

Sustainability in the City and Beyond

Concordia University

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Beekeeping in Canada: Assessing Trends of Self-Sufficiency and Commodification of Honey Bees

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This honours thesis examines trends in beekeeper self-sufficiency and commodification of honey bees to better understand the barriers and pathways to sustainable and healthy economic and socio-ecological beekeeping regimes. The European honey bee, *Apis Mellifera*, is the single most populous and economically valuable bee species for agricultural crops in Canada. Historically, honey bee populations in Canada and globally, have experienced reoccurring fluctuations caused by issues in bee health, socio-economic and socio-political developments. The Canadian beekeeping industry depends on external sources to maintain current populations, however the outstanding benefits of locally-raised honey bees is widely acknowledged. Current trends in the commodification of honey bees in Canada include two equally common approaches: i) use of imported bees, and ii) domestic and individual self-sufficiency. Notably, a mixed-model is emerging that propagates Canadian bee stock externally and imports it to Canada in early spring. In the face of recent challenges to honey bee health and the beekeeping industry, well-established Canadian beekeeping regimes, with geographically specific sets of productive and organizational patterns, have been slow to increase domestic self-sufficiency. Common explanations focus on environmental constraints of Canada's northern locations that do not make this approach to beekeeping economically feasible. However, this study shows that rather than only environmental, biologic, and economic constraints to beekeeper self-sufficiency there are also significant social barriers deeply entrenched in beekeeping cultures. This study indicates that the social practices that form beekeeping ideologies are a crucial factor in achieving greater self-sufficiency. Out of the three Prairie provinces, which contain 69% of Canada's honey bee populations and produce 80% of Canada's honey, the case of Saskatchewan demonstrates that a shift in material practices initiated by a few influential figures, and their concerted efforts to promote beekeeper self-sufficiency altered local beekeeping ideology for decades. Social capital, including initial hands-on training, resulted in self-reinforcing dynamics in the social environment that transformed the beekeeping culture to the point that Saskatchewan is currently remarked to have a different approach to beekeeping than its neighbouring provinces. I invoke theory from socio-ecological frameworks analysis to consider the dynamics between bees, beekeepers, the environment and society, and finally, socio-ecological resiliency in the apicultural sector. The impacts of beekeeper self-sufficiency were found to include, creating deeper ecological connections, deepening bee and local knowledge, and minimizing vulnerabilities inherent in the global lively commodity market.



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This study highlights, in particular, how the politics of hive management are shaped by choices of participating in the global bee trade or beekeeping with rootedness in time and place. These various beekeeping ideologies ultimately have impacts on national biosecurity, food system security, and economic stability. Self-sufficiency that entails quality locally-raised bees and non-participation in international bee trade presents one pathway to achieve greater positive socio-ecological resiliency and economic independence in the face of unpredictable pressures in the apicultural sector. The creation of regional and national beekeeping networks and institutions have been key to building the industry and (re)developing local knowledge. This research demonstrates the social and material practices that contribute to creating robust and desirable beekeeping regimes, specifically, how the politics of hive management are influenced and how social networks and institutions develop and promote beekeeping ideologies. These socio-ecological regimes merit attention in this moment of increasingly large-scale operations with intensive beekeeping practices, habitat degradation, and a myriad of challenges to honey bee health. Understanding the trends and values of domestic and individual beekeeper self-sufficiency and the commodification of honey bees is essential to re-imagining more democratic economies and embracing the potential to reshape beekeeping cultures and industry in ways that are economically and ecologically sustainable.



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