

Bee Better Basics

An Introduction to the
Bee Better Certified™ Program



BEE BETTER
CERTIFIED
XERCES SOCIETY




Bee Better Certified™ works to give bees a healthy place to live.

beebettercertified.org

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Cover photo: Black-tailed bumble bee visiting flower of blackcap raspberry on a berry farm in Oregon. (The Xerces Society/Mace Vaughan).

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1 Introduction to Bee Better Certified™

The Bee Better Philosophy

We work with conservation-minded farmers and innovative food companies who are committed to enacting our science-based standards. Bee Better Certified™ farms are flower-rich environments that contain nesting habitat protected from pesticides. By buying Bee Better Certified products, consumers can be assured that certified farmers are taking the necessary steps to augment pollinator habitat and conserve pollinator populations in agricultural landscapes. Bee Better Certified™ means better places for bees.

Bee Better Certified Farms

Bee Better Certified helps incentivize farm practices that benefit pollinator populations, counteracting production trends that jeopardize the pollinators upon whom we depend. The on-farm pollinator conservation promoted by Bee Better Certified represents a win-win-win scenario for pollinators, farmers, and consumers:

- Bees benefit because they are provided the foraging and nesting habitats they need to survive and thrive.
- Farmers benefit from pollinator habitat plantings because bees improve crop quality, marketability, and yield (Hoehn et al. 2008; Blaauw and Isaacs 2014; Klatt et al. 2014). (Pollinator habitat also supports a number of other ecosystem services, including natural pest control and erosion control [Wratten et al. 2012; Garibaldi et al. 2014], an additional win for farmers).
- Consumers benefit because they gain the ability to purchase food grown in a way that supports bees and other wildlife associated with agriculture.

The Importance of Pollinators

Pollinators are a keystone of agriculture, contributing to the production of more than two-thirds of the world's crop species, whose fruits and seeds together provide over 30 percent of the foods and beverages that we consume (Klein et al. 2007). The United States alone grows more than one hundred crops that either need or benefit from pollinators. The economic value of insect-pollinated crops in the United States was estimated to be \$20 billion in 2000 (Gallai et al. 2009). In addition, pollinated crops contain key micronutrients necessary for human nutrition (Eilers et al. 2011; Brittain et al. 2014).

This service is provided by both managed and wild pollinators, including honey bees, native bees, beetles, butterflies, flies, moths and wasps (Rader et al. 2016). Wild bees are the most effective (Garibaldi et al. 2013); they not only deposit more pollen per visit, but they also improve the pollination efficiency of other insects (Brittain et al. 2014; Greenleaf and Kremen 2006; Carvalho et al. 2011; Sardiñas and Kremen 2016). When there is sufficient natural habitat, wild bees can provide 100% of a crop's pollination needs (Kremen et al. 2004).

Today, native pollinators are more important than ever as honey bees become more expensive and difficult to acquire because of pests and disease (Bond et al. 2014; NASS 2016). Unfortunately, wild pollinators are also declining due to the loss, alteration, and fragmentation habitat, disease spread, and increased pesticide use (National Research Council 2007; Roulston and Goodell 2011; Goulson et al. 2015).



Overview of Pollinators' Needs

Bees have three primary needs: food, shelter, and a safe environment. Pollen and nectar supplied by flowering plants form the basis of a bee's diet. Adult bees mostly consume nectar, while larvae primarily consume pollen. Bees have varied nesting habits that fall into three categories: below-ground, above-ground, and cavity nesters. Below-ground nesting bees excavate their nests underground in soil. Above-ground nesting bees occupy the hollow centers of pithy-stemmed plants or utilize holes created by other insects, such as wood beetles. Cavity nesters, such as bumble bees, construct their nests in spaces created by other animals or plants.

A safe environment means that bees are protected from exposure to pesticides or destruction by other means (such as harvest that disrupts blooms or cultivation that destroys nests). In addition, because commercially managed bumble bees can spread diseases to wild pollinators (Colla et al. 2006; Otterstatter and Thomson 2008; Cameron et al 2016), it is important to limit the use of these pollinators in situations where they may expose native bees to pathogens.

Many habitat management techniques can help provide the on-farm resources bees need to pollinate and reproduce (e.g., Morandin and Kremen 2013; Williams et al. 2015) and pesticide reduction and mitigation strategies can protect bees from harmful chemicals (Johansen et al. 2013; Vaughan et al. 2014). Creating a better environment for wild bees also improves honey bee health (Decourtye et al. 2010) and promotes populations of natural enemies of crop pests (Chaplin-Kramer 2012; Blaauw and Isaacs 2015).



The Xerces Society/Brianna Borders

2 Certification Process

To apply for Bee Better Certified™ certification contact Oregon Tilth. Additional information can be found at <https://tilth.org/certification/services/beebetter>.

For consultation services from the Xerces Society for Invertebrate Conservation to develop a Bee Better Certified conservation plan, contact beebetter@xerces.org.

Additional information about Bee Better Certified can be requested by contacting support@beebettercertified.org.

Steps to Achieve Certification

Bee Better certification is valid for a 3 year (36 month) period prior to renewal.

1. Develop a Bee Better Certified Plan

The Bee Better Certified™ plan (BBCP) describes how farms interested in applying for certification comply with the habitat, pesticide mitigation, and managed bumble bee production standards. Your BBCP must be submitted to Oregon Tilth (OT), Bee Better Certified's third-party certification agent, upon application for inspection. The plan and associated documents and/or records must also be made available during the on-farm inspection.

All applicants are required to use the Bee Better Certified Plan template. The template is available from the Document Center of the Bee Better Certified website, beebettercertified.org.

1.1 Updates to Your Bee Better Certified Plan

Annual updates

Annual updates describe changes to habitat, pesticide use or in managed bumble bee practices. The annual update also allows the certification agent to track changes in practices and verify continued interest in Bee Better certification. Oregon Tilth will send notifications of annual updates to each operation requesting the necessary updates within a specified time.

If responses to an annual update indicate significant changes to habitat, pesticide use or managed bumble bee practices an additional farm inspection may be required. If a site visit is required, OT will charge inspection fees and related expenses. During the

update process, OT may request the following additional items from you, including but not limited to: photos of habitat sites, maps of new acreage, pesticide use reports, receipts and/or invoices.

The following questions must be answered annually:

1. Have you changed the type and/or acreage of temporary pollinator habitat in the past year? If yes, please describe and provide updated habitat maps.
2. Have you used any new pesticides in the past year? If yes, please describe the pesticides used, how they were used, and how you ensured continued compliance with the BBC pesticide mitigation standards.
3. Have you altered your pest/disease scouting and monitoring protocol and/or record-keeping practices? If yes, please describe.
4. Have you changed the non-pesticide management strategies employed? If yes, please describe.
5. Have you changed your use of commercially managed bumble bees? If yes, please describe.

Changes in certified acreage

If you plan to enroll new acreage in the Bee Better certification program, you are required to add information about habitat, pesticide mitigation and managed bumble bee practices on the new parcels/acres to your BBCP.

Updates Prior to Renewal

In addition to annual updates, the entire BBCP must be updated at a minimum every 3 years to reflect the most current conditions of habitat, pesticide mitigation and pesticide use. Submit a revised plan to OT 3 months prior to your renewal date, and make the updated plan available during inspection.

1.2 Plan Development Options

Applicants may develop their own BBCP, hire a third-party pollinator conservation consultant, or choose to work with the Xerces Society for Invertebrate Conservation (Xerces) to develop a plan. To work with Xerces, fill out a notice of interest form, available on the Xerces webpage. This form may be completed online, or mailed to the address on the form.

2. Apply for Certification with Oregon Tilth (OT)

Submit a copy of the BBCP, Bee Better Certified application form, and the certification payment to OT. Pesticide use reports for the past 3 years must also be submitted with your initial BBCP and made available during inspection. Applicants may use existing Pesticide Use Report forms if you live in a state where pesticide use reporting is required; if not, fill out the Bee Better Certified Pesticide Use Report Form. The form

is available from the Document Center of the Bee Better Certified website, beebettercertified.org.

3. Initial Review of Application and Bee Better Certified Conservation Plan

Prior to inspection OT will review your BBCP to ensure it contains all required elements. OT will communicate with you if there are questions or concerns about your BBCP prior to an onsite verification audit (also called the “inspection”).

4. On-Site Inspection

OT will verify that information and activities in the BBCP accurately represent what is happening on the farm parcels for which you are applying for certification. During the inspection you will also be required to provide records that verify compliance with standards (see Section 4 of the Bee Better Certified production standards for a complete list of required records). Inspections may occur any time during the growing season, which varies regionally.

5. Review of Inspection and Issuance of Decision

OT will review the inspection report and issue a decision. OT will then notify the applicant of the outcome. At this point, once granted certification, the applicant is eligible to license the use of the Bee Better Certified seal from OT.

Renewal

Farms need to be re-inspected by OT at a minimum every 3 years to evaluate whether Bee Better Certified production standards are still being met. In addition, annual updates are required to keep your certification active during the 3-year period. The BBCP must be updated prior to submitting it to OT as part of the renewal process. BBCP should be submitted at least 3 months prior to the renewal deadline.

Noncompliance

If inspection indicates an operation does not meet all the Bee Better Certified production standards, the operation will be issued a reminder or noncompliance warning with associated deadlines to come into compliance with the standard. Corrective actions need to be submitted to OT in order to clear the noncompliance warning in order to proceed with certification. In some noncompliant situations OT may issue re-

minders for ongoing compliance, which will need to be corrected within a 12-month period. An inspection will be conducted following the 12-month period in order to verify the full implementation of the corrective action. At the end of these 12 months, if standards are met then the farm will be re-inspected on the regular 3-year schedule. If the standards continue to not be met then the certification will be suspended or revoked, and the operation forfeits their use of Bee Better Certified seal.

For additional information, see the Bee Better Certified document, "Noncompliance," available from the Documents Center of the Bee Better Certified website, beebettercertified.org.

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Bee Better Certified Advisory Board

Board Members

Hannah Freeman, Co-Founder, Ganaz, Inc.

Anna Jones-Crabtree, Vilicus Farms

Rufus Issacs, Professor and Extension Specialist, Michigan State University

Lee Kane, Whole Foods Market

Beth Robertson-Martin, Senior Manager, Natural and Organic Sourcing, General Mills

Errol Schweizer, Beyond Brands

John Tooker, Associate Professor, Pennsylvania State University

Rachael Winfree, Associate Professor, Rutgers University

Scott Hoffman-Black, Executive Director, Xerces Society for Invertebrate Conservation

Eric Lee-Mäder, Pollinator Program Co-Director, Xerces Society for Invertebrate Conservation

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