Producer Sustainability Plan

Operation Name:

Date of Submission:

Updated:

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Food Alliance Certification Application Instructions

Food Alliance can only process complete applications and applications are accepted on a continuous basis. However, inspections will only be scheduled when conditions allow for full inspection of production areas, as determined by Food Alliance certification staff and/or site inspectors. Food Alliance recommends beginning the application process a minimum of 12 weeks before certification is required to allow for completion of the inspection and review processes. Please keep a copy of the completed application for your records. (For an additional fee, expedited services are available. Please contact Food Alliance to discuss these options.)

Step 1:
Review the Food Alliance Evaluation Criteria, available on the Food Alliance website: www.foodalliance.org/certification/producer.

Familiarize yourself with the scoring system and subject matter covered in the evaluation criteria. These are the criteria your inspector will use to evaluate your management practices. Contact Food Alliance (contact information below). if you have questions about how specific criteria may apply to your operation or how the scoring system works.

Step 2:
Review and complete the attached Application Modules.

Step 3:
Mail your:

- Completed Application Modules.
- A payment of $800, which includes a $400 deposit towards inspection costs and an application processing charge. The check or money order should be made payable to Food Alliance.

To: Electronic Applications: certification@foodalliance.org

Paper Applications and/or Deposit:
Food Alliance
P.O. Box 1004
Carnation, WA 98014

Food Alliance will confirm the receipt of your completed application and deposit.

Step 4:
Host a Food Alliance inspection. Your application will be assigned to a qualified Food Alliance inspector. The assigned inspector will contact you to set up an inspection visit. If you have questions, or require any additional information, please contact:

Food Alliance
certification@foodalliance.org
(503) 481-0271

Contact Information			PSP Module 1
Name of Operation:			Date:
Physical Address(es) of all sites:			
Mailing Address (if different from above):			
Fax:	Email:	Website:	

Type of Business:

☐ Individual ☐ Individual "doing business as":

☐ General Partnership Names of Owners/Partners:

☐ Corporation Name of President:

Does your operation hold any other certifications? If "Yes", please specify:	☐ Yes	☐ No

Primary Certification Contact

The person listed below will be the Primary Certification Contact. The person acting as the primary certification contact must have knowledge of the operation's management practices and by being listed here will have access to any information contained in the Food Alliance application. The primary certification contact will be the individual to receive all certification related correspondence.

Name of Primary Contact Responsible for Certification:			
Title:	Mailing Address:	Phone Number:	Email Address:

Additional Contacts

Additional people may be named as contacts for Food Alliance or inspectors regarding this file, or during the inspection and certification process. These contacts may be consultants, managers, employees, administrative assistants, etc.

Name	Job Title	Phone Number	Authorized to speak on behalf of this company?
			☐
			☐

Certification Category

☐ Independent Producer/Handler – Intend to market Food Alliance Certified products through my own business or brand.

☐ Contract Producer/Handler – Intend to sell Food Alliance Certified products through the following Food Alliance certificate holder(s) (can be a certified producer group, handling facility, or brand):

Partner Affiliations

Please indicate if you were referred to Food Alliance by a Food Alliance partner organization. (Choose the one that most directly influenced your decision to apply.)

☐ Pennsylvania Associate of Sustainable Agriculture (Millheim, PA) ☐ Other:

☐ Cooperative Development Services (St. Paul, MN)

Operation Profile	PSP Module 2
Background Information	
How did you find out about Food Alliance certification?	
Please describe the history of your operation, and how you learned to farm or ranch.	
Food Alliance believes sustainable agriculture is characterized by safe and fair working conditions, humane animal treatment, and careful stewardship of ecosystems.	
Please tell us about a related aspect of your operation you are particularly proud of.	
Please tell us about a related aspect of your operation you have been working to improve upon.	
Please list any courses, seminars, and formal education related to sustainable production and natural resource conservation, safe and fair working conditions, or humane animal treatment you or other workers at your operation have successfully completed. Include attendance at farm or ranch association conferences and dates of completion.:	

Acreage		
What is the total acreage of your operation?		
Acres owned:	Acres rented/leased:	Acres in public land permits:
Of your total acreage, how many acres are in the following? Cropland: Pasture: Rangeland: CRP, RIM, CREP or other conservation programs: *Please specify:* Woodland (acres): Wetland (acres): Streams (miles): Ponds or lakes (acres): Farmstead (acres): Other:		

Income Producing Crops and Livestock		
Please list **all** income producing crops you produce and indicate if you are seeking certification on those crops. (If you produce a large number of crops, it is acceptable to list crops by categories such as "cole crops", "vine crops", "small grains", etc.). ☐ N/A – no crops produced.		
Crop	Acreage	Seeking Food Alliance Certification?
		☐
		☐
		☐
		☐
		☐
		☐
		☐
Please list average numbers of income-producing livestock you have on your operation and indicate if you are seeking certification on those livestock: ☐ N/A – no livestock produced.		
Livestock Type	Number of Market or Production Animals per year	Seeking Food Alliance Certification? (Check if "yes".)
		☐
		☐
		☐
		☐
		☐
		☐
		☐

Operation Maps	PSP Module 3

Background:
Maps or Aerial Photos of your operation are an integral part of your application. Please have maps available during the inspection and be prepared to identify features on your maps which describe your soil and water conservation, integrated pest and weed management, wildlife habitat, and biodiversity conservation practices.

Instructions:
Please attach maps of your operation to this application. If you do not have maps, they can often be obtained from your local conservation district office. Maps may also be available from Google Earth: http://www.google.com/earth.

A hand drawn map with a description of the operation and/or a legend is also acceptable. If you manage a very large area of land and it is not practical to send maps with this application, please have maps available for the inspector to view during the inspection visit and be prepared to identify the features listed below.

Please indicate:

- ☐ Maps are attached to the application.
- ☐ Maps will be mailed to the Food Alliance office.
- ☐ Maps will be available at the time of inspection.

Please be prepared to identify the following features on your maps:

1. Structural Features:

   Property boundary(s), production areas (fields, pastures, etc.), outbuildings, pesticide/hazardous material storage areas, family and employee housing, post-harvest handling or processing areas.
2. Environmentally Sensitive and/or Erosion-Prone Areas:

   Bodies of water, drainages, riparian areas, steeply sloped areas, wetlands, adjacent land uses sensitive to farming practices, buffer & filter strips, terraces, etc.
3. Integrated Pest & Weed Management Information:

   Areas subject to high potential pesticide/herbicide losses, areas of invasive weeds, areas with high pest pressures, or potential access for pests.
4. Wildlife Habitat and Biodiversity Conservation Areas:

   Woodland/natural areas, hedgerows, ponds, streams, fallow fields, food plots, predator, and pollinator habitat. Please also identify the following, as is applicable to your operation.
   - Areas of high biodiversity value (priority habitats such as wetland or remnant prairie; habitat for or presence of threatened or endangered species, connectivity to larger natural areas, water resources).
   - Problem areas: farm features that threaten native biodiversity, including areas of invasive weeds or high erosion.
   - Relevant features from the landscape surrounding the farm, including natural areas, restoration projects, public lands, etc.

Product Marketing Profile			PSP Module 4
Primary Marketing Contact The person listed below will be the Primary Marketing Contact. This individual is responsible for labeling and marketing your operation's Food Alliance Certified products.			
Name of Primary Marketing Contact:			
Title:	Mailing Address:	Phone Number:	Email Address:
Products Information Please list the products for which you are seeking Food Alliance Certification and describe any related sales and marketing information.			
Product and Brand	Approx. Annual Sales Vol.	How is this product packaged for sale? (e.g., boxes, bags, weight, etc).	What are the primary sales outlets for this product? (e.g., wholesale to retail or restaurants, farm stand, broker, processors, etc.)
	$		
	$		
	$		
	$		
	$		
	$		

Packing and Post-Harvest Handling	PSP Module 5

Basic Data

1. Is the Food Alliance Certified crop processed at your farm (cooked, baked, preserved, dried, heated, ground, frozen, cut, etc.)?	☐ Yes	☐ No
1a. If "Yes", please complete a Handler Application packet. Please contact the Food Alliance office to request a packet.		
2. Is the Food Alliance crop packed into retail, wholesale, or shipping containers at your farm?	☐ Yes	☐ No
2a. If "No", skip to Question #12. 2b. If "Yes", please ensure a copy of all packages or labels making Food Alliance claims are submitted to the Food Alliance office for review. You must include labels with your farm or company name, as well as any private labels from companies you contract with for Food Alliance Certified product.		
3. Do you handle or pack food products from other non-Food Alliance Certified crop producers?	☐ Yes	☐ No
3a. If "Yes", please complete a Handler Application. Please contact the Food Alliance office to request a packet.		

4. Check all cleaning methods used prior to packing or handling Food Alliance Certified products.

☐ No cleaning or purging occurs – skip to Question #7 ☐ Sweeping or Vacuuming
☐ Compressed air ☐ Purging of equipment ☐ Soap and water ☐ Sanitizing
☐ Other (please specify):

5. Please list all cleaning and/or sanitation materials used on packing equipment and food contact surfaces prior to the handling of Food Alliance Certified products.

☐ N/A I do not use cleaning and/or sanitation materials.

Material	Crop	Reason for Use

6. Is the use of cleansers or sanitizers followed by a potable water rinse?	☐ Yes	☐ No
7. Is chlorine, calcium hypochlorite, chlorine dioxide, or sodium hypoclorite used in wash water or flume water during the handling of Food Alliance Certified crops?	☐ Yes	☐ No

7a. If "Yes", how do you ensure residual chlorine levels in water leaving your facility is maintained at or below 4ppm (the maximum chlorine residual limit under the Safe Water Drinking Act)?

8. Please describe how you ensure Food Alliance Certified are not commingled with non-Food Alliance Certified products during handling and packing. ☐ N/A Only handle Food Alliance Certified products.

9. What type of container are Food Alliance products packed into? (Check all that apply.)

☐ Bulk trucks – skip to Question #13 ☐ Wooden bins ☐ Cardboard/waxed boxes ☐ Paper bags ☐ Plastic bins ☐ Other (please specify):

10. Are all packaging materials and shipping containers food grade?	☐ Yes	☐ No
11. Are packing materials or shipping containers reused?	☐ Yes	☐ No

11a. If "Yes", please describe how Food Alliance Certified products are protected from contamination when placed in the reused container.

12. Please describe how you identify packages or containers as Food Alliance Certified.

Storage

13. Do you store Food Alliance Certified products at your farm?	☐ Yes	☐ No

13a. If "No", skip to Question #14. If "Yes", please provide details on your storage areas by completing the following table.

Use	Location/Name of Storage Area(s)	Type/Capacity	Is Storage Unit Dedicated to Food Alliance Certified products?	
			☐ Yes	☐ No
			☐ Yes	☐ No
			☐ Yes	☐ No
			☐ Yes	☐ No

Transportation		
14. Are you responsible for the transportation of Food Alliance Certified crops or finished products leaving your farm?	☐ Yes	☐ No
14a. If "No", please provide the name of the responsible party:		
15. How do you ensure Food Alliance Certified crops or products are not contaminated during transport? ☐ Transportation equipment is used for Food Alliance crops only ☐ Food Alliance crops are shipped in sealed packages or containers ☐ Transportation equipment is cleaned prior to Food Alliance crop harvest or use ☐ Other (please specify):		
16. What type of cleaning documentation is maintained? ☐ N/A ☐ Clean truck/equipment affidavits ☐ Clean out records ☐ Other (please specify):		

Whole Farm Fixed Criteria	PSP Module 6

All producers, please complete the following (crops, livestock, shellfish, nursery):

No GMO seeds (or breeds) are used.
Crops and livestock products bearing the Food Alliance Certified label must not be produced with genetically modified organisms. Site inspectors may ask to examine records to see if any of the seed varieties or livestock semen, embryos, or other genetics have been produced with genetically modified technologies. (Animals may be fed with GMO feeds; however, applicants are encouraged to source non-GMO feeds if they are available.)

Check the following as applicable:

☐ There are no GMO plants or animals produced on the operation.

☐ GMO plants or animals are produced on the operation, but will not be sold as Food Alliance Certified products (e.g., GMO soybeans are grown, but certification is only sought for Beef Cattle).

If GMO plants or animals are produced on the operation, please list them here:

Continual Improvement:
Food Alliance Certified producers are required to set goals and assess their progress toward these goals by monitoring for impacts of decisions on their operation, family, employees and the environment.

Check the following as applicable:

☐ I am committed to continually improving the management practices of my operation in the interest of environmental health, farm worker welfare, and the overall success of my business.

No Prohibited Pesticides Used – See Appendix A:
The Food Alliance Prohibited Pesticide List (PPL) is based on the WHO Recommended Classification of Pesticides by Hazard (2009). The PPL consists of materials classified as extremely hazardous or highly hazardous on the WHO list that are registered for use by the USEPA. Exceptions will be allowed if the use of a material on the PPL is required by law or required for export. The PPL is in Appendix 1, at the end of the application materials. Please review the list carefully.

Check the following as applicable:

☐ Prohibited pesticides are not used on the operation.

☐ Prohibited pesticides are used on the operation, but crops receiving these pesticides will not be sold as Food Alliance certified products.

Please list prohibited pesticide(s) used, and on which crop it is used:

Livestock and Shellfish Producers only, please complete the following:

No hormones or non-therapeutic (feed additive) antibiotics used
Use of growth promoting hormones and non-therapeutic antibiotics ("antimicrobials") is prohibited in products bearing the Food Alliance certified label. Non-therapeutic antibiotic use is defined as any use of an antibiotic as a feed or water additive for an animal in the absence of a clinical sign of disease. Non-therapeutic uses generally include growth promotion, feed efficiency, weight gain, improved pigmentation, routine disease prevention, or any other routine purpose. Antibiotic uses for disease prevention are considered non-therapeutic unless it can be shown that one or more animals within a barn, pasture, or feedlot carry a disease, or unless an infection likely to occur because of a specific, non-customary situation (e.g. injury to an animal). If animals are ill, they may be given therapeutic medicines until they recover. If animals are receiving antibiotics due to illness at the time of slaughter or during milking, these food products cannot be labeled Food Alliance certified. Site inspectors will examine production and veterinary records to ensure fulfillment of this fixed standard.

Check the following as applicable:

☐ Growth-promoting hormones <u>are not</u> used in animal production on the operation.

☐ Growth-promoting hormones <u>are</u> used on the operation on the following:

☐ Not applicable to my operation (please explain):

Check the following as applicable:

☐ Non-therapeutic antibiotics <u>are not</u> used in animal production on the operation.

☐ Non-therapeutic antibiotics <u>are</u> used on the operation.

☐ Not applicable to my operation (please explain):

Soil and Water Conservation	PSP Module 7

Management Practices

Please describe your approach and overall goals for soil and water conservation on your operation:

What soil erosion problems do you experience (why and where on the operation)?

Which of the following soil and water conservation practices are used? (Check all that apply.)

☐ Terraces ☐ Contour planting ☐ Strip cropping ☐ Cover crops ☐ Conservation tillage
☐ Direct seed/no-till ☐ Maintain crop residues ☐ Permanent waterways/buffer areas
☐ Permanent pasture/rangeland ☐ Retention ponds/sediment traps ☐ Riparian area management
☐ Livestock grazing management ☐ Drought resistant varieties selected ☐ Crops produced without irrigation
☐ Land managed to encourage infiltration and storage of precipitation in soil
☐ Uplands managed to decrease runoff of precipitation ☐ Other (please specify) :

What practices do you use to maintain or increase soil organic matter in your soils? (Check all that apply.)

☐ Crop residue incorporated into soil ☐ Soil organic matter monitored
☐ Conservation cover planted between rows of perennial crops ☐ Mulches used
☐ Livestock manure incorporated into soil ☐ Managed livestock grazing ☐ Cover crops/green manures
☐ Other (please specify):

Tillage equipment and practices:

☐ N/A No crops on operation or no-till/direct seed operation.

a. What equipment do you use for tillage?

b. How do you minimize the negative effects of tillage, such as soil compaction and disruption of the soil's structure?

How do you manage field edges, waterways, and/or riparian areas to ensure water quality, soil, and wildlife habitat is protected? (Check all that apply.)

☐ Permanent buffers/filter strips ☐ Controlled livestock access
☐ No-spray zones established around field edges
☐ Riparian area enhancement (planting or maintenance of multi-aged mixed plant species)
☐ Other (please specify):

Please check all the ways you use water on your operation.

☐ Irrigation ☐ Greenhouse ☐ Livestock ☐ Foliar sprays ☐ Washing crops
☐ Other (please specify):

Water Source(s):

☐ On-site well ☐ River/creek/pond ☐ Spring ☐ Municipal/country ☐ Irrigation district
☐ Other (please specify):

Irrigation Equipment and Water Conservation

☐ N/A – no irrigation

a. What type of irrigation is used on your operation? (Check all that apply.)

☐ None ☐ Drip ☐ Flood ☐ Center pivot ☐ Hand-line ☐ Wheel-line
☐ Other (please specify):

b. What improvements to your irrigation system(s) have been made? (Check all that apply.)

☐ Laser leveling ☐ Gated head pipes ☐ Drop nozzles ☐ Low pressure/micro sprinklers
☐ Other (please specify):

c. What practices are used on your operation to promote irrigation water conservation? (Check all that apply.)

☐ Low-volume irrigation systems ☐ Irrigation activities based on soil moisture testing
☐ Water use monitoring ☐ Water is collected and recycled/reused
☐ Crop demand/consumptive use factored into irrigation activities ☐ Other (please specify):

Other
continued:

Nutrient Management	PSP Module 8

Management Practices

Please describe your approach and overall goals for nutrient management on your operation.

What are the major components of your nutrient management plan (crops, pasture, or rangeland)? (Check all that apply.)

☐ Interplanting ☐ Summer fallow ☐ Off-farm manure ☐ On-farm manure ☐ Grazing management
☐ Crop rotation ☐ Incorporation of crop residues ☐ Compost ☐ Soil amendments
☐ Soil pH monitoring and adjustment ☐ Green manure/plow down cover crops ☐ Subsoiling
☐ Side dressing ☐ Soil inoculants ☐ Mulching ☐ Other (please specify):

Please indicate if you have any of the following nutrient management planning tools in place. (Check all that apply.)

☐ Written nutrient management plan ☐ Calculated nutrient budgets for fields/pastures/rangelands
☐ Regular soil testing ☐ Manure nutrient content testing ☐ Other (please specify):

How do you monitor the effectiveness of your fertility management program? (Check all that apply.)

☐ Soil testing ☐ Microbiological testing ☐ Tissue testing ☐ Observation of soil
☐ Observation of crop/pasture/rangeland health ☐ Comparison of yields ☐ Crop quality testing
☐ Other (please specify):

How often do you conduct fertility monitoring (soil testing, plant tissue testing, etc.)?

☐ Weekly ☐ Monthly ☐ Annually ☐ As needed ☐ Other (please specify):

Fertilizer Inputs
In the table below, please list any fertility inputs you've used in the past year.
Crop operations: please list fertility inputs for crops you wish to certify.
Livestock operations: please list fertility inputs for pastures or rangeland.

☐ N/A – none used

Crop name (can be pasture/rangeland)	Fertilizer application(s)–type and rate

Integrated Pest, Disease, and Weed Management (IPM)	PSP Module 9

Management Practices

Please describe your approach and overall goals for pest, disease, and/or weed management. Also describe how potential negative impacts of the program to the surrounding ecosystem are minimized.

If your application includes the Food Alliance IPM Template (Module 9A), you do not need to complete the following questions. Skip to the Chemical Applications section.

What techniques are used to prevent pest, disease, or weed problems on your operation? (Check all that apply.)

☐ Pest & disease resistant varieties used ☐ Crop rotation ☐ Managed, rotational grazing
☐ Site selection ☐ Canopy humidity management ☐ Certified weed-free livestock feed
☐ Mulch/cover-crops ☐ Cleaning equipment ☐ Maintaining soil fertility
☐ Other (please specify):

Weed Management Plan

What are your problem weeds?

How do you monitor the effectiveness of your weed management program? (Check all that apply.)

☐ Weed counts ☐ Comparison of crop yields ☐ Weed mapping ☐ Observation of weed types
☐ Observation of crop/pasture health ☐ Other (please specify):

How often do you monitor weeds?

Pest Management Plan for Crops (includes hay/harvested forage)
☐ N/A No Crops Produced What are your problem pests? • Insects: • Rodents, gophers, birds, other animals:
How do you monitor the effectiveness of your pest management program? (Check all that apply.) ☐ Insect monitoring ☐ Traps ☐ Observation of crop/pasture health ☐ Sweep nets ☐ Comparison of yields ☐ Crop quality testing ☐ Records maintained and reviewed ☐ Other (please specify):
How often do you monitor for pests?
Disease Management Plan for Crops (includes hay/harvested forage)
☐ N/A No Crops Produced What are your problem crop diseases?
How do you monitor the effectiveness of your disease management program? (Check all that apply.) ☐ Soil testing ☐ Microbiological testing ☐ Tissue testing ☐ Observation of soil ☐ Observation of crop health ☐ Comparison of crop yields ☐ Crop quality testing ☐ Records kept ☐ Other (please specify):
How often do you monitor for diseases?

Chemical Applications ☐ N/A - no pesticides/herbicides/fungicides/fumigants used on the operation. (Skip to next section.)		
Who is responsible for chemical applications? (Check all that apply.) ☐ I am (person filling out application) ☐ Employees ☐ Contract applicator ☐ Other (please specify):		
Please describe the type of application equipment that is used:		
If restricted use chemicals are used, does the person applying them have a valid pesticide applicator's license? ☐ N/A – No restricted use chemicals used.	☐ Yes	☐ No
Please explain how application equipment is calibrated and how often.		
Are written calibration records maintained? ☐ N/A (please explain):	☐ Yes	☐ No
Are copies of MSDS sheets maintained on-site, in an area accessible to all workers? ☐ N/A (please explain):	☐ Yes	☐ No
Are spray records posted in a location where all workers/employees can easily check them? ☐ N/A (please explain):	☐ Yes	☐ No
If "Yes", do spray records include detailed re-entry intervals (REI's)? ☐ N/A (please explain):	☐ Yes	☐ No

Recordkeeping		
Do you keep records for all pesticide, herbicide, and fungicide applications? ☐ N/A - None used. If "Yes", how long are records kept on site?	☐ Yes	☐ No
Please indicate which of the following is recorded on application records. ☐ Product name ☐ Date of use ☐ Amount ☐ Location (crop/field name) ☐ Crop/weed growth stage ☐ Disease/pest growth stage ☐ Target organism ☐ Threshold used to guide treatment ☐ Weather conditions ☐ Effectiveness of treatment ☐ Application method ☐ Application calibration records ☐ Re-entry interval (REI) ☐ Other (please specify):		
Do you keep written scouting/monitoring records? (Recordkeeping can be as simple as notes on a pocket notebook/calendar.)	☐ Yes	☐ No
Hazardous Material Storage		
Where are hazardous materials (chemicals, fuel, fertilizer, etc.) stored on your operation?		
Is the storage area(s) at least 150 ft away from wells and 200 ft away from surface water or sources of flame? If "No", please explain how any potential risk, in the event of leakage or unintended spillage, is accounted for:	☐ Yes	☐ No
Please indicate if the following apply to your hazardous material storage area(s). (Check all that apply.) ☐ Materials are organized by type (pesticides, fertilizers, etc.) ☐ Warning signs posted outside storage area ☐ Flammables kept out of direct sunlight ☐ Storage area is locked ☐ Storage area has sealed floor ☐ Storage area adequately ventilated ☐ Dry materials stored above liquids ☐ Written inventory maintained ☐ Other (please specify):		
How are empty hazardous material containers and/or tank rinsate disposed of? (Check all that apply.) ☐ Empty containers triple-rinsed before disposal ☐ Take rinsate sprayed on labeled crops at labeled rate ☐ Containers returned to supplier ☐ Containers taken to approved recycling program or licensed landfill ☐ Other (please specify):		

Integrated Pest, Disease, & Weed Management (IPM) and Pesticide Risk Reduction	PSP Module 9A

I. PEST IDENTIFICATION

Successful Integrated Pest Management (IPM) begins with correct identification of pests. Only then can appropriate IPM methods and materials be selected. Please use **Tables 1-4** below to list insect, weed, disease and "other" pests that present production challenges and which are the main drivers of IPM on your operation (i.e. all the crops on your farm). **Use Appendix B as a reference guide – includes definitions and examples – the pests in Tables 1-4 will mainly fall into the 'severe' category.**

Table 1: Insect pests (including mites) that present the major production challenges to your operation

INSECT PEST (including mites)	Crop(s) or other areas in which Insect problem occurs	Pest Category (severe, sporadic, or novel)	Type of Monitoring or Diagnostics (see Appendix B for examples)	Frequency of Monitoring (daily, weekly, etc.)	Threshold Used to Guide Control Measures (see Appendix B for examples)	Other Information Please note other pertinent information, such as: pest is resistant to sprays, pest pressure increased/decreased dramatically, etc.

Table 2: Weed pests that present the major production challenges to your operation

WEED PEST	Crop(s) or other areas in which Insect problem occurs	Pest Category (severe, sporadic,or novel)	Type of Monitoring or Diagnostics (see Appendix B for examples)	Frequency of Monitoring (daily, weekly, etc.)	Threshold Used to Guide Control Measures (see Appendix B for examples)	Other Information Please note other pertinent information, such as: pest is resistant to sprays, pest pressure increased/decreased dramatically, etc.

Table 3: Disease(s) that present the major production challenges to your operation

DISEASE (fungal, viral, bacterial, etc.	**Crop(s) or other areas in which Insect problem occurs**	**Pest Category** (severe, sporadic, or novel)	**Type of Monitoring or Diagnostics** (see Appendix B for examples)	**Frequency of Monitoring** (daily, weekly, etc.)	**Threshold Used to Guide Control Measures** (see Appendix B for examples)	**Other Information** Please note other pertinent information, such as: pest is resistant to sprays, pest pressure increased/decreased dramatically, etc.

Table 4: Other pests (nematodes, birds, gophers, deer, etc.) present on the operation

"OTHER PEST" (nematodes, birds, gophers, deer, etc)	**Crop(s) or other areas in which Insect problem occurs**	**Pest Category** (severe, sporadic, or novel)	**Type of Monitoring or Diagnostics** (see Appendix B for examples)	**Frequency of Monitoring** (daily, weekly, etc.)	**Threshold Used to Guide Control Measures** (see Appendix B for examples)	**Other Information** Please note other pertinent information, such as: pest is resistant to sprays, pest pressure increased/decreased dramatically, etc.

II. PAMS MANAGEMENT PRACTICIES

Integrated Pest Management (IPM) is not a single pest control method, but rather a series of pest management evaluations, decisions and controls. Two primary goals of IPM are to prevent environmental risks if possible and then to mitigate environmental risks that cannot be prevented. IPM is site-specific in nature, based on approaches suited for a particular crop, pest & location. IPM strategies include **P**revention, **A**voidance, **M**onitoring and **S**uppression, or **"PAMS"**.

P*revention*: The practice of keeping a pest population from infesting a field or site, should be the first line of defense.
A*voidance:* May be practiced when pest populations exist in a field or site but the impact of the pest on the crop can be avoided through some cultural practice.
M*onitoring*: Proper identification of pests through surveys or scouting programs, including trapping, weather monitoring and soil testing where appropriate, performed as the basis for suppression activities.
S*uppression:* May become necessary to avoid economic loss if prevention and avoidance tactics are not successful.

Use Appendix B as a reference guide to complete Table 5 below - includes example PAMS management practices.

Table 5: PAMS management practices for insect, weed, disease, and "other" pests listed in Tables 1-4. Using the example PAMS management practices listed in Appendix B as reference, complete the following table to describe the PAMS strategies used for insect pest, weed, disease and "other" pest control on your operation.

INSECT PESTS (Including mites)		
PAMS category	**Management practices**	**Comments, details of practices**
Prevent		
Avoid		
Monitor		
Suppress		
DISEASES		
PAMS category	**Management practices**	**Comments, details of practices**
Prevent		
Avoid		
Monitor		
Suppress		
WEEDS		
PAMS category	**Management practices**	**Comments, details of practices**
Prevent		
Avoid		
Monitor		
Suppress		
OTHER PESTS (Nematodes, Birds, Gophers, Deer, Etc.)		
PAMS category	**Management practices**	**Comments, details of practices**
Prevent		
Avoid		
Monitor		
Suppress		

III. ECOLOGICAL SERVICES MANAGEMENT

Insects and other organisms that kill or control unwanted insect, weed, disease, or other pests are called natural enemies, or simply "beneficials". In an Integrated Pest Management (IPM) program, it is important to protect these beneficials by avoiding pesticides that kill them. Equally important are monitoring for and encouraging beneficial insects by choosing plants that provide them with pollen, nectar, and shelter.

Please use Table 6 below to list beneficial insects and other organisms present and/or desired on your operation. Identify the "role" of each beneficial according to the following two categories:

Predators and parasites: Feed upon the pests that attack your crops
Pollinators: Serve to pollinate your crops, include non-Apis bees such as solitary bees, bumble bees and managed hive bees.

Table 6: Beneficials (Crop pest predators or parasites, pollinators) present and/or desired on the operation. (See Appendix B for examples)

Beneficial species	Role (crop pest pollinator, predator, parasite)	Diagnostics, monitoring records, other records that verify the importance of this beneficial species on your operation

Please indicate which of the following management practices are employed on your operation to Protect, Monitor, and Encourage Beneficials (check all that apply)

Protection practices
- ☐ Pesticides hazardous to beneficials not used
- ☐ Pesticides hazardous to benefiicals only applied when beneficials are not present or when exposure is at a minimum
- ☐ Tillage methods chosen to protect beneficials
- ☐ Other (please specify):

Monitoring practices
- ☐ Traps or direct observation used to monitor pollinator or natural enemy activities
- ☐ Diagnostic guides or other sources of expertise used to identify beneficial species on the operation
- ☐ Monitoring records maintained which indicate type and population of beneficials found on the operation
- ☐ Other (please specify):

Encouraging practices
- ☐ Food and shelter for beneficials maintained on the operation including, (check all that apply)
  - ☐ perennial shrubs ☐ cover crops ☐ insectary blocks ☐ beetle banks ☐ wildflower patches
  - ☐ conservation cover ☐ bird and bat boxes ☐ sunflowers and other plantings that provide escape cover
  - ☐ other (please specify):
- ☐ Natural areas preserved on the property, including (check all that apply):
  - ☐ native trees in riparian zones ☐ windbreaks or woodland ☐ floristically rich unmanaged areas
  - ☐ Other (please specify):

IV. CHEMICAL SUPPRESSION – RISK MANAGEMENT

Chemical suppression techniques may be necessary to avoid economic loss if prevention, avoidance or non-chemical suppression tactics are not successful. If chemical suppression techniques are used, it is important to:

1) Identify associated risks for human health and natural resource concerns

2) Prevent or mitigate those identified risks

PART A

Instructions: Using pesticide application records from the most recent full calendar year, list in Table 7 below ALL pesticides (insecticides, herbicides, fungicides, nematicides, fumigants, etc. – including seed treatments) used on the operation, **for crops on which certification is sought**. Also list the following information for each product:

***Pesticide Category*:** Herbicide, Insecticide, Nematicide, Fungicide, etc.

Active Ingredient: The active ingredient (AI) is the chemical in the product which directly kills, controls, or repels the target pest. Often, the active ingredient(s) make up only a small portion of the whole product. Active ingredients can typically be found within a product's Safety Data Sheet (SDS), along with the CAS# (chemical abstract service #). Most SDS and product labels for agrochemicals can be accessed from the following website (the SDS is typically the last file in the list): http://www.cdms.net/Label-Database.

Target Pest(s): List which pest(s) the product is being used to control.

Risk Mitigation Required: Referencing the *Food Alliance List of "High Risk" Active Pesticide Ingredients and Required Risk Mitigations* (check this box if a risk mitigation is identified for the given product.

Required Mitigation: If applicable, list the type(s) of risk identified in the *Food Alliance List of "High Risk" Active Pesticide Ingredients and Required Risk Mitigations*.

Table 7: Pesticides used on Certified Crops and Identified Risks

Product Name	Pesticide Category (Herbicide, Insecticide, Nematicide, Fungicide)	Active Ingredient(s) (See Safety Data Sheet)	Pesticide Signal Word Danger, Caution, Warning (found on product label)	Target Pest(s)	Risk Mitigation Required?	Restricted Use Pesticide (RUP)?	Identified Risk(s)
EXAMPLE – Spartan	*Herbicide*	*Sulfentrazone*		*Broadleaf weeds - Kochia, ragweed*	☒	☐	*Risk to Wildlife*
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	

Required Mitigations: The following mitigation practices must be implemented for risks identified above.

☐ By checking this box, producer attests the following mitigations are implemented for applicable risks identified above.
Additional Comments:

Risk Type	Required Mitigations
Risk to aquatic life; Risk to wildlife	Pesticides containing active ingredients which pose high risks to aquatic life or wildlife are only used if: Non-application zones around aquatic natural ecosystems are enforced, vegetative barriers are established, or other effective mechanisms are implemented to reduce spray drift.
Risk to pollinators	Pesticides containing active ingredients which pose high risks to pollinators are only used if: a) Less toxic, efficacious pesticides are not available. b) Exposure to natural ecosystems is minimized by enforcing non-application zones, by establishing vegetative barriers, or implementing other effective mechanisms to reduce spray drift. c) Contact of pollinators with these substances is further reduced through: only applying substances when pollinators are not active; not applying substances to flowering weeds or removing flowering weeds; applying substances while the crop is not in peak flowering period. d) If bee hives are used, they are temporarily covered during application, and hive bees are provided with a clean water source outside the treated area.
Inhalation risk	Pesticides containing active ingredients which pose high inhalation risks are only used if: a) Functional Personal Protective Equipment (PPE) is used in accordance with the product's MSDS, safety tag or other instructions (whichever are more stringent) and is provided free of cost to workers. b) All persons who mix or handle pesticides, fertilizers, hazardous materials, or other chemical substances or natural pest control substances with possible dermatological or microbiological risks use PPE. c) Restricted entry intervals are enforced and respirators with an organic vapor (OV) cartridge or canister with any N, R, P, or 100 series pre-filter are used. d) Application sites are flagged to indicate inhalation risks to bystanders.

PART B

Indicate which of the following additional prevention and mitigation practices are used as standard practice when chemical applications are used on the operation (check all that apply). (You may also list these practices in the table above, if appropriate.)

☐ **Pesticides applied efficiently (right time, right place, right amount, only when necessary)** ☐ PAMS IPM approach is used to minimize pesticide usage ☐ Certifications and licensing is up to date, with appropriate courses and workshops ☐ Sprayers are maintained and calibrated to ensure safe and effective operations ☐ Written sprayer calibration records maintained ☐ Weather conditions/forecasts taken into account ☐ Other (please specify):	☐ **Pesticide efficacy is maximized** ☐ Appropriate nozzle selection ☐ Proper nozzle spacing, boom heights, and air speeds ☐ Management of application volumes to maximize efficacy and minimize drift ☐ Products mixed according to label directions ☐ Target pest/disease/weed growth stage factored into timing of sprays ☐ Other (please specify):
☐ **Off-crop loss/run-off of product is minimized** ☐ Buffer zones, vegetated filter strips, offsets, etc. to help reduce drift ☐ Surfactants used to minimize drift (when recommended by label) ☐ Awareness of potential for drift and runoff ☐ Use of drift reducing technology (e.g. reduced drift nozzles, controlled drop application, etc.) ☐ Applications made only under weather conditions that minimize off-site movement (wind, thermal, and inversion drift potential considered) ☐ Best management practices employed such as turning off sprayers when turning ☐ Other (please specify):	**Reduced risk pesticide selection practices** ☐ Selection of pesticides to limit health and/or environmental risks based on advice from consultants, extension, or label language ☐ Pesticides selected to preserve beneficial insects ☐ Use of pesticides with “danger” signal word avoided ☐ Use of risk assessment tools, such as PRiME ☐ Other (please specify):

IPM template developed by Paul Jepson, IPPC, Oregon State University as part of a USDA-NIFA funded Extension IPM Program and USDA-NRCS funded IPM guidelines program, in cooperation with Karen Lewotsky and Heather Saam, Food Alliance representatives.

Safe & Fair Working Conditions	PSP Module 10

Management Practices

Please describe your approach or overall philosophy for developing human resources and/or enhancing quality of life issues on your operation.

Does your operation have employees (family or non-family employees)?
☐ Yes ☐ No *(Skip to next module. You do not need to complete the rest of the questions in this module.)*

Please list the total number of workers your operation employs (include paid family members).
Total number of employees: _____
Full-time employees: _____ Seasonal or part-time employees: _____

Are any employees family members? ☐ Yes ☐ No If "Yes", how many? _____

How long, on average, have these employees worked for you?

Do you use labor contractors? ☐ Yes ☐ No

In the past five years have you been cited for violations by OSHA, Bureau of Labor and Industries (BOLI), or any other authorities? ☐ Yes ☐ No If "Yes", what was the citation for, how did you address the citation, and what is your current status?

Do you provide housing for your employees? ☐ Yes ☐ No If "Yes", please describe:

Are any minors of legal working age employed on the operation? ☐ Yes ☐ No If "Yes", please describe any special training given to minors, and how many hours per week minors work on average.

Please describe any training opportunities (on or off the operation) which have been provided to employees (include equipment training, safety training, continuing education classes, workshops, etc.).

Please list any special services or benefits you provide for your employees (e.g. health insurance, flex time, vacation pay, company vehicle, reduced cost housing, bonuses, etc.).

Do you or any employees on the operation apply hazardous materials such as pesticides, herbicides, or chemical fertilizers? ☐ Yes ☐ No If "Yes", please indicate which of the following safety measures are in place. (Check all that apply.)

- ☐ Appropriate safety equipment supplied to applicator
- ☐ Emergency washing facilities (eyewash, showers, etc.)
- ☐ Spare clean clothing available near storage/mixing areas
- ☐ Emergency contact names & phone numbers readily available
- ☐ MSDS sheets kept near storage/mixing areas
- ☐ Other (please specify):

Please indicate if the following additional sanitation and general safety measures are in place. (Check all that apply.)

- ☐ Clean drinking water near working areas
- ☐ Clean latrines and hand-washing stations near field/working areas
- ☐ Shower facility available (can be owner's home)
- ☐ Safety training by professional firm
- ☐ Training checklists developed for training in specific job/equipment usage
- ☐ Other (please specify):

Human Resources Policies: Please complete the following table, describing your operation's human resource policies. ☐ My operation does not have employees. (You do not need to complete this section.)

Human Resources Policies	YES ✓		NO ✓
	Written policy	Verbally communicated	
Do you have a grievance policy, encouraging employees to raise concerns without fear of termination?	☐	☐	☐
Do you have a policy encouraging employees to suggest ways to improve the workplace?	☐	☐	☐
Do you have a policy expressing a willingness to receive suggestions from third-party representatives, upon request from employees?	☐	☐	☐
Do you have a policy that gives employees flexibility in the case of family emergencies?	☐	☐	☐
Do you have a policy that keeps non-employees and under working age children out of the fields and/or workplace?	☐	☐	☐
Do you have a discipline process and policy?	☐	☐	☐
Are workers given job offer terms/contracts?	☐	☐	☐
Do you have a safety policy and/or program?	☐	☐	☐
Are farm policies and job expectations communicated to employees prior to start date?	☐	☐	☐

Wildlife Habitat and Biodiversity Conservation	PSP Module 11

Management Practices

Please describe your approach and overall goals for maintaining and/or increasing wildlife habitat, biodiversity, and/or riparian areas on your operation?

What crop or livestock management practices do you use to promote wildlife habitat, biodiversity, and riparian area function on and around your operation? (Check all that apply.)

- ☐ Delayed harvesting/mowing or grazing
- ☐ Vegetated field buffers or riparian buffers maintained/enhanced for habitat
- ☐ Farm/ranch work around natural areas limited during migration and reproductive times or wildlife is present
- ☐ Water resources protected from contamination from crop/livestock operations
- ☐ Field rotations include fallow period for wildlife
- ☐ Wildlife crops for food planted
- ☐ Portion of crop left unharvested
- ☐ Cover crops provide bird and other habitat
- ☐ Natural areas maintained and/or undisturbed
- ☐ Windbreaks/hedgerows established
- ☐ Other (please specify):

What actions do you take to prevent or control noxious or invasive plant/animal species, especially those threatening natural areas? (Check all that apply.)

- ☐ Monitor for new introductions and control immediately
- ☐ Plant competing beneficial plants
- ☐ Grazing management
- ☐ Use weed and pest-free seed/feed
- ☐ Suppress or remove invasive species
- ☐ Work with state/federal agencies on invasive species control
- ☐ Other (please specify):

Which of the following enhancements have you made to wildlife habitat and biodiversity conservation in or around your operation? (Check all that apply.)

- ☐ Installed bird houses/owl or bat boxes
- ☐ Leave standing deadwood for raptors and woodpeckers
- ☐ Leave wolf trees/den trees for wildlife
- ☐ Established native vegetation
- ☐ Participate in set-aside programs such as CRP, WHIP, EQIP
- ☐ Set aside and not converted priority habitat
- ☐ Buffers established around waterways/aquatic areas with 25-foot minimum setbacks
- ☐ Riparian area planted with diverse multi-aged species of plants and trees
- ☐ Other (please specify):

To the best of your knowledge, do any threatened or endangered species exist on your operation or within the local region?

☐ Yes ☐ No If "Yes", please list and describe practices in place to protect the threatened or endangered species:

Has your operation participated in any wildlife habitat or biodiversity conservation programs or research studies through local watershed councils, soil & water districts, state agencies, farming organizations, universities, or similar groups?

☐ Yes ☐ No If "Yes", please explain:

Please indicate if your operation has been involved in wildlife habitat or biodiversity conservation projects which are part of a regional plan and/or projects which involve other landowners?

- ☐ Eco-regional plan (e.g., created by groups like The Nature Conservancy, etc.)
- ☐ Coordinated resource management plans
- ☐ Soil and water district plans
- ☐ Statewide habitat/biodiversity plans
- ☐ Other (please specify):

Wildlife Habitat and Biodiversity Conservation Plan Template
Completion of Sections I, IIA, and IIB below is required. Completion of Sections IIC-F and Sections III and IV is recommended, but if you do not presently have this information, please indicate so below.

I. Farm/Ranch Map

Maps should be available for inspector to review, and owner/manager should be prepared to identify features on maps which describe wildlife habitat and biodiversity conservation practices. Owner/manager should be prepared to identify and describe the following, as applicable:

- Woodland/natural areas, hedgerows, ponds, streams, fallow fields, food plots, predator and pollinator habitat.
- Areas of high biodiversity value (priority habitats such as wetland or remnant prairie; habitat for or presence of threatened or endangered species, connectivity to larger natural areas, water resources).
- Problem areas: farm features that threaten native biodiversity, including areas of invasive weeds or high erosion.
- Relevant features from the landscape surrounding the farm, including natural areas, restoration projects, public lands, etc.

☐ Maps of the operation are available, and owner/manager can identify the above features, as applicable.

II. Species and ecosystems identified on the operation (please list).

IIA. Threatened and endangered species:

IIB. Noxious or Invasive species:

IIC. Natural ecosystems (e.g., tallgrass prairie, oak woodland, wetland):

IID. Native vegetation:

IIE. Native species:

IIF. Ecosystems historically present:

To the best of your ability, please complete the following tables.	
III. Threats related to biodiversity in cropped and uncropped/ungrazed/natural areas	
What threats to biodiversity currently exist on the operation?	**Planned activities to address threats:**
IV. Opportunities related to biodiversity in cropped and uncropped/ungrazed/natural areas	
What opportunities to biodiversity currently exist on the operation?	**Planned opportunities to increase biodiversity on the operation:**

Continual Improvement	PSP Module 12

Instructions: Food Alliance believes sustainability is a journey, not a destination. Management practices must continue to adapt and evolve in response to changing environmental conditions, the advent of new technologies, and economic conditions. As such, continual improvement is a requirement of the Food Alliance Certification Program. Please describe any of your operation's in-process projects or goals which relate to the following Food Alliance evaluation areas. The projects or goals you list here, combined with improvement suggestions provided by the inspector following your on-site evaluation, will be reviewed and finalized at the completion of the certification process. You will be asked to provide an annual update on implementation of these goals via the Food Alliance Annual Update form sent to all producers in January of each year. (Note: You do not need to list projects or goals in all the evaluation areas listed below.)

Integrated Pest, Disease, and Weed Management
Continual Improvement Goals:

Soil & Water Conservation and Nutrient Management
Continual Improvement Goals:

Safe & Fair Working Conditions
Continual Improvement Goals:

Wildlife Habitat & Biodiversity Conservation
Continual Improvement Goals:

Healthy & Humane Care for Livestock or Shellfish
Continual Improvement Goals:

Operational Efficiencies
Continual Improvement Goals:

Other
Continual Improvement Goals:

Food Alliance Certification Agreement

It is a condition of certification that all applicants sign agreement to the following rights, responsibilities, and commitments which govern participation in the program. One signed, the Certification Agreement remains in effect until certification is denied, suspended, revoked, or cancelled.

On Behalf of *(Insert Operation legal name)*	**I agree to the statements below.**
Name:	**Title:**
Signature:	**Date:**
(E-signature valid for electronic application submissions)	

Rights, Responsibilities, and Commitments of the Certified Party

- Read and understand the program requirements, and ensure requirements are met for the duration of the certification period.
- Commit to paying all certification program related fees in a timely manner.
- Provide accurate and complete information in all certification related documents and during the audit process.
- Use certification claims, seals, logos, or other marketing claims in accordance with Food Alliance requirements.
- Adhere to all relevant local, state, national, and international laws.
- On request, make available to Food Alliance any reports, recommendations, licenses, etc. from statutory authorities.
- Agree to reasonable conformity evaluation procedures, including on-site audits, interviews, and access to documents and areas of the operation deemed necessary for the purposes of the evaluation.
- Promptly notify Food Alliance of significant changes to the operation which may affect certification status.
- Certified parties have the right to withdraw from the certification program at any time without penalty, notwithstanding costs incurred by Food Alliance for services rendered up until the time of voluntary withdrawal.
- Commit to not using certification in such a manner as to bring Food Alliance into disrepute.
- Upon suspension, revocation, or cancellation of certification, promptly discontinue use of all certification related claims, seals, logos, and marketing materials.

Rights, Responsibilities, and Commitments of Food Alliance

- Maintain confidentiality of information collected during the application, audit, and certification process.
- Food Alliance will not share audit reports or findings with any outside party without first receiving prior consent from the audited/certified party.
- Ensure third-party auditors are adequately qualified and trained to conduct audits in a professional manner.
- Maintain a publicly available list of certified clients.
- Ensure audits are conducted in a timely manner, according to established timelines.
- Maintain up to date program Standards and Policies, and ensure any changes to the program are communicated to certified parties with ample time to implement changes to conform with new or revised program requirements.
- Food Alliance is not responsible for financial loses which may occur because of an operation’s certification being suspended, revoked, or cancelled.

FOOD ALLIANCE
SUPPORTING SUSTAINABILITY IN FOOD AND AGRICULTURE

Appendix A – Prohibited Pesticide List

Products on the Prohibited Pesticide List may not be used on Food Alliance certified crops. The Food Alliance Prohibited Pesticide List (PPL) is based on the WHO Recommended Classification of Pesticides by Hazard (2009). The PPL consists of materials classified as extremely hazardous or highly hazardous on the WHO list that are registered for use by the USEPA. Exceptions will be allowed if the use of a material on the PPL is required by law or required for export.

Class Ia and Ib pesticides registered for use by the USEPA (See: The WHO recommended classification of pesticides by hazard and guidelines to classification: 2009.) ©Food Alliance 2011			
EPA Reg No.	**Product Name**	**WHO Mixture Classification**	**Chemical Name**
5481-448	AMVAC BIDRIN 8 WATER MISCIBLE INSECTICIDE	Ib	Dicrotophos
10163-95	AZINPHOS METHYL TECHNICAL	Ib	Azinphos-methyl
66330-233	AZINPHOSMETHYL 50W	Ib	Azinphos-methyl
5481-9032	AZTEC 3.78% GRANULAR INSECTICIDE	Ib	Phostebupirim
5481-9028	AZTEC 4.67% GRANULAR	Ib	Phostebupirim
5481-552	BIDRIN XP	Ib	Dicrotophos
100-987	BRODIFACOUM TECHNICAL	Ia	Brodifacoum
270-371	BROMADIOLONE 2.5% CONCENTRATE	Ib	Bromadiolone
270-374	BROMADIOLONE TECHNICAL	Ia	Bromadiolone
47629-9	BROMETHALIN TECHNICAL	Ia	Bromethalin
279-3060	CARBOFURAN TECHNICAL	Ib	Carbofuran
67760-43	CHEMINOVA METHYL PARATHION 4 EC	Ib	Methyl parathion
4787-33	CHEMINOVA METHYL PARATHION TECHNICAL	Ib	Methyl parathion
34704-259	CLEAN CROP PHORATE 20G	Ib	Phorate
13808-7	COMPOUND 1080 LIVESTOCK PROTECTION COLLAR	Ib	1080
56228-26	COMPOUND 1080 TECHNICAL (LPC)	Ia	1080
47000-144	CO-RAL COUMAPHOS 25% DUST BASE	Ib	Coumaphos
11556-98	CO-RAL COUMAPHOS FLOWABLE INSECTICIDE	Ib	Coumaphos
11556-123	CO-RAL PLUS INSECTICIDE CATTLE EAR TAG	Ib	Coumaphos
11556-148	CORATHON	Ib	Coumaphos
11678-53	COTNION-METHYL	Ib	Azinphos-methyl
66222-11	COTNION-METHYL AZINPHOS METHYL 50W	Ib	Azinphos-methyl
11556-11	COUMAPHOS TECHNICAL	Ib	Coumaphos
5481-545	COUNTER 15G SYSTEMIC INSECTICIDE-NEMATICIDE	Ib	Terbufos
5481-562	COUNTER 20G	Ib	Terbufos
5481-547	COUNTER CR	Ib	Terbufos
5481-546	COUNTER TECHNICAL POISON SOIL INSECTICIDE	Ia	Terbufos
5481-447	DICROTOPHOS TECHNICAL	Ib	Dicrotophos
47629-12	DIFENACOUM TECHNICAL	Ia	Difenacoum

7173-204	DIFETHIALONE TECHNICAL	Ia	Difethialone
61282-5	DIPHACINONE, TECHNICAL GRADE FOR MANUFACTURING ONLY	Ia	Diphacinone
352-361	DU PONT METHOMYL COMPOSITION	Ib	Methomyl
5481-492	DUPONT FORTRESS TECHNICAL	Ia	Chlorethoxyphos
352-342	DUPONT LANNATE SP INSECTICIDE	Ib	Methomyl
352-366	DUPONT METHOMYL TECHNICAL	Ib	Methomyl
352-400	DUPONT OXAMYL TECHNICAL 42 INSECTICIDE/NEMATICIDE	Ib	Oxamyl
5481-9043	ETHOPROP TECHNICAL	Ib	Ethoprop
5481-493	FORTRESS 5G GRANULAR INSECTICIDE	Ib	Chlorethoxyphos
279-2876	FURADAN 4F INSECTICIDE/NEMATICIDE	Ib	Carbofuran
279-3038	FURADAN 85 DB	Ib	Carbofuran
279-3310	FURADAN LFR INSECTICIDE/NEMATICIDE	Ib	Carbofuran
10163-78	GOWAN AZINPHOS-M 50 WSB	Ib	Azinphos-methyl
66222-162	GUTHION SOLUPAK 50% WETTABLE POWDER INSECTICIDE	Ib	Azinphos-methyl
11678-70	GUTHION TECHNICAL INSECTICIDE	Ib	Azinphos-methyl
61282-38	HOPKINS COV-R-TOX ENCAPSULATED WARFARIN - 50% TECHNICAL	Ib	Warfarin
61282-39	HOPKINS WARFARIN TECHNICAL RODENTICIDE	Ib	Warfarin
13808-8	M-44 CYANIDE CAPSULES	Ib	Sodium cyanide
33858-2	M-44 CYANIDE CAPSULES	Ib	Sodium cyanide
35975-2	M-44 CYANIDE CAPSULES	Ib	Sodium cyanide
35978-1	M-44 CYANIDE CAPSULES	Ib	Sodium cyanide
39260-1	M-44 CYANIDE CAPSULES	Ib	Sodium cyanide
39508-1	M-44 CYANIDE CAPSULES	Ib	Sodium cyanide
56228-15	M-44 CYANIDE CAPSULES	Ib	Sodium cyanide
56228-32	M-44 CYANIDE CAPSULES ARCTIC FOX	Ib	Sodium cyanide
10707-10	MAGNACIDE B MICROBIOCIDE	Ib	Acrolein
10707-9	MAGNACIDE H HERBICIDE	Ib	Acrolein
7173-174	MAKI TECHNICAL	Ia	Bromadiolone
7946-11	MAUGET INJECT-A-CIDE B	Ib	Dicrotophos
10163-252	MESUROL 75 WDG	Ib	Methiocarb
10163-229	MESUROL 75% CONCENTRATE	Ib	Methiocarb
56228-33	MESUROL 75% WETTABLE POWDER AVERSIVE CONDITIONING EGG TREATMENT	Ib	Methiocarb
10163-231	MESUROL 75-W	Ib	Methiocarb
10163-230	MESUROL TECHNICAL INSECTICIDE	Ib	Methiocarb
100-530	METHIDATHION TECHNICAL	Ib	Methidathion
10163-245	METHIDATHION TECHNICAL	Ib	Methidathion
5481-9041	MOCAP EC NEMATICIDE - INSECTICIDE	Ib	Ethoprop
279-2862	NIAGARA FURADAN 75 BASE	Ib	Carbofuran
5481-8980	PHORATE 20 G	Ib	Phorate
9779-293	PHORATE 20-G	Ib	Phorate
5481-8979	PHORATE TECHNICAL INSECTICIDE	Ia	Phorate

83100-28	ROTAM METHOMYL 90SP INSECTICIDE	Ib	Methomyl
81598-9	ROTAM METHOMYL TECHNICAL	Ib	Methomyl
7173-75	ROZOL RODENTICIDE TECHNICAL POWDER	Ia	Chlorophacinone
72500-15	SLN PHARMACHEM WARFARIN	Ib	Warfarin
5481-561	SMARTCHOICE 5G	Ib	Chlorethoxyphos
35975-4	SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR	Ib	1080
35978-8	SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR	Ib	1080
39508-2	SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR	Ib	1080
46779-1	SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR	Ib	1080
56228-22	SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR	Ib	1080
36029-14	STRYCHNINE ALKALOID N.F.	Ib	Strychnine
27995-1	STRYCHNINE ALKALOID N.F. POWDER	Ib	Strychnine
37259-1	STRYCHNINE ALKALOID NFX	Ib	Strychnine
5481-9031	TEBUPIRIMPHOS TECHNICAL	Ia	Phostebupirim
12455-88	TECHNICAL BRODIFACOUM	Ia	Brodifacoum
12455-70	TECHNICAL BROMADIOLONE	Ia	Bromadiolone
12455-92	TECHNICAL BROMETHALIN	Ia	Bromethalin
12455-25	TECHNICAL DIPHACINONE	Ia	Diphacinone
61282-1	TECHNICAL DIPHACINONE	Ia	Diphacinone
12455-26	TECHNICAL WARFARIN	Ib	Warfarin
100-1015	TEFLUTHRIN TECHNICAL	Ib	Tefluthrin
264-330	TEMIK BRAND 15G ALDICARB PESTICIDE	Ib	Aldicarb
5481-526	THIMET 10-G SOIL AND SYSTEMIC INSECTICIDE	Ib	Phorate
5481-527	THIMET 15-G SOIL AND SYSTEMIC INSECTICIDE	Ib	Phorate
5481-530	THIMET 20-G	Ib	Phorate
5481-528	THIMET MC - 85 FOR MANUFACTURING PURPOSES ONLY	Ia	Phorate
5481-529	THIMET TECHNICAL FOR MANUFACTURING PURPOSES ONLY	Ia	Phorate
352-532	VYDATE C-LV INSECTICIDE/NEMATICIDE	Ib	Oxamyl
352-372	VYDATE L INSECTICIDE/NEMATICIDE	Ib	Oxamyl
69826-1	WARFARIN TECHNICAL	Ib	Warfarin
3282-32	WINCON WARFARIN TECHNICAL	Ib	Warfarin
61282-3	ZINC PHOSPHIDE 93	Ib	Zinc phosphide

NOTE: WHO classification is based on acute risks to human health. Class Ia = extremely hazardous, Class Ib = highly hazardous.

FOOD ALLIANCE
SUPPORTING SUSTAINABILITY IN FOOD AND AGRICULTURE

Appendix B: Application Module 9A Reference Guide

TABLES 1-4 – Reference Guide

Pest Category: Identify each pest according to one of the following categories, but focus mainly on severe pests that drive your production practices and your IPM program:

> ***Severe***: Pests that most affect your farm and which pose the greatest risks to yield, quality and/or profitability. Pests for which management is always/normally (at least every other year) economically justified or regulated, or pests where management is mandated by law.
>
> ***Sporadic***: Pests where management is occasionally (1 year in 3 or less) justified or pests that may have been severe in the past, but which now pose a lower risk as a result of management actions.
>
> ***Non-economic***: Pests which are always/normally present but for which management is never economically justified.
>
> ***Novel***: Pests new to the state or region in the last two years, particularly those that require management actions. IPM programs are often not available for novel pests.

Type of Monitoring, Diagnostics, and Thresholds: List the type and frequency of monitoring, and thresholds used to guide control measures for each pest.

> ***Monitoring examples:*** Visual inspection, hand lens, sweep net, sticky traps, light traps, pheromone traps, regional monitoring networks (e.g. Veg Net, PestWatch), weather forecasting, etc. Please also indicate if diagnostic lab or other diagnostic tools are used to identify pest/disease.
>
> ***Treatment Threshold examples:*** Number of pests per leaf or trap, % of plants or leaves damaged, existence of specific weather conditions, consultant recommendation, etc.

Examples:

INSECT PEST (including mites)	**Crop(s) or other areas in which Insect problem occurs**	**Pest Category** (severe, sporadic, non-economic, or novel)	**Type of Monitoring or Diagnostics** (see examples above)	**Frequency of Monitoring** (daily, weekly, etc.)	**Threshold Used to Guide Control Measures** (see examples above)	**Other Information** Please note other pertinent information, such as: pest is resistant to sprays, pest pressure increased/decreased dramatically, etc.
"Bad lettuce bug"	Lettuce	Severe	Visual; 100 plants per 10 acre block	Weekly monitoring emergence to harvest,	Two counts showing increasing numbers, >0.1 per plant	Resistant to OP insecticides; associated with warm springs after cold winter

Table 5 – Reference Guide

EXAMPLE PAMS MANAGEMENT PRACTICES *(List is not exhaustive)*	
Prevention practices • Pest-free seed, transplants used • Sanitation procedures implemented • Alternative hosts eliminated • Favorable sites in and off cropping areas eliminated • Equipment cleaned between fields • Irrigation scheduled to prevent disease development • Weed reproduction prevented • High-risk locations avoided to prevent pest susceptible perennial crops	**Avoidance practices** • Crop rotation used to reduce pest opportunities • Genetically resistant cultivars used • Variety selection/cultivars selected for growth & harvest dates that avoid the pest • Annual crops placed away from sites at high-risk of pest development, including specific portions of a field • Trap cropping used • Pheromone traps used • Crop nutrition/soil health used to promote rapid crop development • Excessive nutrients that benefit the pest avoided • Narrow row spacing used • In-row optimization of plant populations used • No-till or strip till used
Monitoring practices • Fields frequently scouted/monitored • Economic thresholds used to guide management decisions • Monitoring tools employed, such as pheromone traps, sticky traps, sweep nets, hand lenses/binoculars • Identification guides, diagnostic tools or diagnostic laboratories used • Weather-based pest-development and pest-risk models used • Soil testing and plant nutrient testing used	**Suppression practices** *Cultural controls* • Cover crops or mulches used • Narrow row spacing or optimized in-row plant populations • Alternative tillage such as no-till or strip till systems • Bio-fumigant crops/crops with allelopathic potential included in rotation *Physical controls* • Cultivation or mowing • Flaming • Temperature management • Exclusion devices used • Mass trapping, baited or pheromone traps used *Biological controls* • Inundative release/classical biological control used • Pest antagonists used • Mating disruption for insects *Chemical controls* • Pesticides used strategically, as last resort • Economic thresholds are used to determine that pesticide use is economically justified

Table 5: Examples

INSECT PESTS (Including mites) (*example for Bad Lettuce Bug*)		
PAMS category	**Management practices**	**Comments, details of practices**
Prevent	Replaced overwintering host trees in hedgerows	Planted native trees that support beneficials
Avoid	Limit N fertilizer early Avoid other crop hosts as previous crop	
Monitor	Visual inspection	Undertaken by crop consultant who provides written recommendations
Suppress	Insectary plants	

Table 6 – Examples

Beneficial species	Role (crop pest pollinator, predator, parasite)	Diagnostics, monitoring records, other records that verify the importance of this beneficial species on your operation
Parasitic wasps	Parasitism	Where highly parasitized aphid colonies are visible, sprays delayed

Table 7 – Examples

Pesticides used on Certified Crops and Identified Risks

Product Name	**Pesticide Category** (Herbicide, Insecticide, Nematicide, Fungicide)	**Active Ingredient(s)** (See Safety Data Sheet)	**Pesticide Signal Word** Danger, Caution, Warning (found on product label)	**Target Pest(s)**	**Risk Mitigation Required?**	**Restricted Use Pesticide (RUP)?**	**Identified Risk(s)**
EXAMPLE *– Spartan*	*Herbicide*	*Sulfentrazone*		*Broadleaf weeds - Kochia, ragweed*	☒	☐	*Risk to Wildlife*
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	

Food Alliance List of "High Risk" Active Pesticide Ingredients and Required Risk Mitigations[1]

The tables below specify risks associated with, and requirements to mitigate the risks of 166 active pesticide ingredients which have been identified as posing significant risks to human workers/bystanders, aquatic life, wildlife, and/or pollinators. This list is the result of an analysis performed by Oregon State University Integrated Plant Protection Center (OSU-IPPC) using the risk assessment tool IPM PRiME, and a risk model that identifies moderate to high (10% or greater) risk. This list will be reviewed by Food Alliance on an annual basis, and results of further analyses conducted by OSU will be incorporated into the list. The following parameters were used by OSU-IPPC to identify high risks:

1. **Risk to aquatic life:** Pesticides qualified for this risk category if one or more IPM PRiME aquatic risk models (aquatic algae, aquatic invertebrates, or fish chronic risk) exhibited high risk at a typical application rate.

2. **Risk to wildlife:** Pesticides qualified for this risk category if one or more IPM PRiME terrestrial risk models (avian reproductive, avian acute, or small mammal risk) exhibited high risk at a typical application rate.

3. **Risk to pollinators:** Pesticides were selected based on a widely-used hazard quotient (HQ) resulting of pesticide application rate (AR) in g a.i./ha, and contact LD50 for the honey bee (Apis mellifera). Values of HQ<50 have been validated as low risk in the European Union, and monitoring indicates that products with an HQ>2,500 are associated with a high risk of hive loss. The HQ value used for this analysis is >350, corresponding to a 15% risk of hive loss. The quotient includes a correction for systemic pesticides, where risks to bees are amplified.

4. **Inhalation risk:** Inhalation risk to bystanders was calculated using the IPM PRiME model for inhalation toxicity (Jepson et al., 2014[2]), calculated on the basis of child exposure and susceptibility. This index is protective for workers who may enter fields during or after application, and also bystanders.

Active Ingredient	CAS number	Risk to Aquatic life	Risk to Wildlife	Risk to Pollinators	Inhalation risk
1) **1,3-Dichloropropene**	542-75-6	☐	☐	☐	☐
2) **2,4-D, 2-ethylhexylester**	1928-43-4	☐			
3) **2,4-D, isooctylester**	53404-37-8	☐			
4) **Acephate**	30560-19-1		☐	☐	
5) **Acequinocyl**	57960-19-7	☐			
6) **Acetamiprid**	135410-20-7	☐			
7) **Acifluorfen, sodiumsalt**	62476-59-9		☐		
8) **Amitraz**	33089-61-1				☐

[1] The List of High Risk Active Pesticide Ingredients is a product of U.S.A. public funding and the intellectual property of the analysis for this list resides within Oregon State University.

[2] Jepson, P.C., Guzy, M., Blaustein, K., Sow, M., Sarr, M., Mineau, P., Kegley, S. (2014) Measuring pesticide ecological and health risks in West African agriculture to establish an enabling environment for sustainable intensification. Philosophical Transactions of the Royal Society B, http://rstb.royalsocietypublishing.org/content/369/1639/20130491

Active Ingredient	CAS number	Risk to Aquatic life	Risk to Wildlife	Risk to Pollinators	Inhalation risk
9) **Amitrole**	61-82-5		☐		
10) **Anilazine**	101-05-3	☐			
11) **Avermectin**	71751-41-2	☐		☐	
12) **Azoxystrobin**	131860-33-8	☐			
13) **Bendiocarb**	22781-23-3	☐	☐	☐	☐
14) **Benfluralin**	1861-40-1		☐		
15) **Bensulide**	741-58-2	☐	☐		☐
16) **Bentazon, sodium salt**	50723-80-3		☐		☐
17) **Bifenthrin**	82657-04-3	☐		☐	
18) **Bromacil**	314-40-9	☐			
19) **Bromoxynil heptanoate**	56634-95-8	☐			
20) **Bromoxynil octanoate**	1689-99-2	☐			
21) **Captan**	133-06-2			☐	
22) **Carbaryl**	63-25-2	☐	☐	☐	
23) **Chlorine dioxide**	10049-04-4				☐
24) **Chlormequat chloride**	999-81-5		☐		
25) **Chloropicrin**	76-06-2	☐	☐		☐
26) **Chlorothalonil**	1897-45-6	☐	☐		
27) **Chlorpyrifos**	2921-88-2	☐	☐	☐	☐
28) **Chlorpyrifos-methyl**	5598-13-0				☐
29) **Copper hydroxide**	20427-59-2		☐		
30) **Copper oxide (ic)**	1317-38-0	☐			
31) **Copper oxide (ous)**	1317-39-1			☐	
32) **Copper oxychloride**	1332-40-7		☐	☐	
33) **Copper oxychloride sulfate**	8012-69-9			☐	
34) **Copper sulfate (anhydrous)**	7758-98-7	☐			
35) **Copper sulfate (pentahydrate)**	7758-99-8	☐	☐	☐	
36) **Cube extracts**					☐
37) **Cyanazine**	21725-46-2		☐		
38) **Cycloate**	1134-23-2			☐	☐
39) **Cyhalothrin, gamma**	76703-62-3	☐			
40) **Cyhalothrin, lambda**	91465-08-6	☐		☐	
41) **Cypermethrin**	52315-07-8	☐		☐	
42) **Cypermethrin, beta**	65731-84-2	☐		☐	
43) **Dazomet**	533-74-4	☐	☐	☐	
44) **Deltamethrin**	52918-63-5	☐		☐	
45) **Diazinon**	333-41-5	☐	☐	☐	☐
46) **Dichlobenil**	1194-65-6		☐		
47) **Dichloran**	99-30-9		☐		☐
48) **Diclofop-methyl**	51338-27-3		☐		

Active Ingredient	CAS number	Risk to Aquatic life	Risk to Wildlife	Risk to Pollinators	Inhalation risk
49) **Dicofol**	115-32-2		☐		☐
50) **Difenzoquat methyl sulfate**	43222-48-6		☐		
51) **Diflubenzuron**	35367-38-5	☐	☐		
52) **Dimethenamid-P**	163515-14-8	☐			
53) **Dimethoate**	60-51-5	☐	☐	☐	☐
54) **Dinotefuran**	165252-70-0	☐		☐	
55) **Diphenylamine**	122-39-4	☐			
56) **Diquat dibromide**	85-00-7		☐		☐
57) **Diquat ion**	2764-72-9		☐		
58) **Diuron**	330-54-1		☐		
59) **Dodine**	2439-10-3	☐	☐	☐	
60) **D-trans Allethrin (Bioallethrin)**	584-79-2				☐
61) **Emamectin benzoate**	137512-74-4	☐		☐	
62) **EPTC**	759-94-4		☐	☐	☐
63) **Esfenvalerate**	66230-04-4	☐		☐	
64) **Ethalfluralin**	55283-68-6	☐			
65) **Ethion**	563-12-2	☐	☐	☐	☐
66) **Etoxazole**	153233-91-1	☐			
67) **Famoxadone**	131807-57-3	☐	☐		
68) **Fenbutatin-oxide**	13356-08-6	☐	☐		
69) **Fenitrothion**	122-14-5		☐		
70) **Fenoxycarb**	79127-80-3	☐			
71) **Fenpropathrin**	39515-41-8	☐	☐	☐	
72) **Fenpyroximate**	134098-61-6	☐	☐		
73) **Fentin hydroxide**	76-87-9	☐	☐		
74) **Ferbam**	14484-64-1	☐		☐	☐
75) **Fluazinam**	79622-59-6			☐	☐
76) **Flufenacet**	142459-58-3	☐			
77) **Fluopyram**	658066-35-4		☐		
78) **Folpet**	133-07-3	☐			
79) **Fomesafen sodium**	108731-70-0				☐
80) **Formaldehyde**	50-00-0	☐	☐		☐
81) **Formetanate hydrochloride**	23422-53-9	☐	☐	☐	
82) **Glyphosate, isopropylamine salt**	38641-94-0		☐		
83) **Glyphosate-trimesium**	81591-81-3		☐		

Active Ingredient	CAS number	Risk to Aquatic life	Risk to Wildlife	Risk to Pollinators	Inhalation risk
84) **Hexazinone**	51235-04-2	☐	☐		
85) **Hydrogen cyanamide**	420-04-2	☐	☐	☐	☐
86) **Indoxacarb, S-isomer**	173584-44-6			☐	
87) **Iodosulfuron methyl, sodium salt**	144550-36-7	☐			
88) **Isoxaben**	82558-50-7		☐		
89) **Lenacil**	2164-08-1	☐			
90) **Lime-sulfur**	1344-81-6		☐		
91) **Malathion**	121-75-5			☐	
92) **Maleic hydrazide, potassium salt**	28382-15-2			☐	☐
93) **Mancozeb**	8018-01-7		☐		
94) **Maneb**	12427-38-2		☐	☐	☐
95) **MCPA, 2-ethyl hexyl ester**	29450-45-1	☐			
96) **MCPA, isooctyl ester**	26544-20-7	☐			
97) **Metalaxyl**	57837-19-1		☐		
98) **Metam potassium**	137-41-7	☐	☐		
99) **Metconazole**	125116-23-6		☐		
100) **Methoprene**	40596-69-8	☐	☐		
101) **Methoxychlor**	72-43-5	☐			
102) **Methyl iodide**	74-88-4	☐	☐		☐
103) **Methyl isothiocyanate**	556-61-6	☐			☐
104) **Metiram**	9006-42-2		☐		☐
105) **Metolachlor**	51218-45-2		☐		
106) **Metolachlor, (S)**	87392-12-9	☐			
107) **Metribuzin**	21087-64-9		☐		
108) **Mineral oil, refined**	8042-47-5	☐			
109) **Myclobutanil**	88671-89-0		☐		
110) **Nabam**	142-59-6		☐	☐	
111) **Naled**	300-76-5	☐	☐	☐	☐
112) **Napropamide**	15299-99-7		☐		
113) **Norflurazon**	27314-13-2	☐	☐		
114) **Novaluron**	116714-46-6	☐			
115) **Ortho-phenylphenol**	90-43-7	☐			
116) **Ortho-phenylphenol, sodium salt**	132-27-4			☐	☐
117) **Oryzalin**	19044-88-3	☐	☐		
118) **Oxadiazon**	19666-30-9	☐	☐		
119) **Oxycarboxin**	5259-88-1			☐	
120) **Oxyfluorfen**	42874-03-3	☐	☐		

Active Ingredient	CAS number	Risk to Aquatic life	Risk to Wildlife	Risk to Pollinators	Inhalation risk
121) **Oxythioquinox**	2439-01-2	☐	☐		
122) **PCNB (Quintozene)**	82-68-8	☐		☐	☐
123) **Pendimethalin**	40487-42-1		☐		
124) **Permethrin**	52645-53-1	☐	☐	☐	
125) **Phosalone**	2310-17-0	☐	☐		
126) **Phosmet**	732-11-6	☐	☐	☐	
127) **Pirimicarb**	23103-98-2	☐	☐	☐	
128) **Prometryn**	7287-19-6	☐	☐		
129) **Propamocarb hydrochloride**	25606-41-1			☐	
130) **Propanil**	709-98-8	☐	☐		
131) **Propargite**	2312-35-8		☐		
132) **Propoxur**	114-26-1	☐	☐	☐	☐
133) **Prosulfuron**	94125-34-5	☐			
134) **Pyraclostrobin**	175013-18-0	☐			
135) **Pyrethrins**	8003-34-7			☐	
136) **Pyridaben**	96489-71-3	☐		☐	
137) **Resmethrin**	10453-86-8	☐	☐	☐	
138) **Rotenone**	83-79-4			☐	☐
139) **S-Dimethenamid**	163515-14-8	☐			
140) **Simazine**	122-34-9		☐		
141) **Sodium chlorate**	7775-09-9		☐		
142) **Sodium dimethyl dithio carbamate**	128-04-1		☐		☐
143) **Sodium hypochlorite**	7681-52-9	☐			
144) **Sodium tetrathiocarbonate**	7345-69-9		☐		
145) **Spinetoram (XDE-175-J)**	187166-40-1 935545-74-7			☐	
146) **Spinosad (mixture of Factors A & D)**	131929-60-7			☐	
147) **Spirodiclofen**	148477-71-8	☐			
148) **Sulfentrazone**	122836-35-5		☐		
149) **Terrazole; etridiazole**	2593-15-9		☐		☐
150) **Tetrachlorvinphos, Z-isomer**	22248-79-9	☐	☐	☐	
151) **Tetraconazole**	112281-77-3		☐		
152) **Thiabendazole**	148-79-8	☐	☐	☐	
153) **Thiacloprid**	111988-49-9	☐	☐		

Active Ingredient	CAS number	Risk to Aquatic life	Risk to Wildlife	Risk to Pollinators	Inhalation risk
154) **Thiobencarb**	28249-77-6	☐	☐		
155) **Thiodicarb**	59669-26-0	☐	☐	☐	☐
156) **Thiophanate-methyl**	23564-05-8		☐		
157) **Tolfenpyrad**	129558-76-5	☐			
158) **Triadimenol**	55219-65-3		☐		
159) **Triallate**	2303-17-5	☐	☐		
160) **Triclopyr, triethylamine salt**	57213-69-1		☐		
161) **Trifloxystrobin**	141517-21-7	☐			
162) **Trifluralin**	1582-09-8		☐		
163) **Triforine**	26644-46-2			☐	
164) **Triticonazole**	131983-72-7		☐		
165) **Zineb**	12122-67-7			☐	
166) **Ziram**	137-30-4	☐	☐	☐	

Risks associated with the use of pesticides containing any of the active ingredients listed above must be mitigated through implementation of the following practices:

Risk Type	Required Mitigations
Risk to aquatic life; Risk to wildlife	
Risk to pollinators	Pesticides containing active ingredients which pose high risks to pollinators are only used if: a) Less toxic, efficacious pesticides are not available. b) Exposure to natural ecosystems is minimized by enforcing non-application zones, by establishing vegetative barriers, or implementing other effective mechanisms to reduce spray drift. c) Contact of pollinators with these substances is further reduced through: only applying substances when pollinators are not active; not applying substances to flowering weeds or removing flowering weeds; applying substances while the crop is not in peak flowering period. d) If bee hives are used, they are temporarily covered during application, and hive bees are provided with a clean water source outside the treated area.
Inhalation risk	Pesticides containing active ingredients which pose high inhalation risks are only used if: a) Functional Personal Protective Equipment (PPE) is used in accordance with the product's MSDS, safety tag or other instructions (whichever are more stringent) and is provided free of cost to workers. b) All persons who mix or handle pesticides, fertilizers, hazardous materials, or other chemical substances or natural pest control substances with possible dermatological or microbiological risks use PPE. c) Restricted entry intervals are enforced and respirators with an organic vapor (OV) cartridge or canister with any N, R, P, or 100 series pre-filter are used. d) Application sites are flagged to indicate inhalation risks to bystanders.