BEE BETTER CERTIFIED
Xerces Society for Invertebrate Conservation

Bee Better Certified™ Plan Template

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► Please complete this Plan for all operations seeking Bee Better certification. This plan, along with the Oregon Tilth (OT) application form, are required to begin the process of certification to the Bee Better standards.

► Bee Better certification is good for a period of three years, however, annual updates must be submitted to OT covering the following:

- Newly added or removed habitat, or when habitat value changes significantly (e.g., after the loss of numerous species from the initial planting)
- New pest issues
- New pesticide applications
- Alterations to protective measures related to managed bumble bees

► An updated BBC plan must be submitted to OT at least 3 months prior to your certification renewal due date.

☐ Check box if you have worked with a consultant, including the Xerces Society, to complete this form
Name and contact information of consultant:

Contact Information

Farm Operation Legal Name:			
Contact Person:			
Mailing/Billing Address: **(Street, City, State and Zip Code)**			
Phone Number(s): **(land, cell, other)**		**Email Address:**	

1. LOCATION AND DESCRIPTION OF PARCELS TO BE CERTIFIED

- Habitat must be on the parcel or adjacent to crop fields or within 1 mile of the farm to be certified.
- If parcels are disconnected, pollinator habitat should be distributed throughout the properties, and the sum of the habitat established on all properties must meet the Bee Better Certified habitat requirements.

Total acres to be certified across all locations: _____

Satellite Non-contiguous Farm/Parcel Information:

Location name or code	Address (Street, City, Zip)	County Assessor's parcel number, Section/ Township/ Range, or other legal description	Date parcel was bought, lease began, or became your responsibility	Acreage (total)	Crops Grown and approx. bloom times
			M _____ D _____ Y _____		
			M _____ D _____ Y _____		
			M _____ D _____ Y _____		
			M _____ D _____ Y _____		
			M _____ D _____ Y _____		
			M _____ D _____ Y _____		
			M _____ D _____ Y _____		

MAPS ☐ Attached

Please attach an 8.5" x 11" map of the parcels listed above. The map may be an Assessor's Parcel Map, an aerial photo, or other map that **clearly shows the boundaries of the parcel.** Please include the following information on your map:

1) Parcel name or code
2) Indication of north
3) Location of *temporary* habitat with identifiers
4) Location of *permanent* habitat with identifiers
5) Location of areas where nitroguanidine neonicotinoids were used in the past two years
6) Location of buffer areas
7) Neighboring land uses to habitat areas
8) Useful landmarks (e.g., other buildings on-site, distinctive features, roads, etc.)
9) Location of tillage practices as described in this plan
10) Location of known nesting areas or resources, as applicable.
11) Locations of greenhouses that commercial bumblebees are housed, as applicable.

LAND HISTORY

Have you used any systemic pesticide on any of your parcels in the last 24 months? ☐ Yes, fill out table below ☐ No - If No, skip to the next Section

Please provide land history for all new pollinator habitat areas for the 24 months prior to this application. If it has been less than 2 years since the date of the last application of nitroguanidine neonicotinoids, land history may begin at the start of transition. If there has been no application of the banned systemic pesticides for the last 24 months, you do not have to list the parcel on this table. You may attach additional sheets as necessary to provide this information.

Year	**Parcel Name/ Location Code**	**Material Information**	
		Systemic Pesticide Name / Manufacturer or N/A.	Date Materials Applied
Current year: 20			
Previous year: 20			
2 years ago: 20			

2. POLLINATOR HABITAT - Complete this section for all parcels. Attach additional pages as necessary.

Pollinator habitat is defined as areas containing flowering plants and/or nesting sites. Remnant natural habitat, matured created and newly created habitat are all considered pollinator habitat. New habitat is defined as habitat that is less than 3 years old or habitat created following initial certification.

- Areas dominated by invasive or noxious species cannot be considered pollinator habitat.
- The operation must have at least 5% of the farm in pollinator habitat at all times. Of the 5% required, at least 1/5 must be in permanent habitat (i.e, at least 1% of the farm must be permanent habitat).
- If mass-flowering, pollinator-attracting crops are identified as part of the temporary habitat, they may only account for 1/5 required habitat acreage.
- If certified parcels are disconnected, pollinator habitat should be distributed throughout the parcels, and the sum of the habitat established on all parcels must meet the Bee Better habitat requirements.

PERMANENT HABITAT

Permanent habitat is present year-round, although the plants may be in a vegetative or dormant state during the winter. Examples of permanent habitat: Hedgerows, perennial or re-seeding wildflower strips, riparian forests, filter strips.

New permanent pollinator habitat plantings must be comprised of a minimum of 5% pithy-stemmed plants, plants that are used for nest cell materials, and butterfly host plants, and some of each category must be included.

Permanent Habitat Location/Unique Identifier	Plant Species or Plant Mix	# of Acres	Remnant/ Mature/ New	Pithy-Stemmed	Nest cell material	Butterfly host	Native
				☐	☐	☐	☐
				☐	☐	☐	☐
				☐	☐	☐	☐
				☐	☐	☐	☐
				☐	☐	☐	☐
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				☐	☐	☐	☐

TEMPORARY HABITAT

Temporary habitat may die back annually or be moved around the certified parcels (as is the case with rotating cover crops). Examples of temporary habitat: Cover crops, insectary strips, mass-flowering crops.

Temporary Habitat Location/Unique Identifier	Plant/Plant Mix	# of Acres	Mass-Flowering (Can only account for 1% of required habitat)	Does it contain native species? Identify
			☐	☐ Yes ☐ No
			☐	☐ Yes ☐ No
			☐	☐ Yes ☐ No
			☐	☐ Yes ☐ No
			☐	☐ Yes ☐ No
			☐	☐ Yes ☐ No
			☐	☐ Yes ☐ No
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			☐	☐ Yes ☐ No
			☐	☐ Yes ☐ No
			☐	☐ Yes ☐ No
			☐	☐ Yes ☐ No

TOTAL HABITAT ACREAGE

Habitat calculations must follow the guidelines in Appendix B: Habitat Measurement Guidelines.

Provide the percentage of permanent and temporary habitat across all parcels to be certified:

Total Acreage		**Permanent habitat**		**Temporary habitat**	
Total acreage of farm		Total acreage of permanent habitat		Total acreage of temporary habitat	
Percentage of farm in total habitat (must be more than 5%)		Percentage of total farm in permanent habitat (must be more than 1%)		Percentage of total farm in temporary habitat	
		Percentage of total permanent habitat plantings comprised of pithy-stemmed, nest cell or butterfly host plants. (Must be at least 5% of the total permanent habitat)		Percentage of total farm in mass-flowering pollinator attracting crops (must be ≤1%)	

3. BOUNDARIES AND BUFFERS

All habitat areas must be protected from chemical drift. The operation must establish a pesticide-free spatial buffer around permanent pollinator habitat on land that is controlled by the operation. Buffers must be established for the following:

- 40 foot buffer for most ground-based applications
- 60 feet for air blast applications

Where new permanent pollinator habitat is installed on your property a minimum 30 –foot buffer must be set aside between the habitat and neighboring farms or land where insecticides are known or suspected to be used.

Herbicides—except paraquat dichloride—may be used within buffer areas.

When spatial buffers are not feasible, a vegetative buffer can be planted to capture chemical drift. If vegetative buffers are not mature (have not reached spray release height), drift and runoff precautions on pesticide labels must be adhered to.

If insecticide application practices change on adjacent properties following habitat creation setback requirements can be waived, although a vegetative buffer is recommended when feasible.

1) If vegetative buffers are used please confirm the following:

- ☐ The vegetative buffers are designed to maximize drift capture, including ensuring optimal airflow.
- ☐ The vegetative buffers utilized on my property are comprised of densely planted, small-needled evergreen species. *Please ensure they are listed in the table below.*
- ☐ The vegetative buffers utilized are designed to grow above spray release height.

Provide the information below for all areas neighboring **habitat areas** on the parcels to be certified. Attach an additional list if necessary:

Parcel/Location Code	**Type of adjoining land use to pollinator habitat (Non-organic corn, native vegetation, etc.)**	**Type of Pesticide Application (Ground, airblast, other)**	**Width of buffer (i.e., farm road 20ft. plus grass strip 20 ft. for a total of 40 ft.)** See required minimum buffer distances above.

4. BLOOM

There must be at least three (3) flowering species in each season (spring, summer, fall). The combined vegetative cover of the plant species in bloom should be classified “abundant” or “common” in each season. Flowering species can include trees, shrubs or forbs known to provide pollen and/or nectar to pollinators.

Abundance categories:

- *Abundant*: Numerous individuals of the flowering species are present (51 – 100%).
- *Common*: Several individuals of the flowering species are present (11 – 50%).
- *Sparse*: Only a few individuals of the flowering species are present (1 – 10%).
- *Absent*: No flowering species are present (0%).

As identified on the plant listings above, note in the following table the flowering species available in your permanent habitat during each season:

Season	Flowering species and Bloom time	Abundance category* (must be common or abundant in each season)
Spring		
Summer		
Fall		

5. POLLINATOR HABITAT PLANTING STOCK AND SEED

Plant materials for replanting or establishment of new pollinator habitat must be sourced from within 150 miles of your property; if no plant sources are available with this radius, document which suppliers you contacted and expand the radius to 300 miles.

Plant material receipts can be submitted to provide evidence of plant material sourcing and native status.

Native plants are defined as species that are indigenous—occur naturally without human intervention—to a region. Please review the USDA PLANTS database for information on native plants to your area.

Indicate the percentage of vegetation established in permanent pollinator habitats that is native to the region at each farm site. You may list multiple farm locations on each line:

Farm name(s) or code(s)	List the pollinator attractive plants comprising the percentage of native species defined in this table.	Percentage of vegetation native to region
New permanent habitat:		
		Must be at least 70%
Natural or mature created permanent habitat:		
		Must be at least 35%

1) How do you ensure that plants or seed for new permanent habitats are purchased within 150 miles of your property?

2) If plants or seed are not available for purchase within 150 miles radius it may be extended to 300. If you must source over 150 miles how is commercial availability conducted and documented?

3) Native plant materials should be prioritized over non-native materials. If you utilize non-native materials please provide justification for the use over native species.

4) It is required that plants are ecologically appropriate for your site, meaning seeds or other materials were collected from similar climate/ecological region to your property. What characteristics do you look for when purchasing planting materials or what information do the nurseries provide you with about where the seeds were collected?

6. NESTING FEATURES

Pollinator nesting site must be identified and protected and known nesting areas outside crop fields must be left undisturbed.

Plants that provide nest sites or nesting materials for native bees must be incorporated into habitat plantings. Host plants for butterflies must also be included. See Appendices D- G for more information on nesting.

1) Describe known pollinator nesting areas and how they are protected and identified to workers. (Note: please ensure that these areas are identified on your submitted maps)

2) Describe how your farm provides nest cell plant materials for above-ground nesting bees.

3) Describe how your farm provides host plants for butterflies in permanent habitats.

7. TILLAGE

A tillage standard operating procedure must be in place to reduce the impact of tillage activities on ground-nesting bees nesting areas.

Examples of Standard Operating Procedures:

- *Row crop: (1) Crop fields containing crops known to be attractive to bees will only be disked at 4" depth 1 -2 x per year for the year following planting. Fallow fields will be mowed instead of tilled. (2) Field edges will be mowed instead of cultivated.*
- *Perennial crop: (1) Every other alley between rows will be scraped annually instead of tilled. (2) Use chemical fallow in field edges.*
- *Example if already using no-till system: No till will continue to be practiced throughout the farm.*

1) Do you use tillage practices on your farm? ☐ Yes, describe below ☐ No - If No, skip to the next Section

2) What is the total area* of your farm covered by the practices described in this section? _____

*Total area must encompass at least 1/3 of the total farm acreage, and include cropped and non-crop areas. Please note that the tilled area can rotate each year.

3) Your tillage practices plan described below must include at least two (2) of the following. Please check the applicable practices:

- ☐ Tillage depth
- ☐ Timing of tillage
- ☐ Frequency of tillage
- ☐ Equipment type
- ☐ Location of tillage

4) Outline your Standard Operating Procedure (SOP) by describing the tillage practices employed to reduce the impact of these activities on ground-nesting bees nesting (see above for examples):

8. PREVENTATIVE NON-PESTICIDE MANAGEMENT

Practices that can help prevent the use of pesticides, including scouting and monitoring of pests and diseases to help inform pesticide application decisions, are required on all certified farms.

1) List the pests/diseases (or potential pests/diseases) that threaten your crops:

_____

_____

_____

2) Do you use farm specific scouting and monitoring records to demonstrate an outbreak? ☐ Yes ☐ No
If yes, please describe your monitoring records and methods of documenting the severity of a pest issue.

_____

_____

3) If you use pre-determined thresholds to justify the use of pesticides, please describe the thresholds identified for each pest.

_____

_____

4) List the preventative management practices you use in the following table:

Additional Preventive Practices (Physical, Cultural, Mechanical, or Biological)				
Practice	**Currently used?**	**Description of how practice *is* applied (where/when)**	**To be adopted?**	**Description of how the practices *will be* applied (when/where)**
Timing of planting or harvest to avoid pest damage (including choice of crop maturity date)*				
Physical barriers (e.g., floating row covers, fruit bagging)				
Mechanical pest removal (e.g., hand picking, vacuuming, or pure water sprays to remove pests)				
Cultural practices to improve air flow (e.g., plant spacing, row orientation, pruning) *				
Trap cropping				
Crop rotation *				
Use of resistant varieties (for insect pest and disease control)†*				
Use of cover crops, green manures, and composts (for improved soil fertility)				
Mating disruption (including use of pheromone traps for pest reduction)				
Mulching, hand weeding, mechanical weeding, or grazing (for weed control)				
Mulching plant material (for disease control) *				
Sanitation – removal of debris/infested plant material *				
Sanitation - equipment *				
Eliminate alternate hosts or sites for pests and disease *				
Soil solarization (for nematodes, soil borne diseases, or weed seeds)				
Strip cropping (to disrupt pest movement)				

Late water (cranberries) *				
Other (please describe)				

† Cannot be genetically modified crops that express pesticides or are resistant to herbicides.

* Denotes preventative management strategies that can be used to control fungal pathogens

9. PESTICIDE MITIGATION

JUSTIFIED USE OF PESTICIDES

Use of pesticides must be justified and be supported by evidence that a severe pest or disease outbreak exists or has strong potential to exist. Farm-specific monitoring records can be used to demonstrate an outbreak. Additional documentation (e.g., extension publications, newspaper articles) that supports the severity of the issue may also be submitted.

Documentation should provide evidence that an economic threshold has been exceeded. If no threshold is available, provide an expert opinion. Experts may include a certified pest control adviser, accredited crop consultant, extension agent, or other approved credentialed independent pest management specialist. Advice or recommendations from pesticide or seed company representatives is not considered sufficient evidence to justify pesticide use.

Prior to using a new pesticide, check that it is not classified as highly or moderately toxic by EPA (Bee Better Appendix K). To ensure pesticides don't synergize to increase toxicity to pollinators, screen the proposed application through the University of California Integrated Pest Management Bee Precaution tool (Bee Precaution). No pesticides that are flagged by Bee Precaution as interacting may be applied in the same tank mix or within 3 days of one another. See Appendix M for instructions on how to use Bee Precaution.

Fungicides can only be used during pre-bloom and/or bloom time if at least one non-chemical pest management strategy is also used to directly address the fungal concern prompting the application(s)(Bee Better Appendix J).

Pesticides are any substance or mixture of substances intended for preventing, destroying, repelling or mitigating a pest or disease. Pesticides can also be plant regulators, defoliants, desiccants or nitrogen stabilizers. The term pesticide includes bactericides, fungicides, herbicides, insecticides, miticides, molluscicides, nematicides, and piscicides.

Pesticide applications include any activity that introduces a pesticide into the environment for purposes of controlling pests, including but not limited to spraying, dusting, and chemigation. We also consider the planting of pesticide-coated seed a pesticide application.

Pre-bloom is the period 10 days prior to when bloom is expected to occur.

1) Do you use pesticides (including organic pesticides)? ☐ Yes ☐ No

If yes, please select the evidence used to justify use:

- ☐ Scouting and monitoring records
- ☐ Documented damage exceeding pre-determined thresholds
- ☐ Degree day models
- ☐ Moisture and temperature records
- ☐ Spore counts
- ☐ Other, please describe:

_____

_____

2) If you are planning to apply pesticides to crops that contain blooming temporary within-field habitat beneath or nearby them (e.g., understory), what conditions must exist and how will you remove blooms within 24 hours prior to applications?

_____

_____

3) How often do you calibrate your application equipment? Must be at least once annually.

4) If you are planning to apply fungicides aerially when other application methods are not feasible, what conditions must exist and how will they be recorded? Please refer to Appendix O of the production standards for guidance.

Note: Conditions that allow for aerial applications of fungicides include field conditions, shortage of application equipment during the required window of application and risk to damage of ripe crops from ground application.

5) Provide contact information of any professional crop consultants or crop advisors that provide pest scouting and monitoring services and/or pest control recommendations.

Name: Company (if applicable):

Email: Phone number:

PROHIBITED ACTIONS

The following actions are prohibited. Please check each box demonstrating your understanding of these requirements:

- ☐ I will not apply pesticides without a justified use.
- ☐ I will not apply any pesticides classified as highly toxic or moderately toxic to bees by EPA during bloom for crops that are visited by or pollinated by insects.
- ☐ I will not apply pesticides that jointly may increase toxicity to bees within three days of one another.
- ☐ I will not use nitroguanidine neonicotinoids (clothianidin, dinotefuran, imidacloprid and thiamethoxam), including the planting of treated seeds.
- ☐ I will not use genetically modified crops that express pesticides or are resistant to herbicides.
- ☐ I will not apply pesticides aerially (the only exception being fungicides under the conditions listed in 2.3 a. of the standards).
- ☐ I will not use soil fumigants.
- ☐ I will not use paraquat dichloride within spatial buffers around permanent pollinator areas.
- ☐ I will not use pesticides other than herbicides in designated permanent pollinator habitat.
- ☐ I will not apply herbicides to plants in bloom in permanent pollinator habitat, including weeds.
- ☐ I will not apply pesticides classified as highly toxic or moderately toxic to bees by EPA or herbicides to temporary pollinator habitat (e.g., cover crops, in-field insectary strips) or to crops with in-field blooming habitat. Except that, if pesticide applications need to occur during habitat bloom, mow or otherwise remove blooms at least 24 hours prior to any pesticide applications.

10. MANAGED BUMBLEBEES

Commercial bumblebees cannot be used for open field pollination. Commercial bumblebees may only be used in secure indoor facilities, such as screened greenhouses, in which they are not able to interact with wild bumblebees. Managed bumblebees may only be used within their native ranges.

Records must be maintained of all colony purchases, steps taken to secure greenhouses and disposal dates/procedures.

COMMERCIAL BUMBLEBEE MANAGEMENT

1) Do you use commercial bumblebees on your farm? ☐ Yes, describe below ☐ No - If No, skip to next section.

_____

_____

_____

a) Do you use native species within their native ranges? ☐ Yes ☐ No - If No, see above requirements

b) Describe the location of your indoor facility and how entrances are screened or sealed to prevent individual bumblebees from entering or exiting the facility.

_____

_____

_____

Please confirm the following required actions are maintained:

☐ Queen excluders are used on all colonies.

☐ Individuals are not released from commercially acquired bumble bee colonies into the wild.

☐ Individuals are properly disposed of through incineration, freezing or hot soapy water (complete submersion for at least two minutes).

☐ Materials (pollen, nectar, bedding and cardboard) are disposed of through incineration.

11. RECORDKEEPING

Required forms and records must be made available to the certifier upon request and to farm inspectors. Farmers may submit their own plans and forms, or they can use Bee Better Certified plans and forms as listed below each record. If their own forms are used, they must include all the information required in the Bee Better forms.

1) Submit the following forms and records to demonstrate compliance with the Bee Better Certified™ Pesticide Risk Mitigation Production Standards:

Attached	Description	Forms/Examples Link
☐	Pesticide use Records from the past 3 years: *You may submit pesticide use forms required by your state, the Bee Better pesticide use record (Link/Appendix 1), or a form containing all the same information as the Bee Better form.*	*Bee Better pesticide application record form (Appendix 1 to the Production Standards)*
☐	Pest scouting and monitoring protocol	*Bee Better Certified scouting and monitoring guidance (Appendix 2 to the Production Standards).*
☐	Pest scouting and monitoring records	*Bee Better pest monitoring and scouting guidance (Appendix 2 to the Production Standards)*
☐	Non-pesticide management records	*Bee Better Certified non-pesticide management record (Appendix 3 to the Production Standards).*

2) The following forms and records must be maintained on-site and available for the inspector to review during the inspection. They must also be made available to the certifier upon request. Note that photos may be requested by Oregon Tilth to confirm habitat characteristics that cannot be observed during the on-site inspection. Please confirm that they are being maintained and available.

Are they Maintained?	Description
☐ Yes ☐ No ☐ NA	Records of all commercial bumblebee colony purchases, steps taken to secure greenhouses and disposal dates/procedures, as applicable.
☐ Yes ☐ No ☐ NA	Records of seeds and planting stock for new pollinator habitat or re-planting of existing pollinator habitat. Including, but not limited to invoices/purchase documentation showing that they were sourced within 150 miles, commercial availability search if it is purchased 150-300 miles away.
☐ Yes ☐ No ☐ NA	Records of non-GMO status of seeds.
☐ Yes ☐ No ☐ NA	(Optional) Additional evidence that can justify pesticide application: *Additional evidence should demonstrate that conditions on the farm are conducive to the targeted disease and or pest. Examples of acceptable evidence include scouting and monitoring records, documented damage exceeding pre-determined thresholds, degree day models, moisture and temperate records, or spore counts.*

12. LABELING

Before the Bee Better Certified Product or Ingredient Seal may be used on products or to represent your farm operation in marketing and sales information, you must be certified by an approved Certification Agent. All uses of the Bee Better Seal and Logo are trademarked by The Xerces Society and may only be used in accordance with the labeling standards as specified by the Branding and Trademark Guidelines. All packaging and promotional materials that use the Bee Better Certified Seal or Logo must be submitted to the Certifier for approval prior to use.

1) Do you plan to use the Bee Better Seal or Logo? ☐ Seal ☐ Logo ☐ Neither

2) Please describe how and/or on what products you will use the Seal:

_____

_____

_____

3) Please describe how you will use the Program Mark:

_____

_____

_____

4) Confirm that you are aware that all labels and marketing material must be made available to the Certifier to review prior to use: ☐ Confirmed