



Ministry of  
Agriculture

# Beekeeping in British Columbia

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Beekeeping has been practiced in British Columbia for over 150 years. The first two honey bee colonies arrived by ship in Victoria in May 1858. Since then, honeybees have spread to all parts of the province and more than 2,300 beekeepers currently operate approximately 47,000 colonies as a hobby or as a full or part-time business venture. BC beekeeping is largely determined by its topography, climatic conditions and agricultural activities that provide nectar and pollen sources.

## **Establishing a Beekeeping Operation**

Unlike most other agricultural enterprises, beekeeping is highly dependent on the seasonal availability of nectar and pollen. Other important factors include management, presence of diseases and pests, and the quality of the bee stock. The combination of all these factors ultimately determines the success of the beekeeping enterprise.

## **Climate**

Notwithstanding B.C.'s large size, climate and vegetation limit suitable beekeeping areas. The interior of the province is affected by the continental climate but also tempered by oceanic air currents that allow for successful beekeeping in most years. Northern B.C., on the other hand, is gripped by severe winter conditions seven months of the year, which place stresses on the bees. Colony winter mortality in the Peace may be as high 30% while colonies in southern B.C. experience winter mortality of 12-15%. The Peace District is a region of extremes where huge honey crops can be produced in good years, while in some other years summer never materializes and colonies require supplemental feeding to avert starvation.

The southern interior of the province offers excellent spring conditions for bees when fruit trees and other floral sources are in bloom. But later in the season, hot conditions cause all forage sources to disappear and colonies must be moved into the mountains for the remainder of the season. Coastal British Columbia offers its own unique climatic challenges. Winters may be mild, but excess moisture threatens the survival of the wintering colony. Improved air circulation, keeping colonies well off the ground and placement of the apiary in a sheltered location are essential.

## **Nectar and Pollen Availability**

When weather conditions are favorable, floral sources can produce an abundance of nectar and pollen. The combination of moisture, temperature and floral forage availability determine the number of colonies that can be placed in any location. Beekeepers must be thoroughly familiar with the local environment and the flowering plants that can be a food source for bees.

In the Fraser Valley, berry crops have increasingly become dependent on the availability of honeybee colonies to meet their pollination needs. Since cranberries are not attractive to bees because of the absence of nectar, growers have been forced to increase the number of colonies per acre. Higher bee density in cranberry bogs creates stress which in turn results in increased disease susceptibility. For this reason, cranberry pollination fees have traditionally been significantly higher than any other crop. Blueberry has become a major crop in the Fraser Valley since 1995. Its high dependency on pollinators has made this crop an attractive source of income for beekeepers. With over 28,000 acres in cultivation (2015) and a recommended placement of 2-3 hives per acre, the current honey bee population in BC is insufficient to meet the demand of over 60 - 70,000 colonies. Commercial beekeeping operations from Alberta that winter their colonies in BC, have been able to supplement colony numbers to meet blueberry pollination requirements.

### **Diversification of the Beekeeping Enterprise**

Climate may place constraints on beekeeping but it also offers opportunities that may not be available in other parts of Canada. Honey yields in the Fraser Valley may not be the highest in the province, but its proximity to large consuming centers offer better marketing opportunities. The large acreage of fruit bearing crops, most of which are dependent on insect pollination, offer Fraser Valley and Okanagan beekeepers a valuable source of income. While honey consumption per capita may not be easily increased, other hive products such as pollen, propolis and bee venom may offer new marketing opportunities. Mild climatic conditions in southern B.C., and especially on southern Vancouver Island, have enabled some beekeepers to become breeders and suppliers of bees and queens to other beekeepers in BC and beyond.

### **Urbanization and Land Use Pressures**

Honeybees and humans have successfully coexisted for thousands of years. In many parts of Europe and North America, honeybee colonies are kept in urban areas without any problems. Yet, it is important to recognize that in urban environments, beekeeping poses unique challenges and responsibilities. The beekeeper must be aware that colonies can be a nuisance to nearby residents, and may involve medical and legal issues. For example, in early spring when bees first emerge, their feces may be deposited on smooth surfaces of cars, decks and patio furniture. In mid to late summer, colonies need large volumes of water and will visit bird baths and swimming pools. At the end of the season, when colonies reach their maximum population size, bees become more defensive. Although a bee sting may not pose a health risk to most people (less than 3% of the general population), those that are truly allergic may experience a medical emergency. Many municipalities have amended their bylaws to permit beekeeping. However, it is important for the beekeeper to be familiar with the conditions and limitations included in the bylaws.

Most beekeepers are enthusiastic about having a few colonies in the backyard but it is important to remember that neighbors may not share the same enthusiasm. Some people have great anxiety as soon as they become aware of beehives nearby. To avert these concerns, it is recommended to keep hives in less visible locations or blend the hives with the vegetation.

### **Bears and Vandalism**

Virtually all parts of British Columbia are “bear country”. Bears are attracted to honeybee colonies because of the high food value of bee brood. In summer, bears roam great distances to fatten themselves for winter. In many areas, the threat of bears is so high that precautions must be taken. Electric fences are most effective as long as bears have not previously raided the apiary.

Vandalism can be a costly threat to beekeepers. In populated areas, colonies may be stolen while in rural areas, colonies are sometimes driven over, pushed over or used for target practice. Hidden from highway view, locked and fenced gates or a site near a farm house all help to reduce the risk of theft and vandalism. Some beekeepers paint their colonies green to blend with the environment or place the colonies behind dense vegetation.

### **Purchase and Establishment of a Beekeeping Enterprise**

Diversification of the beekeeping operation has become essential in most parts of the province. In addition to honey production, income from crop pollination contracts, queen rearing, and hive product marketing have become important income sources to commercial beekeepers. Honey production as a sole source of income may only be viable in the Peace District with large annual honey yields and great distance from consuming centers.

For starting a commercial beekeeping enterprise, the purchase of an established operation with registered apiary sites may be more cost-effective than starting a small operation and slowly building up colony numbers.

### **Honeybees and Modern Agriculture**

Crop pollination is the most important agricultural function of honeybees. Studies have shown that honeybee pollination in B.C. is responsible for over \$250 million per year in agricultural production, while the total market value of hive products accounts for only \$12 million per year. In Canada, the value of honeybee pollination is estimated at over \$1.5 billion per year of agricultural production, while in the U.S. this value is estimated at over \$15 billion per year. The high dependency of the agriculture sector demands that bee populations remain healthy and viable in the future. The beekeepers play a vital role in realizing this goal.