**Headline:** Saving the Bumblebee Starts With Changing Our Farming Practices

**Teaser:** We are the cause of the bumblebee decline—and the solution.

By Jimmy Videle

**Author Bio:** Jimmy Videle is a farmer, naturalist, and researcher. He is the author of [*The Veganic Grower’s Handbook: Cultivating Fruits, Vegetables, and Herbs from Urban Backyard to Rural Farmyard*](https://lanternpm.org/book/the-veganic-growers-handbook/) (Lantern Press, 2023), the co-founder of [NAVCS-Certified Veganic](https://certifiedveganic.org/), and a contributor to the [Observatory](https://observatory.wiki/Jimmy_Videle). His writing has appeared in CounterPunch, Countercurrents, and LA Progressive, among others.

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**Image/Graphic:** <https://drive.google.com/drive/folders/14V2nPlITvrkrH0zEQkcumvn2bdiBk-vD?usp=sharing>

**[Article Body:]**

The weather warms. The snows recede, and vast swaths of wild flora mat the terrain. The first shoots of the perennials are green. What was once brown and hibernating transforms into a verdant, foliated sea. Not long after the transition, the first insects emerge, following lockstep with the plants. Flying pollinating insects congregate and feed in earnest.

The queen bumblebees emerge in the spring and actively forage on the earliest flowering bushes and trees. By early summer, they find suitable nest sites, create wax pots, and lay eggs. Two to three weeks after the first babies (workers) hatch, they take over the duties of looking for nectar and caring for the rest of the brood. The colonies reach maximum size by mid-summer.

The reproductive cycle begins when the gynes—those destined to become queens—mate. As important as places to nest are to all bumblebee species is the [availability of high-quality forage](https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2664.13403), especially in September, before the bumblebees begin seeking hibernation sites. The rest of the colony will die off before the year is over, and the newly mated gynes will find a suitable hibernation site before emerging the following spring to [start the cycle again](https://wisconsinbumblebees.entomology.wisc.edu/about-bumble-bees/life-cycle-and-development/).

[Understanding](https://academic.oup.com/bioscience/article/71/12/1234/6427255?login=false) the placement of any farm and its relationship to the complete bumblebee cycle is very important as it has been researched that forests play an open role in bumblebee life history.

Once the ground warms deep in their hibernating dens and solitary bumblebee queens surface, what will they find once they take flight? Will there be enough pollen from early flowering plants to nourish them after the long, deep sleep? Was there enough ground cover to protect them from winter nights dropping to minus 30 degrees Celsius? Is the flower diversity sustained throughout their cycle? The whole cycle must be considered to reverse the decline.

**The Bumblebee Decline**

[Bumblebee declines](https://www.sciencedirect.com/science/article/abs/pii/S0006320717313976) have been documented worldwide, particularly in bumblebees, with some species in North America declining over [90 percent](https://www.pnas.org/doi/full/10.1073/pnas.1014743108) in the last 20 years.

It is relatively simple to understand why. Climate change affects their hibernation cycle and nesting temperatures in the late spring and early summer; land-use change from agriculture and development destroys nesting and wintering sites underground (abandoned mice and vole holes); [pesticides toxify the flowers](https://pubmed.ncbi.nlm.nih.gov/36689649/) that then kill the bees, and apiculture practices [breed viruses](https://pubmed.ncbi.nlm.nih.gov/24553241/) that commercial honeybees will pass on to wild bees. In short, humans are causing the decline of bumblebees.

**La Ferme de l’Aube Bumblebee Assessment**

In 2018, my small-scale farm in Boileau, Québec, [La Ferme de l’Aube](https://www.lafermedelaube.com/), set out to understand how veganic farming practices benefited or hindered the wild population of fauna and insects. Methods of shallow, low-till; no-fungicide, herbicide, or insecticide spraying; keeping the gardens covered throughout the year; planting a diversity of flowering annuals and perennials that bloom throughout the whole frost-free year, and rewilding practices of the remainder of the 2.2-hectare land holding, would be scrutinized.

The farm-wide biodiversity study would become the baseline for future research. One insect of keen interest to the survey was bumblebees. By slowly walking transects through 3,500 square feet of cultivated annual and perennial garden space, the surveyors attempted to quantify the abundance and distribution of the bumblebees present.

The numbers tell the story. In 2018, perennials were young, and some still being established. Four years later, as perennial plants matured, the number of bumblebees increased by 227 percent. In 2023, due to abundant rainfall during peak flower season, numbers were lower but still 175 percent above the baseline year.

In 2024, the count was beyond expectations, up 340 percent. The number of species observed increased from five to nine, and one, the Yellow-banded bumblebee [*Bombus terricola*](https://en.wikipedia.org/wiki/Bombus_terricola), is listed as vulnerable by the [IUCN Red List](https://www.iucnredlist.org/species/44937505/46440206) and of [special concern](https://www.quebec.ca/agriculture-environnement-et-ressources-naturelles/faune/gestion-faune-habitats-fauniques/especes-fauniques-menacees-vulnerables/liste#c159753) in Québec. Finding this species helps to prove that veganic growing practices are working to [potentially eliminate](https://ecoevorxiv.org/repository/view/7590/) bumblebee declines in the region.

**The Flower Diversity Throughout the Season**

One key factor in the bumblebees’ success at La Ferme de l’Aube has been the coordinated effort to ensure flowering plants throughout the season. These additional foraging sources augment the plants the bumblebees find in the wild.

The cultivated favorites of these highly social beings are [bachelor button](https://www.almanac.com/plant/bachelors-buttons), basil ([sacred](https://health.clevelandclinic.org/benefits-of-holy-basil) and [Thai](http://v)), bergamot ([purple](https://plants.ces.ncsu.edu/plants/monarda-media/) and [red](https://www.wildflower.org/plants/result.php?id_plant=MODI)), [borage](https://en.wikipedia.org/wiki/Borage), buckwheat, bush beans, chives, [comfrey](https://en.wikipedia.org/wiki/Symphytum), [orange cosmos](https://en.wikipedia.org/wiki/Cosmos_sulphureus), echinacea, [haskap](https://en.wikipedia.org/wiki/Lonicera_caerulea), hollyhock, [Korean mint](https://en.wikipedia.org/wiki/Agastache_rugosa), [lamb’s ear](https://plants.ces.ncsu.edu/plants/stachys-byzantina/), lavender, [liatris](https://hort.extension.wisc.edu/articles/liatris/), [orange milkweed](https://www.wildflower.org/plants/result.php?id_plant=astu), [phacelia](https://en.wikipedia.org/wiki/Phacelia), squash ([summer](https://en.wikipedia.org/wiki/Summer_squash) and [winter](https://en.wikipedia.org/wiki/Winter_squash)), sunflower, [wild marjoram](https://gobotany.nativeplanttrust.org/species/origanum/vulgare/), and yellow daisy.

In addition, all common milkweed, clover (red, strawberry, and white), and dandelion are allowed to proliferate within the flower garden spaces.

As work continues to protect 3,000 hectares of biodiversity in Boileau, Québec, La Ferme de l’Aube, the main research center, has become the heart of the nature reserve. Every record of a watch-list species adds to the necessity for permanent conservation.

As veganic farming has become the leader in ending the exploitation of domesticated animals in agricultural systems, it has also become the standard in ensuring that wild fauna and insect creatures can thrive. The scientific community starts paying attention when intuition is backed up by solid data. We are on the precipice of systemic change, and all our *Bombus* friends are buzzing with gratitude.