A Tech Transfer Team for BC?

Tech transfer teams now exist or are just starting in all provinces of Canada except British Columbia. For comparison, here is a list of the six provinces/regions with their tech team initiation dates and numbers of beekeepers and colonies.*

Ontario: began early 1990's; 3026 beekeepers; 100,413 colonies

Quebec: began in 2006; 1129 beekeepers; 65,128 colonies

Saskatchewan: began in 2010; 1059 beekeepers; 115,000 colonies

Atlantic: began in 2016; 1045 beekeepers; 47,762 colonies

Alberta: began in 2019; 1801 beekeepers; 312,218 colonies

Manitoba: 2020 - about to be initiated; 834 beekeepers; 114,098 colonies

(British Columbia: 2676 beekeepers; 52,033 colonies)

The mandates for each of these teams differ to some extent, but include priorities such as providing presentations, demonstrations of new technology, individual producer's services including field testing and sampling, workshops on queen rearing and breeding, integrated pest management, and more advanced training on practical management issues, in addition to many applied-type practical research projects. In the Atlantic region, for example, the tech team led 5 main research projects in 2018: 1) queen rearing; 2) Miticide resistance and efficacy project; 3) pollen supplementation; 4) pollination study in blueberry; 5) Nosema project. Tech teams across the country provide an avenue for collaboration, such as the 2019 joint meeting with the Bee Informed Partnership (= US tech teams) in Montreal, during Apimondia.

A lot can happen in a short time! The most recent (2019) tech transfer team is in Alberta, with Renata Borba leading the initiative. She is now in the process of hiring one other full-time person, and organizing additional seasonal help for the coming year. She recently organized the Southern Alberta Beekeepers' meeting just south of Calgary and presented plans for this year to attending beekeepers. Those plans include on-farm IPM workshops for large operations and their employees, a fee-for-service sampling, testing and consultation program, a larger IPM course to be held in different areas, and developing a hands-on queen rearing course for hobbyists, in addition to research projects including mass queen banking over winter geared explicitly for Alberta conditions. And she's only been on the job a few months!

Specifically, some of the functions that a BC tech transfer team could take on include: providing real-time sampling for pest and disease levels, including giving beekeepers data-driven management advice to guide them moving forward; providing regional testing and post treatment sampling for early warning of varroa mite resistance to commonly used treatments; providing skilled observations of colony health issues under pollination conditions; providing expertise and labour to carry out applied research projects

with beekeepers (eg., the recent blueberry project would have been an ideal project for a tech transfer team to carry out); providing stock testing for queen breeders; providing workshops on IPM, queen rearing and more advanced management in various regions; providing workshops and one-on-one advice to urban beekeepers to promote nuisance-free beekeeping; and lastly, providing training webinars on specific management aspects for beekeepers in remote locations and during times like this when in-person teaching is not possible. The many bee clubs in the province would provide an ideal avenue through which to educate and reach out to hobbyists. Ultimately, a BC tech team's mandate would be determined by the beekeepers of BC, with support and direction from the BCHPA.

Tech transfer team funding

In all cases, tech transfer team funding comes from many sources, with founding funds from the provincial beekeeping association and the provincial ministry of agriculture. Federal or provincial partners have also provided funds through programs such as CAP or ADF (Agriculture Development Fund) or ADOPT (Agricultural Demonstration of Practices and Technologies), and funding could also flow from other industry sectors which may stand to benefit from the presence of a tech team. Some tech teams offer services to beekeepers on a fee-for-service model, or contracts with blueberry or cranberry growers, for example, for hive strength inspection services during pollination.

One of the main responsibilities of a tech transfer team leader is to secure additional funding by applying to granting agencies and developing research proposals that could qualify for research funds from agencies such as the Canadian Bee Research Fund, the Boone Hodgson Wilkinson Trust Fund, and Project Apis M.

Most tech transfer teams across the country operate with 1 or 2 full-time individuals and 1 or 2 assistants for seasonal help. Ontario is the exception – it has been in existence the longest, and has grown to up to 10 people at their busiest time of year.

A tech transfer team within our province could be a huge benefit to BC beekeepers and the industry. A practical example was given at the joint US BIP/Tech team meeting in Montreal: comparisons between beekeepers participating with the US tech teams and other bee operations surveyed in the US national APHIS survey showed a significantly lower varroa prevalence and load for tech team participants. But the biggest benefit would be the increased level of reliable knowledge that would be available to BC beekeepers, translating to a better understanding of our bees, better management, and healthier bees!

* 2018 Annual Report from the Canadian Association of Professional Apiculturists

Submitted by Heather Higo