



CITY OF VANCOUVER

POLICY REPORT Social Development

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TO: Standing Committee on Planning and Environment

FROM: Director of Social Planning in consultation with the Director of Development Services, Co-Director of Licences and Inspections, Director of Legal Services, Regional Director of Health Protection - Vancouver Coastal Health, Manager of the Office of Sustainability and General Manager of Parks and Recreation

SUBJECT: Hobby Beekeeping (Urban Apiculture) in Vancouver

RECOMMENDATION

- A. THAT Council repeal from Section 4.1 of the Health By-law the prohibition against operating an apiary or keeping of bees in the City of Vancouver;
- B. THAT Council adopt the policy outlined in APPENDIX A as Guidelines for Hobby Beekeeping in the City of Vancouver;
- C. THAT Council instruct the Director of Legal Services to bring forward for enactment the amendment to the Health By-law generally as set out in APPENDIX B.

GENERAL MANAGER'S COMMENTS

The General Manager RECOMMENDS Council adopt recommendations A, B, and C noting that the proposed guidelines will be based on voluntary compliance by beekeepers. Through the Provincial Bee Act, the BC Ministry of Agriculture and Lands (BCMAL) administers the Beekeeper and Apiary Registration program for British Columbia. A working relationship between the BCMAL and the City of Vancouver will ensure inquiries regarding honeybees are addressed.

HEALTH AUTHORITY COMMENTS

The Regional Director of Health Protection for Vancouver Coastal Health supports recommendations A, B and C. Health risks related to honeybee stings are minimal and can be further reduced through good urban apiculture practices, rather than the existing prohibition. Currently, enforcement of the Health By-law No. 6580 is complaint-driven and the removal of the prohibition would allow for the City to provide a list of guidelines for good management practices of urban apiculture. Removing reference to the operation of an apiary or keeping of bees within the City of Vancouver from the Health By-law No. 6580 would transfer the responsibility of urban apiculture from Vancouver Coastal Health to the City. During the transition period, Health Inspectors will continue to respond to complaints. The proposed Guidelines for Hobby Beekeeping in the City of Vancouver have been designed in the interest of public safety and responsible beehive management to complement the BC Ministry of Agriculture and Lands registration and inspection system.

COUNCIL POLICY

Food Policy

On July 8, 2003, Council approved a motion supporting the development of a just and sustainable food system for the City of Vancouver that fosters equitable food production, distribution and consumption; nutrition; community development and environmental health.

Sustainability Policy

In April, 2002, the City adopted a formal position, definition and principles on sustainability. Sustainability requires integrated decision-making that takes into account economic, ecological and social impacts as a whole.

Health By-law No. 6580, Sec. 4.1

No person shall keep or permit to be harboured any horses, donkeys, cattle, swine, sheep or goats, or any live poultry or fowl, including ducks, geese, turkeys, chickens, pheasants or quail, or operate any apiary or otherwise keep bees for any purpose in the City, except that this prohibition shall not apply to a licensed pet shop or kennel, zoological park, research laboratory, veterinary hospital or slaughter house within the meaning of or where otherwise permitted by, the Zoning and Development By-law, unless otherwise stated within this By-law.

Other Relevant Policy

Provincial Policy

The Provincial Bee Act requires anyone who operates honeybee colonies to be registered with the BC Ministry of Agriculture and Lands (BCMAL). The location of the apiary must also be registered. If a person is contravening this registration process, BCMAL Apicultural staff have the authority to destroy or dispose of the honeybees or beehive equipment in the possession of the unregistered individual. The Provincial Bee Act enables BCMAL to respond to complaints, conduct inspections and to control diseases that affect bees.

PURPOSE AND SUMMARY

Urban hobby beekeeping provides increased biodiversity and pollination for horticultural plants in backyard, community and public gardens. Hobby beekeeping is considered to be part of a broader Urban Agriculture strategy currently being developed under the umbrella of the City's food policy mandate. This policy report on hobby beekeeping will be followed by a comprehensive report to Council on Food Policy and Urban Agriculture in the fall 2005.

This report proposes the removal of the Health By-law prohibition against operating an apiary in the City of Vancouver and recommends the adoption of Guidelines for Hobby Beekeeping that have been developed in co-operation with the BC Ministry of Agriculture and Lands (BCMAL). City staff, Provincial Apicultural staff, representatives from Vancouver Coastal Health and local beekeepers have discussed a variety of options for permitting beekeeping and support the use of guidelines rather than more formal methods. Involved Departments concur with this approach.

The proposed guidelines provide good management practices appropriate to the specific needs of Vancouver and smaller residential lots. As far as the City's role is concerned, it is recognized that guidelines will be based on voluntary compliance. Property Use Inspectors will respond to inquiries regarding honeybees and the BCMAL Apicultural staff will be able to support City staff in the event of a site visit. Under the authority of the Provincial Bee Act, BCMAL administers the Beekeeper and Apiary Registration program for British Columbia and has the authority to remove or destroy hives and beekeeping equipment if a beekeeper is not complying with the Provincial Bee Act.

A working relationship with BCMAL Apicultural staff has been established and Provincial standards for honeybee hives will be in effect for apiaries in the City. Information on the number of hives, location of apiaries and nature of complaints will be tracked and monitored by City staff. Based on the minimal complaints that have been registered in neighbouring municipalities which allow hobby beekeeping, staff believe that the adoption of municipal guidelines that complement BCMAL standards is appropriate. If it is determined that a formal enforcement mechanism is required, options to create a by-law will be reviewed.

Subject to Council's approval of this approach, staff will conduct public education sessions on the new guidelines in the fall of 2005. Numerous additional opportunities exist within Vancouver to provide further education to the public on the important role of honeybees for biodiversity and as pollinators for food production within the City.

BACKGROUND

Cities in Europe and North America (including several municipalities in the GVRD) have sanctioned hobby beekeeping within City limits. Guidelines for beekeeping in urban areas are developed with the intent to minimize the interface between honeybees and residents of the City. Through good management practices, hobby beekeeping can be a safe and suitable activity for urban areas while at the same time, provide the required pollination for urban food production and biodiversity.

The current Health By-law prohibiting the keeping of bees in Vancouver was developed in the early 1970's, in conjunction with the exclusion of other livestock from within City limits. The

policy excluded agricultural activities from the city centre as a mechanism to control the spread of disease. Discussions with the Regional Director of Health Protection for Vancouver Coastal Health reveal that apiaries may have been included in the ban without a complete analysis of the advantages and concerns of bees in urban areas (APPENDIX C).

A number of municipalities in the Lower Mainland have beekeeping by-laws in place. These by-laws specify the maximum numbers of colonies per property, surrounding fencing requirements to manage flight paths and general requirements for hive management that will maintain bees in a condition that reasonably prevents swarming. Discussions with neighbouring municipalities reveal that complaints are rare and enforcement of these by-laws is virtually non-existent. A summary of beekeeping by-laws in neighbouring GVRD municipalities is provided in APPENDIX C.

The BC Ministry of Agriculture and Lands (BCMAL) administers the Beekeeper and Apiary Registration program for British Columbia. This registration program collects data on the number of hives and location of the apiary with an aim to control diseases that affect bees and to promote good management practices (APPENDIX D). Through the Provincial Bee Act, Provincial Apicultural staff have the authority to remove or destroy hives and equipment if a beekeeper and apiary are not registered or if the colony is diseased. The Regional Apiculture Inspector for Greater Vancouver/Fraser Valley and the Provincial Apiculturist have a working relationship with GVRD municipalities and are able to respond to nuisance complaints and complete inspections of honeybee colonies.

DISCUSSION

Current Status of Beekeeping in the City of Vancouver

Although beekeeping is not permitted in Vancouver, there are a number of hives within the City, including 26 beekeepers registered with the BC Ministry of Agriculture and Lands (BCMAL). As discussed, the BCMAL Beekeeper and Apiary Registration program collects data on the number of hives and location of the apiary with an aim to control diseases that affect bees and to promote good management practices. By maintaining a registration system of beekeepers, the location of an apiary and the number of colonies on each property, BCMAL is able to analyze the context in which the colonies are situated (APPENDIX D) and identify the appropriate apiary in the case of a complaint. BCMAL has penalties and enforcement tools to support the implementation of the Provincial Bee Act and promote good beekeeping practices.

It is recognized that not all beekeepers within the City are registered with BCMAL. It is estimated that there may be 10-20 unregistered beekeepers. It is possible that the current municipal prohibition has deterred hobby beekeepers from registering. The majority of registered beekeepers in Vancouver manage 1-3 hives.

The possibility of complaints is one aspect to consider in relation to the removal of the Health By-law prohibition and the institution of beekeeping guidelines. Currently, the Environmental Health Inspectors receive approximately 12 complaints per year regarding wasps and honeybees in the City of Vancouver. However, these complaints do not distinguish between wasps (which are carnivorous and will sting while they hunt for food) and honeybees (which are vegetarian). Further information regarding honeybees is available in APPENDIX C.

The Provincial Apiculturist and Regional Apiary Inspector respond to questions and complaints regarding honeybee hives. Most calls are received between May and July. In 2004, the Regional Apiary Inspector for Greater Vancouver/Fraser Valley received approximately 15 calls for the entire GVRD region, 2 of which were from the City of Vancouver. Complaints are addressed over the telephone with the beekeeper to suggest good management practices and a site visit is completed by the Regional Apiary Inspector when necessary. BCMAL staff has also responded to queries from Park Board Staff and Environmental Health Inspectors. According to Vancouver's Manager of Property Use Inspectors, there have been no complaints about honeybees to that Department in the last 10 years.

As reported by the Provincial Apiculturist, almost 90% of the honeybee calls received by BCMAL (from across the Province) are to report a swarm or register a complaint regarding bees that are seeking out water sources at the edge of swimming pools, bird baths or other public water areas. The proposed guidelines include a provision to provide water within close proximity to the hives in order to minimize this concern. BCMAL maintains a list of beekeepers who are able to collect a swarm and this has proven to be an effective response.

Science World, VanDusen Gardens, Strathcona Community Garden and the UBC Farm have demonstration hives and provide educational programs. Discussions with beekeepers in Vancouver reveal that there is a high level of support to officially recognize and sanction beekeeping in the City through guidelines.

Proposed Guidelines for Hobby Beekeeping in Vancouver

City staff has explored several options for providing good management practices for beekeeping relevant to the urban environment. On March 9, 2005, a meeting was hosted by the Food Policy Team at the City of Vancouver to analyze the options, including the Zoning and Development By-law, Licensing By-law, and Animal Control By-law. Participants included the Provincial Apiculturist, Regional Apiary Inspector, City staff, Vancouver Coastal Health representatives and over 10 members of the beekeeping community. There was general agreement among staff and beekeepers that the procedure of legalizing beekeeping should not create unnecessary requirements for hobby beekeepers or increase the administrative procedures for the City of Vancouver.

Input from academics and neighbouring municipalities was also sought. Further research and consultation with City staff and the Regional Director of Health Protection concluded that guidelines would be the preferred option instead of a formal permit system or by-law creation. While it is recognized that guidelines rely on voluntary compliance and cannot be enforced, staff research suggests that complaints are minimal and can be responded to in partnership with BCMAL Apicultural staff. A less regulatory approach is preferred, given the relatively small numbers of beekeepers.

All parties consulted agree that beekeeping is an appropriate activity for the urban environment with appropriate guidelines that are specific to the needs of Vancouver and smaller residential lots. The guidelines will be an educational tool for current and future beekeepers on good management practices and will set the municipal standards. These guidelines complement the BCMAL Beekeeper and Apiary Registration program and complaints regarding honeybees can be referred to Provincial Apicultural staff to determine the best

course of action. As discussed, BCMAL has penalties and enforcement tools to support the implementation of the Provincial Bee Act and promote good beekeeping practices.

A follow-up meeting was held on April 28, 2005, with City staff, BCMAL representatives, the Senior Health Inspector and local practitioners, to discuss a list of proposed guidelines. Input was provided from all participants and the guidelines were analyzed and agreed upon. These guidelines are outlined in APPENDIX A.

Implementation and Monitoring Process

As discussed, both the Provincial Apiculturist and Apiary Inspector have played a key role in advising the City on appropriate guidelines. The proposed municipal guidelines have been designed to complement the Provincial registration and inspection system (APPENDIX D). The Provincial Apiculturist has an advisory role to municipal governments and will be able to work with City staff to address concerns that arise. In the event of a concern regarding management of hives, BCMAL will assist with site visits.

The Environmental Health Department of Vancouver Coastal Health has agreed to continue to respond to complaints during a transition period. Once the Health By-law is amended, Property Use Inspectors will be the point of contact for inquiries related to honeybee colonies. Since this is a new area of responsibility for the City, the number of complaints received by BCMAL and Property Use Inspectors will be monitored and recorded. BCMAL has shared data with City staff and has agreed to continue to communicate information regarding the number of complaints received, and the locations of current and newly registered apiaries within the City.

Collection of this data will enable the City to monitor beekeeping activity. This data will be reviewed on an annual basis to determine whether or not the guidelines offer sufficient management of hobby beekeeping. If it is determined that a formal enforcement mechanism is required, a by-law would be developed as an enforcement mechanism to address future complaints.

While official recognition of beekeeping offers the City the opportunity to provide a list of guidelines, it also comes with the understanding that the responsibilities and assumed liabilities of beekeeping ultimately rest with the beekeeper. The BC Honey Producers Association provides an optional \$2,000,000 Group Liability Insurance to each of its members. This insurance includes incidents of third-party claims for bodily injury and property damage and is available to all current and new beekeepers in Vancouver.

The Guidelines for Hobby Beekeeping in Vancouver will be made available through the Enquiry Centre of the Development Services Department, Environmental Health Department and on the City website. A list of local beekeepers who are able to collect a swarm will also be made available through these channels, BCMAL and the Vancouver Fire Department dispatch service.

Public Outreach and Community Education

Information has been provided by the Food Policy staff team on urban beekeeping at various community events (including the Environment Canada Sustainability Fair on June 8, 2005, and

Food Policy Forum, June 23, 2005). Food Policy staff intend to organize two public meetings in the fall of 2005 to provide information on honeybees and promote the guidelines.

Training is also available for beekeepers. The BCMAL Apiculture Program provides introductory beekeeping courses through local colleges. BCMAL and Simon Fraser University also offer an advanced apiculture course every two or three years.

There are a number of public education programs on honeybees at Science World and VanDusen Gardens. Preliminary discussions with the Stanley Park Ecology Society reveal that staff members are interested in revising their Fall 2005 School and Public Programs to include honeybees and pollination in the curriculum. Numerous opportunities exist within Vancouver to provide further education to the public on the important role of honeybees as pollinators for food production within the City.

FINANCIAL IMPLICATIONS

It is anticipated that the complaints regarding honeybee colonies will be minimal; however, Property Use Inspectors may be required to visit an apiary site. Minimal human resources will also be required to monitor and collect data on honeybee apiaries in the City.

ENVIRONMENTAL IMPLICATIONS

Urban beekeeping can contribute to pollination, and better harvests in backyard, street, rooftop, and community gardens. By contributing to pollination of City gardens, urban beekeeping is an important complement to urban food production and to the City's sustainability goals.

CONCLUSION

The proposed guidelines for urban apiculture in Vancouver have been developed to complement the existing BCMAL Beekeeper and Apiary Registration system. Council's recent commitment to a sustainable City and a just and sustainable food system for the City of Vancouver would be supported by endorsing the role of honeybees in enhancing the biodiversity of the City and increasing the food production of backyard, rooftop, street and community gardens. Through a working relationship with BCMAL, hobby beekeeping within Vancouver can be a safe and suitable activity for urban residential lots.

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Guidelines for Hobby Beekeeping in the City of Vancouver

1. It shall be the duty of every person on whose property bees are kept to adhere to good management practices and maintain bees in a condition that will reasonably prevent swarming and aggressive behaviour.
2. It shall be the responsibility of the person on whose property the bees are kept to provide adequate water for the bees to prevent bees from seeking water in neighbouring swimming pools, birdbaths, ponds or other community bodies of water.
3. Hobby Beekeeping is to be limited to:
 - a. One- and Two-Family Dwelling Districts (RS- and RT-); or
 - b. Agricultural Districts (RA-1) on sites containing a one- or two-family dwelling; or
 - c. A site containing a community garden; or
 - d. A site where beekeeping will form part of an educational program.
4. A maximum of two (2) beehives per lot in One- and Two-Family Dwelling Districts (RS- and RT-) on a parcel of land less than 10,000 square feet.
5. A maximum of four (4) beehives per lot on a parcel of land with an area over 10,000 square feet.
6. Beehives are restricted to rear yards.
7. In order to ensure the appropriate height of honeybee flight path:
 - a. A beehive will be situated 8 feet or more above ground level; or
 - b. The beehive entrance will be directed away from the neighbouring property and situated behind a solid fence or hedge that is 6 feet in height running parallel to the property line; or
 - c. A beehive will be located a minimum of 25 feet away from the neighbouring property line.

Proposed amendment to the Health By-law to repeal the prohibition of operating an apiary or keeping of bees in the City of Vancouver

Proposed Health By-law No. 6580, Sec. 4.1

No person shall keep or permit to be harboured any horses, donkeys, cattle, swine, sheep or goats, or any live poultry or fowl, including ducks, geese, turkeys, chickens, pheasants or quail, ~~or operate any apiary or otherwise keep bees~~ for any purpose in the City, except that this prohibition shall not apply to a licensed pet shop or kennel, zoological park, research laboratory, veterinary hospital or slaughter house within the meaning of or where otherwise permitted by, the Zoning and Development By-law, unless otherwise stated within this By-law.

Background Information on Hobby Beekeeping

Potential Benefits and Concerns of Hobby Beekeeping in Urban Areas

Potential benefits:

Honeybees as urban pollinators: Pollinators, including honeybees and other insects, are critical to the lifecycle of most horticultural plants and agricultural crops. Urban beekeeping as a hobby can contribute to more productive harvests from backyard, street, rooftop, and community gardens. It is estimated that the pollination services provided by honeybees are often 60 to 100 times more valuable than the market price of honey.

Biodiversity in Vancouver: As pollinators, honeybees contribute to the production of fruits, vegetables and seeds which then provide a food source for birds and other insects, contributing to the health and biodiversity of an urban environment.

Urban food production: The average yield of honey in Canada is 134 lb (60 kg) of honey per colony each year. However, the volume of honey produced can range between 30 - 150 lbs per colony each year. The diverse sources of nectar within the City found in back yards, community gardens and public parks support a long pollination season and, therefore, productive colonies for hobby beekeepers. In addition to honey, beekeepers could also produce honeycomb, beeswax, pollen and royal jelly.

Increased safety: Official recognition of beekeeping within Vancouver would allow for City to provide a list of guidelines for beekeeping in the interest of public safety and responsible beehive management. These guidelines, in conjunction with BC Ministry of Agriculture and Lands (BCMAL) registration and inspection, provide a solid foundation for safe of beekeeping within the City. At the same time, it is recognized that the beekeeper, by virtue of keeping honeybees within City limits and in accordance to City bylaws, remains fully responsible and legally liable for any effects his/her honeybee colonies may have on other parties.

Opportunities for education: The role of honeybees in pollination can be used as an educational tool by beekeepers and educators alike to facilitate the understanding of natural processes and food growth.

Increased registration and inspection with BCMAL: Endorsement of urban beekeeping by the City would require beekeepers to register their hives with the BCMAL. This would enable the Ministry to conduct inspections and control diseases that affect bees.

Potential Concerns and Mitigation Strategies:

Bee stings and allergies: As long as hives are maintained properly, honeybees are generally not aggressive and rarely result in bee stings. Honeybees have been domesticated over centuries and have been selected for certain beneficial characteristics including gentleness, winter-hardiness, disease resistance and honey productivity. Bee stings account for approximately ¼ of insect stings; most stings are caused by wasps, either the Yellow Jacket or the Bald-Faced Hornet. Wasps have a carnivorous diet by hunting other insects, while

honeybees are strict vegetarians deriving their nutrition from pollens and nectar. Hence, honeybees are generally not attracted to food and garbage containers near barbeques and picnic sites. Less than 1% of the population is at risk of a systemic (anaphylactic) reaction to honey bee stings.

Flight Paths: The flight paths of bees from hives can interfere with neighbouring properties and nearby pedestrians if the hives are not positioned appropriately on the site. Maintaining a 6 foot fence or hedge around any property containing bee hives will raise this flight path to 7 or 8 feet above ground, minimizing encounters with neighbours and pedestrians.

Fecal Droppings: Bees can deposit waxy droppings on cars, skylights, hanging laundry and other surfaces. These droppings can be a nuisance and difficult to clean off. This is most pronounced in the early spring, when the bees are taking their first flights after winter dormancy. Restricting the number of hives will control the volume of bees involved in these first flights.

Horses: Bees are fearful of large animals, including horses and cattle, as these large animals have the potential to trample the hive. Horses in close proximity to honeybee colonies may provoke some bees to sting. As a result, it is recommended that bees and horses are not located in close proximity.

Seeking out water: Honeybees may hover at the edges of swimming pools, bird baths and ponds in the summer time while they seek out water. This is most pronounced during the warmer summer months of July and August. This can be mitigated by ensuring an adequate water source is available near the hive. An adequate water source would include a small bucket of water close to the hive, that is not left stagnant, to ensure that this would not pose a threat for West Nile Virus.

Swarming: Bees swarm as part of their natural life cycle in late spring or early summer. The colony follows the Queen, usually not more than 100 feet in a densely populated area. Bees are not aggressive during swarming; however, the presence of a swarm can be frightening to people who do not expect it. Experienced beekeepers can gather a swarm fairly easily. The Provincial Apiculturist and Apiary Inspector are both accustomed to handling swarms, and also keep a "swarm list" of other local beekeepers who will manage swarms in their neighbourhoods. This list will also be available on the City of Vancouver website and discussions with the Vancouver Fire Department confirm that a swarm contact list could also be made available to the public through their dispatch service.

Beekeeping By-Laws in Other Lower Mainland Municipalities

City of New Westminster

- Maximum of 2 beehives and 2 nucleus colonies on properties less than 10,000 square feet; maximum of 4 beehives and 4 colonies on properties 10,000-21,765 square feet; maximum of 6 beehives and 6 nucleus colonies on properties 21,675-43,530 square feet;
- A beehive is not permitted within 25 feet of any parcel of land, except when the hive is 8 feet above ground level or if the hive is behind a 6 foot solid fence or hedge and extending at least 20 feet beyond the hive in both directions;
- No beehives in multi-family zoned properties except a duplex zone.

District of North Vancouver

- Maximum of 4 beehives on properties less than 11,840 square feet;
- A beehive is not permitted within 25 feet of any parcel of land, except when the hive is 8 feet above ground level or if the hive is behind a 6 foot solid fence or hedge and extending at least 20 feet beyond the hive in both directions;
- Beekeeping is not permitted in multiple-family zoned properties, high density residential zone or within 80 feet of a residential building containing more than two units.

Surrey

- Maximum of 4 beehives on properties less than 10,000 square feet;
- A beehive is not permitted within 25 feet of any parcel of land, except when the hive is 8 feet above ground level or if the hive is behind a 6 foot solid fence or hedge and extending at least 20 feet beyond the hive in both directions;
- No beehives on multi-family zoned properties.

Richmond

- No beehives on any parcel containing a one-family dwelling, two-family dwelling or multiple-family dwelling;
- No beehives within 75 feet of a property line of a parcel of land with a one-family, two-family or multiple family dwelling;
- A person must not keep more than 4 colonies of bees on a parcel having an area of less than 10,000 square feet.

West Vancouver

- Maximum of 4 beehives on single family and duplex zoned properties;
- A beehive is not permitted within 25 feet of any property line, except when a hive is 8 feet or more above ground level or behind a 4 foot high fence or hedge extending 20 feet beyond the hive in both directions;
- Beekeeping is prohibited in other zonings.

Langley Township, Pitt Meadows, Port Coquitlam

- Beekeeping is only permitted in agricultural zoned properties.

Background Information on Honeybees and Urban Apiculture

Honeybees have been domesticated for over 3,000 years. They are social insects, with a marked division of labour between the various types or castes. A colony of honeybees includes a queen, several hundred drones (male bees) and several thousand worker bees (females) who gather nectar to make honey.

The word apiculture is derived from the honeybee's Latin name *Apis mellifera*, which means 'honey gatherer.' Honeybees collect nectar to produce honey. While they are gathering nectar from plants to create their food source, pollen grains are also transported on their bodies, leading to pollination of other plants. Over the last 90 million years, flowering plants and bees have co-evolved, creating a complete interdependence between the two. The availability and variety of food producing and ornamental plants in an urban area provides diverse nectar sources for pollinators. The presence of urban pollinators can increase

harvests for backyard, street, rooftop, and community gardens. It is estimated that the pollination services provided by honeybees are often 60 to 100 times more valuable than the market price of honey.

Honeybees and humans have coexisted successfully for thousands of years. Cities in Europe and North America (including several municipalities in the GVRD) have sanctioned hobby beekeeping within city limits. Guidelines for beekeeping in municipal areas are developed with the intent to minimize the interface between honeybees and residents of the city. With appropriate guidelines, hobby beekeeping can be a safe and suitable activity for urban areas while at the same time, provide the required pollination for urban food production.

The Social Setting of the Colony

Honeybees require the social setting of the colony and cannot survive on their own for very long. It is the colony that matters, where tasks are accomplished through division of labour. Every member works, not for itself, but for the benefit of the colony. For example, during the summer season, large quantities of nectar is gathered to produce and store honey, even though the individuals do not live long enough to feed on these reserves during winter. Any defensive behaviour exhibited by an individual bee is not for herself, but rather for the benefit of the colony. Since stinging mostly results in death, the use of the stinger is of no value to the individual bee.

Colony Information:

- Honeybees are social insects, with a marked division of labour between the various castes of bees in the colony. A colony of honeybees includes a queen, drones and workers.
- A normal colony of honeybees contains only one queen who may lay 2,000 eggs per day during her busy season. There may be as many as 60,000 worker bees (females) who gather the nectar and make the honey. There will also be several hundred drones (male bees).
- The queen may live up to 5 years. Drones live 4 to 6 weeks. During the active season, workers live about 5 to 6 weeks. Over-wintering workers may live 4 to 6 months.
- A colony of honeybees in early spring has 10,000-15,000 bees.
- A colony of honeybees in summer has 50-60,000 bees.

Nectar Collection for Honey:

- A worker bee creates 0.8 gram (0.0288 ounce) of honey in her entire life.
- It requires 556 worker bees to gather a pound of honey.
- Bees fly more than once around the world to gather a pound of honey.
- Nectar, as gathered by the bee, contains about 70% water (honey is about 17% water).
- Bees remove the excess moisture from nectar by rapidly fanning their wings over the open cells in the hive.
- Honeybees have been used by humans for their honey needs for thousands of years.
- A honeybee flies up to 24 km /hr and its wings beat 200 times per second or 12,000 beats/minute.

(Source: Apiculture Factsheet #104, BC Ministry of Agriculture and Lands, <http://www.agf.gov.bc.ca> and Canada Honey Council <http://www.honeycouncil.ca>)

BCMAL Beekeeper and Apiary Registration

BCMAL administers the apiculture registration system for British Columbia. This registration system licenses both the beekeeper and the apiary location. Under the authority of the Provincial Bee Act, a person must not keep bees or possess beehive equipment unless the person is registered. The Act also stipulates that a person must not allow bees to be kept on land owned or occupied by the person unless the land is registered under the Act as the location of an apiary. It is possible to refer complaints to the Provincial Apiculturist and if a person or their property is not registered, a BCMAL inspector has the authority to destroy or dispose of the bees or beehive equipment.

By maintaining a registration system of beekeepers, the location of an apiary and the number of colonies on each property, BCMAL is able to analyze the context in which the colonies are situated. Upon site inspection, an Apiary Inspector determines whether or not the site chosen is appropriate for honeybee colonies. For example, it would be the discretion of the Provincial Apiculturist and Inspector to determine whether or not registration would be granted to a beekeeper and apiary if located in close proximity to a school. Further, a certificate of registration would not be issued for an apiary in a new location if it was too close to an already existing apiary, as it may interfere with normal beekeeping operations or promote the possibility for spread of disease.

Various mechanisms to address and control the spread of disease are articulated in the Bee Act. For example, the approach for inspection, disease control and treatment are outlined. The Act also addresses issues regarding the health of honeybee colonies and swarming. BCMAL has penalties and enforcement tools to support the implementation of the Act and promote good beekeeping practices. Finally, the Provincial Apiculturist and Inspector hold the authority to cancel a certificate of registration if the beekeeper has failed to comply with any aspect of the Act.

Background of Proposed Guidelines

The Provincial Apiculturist and the Regional Apiary Inspector from BCMAL recommend limiting the number of colonies permitted on residential City lots. Limiting the number of colonies to two (2) hives per lot will ensure sufficient pollen sources for the bees and also mitigate the concentration of bees in the denser urban areas of the City (further information on honeybee colonies is attached in APPENDIX C).

The Provincial Apiculturist also recommends that appropriate fencing or vegetation (e.g. hedge) surrounds any apiary in residential areas. Maintaining a 6 foot fence or hedge around a yard containing bee hives will raise the flight path of bees to 6 - 8 feet above ground. This will minimize encounters with neighbours and pedestrians. A 6-foot fence is in accordance with current Zoning and Development By-law for the rear and sides of a yard.

A surrounding fence or hedge may not be necessary in agricultural areas (RA-1 zones) if hives are located at least 25 metres away from the property line. This distance ensures that the bees have the appropriate distance to raise their flight path at least 6 feet above the ground by the time they reach the property line. This will minimize the risk of encounters with neighbours, pedestrians and - significant to the RA-1 zone - horses.

Definitions

Apiary: A place where one or more honeybee colonies are kept.

Apiculture: The keeping and management of the honeybee, *Apis mellifera*.

Beehive: A beehive is made up of a series of rectangular boxes stacked one on top of the other, which house a colony. Standard dimensions of these boxes are 20 X 16.5 X 9.5 inches (or 50 X 42 X 24 centimetres).

Honeybee colony: A cluster of worker-bees with a queen and drones.

Re-queening: The process of replacing an existing queen with a new queen in a colony of bees.

Swarming: The natural method of honeybee colonies to reproduce, resulting in the departure of part of the bee population with a queen to create a new honeybee colony.