



On-Farm Biosecurity Risk-Assessment for Honey Bees

This checklist is designed to assist beekeepers in evaluating the elements of their biosecurity programs to identify gaps in their operations. This on-farm biosecurity risk assessment is to be completed by Alberta honey beekeepers applying for funding under the Growing Forward 2 Animal Health Biosecurity Producer Program. This assessment must be submitted with your application form in order for your project to be considered for funding.

To complete this risk-assessment, read it through and answer the questions honestly and to the best of your ability. Once complete this assessment will help you evaluate your on-farm biosecurity practices, identify key risks to your farm and isolate areas of improvement; the checklist also provides some suggestions on potential projects. Note: these are not the only eligible projects under this program; they are simply examples to generate further ideas.

You may choose to complete this on-farm biosecurity risk assessment on your own or you may hire a private industry consultant (e.g. veterinarian, agrologist, etc.) to complete the assessment. The Growing Forward 2 Biosecurity producer program will reimburse the cost of the assessment visit for up to \$250.

Name of Beekeeper: (please print)	
Name of Honey Bee Operation:	
Mailing Address:	Postal Code:
Email Address:	Phone:
Beekeeper Registration Number:	Fax:
Number of hives registered:	
I certify that the information provided is, to the best of my knowledge, true, complete and correct.	
Signature: _____	Date: _____

The personal information on this form will be used for the purpose of administering the Growing Forward 2 Animal Health Biosecurity Producer Program, which may include contacting the Provincial Apiculturist and other specialists as determined by the Program for review and recommendations. Your personal information is collected under the authority of section 33(c) of the *Freedom of Information and Protection of Privacy Act* and is protected by the privacy provisions of this Act. If you have any questions about the collection and use of this information, please contact the Growing Forward 2 Biosecurity Manager at: OS Longman Building, 6909 - 116 Street, Edmonton, Alberta T6H 4P2; Telephone: (780) 644-2148, toll free dial 310-0000 followed by telephone number.

Section: Bee Health Management

Please indicate if the practice identified is in place in your operation.	Check (Please Indicate if a written procedure (WP) is available)				Comments (list additional activities necessary to meet requirements)
	Yes	WP available	No	N/A	
Bee Sources:					
Importing certified or buying with documented health status: - Queen bees - Packaged bees - Nucs or bee colonies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Checking for pests in purchased: - Queen bees - Packaged bees - Nucs or bee colonies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Recording imported or bought bees and their sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	software, computer & printer
Placing new bees in new or disinfected hives and handling with disinfected equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Monitoring and recording bee health after placement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	software, computer & printer
Prevention Management:					
Routinely inspecting hives for bee pests and recording observations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	software, computer & printer
Visiting colonies suspected of infection or infestation last	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Confirming bee pest problems using recommended tests or diagnostic labs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Microscopes, diagnostic equipment, pesticides' resistance test kit, diagnostics lab services
Segregating infected or infested colonies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Treating bee pests when thresholds reached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Using only registered or prescribed treatment products according to label or veterinarian instructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fumigation chambers, safety equipment, drug preparation equipment
Recording all treatment information including efficacy and bee health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Treatment efficacy test tools, software, computer, printer
Recording and reporting pesticides kills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Computer, printer, sample analyses
Providing bees access to good quality water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containers for water in apiaries
Replacing at least 20% of brood combs to avoid chemical build up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New comb foundations to replace used melted ones

Please indicate if the practice identified is in place in your operation.	Check (Please Indicate if a written procedure (WP) is available)				Comments (list additional activities necessary to meet requirements)
	Yes	WP available	No	N/A	
Reducing exposure to bee pests by proper design and use of hive equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Entrance reducers
Preventing robbing, drifting and swarming by using proper management practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Using preventative measures to protect bees during transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Transport nets
Using screened bottom boards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Scraping bottom boards at least once a year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Monitoring weather and environmental conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Weather station equipment
Notifying Provincial Apiculturist when a high-risk or unfamiliar pest is suspected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ensuring written biosecurity procedures and communication plans are in place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Consultant to develop biosecurity and communication protocols
Maintaining a visitor log book	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Log book, signage

Section: Operations Management

Production Inputs and Handling:					
Using potable water for mixing, treatments, cleaning and disinfecting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water treatment system and storage
Using sucrose or high fructose corn syrup suitable for bees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sugar feed storage equipment
Irradiating pollen and protein supplements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irradiation treatments
Irradiating extracted honey used to feed bees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irradiation treatments
Storing and disposing treatment products according to label instructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Refrigerator, separate storage area
Using closed feeders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	In hive or top hive feeders
Using new feeders or disinfecting used feeders before reuse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pressure washer
Using feeders, feed and water containers that are sealable, and constructed of material that is easily cleaned and disinfected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pressure washer

Please indicate if the practice identified is in place in your operation.	Check (Please Indicate if a written procedure (WP) is available)				Comments (list additional activities necessary to meet requirements)
	Yes	WP available	No	N/A	
Storing feed away from bees and processing areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Separate storage areas – new construction or renovations
Cleaning honey spills daily	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pressure washer
Routinely removing dead bees and disposing properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Incineration equipment
Bee Equipment:					
Purchasing new bee hive equipment to improve biosecurity standard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Record keeping software, computer, printer
Inspecting all hive equipment annually or as needed before use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Record keeping software, computer, printer
Purchasing used equipment: - from local trusted source - with permission and certificate and keeping records	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Inspection services, record keeping software, computer, printer
Pressure washing and disinfecting used equipment before reuse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irradiation treatments, pressure washer, hot paraffin wax dipping equipment, fumigation chambers
Using new or disinfected used combs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irradiation of used combs
Management and Maintenance:					
Using identification system for: - Hives - Apiaries	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	GPS and bar codes with handheld readers or Quick codes
Routinely inspecting equipment and facilities for pests and recording	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Software, computer, printer
Applying best management practices to reduce risks of infection and reinfection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Software, computer, printer
Washing hands after handling contaminated equipment or bee products and between apiaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hand wash facilities and equipment
Replacing disposable gloves between apiaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cleaning and disinfecting reusable gloves as needed between hives and apiaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hand wash facilities and equipment
Cleaning and disinfecting personal gear and tools as needed and after handling infected bees, bee products and bee equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adequate water supply for all cleaning functions, dedicated washer and dryer in production facilities
Storing equipment, wax, brood chambers, honey supers, and bee products in separate areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Separate storage areas – new construction or renovations to meet biosecurity standards and proper containers

Please indicate if the practice identified is in place in your operation.	Check (Please Indicate if a written procedure (WP) is available)				Comments (list activities necessary to meet requirements)
	Yes	WP available	No	N/A	
Ensuring facilities are bee tight and rodent proof	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Improvements to facilities, rodent control program; Spring loaded self-closing doors
Hard surfacing loading areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hard surfacing (paving, concrete, etc) of loading areas
Sealing concrete floors within facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Application of sealants to concrete floors
Providing appropriate temperature and humidity-controlled storage and monitoring conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Heating units, humidifiers or improvements to ventilation, monitoring equipment, back-up power generators
Providing good air circulation in storage areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Improvements to facilities, improvements to ventilation
Never extracting honey from brood combs or AFB infected colonies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irradiation treatments, melting wax equipment
Properly storing and disposing contaminated bee and hive products and equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Incineration equipment, Melting wax equipment, disposal according to instructions on the label
Monitoring apiaries for nuisance pests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Monitoring tools
Preventing pets access to facilities and apiaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Section: Training and Education

Management and Maintenance:					
Training staff to understand biosecurity principles and risks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Training costs, travel expenses
Training staff to diagnose and monitor bee pests and reporting procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Training costs, travel expenses
Training staff in proper application of treatment products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Training costs, travel expenses
Training staff in record keeping procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Training costs, travel expenses
Training staff in good personal hygiene and sanitation procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Training costs, travel expenses
Training staff on management practices that reduce biosecurity risks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Training costs, travel expenses
Providing training and resources in a language and comprehension level applicable to employee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Training costs, travel expenses, translation services
Keeping staff up-to-date on honey bee production and management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Conference and workshop fees and costs, production manuals,

Identify what On-Farm Biosecurity project you will develop

Project(s) to develop to address biosecurity needs identified on this risk assessment

1.

2.

3.

This Risk Assessment was completed by:

Beekeeper Veterinarian Agrolgist Industry Other

Name _____ Licence or registration # (if applicable) _____

Contact #: _____

Signature _____ Date _____

Submit this On-farm Biosecurity Risk Assessment alongside your application form and required documents to:

Growing Forward 2 Animal Health Biosecurity Producer Program

Alberta Agriculture and Forestry

1st floor, O.S. Longman Building

6909 – 116 Street NW, Edmonton, AB

T6H 4P2