IMPORTATION OF PACKAGED HONEY BEES FROM CALIFORNIA, UNITED STATES TO MANITOBA, CANADA

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INTRODUCTION:

Overview

The objective of this document is to solicit support from the Federal Government of Canada to allow packaged honey bees to be imported from California to Manitoba under a Federal-Provincial import permit that is granted under the provincial and federal animal health legislation as an exemption to *Honeybee Importation Prohibition Regulation*.

Given the level of cooperation and shared responsibility that CFIA and provincial authorities undertook to maintain queen honey bee imports when small hive beetle was discovered in Hawaii and Australia, and how some provinces have implemented policies to exclude importation of bees from specific exporting countries and provinces, there is sufficient precedence to suggest that a cross country ban on imports is not the only solution to mitigate disease risk. Especially with a country that has a shared border, which has been proven to be incapable of excluding natural dispersal of honey bee diseases into Canada.

In this document, the Manitoba Beekeepers' Association (MBA) in cooperation with Manitoba Agriculture, Food and Rural Development (MAFRD) have prepared a rationale that proposes that risk factors outlined in the "Risk Assessment on the Importation of Honey Bee (Apis mellifera) Packages from the United States of America – (V13) September 2013" (a.k.a. AHRA-2013) are not the same in every province and should not be uniformly applied to determine the cost/benefit for every province for maintaining the *Honeybee Importation Prohibition Regulation, 2004.* In addition, we will present a counter-argument that the current importation ban does not protect Manitoba's beekeeping industry from the aforementioned risk factors and that continuing the prohibition is harmful to Manitoba's beekeeping prosperity.

Background

In 1987, in response to the outbreak of two parasitic mites in the US; Honey Bee Tracheal Mite, *Acarapis woodi* and Varroa Mite, *Varroa destructor* the federal department of Agriculture closed the border to the importation of honey bees (e.g. queens and packaged honey bees) from the continental US. Since then the debate over the need to maintain a closed border after these mites were discovered in Canada has been a source of a great deal of controversy and division in Manitoba's beekeeping industry. Although the mite spread naturally across the border, the importation ban was maintained because of the presence of other exotic pests reported in the US and not in Canada, such as Africanized Honey Bee and Small Hive Beetle as well as treatment resistant strains of endemic pests (e.g. American Foulbrood and Varroa mite).

Over the years, the Manitoba Beekeepers' Association (MBA) has conducted numerous surveys and referendums to determine the current position of Manitoba's beekeepers toward supporting the continuation of the honey bee importation ban. The outcomes of the surveys were generally very close, in that, virtually half of the beekeepers wanted to maintain the border closed and the other half wanted to see the regulation repealed. Nationally, support for maintaining the status quo was the position that the majority of the Provinces as well as Canadian Honey Council (CHC) upheld over the years.

With the recent decline in the health of domestic honey bees in many parts of Canada, including Manitoba, support for the status quo was declining as well. In conjunction with growing demand for more and better adapted queen stocks to assist in dealing with the consequences of declining bee health (i.e. higher wintering losses), the support for maintaining the full importation ban (i.e. status quo) was no longer acceptable. In 2002, the majority of beekeepers in Manitoba supported changes to the importation ban to allow greater access to imported queens, including sources where varroa mite was endemic. Support for change was also being demanded in other provinces as well (BC, AB, and Maritimes). In 2004, the *Honeybee Importation*

Prohibition Regulations, 1999 was repealed and replaced with a regulation that continued to prohibit the importation of packaged honey bees but would allow for the import of queen honey bees with attendants. This regulation change allowed industry to import queens from specifically designated regions and/or queen producers of California to help replenish bee stocks in a controlled and regulated fashion that posed a minimal risk to the health of domestic honey bee stocks.

Support for changing the prohibition regulation to allow queen imports was not supported by all provinces, but a risk assessment conducted by the Canadian Food Inspection Agency (CFIA) in 2003 (a.k.a. AHRA-2003) identified the principal risk factors of concern. With this information, industry stakeholders in conjunction with provincial and federal governments were able to develop import conditions that addressed many of the risks.

In addition to federal import conditions to mitigate risk, existing provincial legislation enables any concerned province to prohibit the entry of unwanted honey bees into their province. Currently, inter-provincial movement of bees requires that a permit or permission be granted from the provincial apiculture authority to the person(s) moving honey bees to or through a province prior to the bees being moved from the province of origin. Furthermore, some provinces, such as Ontario, require a provincial permit to import honey bees into and through Ontario even though the beekeeper may already have been granted a federal permit. It is important to note that without defined ports of entry between provinces, policing inter-provincial movement continues to be identified as an on-going challenge but appears to have worked successfully for many years.

In response to extensive wintering losses being reported this spring (i.e. winter 2012-2013), and the anticipated shortage of available replacement bees to cover the losses, the MBA held a Special General Meeting on May 3, 2013 to seek direction on pursuing a campaign to access packaged bees from the US this spring. The majority of the voting members in attendance voted in supported (i.e. 74%) of an immediate end to the prohibition on imported packaged bees from the continental US. As part of the conditions for removing the import prohibition, MBA does not want the "no-comb law" removed, as this restricts bees on comb from entering the country and supports the establishment of import protocols to minimize risk of importing pests such as treatment-resistant varroa mite, American Foulbrood, Small Hive Beetle, and Africanized honey bees.

RISK FACTOR THREAT RATIONALE

1. Risk Factor - Africanized Honey Bee (AHB)

The risk factor associated with the introduction and establishment of AHB as identified in CFIA's Risk Assessment (AHRA-2013) was considered low - moderate risk. Predominately because of the limited distribution of AHB in the US, especially in northern states, it was viewed as unlikely to establish in most areas of Canada. Although southern B.C. may be at highest risk due to environmental conditions in that part of the country, there does not appear to be strong evidence that AHB has adapted to any locations in Canada.

In Manitoba's case, honey bees coming into North Dakota from all parts of the US, including states like Texas where AHB is known to be endemic, has not resulted in the threat to beekeeping that was once feared when initially recorded in the US in the 1990s. Given there is no physical barrier preventing aerial dispersal of honey bee populations across the border between North Dakota and Manitoba, natural dispersal of bees and pests is unavoidable. Manitoba does not have a required setback distance from the border prohibiting

apiaries and neither does North Dakota. In some cases the distance between apiaries in North Dakota and Manitoba is less than 5 kilometers. Under those circumstances intermixing of honey bee populations, including drones, is highly possible. In the 20 years that AHB has been known to exist in the US there does not appear to be any record of aggressive bees suspected of being associated with AHB in North Dakota. Manitoba has also never had any reports of unusually aggressive bees in honey bee populations near the border.

In addition to being a low risk for dispersal and establishment in Manitoba, the import conditions for queens from California (mDNA testing) would help to ensure the risk of introducing this pest, via the importation of packaged honey bees, would remain low. The fact that Manitoba has imported queens from California since 2004 should help to provide confidence that the risk of importing AHB in packaged honey bees is low, since many of the queen suppliers are also potential suppliers of the packaged honey bees.

The comments in the risk assessment (AHRA-2013) regarding the threat of transmission of AHB genetics through drones are completely speculative and unsubstantiated! The fact that areas of the northern US have purchased packaged honey bees from areas known to have AHB for nearly 20 years without reports of problems of AHB establishment, further suggests this argument is hypothetical and should not be used in the probability estimates for a northern climate like Canada. That said, if necessary, drones can be excluded from the population of bees using excluders, so this requirement could easily be added to any import requirement for imported packaged honey bees to Canada.

In our opinion, the assessment of risk associated with AHB was overestimated and there is no justification that the risk estimate be anything but **negligible** at least for Manitoba (Table 1). Furthermore, there has been no significant testing for AHB genes in Canada to demonstrate that the distribution of those genes are absent or different than what currently exists in places like California where we have been importing queens for almost 10 years.

Recommendation:
That the current import conditions for mitigating AHB introduction risk associated with queen importation to Canada from California (i.e. negative AHB mDNA test result) be included in the Manitoba specific Import Permit for packaged honey bees from California. Consideration may be given to include requirements for drones exclusion from the population of bees going into packages exported to Manitoba, provided that CFIA is able to substantiate that this is a necessary risk reduction practise worthy of including in the import protocol.

2. Risk Factor – Antibiotic-Resistant American Foulbrood (rAFB)

The risk factor associated with the introduction and establishment of rAFB as identified in CFIA's Risk Assessment (AHRA-2013) was considered moderate. This is absolutely an overestimation of risk not only for Manitoba but also any province that allows inter-provincial movement of bees and hive equipment from Alberta, where rAFB is regarded as endemic. The fact that rAFB has been found in Manitoba since 2003 and that Manitoba allows inter-provincial movement of bee equipment and bees from Alberta would suggest that the risk associated with this disease has been deemed acceptable provided that inter-provincial movement requirements have been met.

Furthermore, the fact that in Manitoba rAFB has only been detected in 10 operations in 10 years would suggest that the spread of the disease is manageable given current disease control practices and early detection activities. It has been our experience that in most cases, positive rAFB operations can get the disease under control within one year with the use of the antibiotic Tylan Soluble (100g tylosin tartrate).

Tylan Soluble is now registered in Canada for the control of AFB, which will make it more readily available than it was in 2003 when it required a veterinary off-label prescription.

It is important to note that Tylan Soluble degradation is much slower than the oxytetracycline hydrochloride based antibiotic, therefore it carries a higher risk for residues in the hive as well in the hive products (e.g. honey). Educating Manitoba beekeepers regarding the risks of proper use of Tylan Soluble will be part of the mitigation activities associated with the greater use of Tylan Soluble. A worldwide practice to combat AFB has been to shake bees off old infected comb into new equipment and clean comb, which would be similar to shaking bees into packages. In our opinion, the risk estimate in Manitoba for rAFB would negligible but the fact that Manitoba allows bees from Alberta puts into question whether this hazard should be included in the risk assessment (**i.e. not applicable**) and packaged honey bees from California should be treated the same as bees being moved inter-provincially from Alberta (Table 1).

Recommendation:

That the conditions for mitigating rAFB introduction risk, associated with inter-provincial movement of honey bees from Alberta to Manitoba and/or queen imports from California (i.e. acceptable inspection tolerance level is zero), be required in the Manitoba specific Import Permit for package honey bees from California. Educating Manitoba beekeepers regarding the risks of proper use of Tylan Soluble will be part of the mitigation activities associated with the threat of greater use of Tylan Soluble. This education component of the mitigation activities will be provided by MAFRD.

3. Risk Factor – Small Hive Beetle (SHB)

The risk factor associated with the introduction and establishment of SHB as identified in CFIA's Risk Assessment (AHRA-2013) was considered low – moderate risk. The risk is considered on the lower end of the scale predominately because it is unlikely that SHB would establish successfully in most areas of Canada. Although it is true that SHB is not likely to be a problem in most parts of Canada, SHB has been found to successfully survive winter in some areas in Ontario and Québec and is regarded as endemic in parts of southern Ontario.

Manitoba's experience with SHB supports that the risk of introduction is possible but that poor establishment of this pest in Manitoba would suggest that the economic impact risk to the industry (i.e. consequence) would be **negligible**. On four separate occasions, SHB has been found in Manitoba. Each occasion was associated with a different route of entry:

(1) shipment of un-rendered beeswax from Texas (2002)
(2) shipment of packaged honey bees from Australia (2006)
(3) shipment of queen honey bees from Hawaii (2011)
(4) dispersal of adult beetle across the US-Canada border (2012).

In all cases, there was no evidence of beetle establishment beyond the winter, and damage to the honey bee population or equipment was not detectible.

It is important to note that although SHB has been recorded to occur in California, the environmental conditions in northern California where the packaged honey bees will be produced is generally reported not to be considered suitable for SHB propagation, therefore it is regarded as a secondary pest similar to wax moth.

Lastly, at the time of the previous assessment (RA-2003), there were no registered SHB treatments in Canada. Currently however there is one registered in-hive treatment and there are multiple commercially available trapping/monitoring devices available to assist beekeepers to manage the pest, if on the rare occasion the SHB population control is required.

Again to date, Manitoba's experience with SHB suggests this pest is poorly adapted to Manitoba environmental conditions, especially beyond the year of introduction. In our opinion, the additional risk of SHB identified with packaged honey bees is overestimated in Manitoba's case. Although entry probability via packaged honey bees from California is possible, in reality dispersal across the US border from hives in North Dakota is currently considered a higher risk for this pest. The exposure probability due to poor reproductive and establishment capabilities once this pest enters Manitoba suggests the risk is low. The entry and exposure probability matrix would therefore be low. To date, the consequence estimate has been demonstrated to be negligible; therefore even with a high probability of entry, the costs and losses associated with SHB may be viewed as insignificant. The overall risk estimate in Manitoba would therefore be considered **negligible** (Table 1).

The fact that SHB entry into Manitoba is believed to be occurring at this time via natural dispersal from North Dakota lessens the cost/benefit value of not allowing the import of packaged honey bees to significantly reduce its risk of entry. The fact that Manitoba allows inter-provincial movement of honey bees from Ontario, known to have an endemic population of SHB would suggest that the risk associated with this pest has been deemed acceptable in Manitoba, provided that inter-provincial movement requirements have been met. Due to the fact that the consequence of this pest in Manitoba is considered negligible, for all intents and purposes, the risk estimate for SHB for the beekeepers along the border in Manitoba would likely not change at all whether packaged bees from California were permitted or not.

Recommendation:
That the conditions for mitigating SHB introduction risk associated with inter-provincial movement of honey bees from Ontario to Manitoba and/or queen imports from California (i.e. acceptable inspection tolerance level is zero) also be required in the Manitoba specific Import Permit for package honey bees from California.

4. Risk Factor – Amitraz-Resistant Varroa Mite (rVarroa)

The risk factor associated with the introduction and establishment of rVarroa as identified in CFIA's Risk Assessment (AHRA-2013) was considered moderate. As it stands right now, the threat of rVarroa would be regarded as the greatest threat to Manitoba's beekeeping industry of all the threats identified in AHRA-2013 and downgrading that risk estimate to low would likely only be achieved through mitigation procedures required as part of the import protocols (Table 1). The question now, is what import mitigation procedures would be required to reduce the threat of rVarroa even further and more in line with the other risk factors in this document. At the time of AHRA-2003, the treatment-resistant varroa mite referred to in the document was fluvalinate-resistant varroa mite. Today the treatment-resistant varroa mite of concern would be amitraz-resistant varroa mite.

In general, the Canadian experience with the spread of rVarroa, regardless of which treatment the mites have developed resistance to, has been that barriers established to contain the pest, such as quarantine areas or import restrictions have provided limited protection. In Manitoba, once rVarroa has been detected, within a 3 to 4 year period it will have spread to all of the major beekeeping areas of the province. In all cases, the original foci of Varroa and rVarroa in the province have occurred first in the southern regions of the province, near the US border. It could be argued that because beekeepers near the border traditionally began using treatments to control Varroa first they would also be the first to have problems with rVarroa. It could also be argued that because Varroa initially entered into Manitoba through natural dispersal across the US border, it is also very likely that rVarroa resistant to amitraz will also enter Manitoba via the same route.

It has been Manitoba's experience that once rVarroa becomes widespread in the US, the beekeepers in the southern region of the province near the border will start to see problems with rVarroa in their colonies. This

happened with fluvalinate-resistant rVarroa and coumaphos-resistant rVarroa. Manitoba's beekeeping industry therefore has very limited protection from rVarroa once it gets into North Dakota.

At this time, there are conflicting reports as to the extent of rVarroa to amitraz in the US. Some reports indicate that it is likely widespread because the US beekeepers have been using it extensively even though it was not registered for Varroa control. There are very few published papers denoting the extent of resistance. Elzen et al (2000) first reported the occurrence of rVarroa to amitraz before it was commonly being used to control varroa. Sammataro et. al. (2005) also reported finding the esterase profile associated with amitraz resistance in mite populations at various locations in the US, including California. The findings were very peculiar, in that at the beginning of the study, (Spring 2003) some of the mites were susceptible to all three acaricides being tested but several months later, (Fall 2003) most of the mites were exhibiting the esterase profile for resistance to all three acaricides. In some cases, the resistance was being reported in mite populations that were not being treated with any acaricides. These results seem to be somewhat unlikely, mite resistance without any selection pressure. The author noted some deficiencies in the study and questioned whether the esterase activity gel method was a reliable technique at detecting multiple resistances.

The manufacturer of Apivar, (3.33% amitraz) has cited a couple of recent studies on their website (http://apivar.net/customer-support/) that have demonstrated the effectiveness of Apivar to control varroa mite in the US (Pettis and vanEngelsdorp, 2009; Eischen et. al., 2012). Personal communication with Eric Mussen at the University of California, Davis also put into question how extensive amitraz resistance is in the US. "*You would think that if resistance started that quickly, it would have advanced a good deal by now, since amitraz has been the treatment of choice by many of our beekeepers for a long time.*"- quote from email communication with Eric Mussen, (Entomology Extension UC Davis). Lastly, Valerie Severson from Strachan Apiaries Inc, which is one of the main California queen exporters to Manitoba, reported that they have never heard of any of the queen breeders in the area reporting problems with rVarroa to amitraz.

The current acceptable level of Varroa mite on the import permit from countries that have Varroa but do not have rVarroa is 1% or less. There may be additional mitigating procedures that could help to reduce the risk of rVarroa further, but is it appropriate if countries like New Zealand and Chile that currently have varroa and use amitraz-based varroa control treatments are only required to meet the maximum 1% standard?

Below are some examples of additional mitigation procedures that could be considered to help reduce the risk of introducing rVarroa through importation of packaged bees from California:

- Testing the exporting honey bee operations for rVarroa as part of the export requirements (rVarroa bioassay test, a.k.a. Pettis test).
- Follow up testing of hives established from import packages to monitor Varroa mite levels.
- Canada has several organic acid treatment products registered for Varroa control, so in order to reduce the risk of allowing rVarroa to spread, treating the imported honey bee population prophylactically with an organic acid product would theoretically reduce the number of both resistant and nonresistant Varroa mites.

Recommendation:

That the import conditions used in the Manitoba specific Import Permit for packaged honey bees from California be the same as the conditions used to import queens to Canada from California and the same used to import packaged honey bees from New Zealand or Chile (i.e. acceptable inspection tolerance level for varroa mites is set at 1% or less). The 1% maximum level is based on the average mite infestation per sample taken from 60 individual hives from a total of 4 separate apiary sites. A sample is regarded as a minimum of 300 adult bees collected off of brood comb. Consideration may be given to including some or

all of the following mitigation procedures: amitraz resistance testing as part of the export requirement, follow up Varroa mite testing, and prophylactic treatment of packaged honey bees with registered organic acid treatments.

Table 1. Summary of the Risk Assessment Hazards for Packaged Honey Bee Imports from California to Manitoba.

Hazard	Entry Probability	Exposure Probability	Consequence Estimate	Risk Estimate
Africanized Honey Bee (AHB) (Hybridized African and European honey bee)	Low	Low	Negligible	Negligible
Resistant American Foulbrood (rAFB) (oxytetracycline resistant AFB)	Small	Low	Low	Negligible – Not applicable
Small Hive Beetle (SHB) (*Aethina tumida* - USA phenotype*)*	High	Low	Negligible	Negligible
Resistant Varroa Mite (rVarrao) (amitraz resistant varroa mite)	Moderate	Low	High	Low

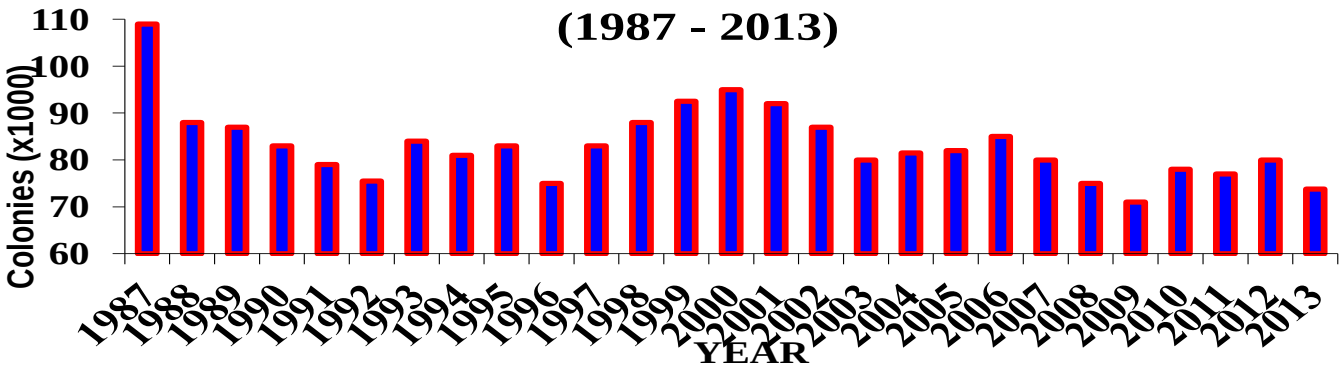
RISK TO BEEKEEPING PROSPERITY

In terms of risk to beekeeping prosperity in Manitoba if packaged honey bees were imported to Manitoba from California, one could argue that the risk factors discussed above are generally considered a lower risk than keeping the border closed. The growth of the beekeeping industry in Manitoba has stagnated. One could argue that there may be numerous reasons why Manitoba's beekeeping industry has not grown recently beyond the 85,000 hives when compared to the 110,000 hives in 1987 before the border was officially closed to packaged bees from the US (Figure 1). But one could <u>not</u> argue against the fact that over the last 7 years, higher losses over winter due to declining bee health and adverse weather conditions has created a situation where sustainable growth of the industry is not possible with the current supply of replacement bees. Figure 2, shows that despite increasing honey prices since 2006, the number of colonies over that period of time have been on an overall decline.

Last winter (2011-12), average honey bee losses in Manitoba were 16%. This winter (2012-13) the average honey bee losses in Manitoba were 46.4% with many of the surviving colonies being too weak to assist with helping to replace the lost colonies. Extra packaged honey bees from New Zealand and Australia/Tasmania were brought into Canada to help meet the demand, but we are still anticipating that the number of honey bee hives in Manitoba will be down by as much as 8% (i.e. 6,200 colonies). This loss equates to a minimum of $2 million in lost honey production alone and does not include the extra labour and livestock replacement costs.

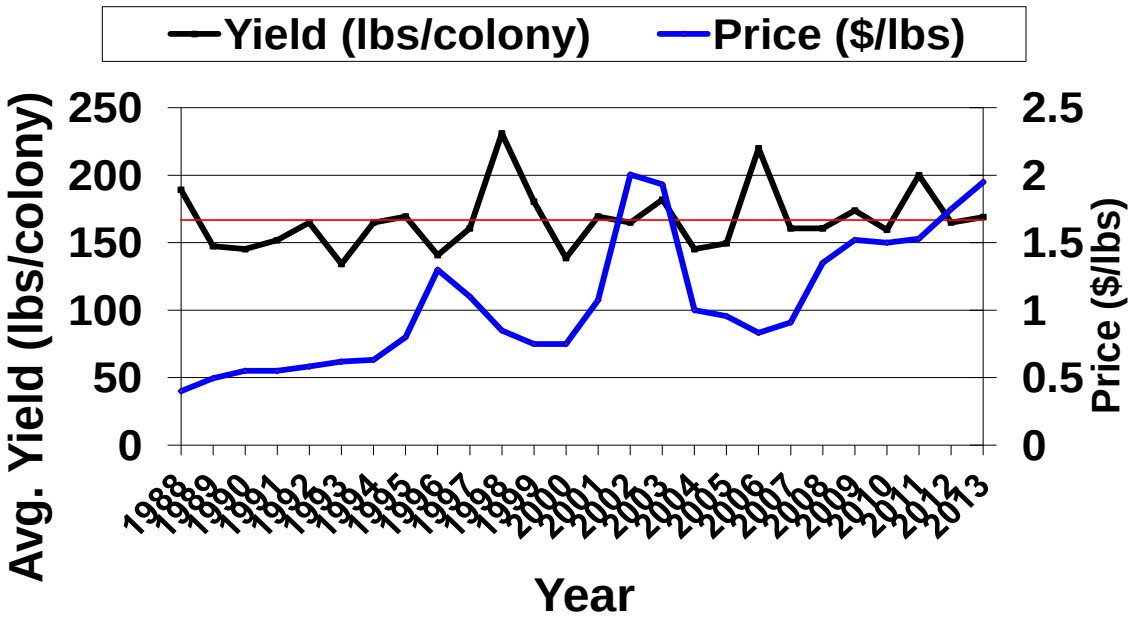
At a recent auction sale, small hives (i.e. nucs), which traditionally sell for $140 - $170 were selling for $220 -$275. One could say that limited supply and/or high demand is having a dual impact on the already vulnerable beekeepers that have lost close to 50% of their colonies.

Figure 1: Honey Bee Colonies – Manitoba



Data Source: Manitoba Agriculture Yearbook (1988 – 2013)

Figure 2: Manitoba Honey Production per Hive Average and Average Price of Bulk Honey



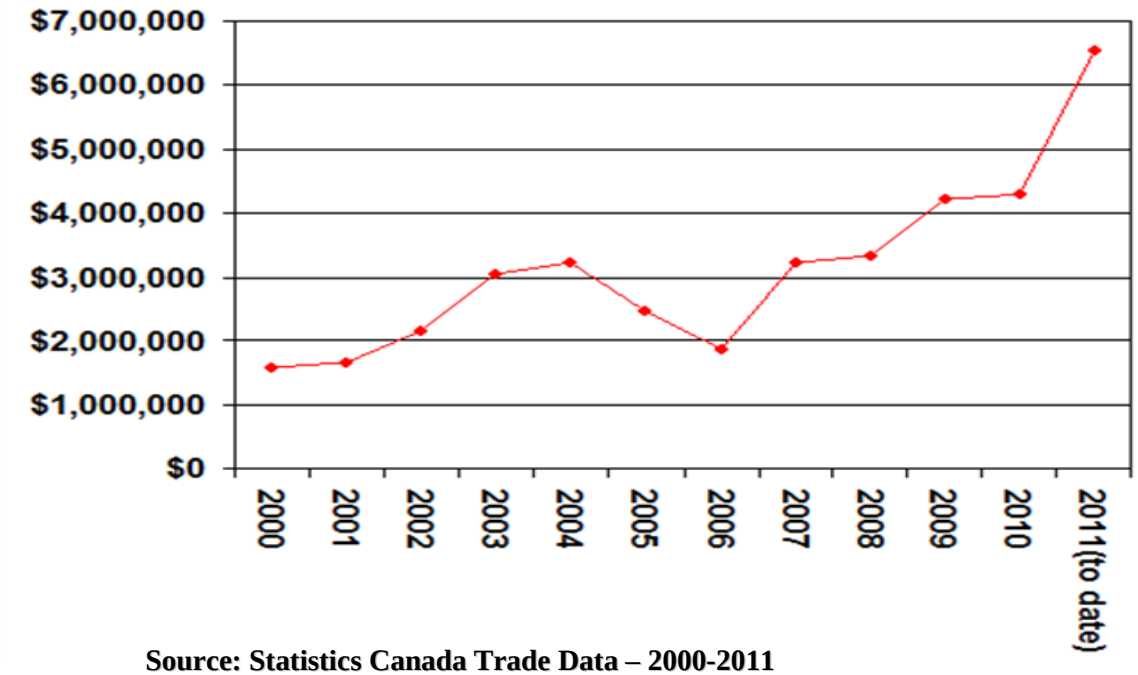
Data Source: Manitoba Agriculture Yearbook (1988 – 2013)

Trying to make up that many hives by splitting the surviving bee population will not work well, because trying to do that would only weaken the surviving colonies further, and negatively impact their ability to produce honey. Buying replacement colonies at a 50% increase in price, if you can get them, only pays for itself if you do not lose the colony again over winter! There are successful beekeepers in Manitoba that have not suffered the impact of high losses. MBA is fully committed to invest in studying the successes and

failures of the industry, but at this time we cannot overlook the negative impact the losses are having on the beekeepers that cannot afford to continue to lose colonies until we figure out the problem.

The reality is that the demand for imported stock (queens and packaged honey bees) is increasing. Figure 3 demonstrates that the demand for imported stock has increased in value in Canada from $1.5 million in 2000 to over $6.5 million in 2011. Although there are some economic spinoffs to Manitoba's economy relating to the distribution of imported bees, the reality is that the majority of the value of the trade of imported stock to Manitoba's economy is in conversion of profit margin from input cost of bees and the value of honey production. Therefore keeping input costs down on bees would be an industry priority.

Figure 3: Total Value of Bee Imports to Canada ($CND)



Source: Statistics Canada Trade Data – 2000-2011

Lastly, we cannot overlook the benefits that packaged honey bees from the US can provide to the beekeepers of Manitoba. The following are some examples of opportunities and reduced challenges that can occur with having greater access to replacement bees in the form of affordable packages:

- Improved honey production and pollination capacity and business planning, long-term, and all the benefits this brings related to tax revenues, employment, etc.
- Increased competition could help to stabilize the price of bees so that beekeepers suffering from high losses will not only have a greater supply to choose from but reinvestment costs would be more stable.
- Ability to allow equipment rotation, where the hive components can be cleaned, cold-treated, repaired and irradiated, if need be, over the winter months. This preparation allows a healthy start for the bees in the spring
- Packaged bees that have less than 1% varroa mite, and no signs of AFB or SHB at the start of spring, will generally not require any treatment till the fall, thus reducing the use of chemicals and the negative aspects of using them, such as residues contamination and synergistic impact between chemicals
- Packaged bees is part of an integrated pest management system that will reduce the amount of chemicals into the hive which reduces the risk of finding chemicals in the honey.

- Packaged bees are generally less labour intensive to manage, which in addition to being more cost effective, will also assist with the labour shortage issue that currently is another reason why the industry has not been able to expand according to market demand.

RECOMMENDATION FOR ACTION:

That the Canadian Food Inspection Agency in cooperation with Manitoba Agriculture, Food and Rural Development enter into an agreement to develop import condition and domestic protocols as part of a Federal-Provincial import permit in support of allowing importation of packaged honey bees from California into Manitoba. Because the Manitoba beekeeping industry would like to respect other provinces' need to maintain their ability to prohibit importation, they would not be opposed to having the Federal-Provincial import permit as an exemption to the *Honeybee Importation Prohibition Regulation*. The criteria under which this exemption would be granted would have to be agreed upon by both levels of government and may require "transfer of responsibility" agreement in relation to provincial and federal animal health legislation. The exemption would also have to comply with OIE standards.

If the Federal-Provincial Import permit exemption cannot be developed with the *Honeybee Importation Prohibition Regulation* still in existence, then the position of Manitoba's beekeeping industry is to repeal the *Honeybee Importation Prohibition Regulation* and replace it with a Federal-Provincial Import permit.

As part of the domestic protocol of the Federal-Provincial Import permit, the MBA would support the requirement of an affidavit declaration from all participants that purchase packaged honey bees associated with this import permit, stating that they will not resell any bees outside of the province of Manitoba. The conditions of the permit will require that all the risk factors outlined in this document have been rated as negligible and are acceptable to the following stakeholder, MBA, MAFRD, CFIA, United States Dept of Agriculture, California Dept of Food and Agriculture and the participating packaged honey bee exporters. Lastly, it is important to note that it is still unknown how beekeeping operations that are split between Saskatchewan and Manitoba will be impacted by the decision to import US bees into Manitoba. The Saskatchewan Ministry of Agriculture will also have to be consulted on this proposal to determine how best to minimize the impact on these MB/SK beekeepers.

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