eliminating and controlling crop pests. Now, however, it is widely accepted that, in isolation, they cannot prevent losses caused by all pests. Modern farming demands a more integrated pest-management approach.

Protecting your farm and crops is about understanding the risks to your operation and the ways in which your crops become exposed to crop pests, and taking steps to minimize those risks. The steps required to put sound biosecurity practices in place often do not require major capital investment and can be implemented through management and planning changes. A well-designed and implemented crop biosecurity program maximizes profits by maintaining the resistance of various varieties of crops to pests, by minimizing the development of pest populations that are resistant to control measures, and by avoiding the introduction and establishment of new pests on the farm.

Biosecurity on Canada's farms is not new. There is, however, a move to approach the application of biosecurity practices in a more systematic way; that is, by implementing across numerous commodities that reach from the farm to the national level.

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## Pest and Crop Production

A wide variety of organisms can be injurious to plants or plant products; namely, viruses, bacteria, fungi, weeds, nematodes, and phytoplasma. Depending on their biological nature, introduction of these pests onto a farm occurs through a wide range of pathways. Knowing the pests of concern for your farm and identifying the pathways by which they are introduced and spread are key elements of a biosecurity plan. Pathways of introduction include the following:

- seeds and plant materials
- vehicles and transportation
- equipment
- family and staff, and visitors
- irrigation water
- compost, manure, soil
- insects, birds, wildlife, and other animals
- wind and blown dust

What influences the ability of a crop industry sector to withstand an outbreak is not only the collective efforts of the sector, but also the individual biosecurity plans and their effective implementation.

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# B

## A Generic Guide

The purpose of this guide is to identify the key elements, considerations, and critical points of biosecurity intervention that apply to producers and handlers of agricultural crops. It is designed to assist government, national associations, and producers in developing and implementing biosecurity programs. These preventive guidelines are not all inclusive, but are generally accepted as beneficial management practices for most agricultural crops. Adopting these practices does not guarantee protection from all potential pests, but an effective plan will help protect your investment in your farm.

This guide is intended to encourage producers to implement the use of sound crop production practices that protect crop health and maximize profits. Production operations differ significantly, and sector needs vary geographically. Biosecurity considerations may be regulated federally, provincially, regionally, or municipally. One biosecurity plan will not fit the needs of every farm operation, and thus biosecurity plans should be developed to meet the specific needs of each farm. Each operation should incorporate these practices into daily routines that are appropriate for specific high-risk pests. Producers should review their production practices in relation to pest prevention on a frequent basis and ensure their strategies are carried out. An effective biosecurity plan is one that is flexible and open to new knowledge and technology as it becomes available.

The Canadian Food Inspection Agency (CFIA) has developed a similar approach to protecting Canada's animal resource base. The animal guide has been designed in parallel with the plant resource guide and focuses on biosecurity measures for animals. The National Farm-Level Biosecurity Planning Guide – Proactive Management of Animal Resources can be accessed from the CFIA website.

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C

## Developing Your Farm Biosecurity Plan

Developing a biosecurity plan should be a team effort between the owner or producer and crop specialists, with input from other sources. It is essential that the biosecurity principles chosen by a farm are feasible and practical for that operation. Establishing a practical and sensible farm biosecurity plan involves a rational risk assessment and careful planning to manage the targeted risk(s). The steps in developing a farm-level biosecurity plan are typically as follows:

- identifying potential pests of concern;
- evaluating who and what enters and exits a farm;
- determining the risk level for specific pests of concern;
- evaluating how a pest could enter and spread within the farm (pathways);
- targeting pests against which the biosecurity plan will operate;
- identifying preventative biosecurity measures by which the risk factors for a pest(s) entry or spread can be managed or minimized;
- consulting federal, provincial, regional, and municipal regulations;
- setting limits and standards for your farm;
- establishing uptake of the plan; and
- implementing the biosecurity plan.

At a minimum, a biosecurity plan should focus on biosecurity interventions that minimize

- the risk of introduction of pests into the crop production area.
- the risk of transmission between production areas.
- the release of pests from the farm.



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# D

## Definitions

**Biosecurity zone:** An area with defined boundaries where biosecurity measures are to be implemented to control access, exit, and movement to prevent the introduction and spread of pests (e.g. a field, greenhouse, storage area, etc).

**Crop:** Throughout this document “crop” is used in a widely inclusive sense to include plants, plant products, and other products that may be produced by a grower, producer, or operator for profit, including annual and perennial crops, fruit, vegetables, and horticultural plants, specifically, trees and mushrooms.

**Employee:** A person paid or otherwise expected to work on the farm for the producer.

**Farm:** A tract of land held for the purposes of cultivation, crop production, and/or the rearing of certain animals. Throughout this document “farm” is used to denote a physical location that produces crops, plant products, and other products, including nurseries, greenhouses, and plant propagators.

**Pest:** According to the Plant Protection Act, any thing that is injurious or potentially injurious, whether directly or indirectly, to plants, or to products or by-products of plants, and includes any plant prescribed as a pest.

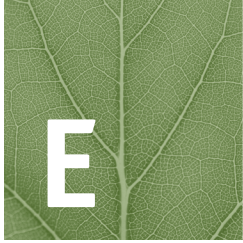
**Producer:** One who owns, leases, or rents land for cultivation, crop production, and/or rearing of certain animals.

**Production area:** A field, greenhouse, or other area designated for cultivation or crop production or rearing of certain animals.

**Property:** The land on which the production area(s) are located, including residence and all farm buildings and structures.

**Standard Operating Procedure (SOP):** A set of written instructions that document a routine or repetitive activity followed by a farm.

**Visitor:** Any non-farm personnel who arrives at the farm (includes salesmen, inspectors, delivery people, contractors, friends, and relatives of farm personnel, etc.)



## Elements of a Farm-Level Biosecurity Plan

When developing a farm-level biosecurity plan, consider these three areas:

- 1. Facility location and layout**
- 2. Operational routines**
- 3. Crop health management**

The producer is encouraged to design measures that are practical, outcome-based, and flexible. The order or organization of the concepts is not as important as the consideration of all concepts. As a biosecurity plan is developed, certain limitations (e.g. geographic, economic) may prevent implementing ideal practices. In these circumstances, increased emphasis and rigour in other element(s) may be indicated.

### 1. Facility Location and Layout

While greater emphasis may be placed on operational routines and plant health management practices in applying biosecurity principles, some minor upgrades to farm facilities can significantly improve farm biosecurity. At the very least, it is important to identify the strengths and weaknesses of existing farm facilities, so they may be factored into operational routines and biosecurity strategies.

#### 1.1 Geography

The natural environment surrounding your farm is important for identifying the source and nature of potential pests in your area. Understanding the layout of your operation and neighbouring farms is vital information for helping reduce the risk of pest introduction and spread.

#### **Biosecurity considerations:**

- Make available a farm map, detailing property lines, roadways, borders and fencing, buildings, production areas, and any waterways.
- Be aware of the proximity and nature of neighbouring farms and operations.
- Be aware of prevailing wind direction.

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## 1.2 Layout

The ability to illustrate the layout of your operation can assist in training new employees, directing visitors, and planning future production processes. Understanding the logic of crop movement and work patterns is important in developing, implementing, and modifying a biosecurity plan.

### **Biosecurity considerations:**

- Modify various farm buildings and production areas to minimize pest introduction and spread.
- Locate washing facilities for cleaning and disinfecting equipment, boots, vehicles, personnel, etc., considering the capacity for high-pressure water supply and waste water collection, in an area that prevents pest introduction and spread.
- Situate holding and disposal areas for crop waste or residues, and compost and manure in an area that prevents pest introduction and spread.
- Appropriately locate designated receiving areas for inspection (and cleaning and treatment, if necessary) of farm inputs and new off-farm acquisitions (used or borrowed equipment, seed, feed, livestock, etc.).
- Establish a visibly demarcated boundary around the property and production areas (e.g. fencing, signage, tree lines).

## 1.3 Traffic Flow

Vehicles and the surfaces on which they travel can be vectors for the introduction and spread of pests. Thus, it is important to control and, if necessary, restrict the movement of vehicles on your premises.

### **Biosecurity considerations:**

- Ensure that traffic flow routes are well defined and provide direction for visitors, vehicles, and farm equipment.
- Use appropriate signage to direct visitors to parking areas, farm offices, transition areas, and delivery and drop-off points.
- Provide designated parking areas for vehicles not entering the production area.
- Ensure that the main entrance gate to the premises and production area has appropriate signage and can be secured.

## 1.4 Landscape

Natural features, including vegetation, waterways, and topography can benefit a biosecurity plan by providing natural barriers and drainage. These features on your property provide an economical and practical way to assist in implementing biosecurity measures.

### **Biosecurity considerations:**

- Use natural barriers along roadways or neighbouring farm boundaries (e.g. windbreak or hedge).
- Ensure that weeds within or around the production area are easily manageable.
- Make use of landscaping to assist drainage and reduce standing water in the production area.

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## 2. Operational Routines

This area focuses on the day-to-day farm activities that optimize the overall biosecurity status of the existing farm facilities and may help to compensate for some infrastructure that may not exist. It focuses on producer and manager organization, as well as observational skills, sound judgement, and the need for knowledgeable and trained employees who understand why biosecurity guidelines exist and who are competent in implementing the farm-level plan. Conscious day-to-day activities, regular maintenance practices, and clear knowledge of biosecurity principles will help ensure that a biosecurity plan is successful in controlling the introduction, spread, and movement of crop pests, such as weeds, insects, and pathogens.

### 2.1 Biosecurity zones

Biosecurity zones are areas where biosecurity measures are implemented to control access, exit, and movement. To be effective, these zones are visible and controlled, and their importance understood.

#### **Biosecurity considerations:**

- Classify biosecurity zones based on use, status, access, and the level of protection needed.
- Provide appropriate signage at main entrances and field approaches to indicate various biosecurity zones, and provide contact numbers.
- Control entry and exit points for moving people, animals, equipment, and vehicles into and between various biosecurity zones.

### 2.2 Movements of Employees and Visitors

People moving between different farms or between different biosecurity zones within a farm can spread pests on boots, clothing, and equipment. The most obvious risks are pests carried in soil and plant debris. However, one can develop and implement measures to reduce these risks through protocols and strict controlled access to biosecurity zones.

#### **Biosecurity considerations:**

- Have visitors contact the producer before visiting a farm, and have them report to the farm office to document visit and to receive a briefing on the biosecurity measures in place.
- Clean, as well as disinfect (if necessary), clothing and footwear of all personnel, family members, and visitors who enter a farm or a biosecurity zone, ensuring there is no soil or crop debris.
- Provide, if needed, disposable or farm-dedicated protective clothing and footwear.
- Place cleaning facilities at appropriate access points for protective clothing and footwear removal, or for cleanup and disinfection.
- Require all personnel (employees, family, and visitors) to follow established workflow procedures into and between production areas and biosecurity zones.
- Ensure that movement is always from clean to dirty areas.
- Document the pertinent activities and movement of family and staff on the farm.

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## 2.3 Movements of Vehicles and Equipment

Vehicles and equipment entering and moving within your farm pose a serious biosecurity threat; they can carry pests, soil, and crop debris. The risk is increased with shared, contracted, and second-hand vehicles and equipment, due to use on other farms with unknown biosecurity status. Care must also be taken with non-agricultural vehicles and equipment that must travel within your farm (e.g. earth-moving equipment, gas exploration equipment, utility service vehicles). A good biosecurity plan considers incorporating protocols and controls to mitigate the associated risk.

### **Biosecurity considerations:**

- Park, when feasible, off-farm vehicles in a designated area or lot, and use a farm vehicle to transport visitors about the premises.
- Clean off-farm vehicles and equipment entering a farm or a biosecurity zone to entirely remove soil and crop debris, and disinfect (if necessary) in a designated area.
- Clean farm vehicles and equipment moving between various biosecurity zones to entirely remove soil and crop debris, and disinfect, if necessary.
- Clean vehicles and equipment exiting a farm or a biosecurity zone to entirely remove soil and crop debris, and disinfect, if necessary.
- Minimize movement of vehicles and equipment over wet soil.
- Require field operations to follow a pattern of moving from clean production areas to those more likely to harbour infestations or pose a biosecurity risk.
- Limit recreational vehicle use on the premises.
- Use equipment logs to document machinery usage, cleaning, and any use restrictions in place.

## 2.4 Construction and Maintenance of Facilities and Property

A well-constructed and maintained operation strengthens a biosecurity plan by aiding cleaning and disinfection processes and by reducing the risks associated with visitors, service personnel, and pests.

### **Biosecurity considerations:**

- Put in place a routine facility and property maintenance program.
- Conduct routine visual inspections of equipment and buildings for damages.
- Keep buildings and mechanical equipment in good repair.
- Have signage, fences, and boundaries in good repair.
- Make sure that buildings are easily cleaned and disinfected.
- Ensure that gates and buildings are lockable.
- Keep premises' roads and walkways in good repair, and ensure they are constructed with all-weather material to reduce the transportation of soil and organic material.
- Build parking areas of concrete or asphalt to promote adequate drainage.
- Maintain good hygiene in and around storage areas.

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## 2.5 Irrigation Water

Water used for irrigation can carry plant pathogens, especially when water is taken from ponds, streams, or other surface water sources. Managing water quality is important for the maintenance of healthy crops.

### **Biosecurity considerations:**

- Regularly test water storages, and monitor surrounding vegetation for the presence of pests.
- Keep area around water storages free of crop waste and other potential sources of infestation.
- Filter water from wells, streams, ponds and lakes, and treat if required.

## 2.6 Compost, Manure, and Soil

Compost, manure, and soil can carry different crops' pests. Composting to an appropriate temperature and time can destroy disease-causing agents and weed seeds.

### **Biosecurity considerations:**

- Adhere to provincial and municipal waste, agriculture, and environmental guidelines when managing compost and manure.
- Compost off-farm manure and compost inputs prior to application to destroy possible pests.
- Use on-farm produced compost and manure only after the producer is satisfied that it contains no disease-causing agents or weed seeds that could pose a biosecurity risk to the intended production area.
- Properly dispose, rather than composting, infested crop residues.
- Avoid moving soil between fields and biosecurity zones.
- Record purchases of manure and compost.

## 2.7 Biological Vectors of Pests

Animals, insects, and birds create a unique set of risk situations. Animals can spread pests via feet, feces, and fur. Some insects can also serve as vectors of disease-causing agents, such as viruses and bacteria. Weeds can also be alternate hosts for pests that infect your crops.

### **Biosecurity considerations:**

- Manage the introduction and movement of animals on the farm to prevent or limit spread of pests, diseases, and weed seeds.
- Implement control measures for rodents, pests, and wildlife (e.g. fencing, traps, repellents).
- Control weeds within and around production areas.
- Monitor rubbish dumps and debris piles that attract vermin or wild animals.

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## 2.8 Planning and Training

Knowledge provides the ability to effectively control operations on a farm. It also allows for future planning as situations or production processes change. Developing and implementing a training program provides employees with a sense of involvement and pride, and helps to avoid complacency.

### **Biosecurity considerations:**

- Assess your farm pest risks, and develop your farm-level biosecurity plan, in consultation with a professional agrologist, provincial or industry plant health specialists, family members, and employees.
- Decide on the biosecurity goals and standards you want to maintain.
- Document all biosecurity procedures, events, and actions.
- Ensure that each production facility has a copy of the biosecurity plan.
- Monitor, review, and change the plan as situations change and when new knowledge becomes available.
- Develop SOPs for routine biosecurity practices.
- Ensure employees and family members receive the theoretical and practical training to implement and maintain your plan.
- Maintain periodic training and discussion sessions with staff and family members.
- Share your biosecurity plan with neighbours, visitors, industry associations, and service providers.
- Keep updated on plant health developments (local, regional, national, and international).

## 3. Crop Health Management

This area involves decision making that directly pertains to crop production and cultivation practices, as well as to the biology of weeds and disease-causing agents that can pose biosecurity threats. This stage will reveal the biosecurity breaches, and thus careful observation and background knowledge are critical.

### 3.1 Good Management Practices

Developing, implementing, and maintaining good management practices allows a biosecurity plan to operate effectively and enhances or maintains crop productivity.

### **Biosecurity considerations for the producer or owner:**

- Check that all pertinent employees have good knowledge of crop production and handling procedures.
- Make available those individuals who are familiar with all relevant weeds, pests, and diseases, as well as with their biology and relevant federal, provincial, territorial, and municipal legislation relating to their management, which allows for early detection and problem management.

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- Ensure that seed, crops, and crop products that arrive at the farm are from reputable suppliers, and are certified in terms of quality and pest-free status. (Where possible, choose suppliers that meet the phytosanitary standard established for each farm operation.)
  - Maintain cropping records for each field. Include crop, variety, seeding rate and date, pesticide use, fertilizer and manure use, irrigation, etc.
  - Inquire, prior to renting, leasing, or buying a field, about its biosecurity status (historical land use and ownership, pest status of the area, etc.). Apply strict biosecurity protocols to all rented land.
  - Ensure that, before renting land to another producer, a strict biosecurity protocol will be applied to protect the biosecurity status of the property.
  - Best management practices:
    - Plant resistant varieties, when available.
    - Ensure a crop rotation plan is in place.
    - Have a weed and volunteer plant control strategy in place.
    - Plant cover crops to control weeds and to reduce soil movement by erosion.
    - Plant, when feasible, trap crops to protect the main crop.
    - Use modern pest management tools (chemical, biological, physical).
    - Put in place a routine crop inspection program.
    - Implement a pesticide resistance management strategy (e.g. rotation between products when possible, use the appropriate rates, etc).

### 3.2 Pest surveillance

Early detection of a pest is vital to minimizing its impact and containment in an isolated production area.

#### **Biosecurity considerations:**

- Establish a routine monitoring program to regularly assess the biosecurity status of all areas on the farm (production area, storage area, etc), particularly in terms of weeds, diseases, and insects.
- Record pest surveillance activities, even when nothing is found.
- Examine farm inputs (seed, feed, manure, plants, plant products, etc.) and any accompanying documentation prior to moving into production areas. Quarantine, if necessary, or if the status is questionable.
- Consult professional agrologist(s) or other consultant(s), as required.



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### 3.3 Pest Response Plans

The ability to react quickly and effectively to a pest situation is vital to minimizing its effect on an operation and in helping prevent the spread of the pest.

#### **Biosecurity considerations:**

- Investigate suspected problems to identify pests and implement appropriate management practices. Report any unusual finding to appropriate authorities.
- Ensure that a new biosecurity threat discovered on the farm triggers next steps for farm managers and employees to contain any outbreak, and modify plans for that particular zone or production area to help ensure that the situation is quickly brought under control and resolved.
- Develop and implement a disposal system for weed seed, crop waste, and potentially infected crop material.
- Require key or emergency contact information to be on hand for any biosecurity risk or event.

## Farm-Level Biosecurity Checklist for Crops

### Section 1: Farm Location and Layout

#### 1.1 Geography

A layout map, indicating buildings, production areas, borders, fencing, critical control points, is available.

Yes	No	N/A	Comments

#### 1.2 Layout

There is a dedicated cleaning facility appropriately located with high-pressure water supply and waste water collection capacity.

There is the capacity to clean soil and plant debris off machinery and equipment when moving between different biosecurity zones on the farm.

There are holding and disposal areas for crop waste or residues, compost, and manure (e.g. deep burial site).

A designated receiving area(s) for inspection of farm inputs and machinery is available and appropriately located.

A visible demarcated boundary surrounds property and production areas.


#### 1.3 Traffic Flow

Routes are defined and provide direction.

Appropriate signage exists.

There is a designated parking area.


Yes	No	N/A	Comments

### 1.4 Landscape

Natural barriers are present around production areas (e.g. windbreak).

Drainage is effective.

## Section 2: Operational Routines

### 2.1 Biosecurity zones

Various biosecurity zones are classified based on use, status, access, and the level of protection needed.

Appropriate signage at main entrances and field approaches indicate biosecurity zone and contact numbers.

Entry and exit points into and between biosecurity zones are controlled.

### 2.2 Movements of employees and visitors

Visitors are controlled and have limited access to production areas.

Visitor log is maintained.

A procedure is in place to ensure that visitor and employee footwear, equipment, and clothing are free from soil and crop material upon entry to the farm.

Cleaning facilities are provided for people entering or exiting production areas.

Disposable or dedicated outerwear and footwear are provided, if needed.

Workflow procedures from clean to dirty areas are established and followed.

	Yes	No	N/A	Comments
<b>2.3 Movements of vehicles and equipment</b>				
Off-farm vehicles are parked in a designated area.				
Visitors are transported about the premises, using a farm vehicle.				
Vehicles and equipment entering or exiting biosecurity zones are inspected and cleaned in a designated cleaning area.				
Off-farm vehicles and equipment are cleaned prior to entry onto the farm.				
Field operations follow a pattern of moving from clean production areas to those more likely to be infested.				
Care is taken to minimize movement of vehicles or machinery over wet soil.				
A vehicle movement log is maintained.				

### 2.4 Construction and maintenance of facilities and property

A cleaning and regular maintenance program is in place.				
Construction materials are easily cleaned and disinfected.				
Equipment, buildings, boundaries, signage, and driveways are kept in good repair.				
Good hygiene is maintained in and around storage area.				

### 2.5 Irrigation water

Water is tested regularly.				
Water is filtered and treated, if required.				

### 2.6 Compost, manure, soil

A high-heat compost procedure is in place.				
Infested crop residues are not composted but are properly disposed of.				
Movement of soil between fields and biosecurity zones is minimized.				

Yes	No	N/A	Comments

## 2.7 Biological vectors of pest

Control measures are in place for animals and wildlife.

Weeds are controlled within and around production area.

Attractive environments are eliminated or reduced.

## 2.8 Planning and training

A written practical biosecurity plan has been developed, in consultation with a professional.

The plan is shared with family, visitors, and employees.

Biosecurity training is conducted.

Up-to-date information and learning resources are gathered and made available.

All biosecurity procedures, events, and actions are well documented.

# Section 3: Crop Health Management

## 3.1 Good management practices

Staff are trained in the best crop production practices.

Staff are trained to identify pests, symptoms, and other crop problems.

Best management practices are in place.

The source of planting material (seed, transplants, cuttings, etc.) is certified as pest-free.

A producer inquiry on biosecurity status of a land occurs prior to renting.

The owner ensures that biosecurity protocols are followed on rented land.

Cropping records are maintained for each field.

### 3.2 Pest surveillance

Scouting, monitoring, and surveillance activities are routinely implemented.

Farm inputs are inspected prior to being moved into the production area.

Pest surveillance activities are recorded, even when nothing is found.

Yes	No	N/A	Comments

### 3.3 Pest response plans

Suspected problems are investigated to identify pests and to implement appropriate management practices.

A procedure for reporting pests and other biosecurity risk(s) to appropriate plant health authorities and specialists is developed.

A disposal system is developed and implemented for weed seed, crop waste, and potentially infected plant material.

Discovery of a new biosecurity threat on the farm triggers emergency procedures.


#### Add more as required


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	Yes	No	N/A	Comments

