



AFSC

## 2020 ALBERTA BEEKEEPER IAG MEETINGS

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## Introduction

Agriculture Financial Services Corporation (AFSC) reviews its products on a rotational basis with programs coming due for a review every 5 years. This helps AFSC to assess the relevance of programs, products and features to ensure that both client and AFSC shareholders, as well as other stakeholder's needs are being met.

AFSC had committed to reviewing both the Honey Production and Bee Overwintering insurance programs in 2020, however at the request of the Albertan beekeeping industry it was moved up one quarter. 2019 was a challenging season for Albertan beekeepers with poor weather, high death loss and low prices all combining to make it difficult for beekeepers to be profitable.

Albertan beekeepers had concerns that the BRM programs offered by AFSC were not relevant or working as they should. Additionally, program enrollment was extremely low. In 2017, out of an estimated 200 eligible producers, only 12 participated in the Bee Overwintering program and in 2019 only 20 participated in the Honey Production program. See Appendix.

Compounding the problem, AFSC had received mixed signals regarding the programs as there is some debate surrounding the impact that management practices has on these programs.

In order to determine what changes (if any) to make to the programs, and to test the veracity of the impact management has on beekeeping operations (and consequently the BRM programs), AFSC and the Albertan Beekeepers Commission (ABC) worked closely together to hold a series of 5 Industry Advisory Group (IAG) meetings across Alberta.

### **Agriculture Financial Services Corporation IAG Meetings**

In February of 2020, AFSC Research and Product Development (RPD) conducted Input Advisory Group (IAG) meetings across Alberta, visiting 5 locations of the province (Falher, Westlock, Vermilion, Lacombe and Lethbridge), with the objective of gathering producer input on the BRM programs available to Albertan beekeepers. More specifically, producers' views on how to improve programs so that they are more relevant and effective. These visits, along with a survey that was distributed at the meetings, will provide the basis for program changes going forward. The following report is the summation of what was heard on the tour and the survey.

## Executive Summary

### Themes

Albertan beekeepers' comments and concerns surrounding their industry and AFSC's programs are addressed in detail below, however the main themes that AFSC staff heard at the IAG's centered around two items:

1. Deadlines and eligibility requirements of AFSC's BRM programs.
2. Desire for a margin-based insurance program.

Item number one is addressed in detail below, and AFSC should have little trouble in addressing the issues and suggestions that it encapsulates. Item number two represents a project that would be a significant body of work, as even creating an AgriStability top up (which would be the easiest approach) would require a substantial level of analysis and program design. Going forward it will be up to both AFSC as well as the ABC to determine which (or both) of these items are addressed.

### Risks

- According to beekeepers the top five risks that they are facing are (in order of highest to lowest importance):
  - Production loss
  - Weather variability
  - Overwintering losses
  - Disease outbreaks
  - Price volatility
- AFSC's current BRM programs cover all these risks. Other factors (deductibles, eligibility) could be addressed to increase relevance to producers.
- Regardless of the risk (production, revenue or input costs) the largest grouping of producers (~40%) felt that they could cover the first 20% loss on their own.
- Producers sensitivity to input costs may be increasing, and they (input costs) may be the risk that producers are most exposed to as their production has been very stable of the last 10 years (126.5 lbs/colony with a standard deviation of 5.8 lbs per colony).

### Bee Overwintering Insurance

- Currently there is a 10% deductible applied to a producers selected coverage level. Producers would like to see this removed, and this program brought in line with other crop insurance products where a beekeeper could insure 50, 60, 70 or 80% of their long-term average with no additional deductible. (This may be more surrounding terminology confusion than actual program design. In actual practice AFSC's programs are close to the other provinces.)
- Overwintering practices have changed, and more producers are overwintering singles than in years past. Currently AFSC does not consider singles eligible for insurance which means that a large portion of Albertan beekeepers do not qualify. It was recommended by producers that AFSC change the eligibility requirements to allow singles to be insured.
- Producers felt that AFSC's current OFI procedures and deadlines were not well aligned with how they would like to manage their hives.

- Beekeepers were concerned about the level of apicultural knowledge of AFSC adjusters and asked for more training for AFSC staff.
  - The Alberta Beekeepers Commission (ABC) offered to help in this regard, similar to how the Saskatchewan Beekeepers Development Commission (SBDC) works with Saskatchewan Crop Insurance Corporation (SCIC).
- There was no agreement on what the deadlines should be moved to, however there was discussion about floating deadlines that would be allowed fluctuate year to year. As this would be very difficult for AFSC to administer; a potential compromise would be to expand the deadlines to encompass all potential dates.
- Producers are divided on this program, with some feeling that it is not required as winter hive survival is so strongly related to management. This means that there is a possibility that this program will never be highly subscribed, regardless of any changes that are made.

### **Honey Production Insurance**

- Producers main concerns with this program were around AFSC's deadlines and eligibility.
- Currently producers who provide pollination services are not eligible for Honey Production insurance. This means that a significant portion of Albertan producers are ineligible for this product (24% of survey respondents provided pollination services).
  - Producers would like to see this changed so that beekeepers offering pollination services are eligible for this product.
- Hives must be in Alberta by May 31 in order to be eligible for insurance. While producers were undecided on the exact date that they would prefer to see, the majority selected a date between June 15<sup>th</sup> and July 1<sup>st</sup>. This is to allow producers who have hives overwintered outside of Alberta and/or are providing pollination services outside of Alberta to be eligible for the product. See Appendix.

### **Business Risk Management Programs**

- Fewer beekeepers participate in AgriInvest as compared to the agriculture industry average, and a higher proportion of them (beekeepers) rely on their accountants to enroll them in the BRM programs.
- There appears to be an opportunity to educate producers on what BRM solutions are available as producers at the IAG's were unaware of the programs.
- Producers indicated that they had difficulty with the forms (specifically for AgriStability) and struggled to fill them out in a way that represented their financial situation. Interestingly, both at the IAG's and through the ABC producers made it clear that AgriStability works better in Saskatchewan.
  - There is potentially an education opportunity here as there is no difference between how AgriStability would handle beekeepers in Saskatchewan or Alberta. Neither province has 'beekeeping' specific forms.
- Producers had the same concerns around predictability, timeliness and complexity that AFSC heard from other industries both this year as well as last.

### **Wildlife**

- Wildlife damage, specifically bear damage, is of significant concern to producers.
- All survey respondents lost hives to bears this past season.
  - 84% had 50 or more hives damaged more than once.
- 84% of respondents feel that their mitigation strategies (mainly electric fences) are at least slightly effective.
- Producers agreed to an approach that would be similar to the current stacked hay program.
  - Producers requested a 'decaying counter' be added so that they have more flexibility in responding to 'black swan' events (ex. Wildfires) and these events effects on wildlife behaviour.
    - A 'decaying counter' would come into effect if a location was damaged by a bear one year, but not for several years after that; as it would allow the record of the bear damaging the location would be erased.

## Data Collection Methodology

AFSC's 2020 IAG and Survey with stakeholders had three main objectives:

- Listen to and understand Albertan producers' views on the BRM programs as they relate to beekeeping.
- Collect both quantitative and qualitative data on the best direction for future program changes and improvements.

In order to obtain a reliable view of Albertan producers' thoughts on the topics presented it was necessary to create both a quantitative and qualitative data set. By collecting both types of data it is possible to quantify the views of producers while maintain the context around these quantified views. It is for this reason RPD applied a two-pronged data collection approach:

- The first approach involved face-to-face meetings with producers through AFSC's annual IAG process.
  - RPD conducts a yearly research engagement with clients regarding AFSCs products.
  - RPD selects the municipalities to visit and relies on assistance from Branch staff to contact producers in surrounding communities to participate in the IAG.
    - As a result of the low participation in AFSC's insurance programs RPD was concerned that AFSC alone would reach an insufficient number of producers. With this in mind AFSC worked closely with the ABC to ensure that as many producers as possible (many of which did not use AFSC's programs and were therefore unknown to AFSC staff) were invited to the meetings.
  - The information/data gleaned from the IAG meetings is the source of the qualitative data considered in this report.
- The second approach involved the development of a survey that was distributed by RPD during the IAGs.
  - Responses to the survey are the source of quantitative data considered in this report.

The list of locations for the IAGs surveyed can be found in Figure 1.

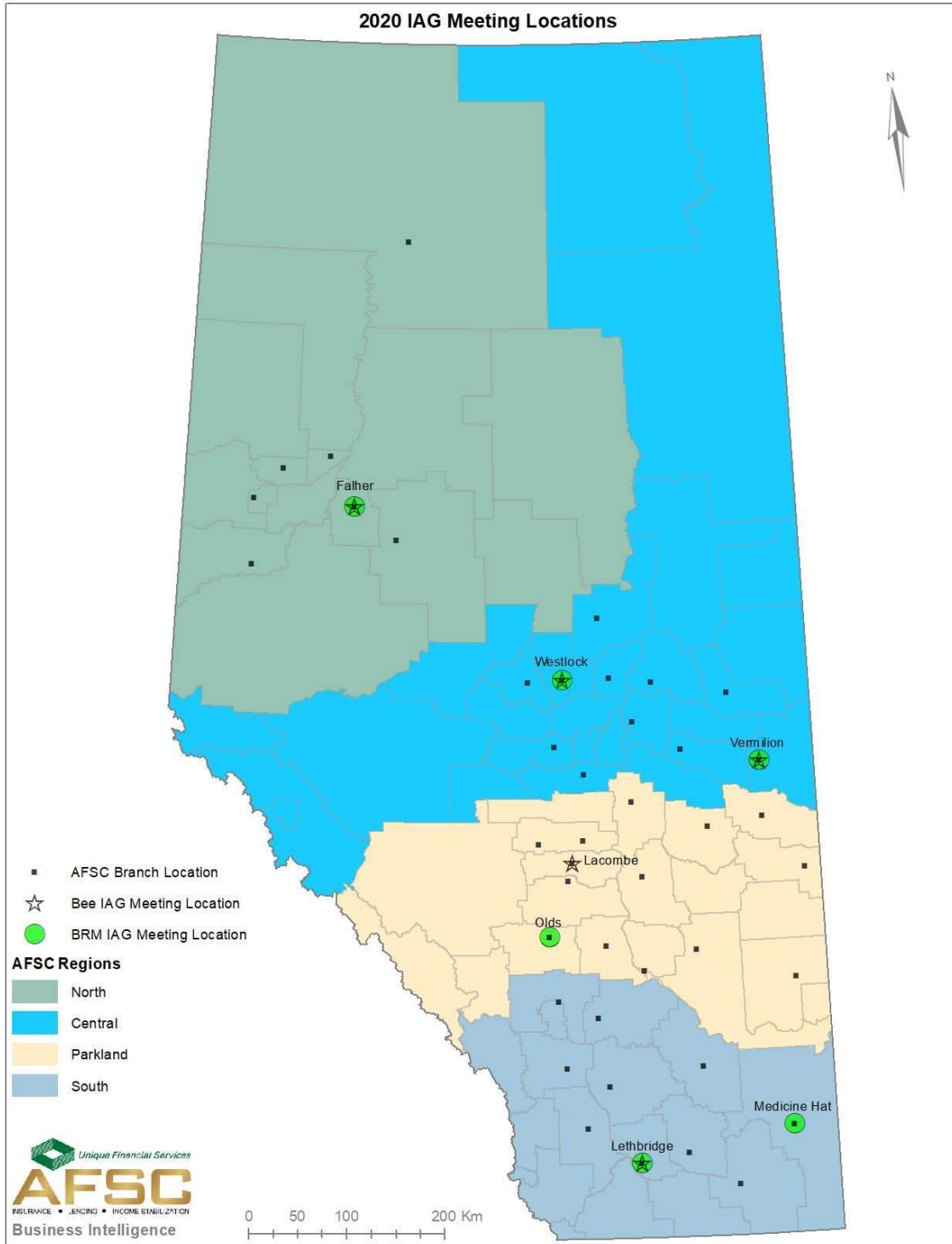
**Figure 1 - Engagement Participant Summary**

IAG Location
Falher
Lacombe
Lethbridge
Vermilion
Westlock



## Meeting Location Map

Figure 1A. 2020 Beekeeper Industry Advisory Group Meeting Locations



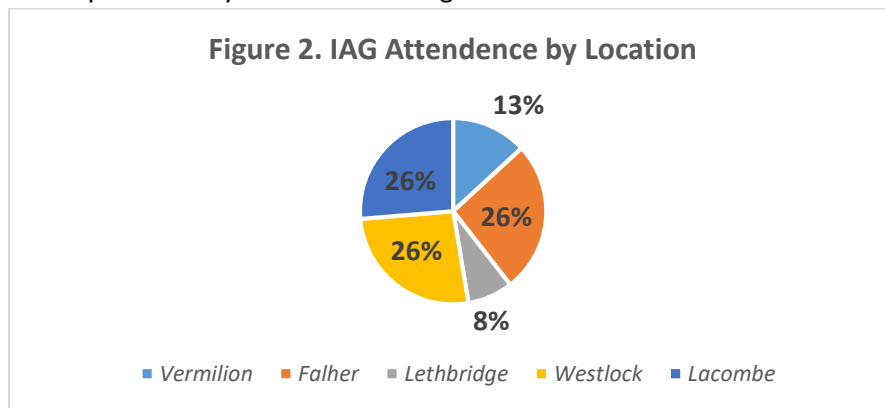
## Demographic Information

### Quantitative Analysis

The following section outlines the demographics of the survey respondents. Each descriptive question is dealt with in its own subsection. All participants in the IAGs completed the survey. There were 5 IAG locations, and 38 total survey respondents.

It is recognized that the number of survey respondents is low relative to the total number of beekeepers in the province of Alberta. The individual responses on their own would be of limited value; however, when viewed in conjunction with the IAG's it gives a balanced and informed opinion that can be inferred to represent the majority of Alberta's beekeepers on the topics discussed.

Percentage of respondents by location are in Figure 2.

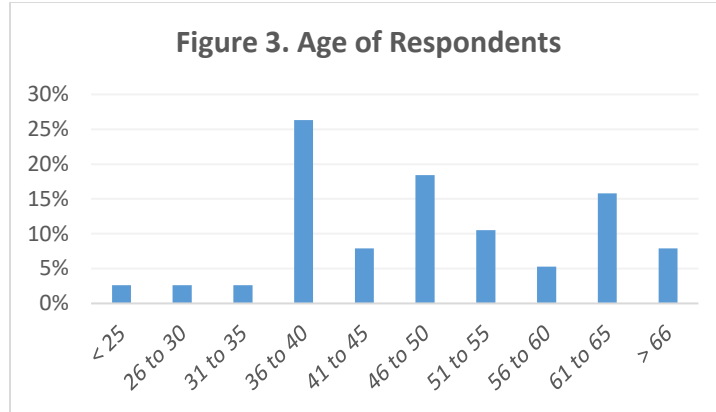


**Figure 2A. Number of Attendee's**

Location	Number of Attendee's
Falher	10
Lacombe	10
Lethbridge	3
Westlock	10
Vermilion	5
Total	38

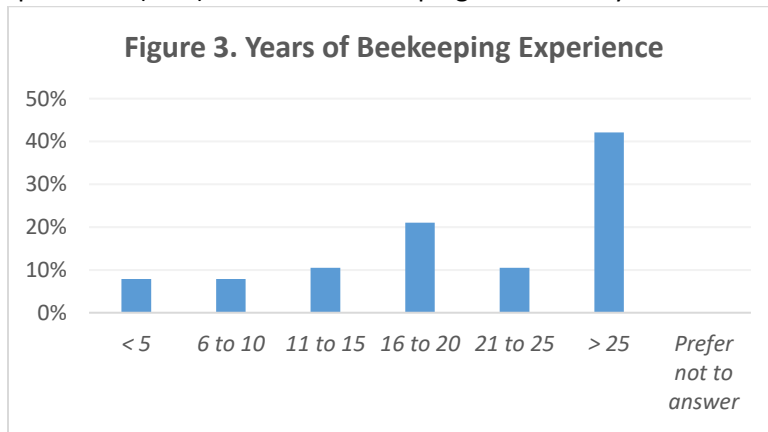
### Respondents Age

The age bracket that contained the most respondents was 36 to 40 years of age, though there was no clear bracket that contained a majority.



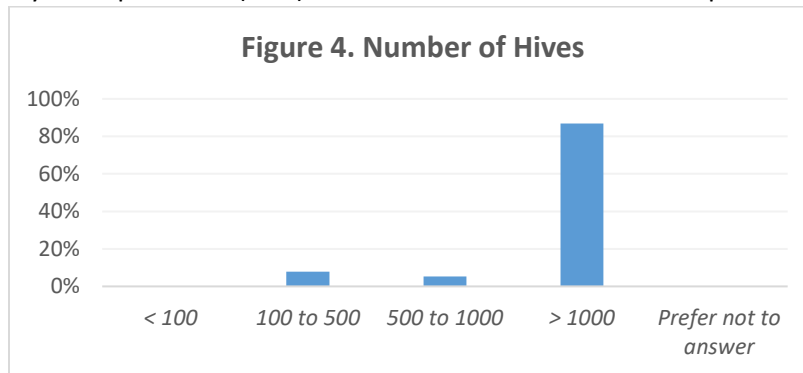
**Years of Beekeeping Experience**

A majority of respondents (42%) had been beekeeping for over 25 years.



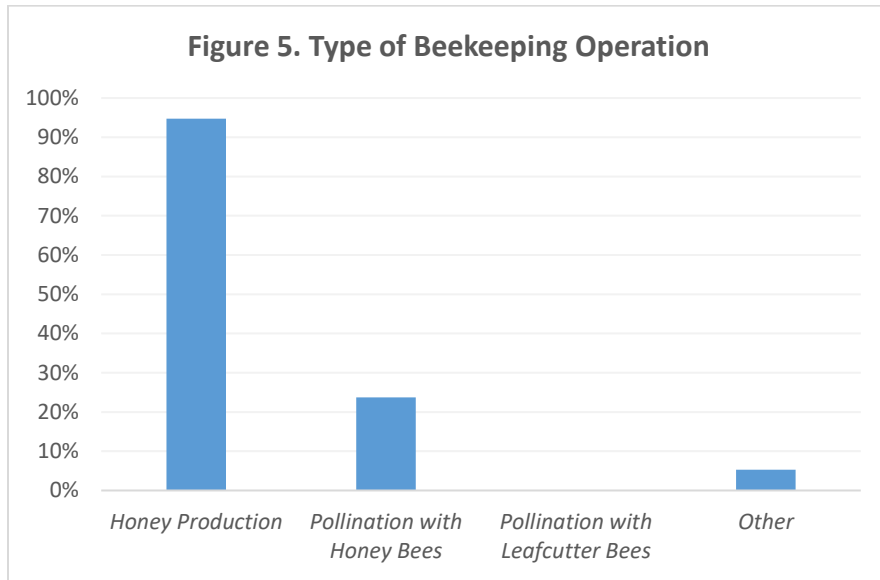
**Number of Hives**

The vast majority of respondents (87%) had 1000 hives or more in their operation.



**Type of Beekeeping Operation**

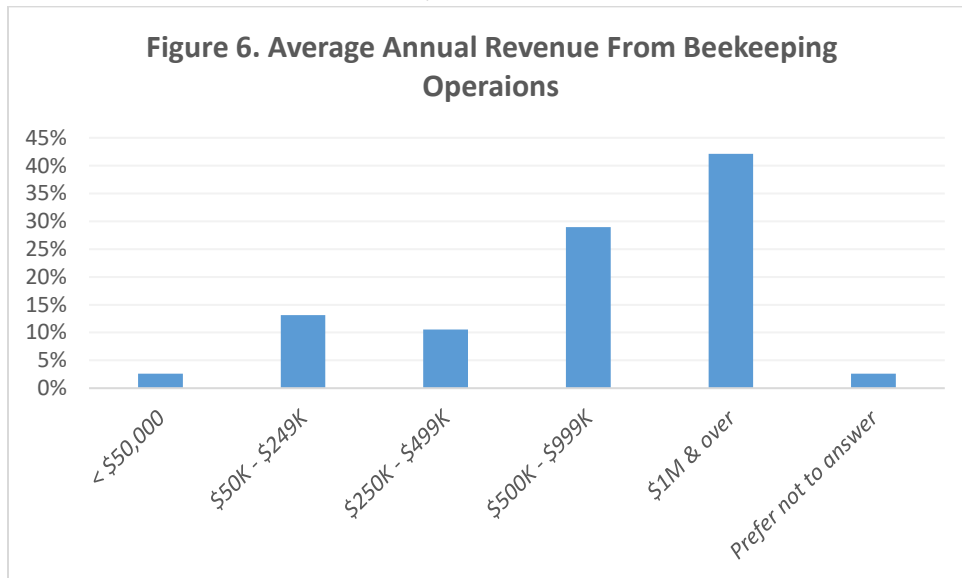
Respondents were asked what type of beekeeping operation they had, and to select all that applied. Hence a producer may have chosen more than one option. Therefore an example of the interpretation of results would be: 95% of respondents produced honey as a part of their operations. The results of this survey question can be seen in Figure 5.



AFSC had heard that the eligibility requirements of the Honey Production insurance program were restrictive, resulting in a significant portion of Albertan beekeepers being ineligible (currently beekeepers that offer pollination services are ineligible for Honey Production insurance). This finding would support that as 24% of respondents indicated that pollination services with honeybees make up a portion of their operations.

**Average Annual Revenue from Beekeeping**

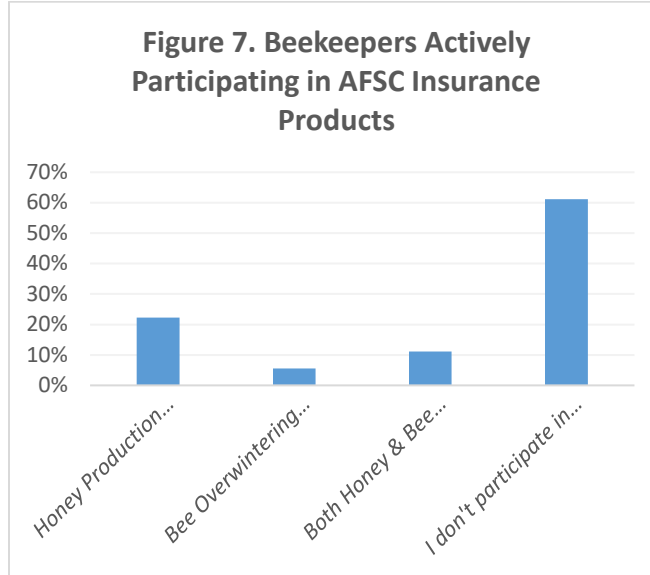
42% of respondents had annual revenues from beekeeping operations of more than one million dollars, while 71% had revenues over \$500,000.



Note: One respondent (Representing 2.63% of the data) chose the option 'Prefer not to say' when asked their Average Annual Beekeeping Revenue.

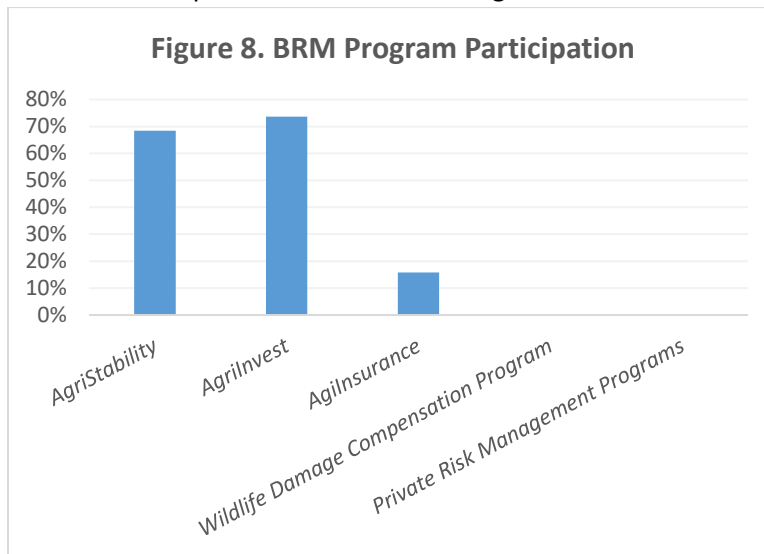
**Number of Respondents Actively Participating in Insurance Programs**

The majority of respondents (61%) did not participate in any of AFSC’s insurance programs. Honey Production insurance was significantly more subscribed as compared to Bee Overwintering (22% vs 6%).



**Business Risk Management (BRM) Program Participation**

Respondents were asked to select all BRM programs that they have participated in within the last 5 years. The results of this question can be seen in Figure 8.



68% of respondents participated in AgriStability, while only 74% participated in AgrilInvest and 16% in AgilInsurance. This displays quite a difference as compared to non-beekeeping agricultural operations as respondents at this year’s BRM IAG indicated that they participated at 52%, 98% and 97% respectively. The AgrilInvest participation rate in particular is interesting

because it is a program with a low barrier to entry that is highly subscribed in all other agriculture industries.

### **Qualitative Analysis**

Communication was viewed as a major barrier facing beekeepers who wanted to take part in AFSC's BRM programs and was brought up at every meeting, regardless of location. Additionally, it is clear from AFSC's conversations at the IAG's (as well as with the ABC) that beekeepers are relying heavily on their accountants to determine whether or not to participate in AgriStability and AgriInvest. It will be important that going forward any marketing efforts clearly communicate to producers what the programs can offer them so that they can ensure that their accountants are up to date on all BRM offerings.

A significant portion of attendees at the IAG's were unaware of the changes (and/or the existence) of the AgriInsurance products (Honey Production and Bee Overwintering Insurance). Once they were made aware of the programs, they expressed interest in them and IAG presenters put multiple producers in contact with their local branches so that they could further explore what these products could do for their operation.

It was clear through the meetings that communication of program information was an area that should be addressed. Knowing that AFSC's current database of bee producers would be insufficient in reaching the industry in a significant way, AFSC would need to partner with the ABC in order to reach more producers.

### **Producer Comments**

*"Heard that AgStab is a waste of time from accountants and recommending people not join."*

- Westlock

*"Would like to see AgStab more predictable and easier to follow. Want to understand calculations. Too much of a black box. More transparent!!!"*

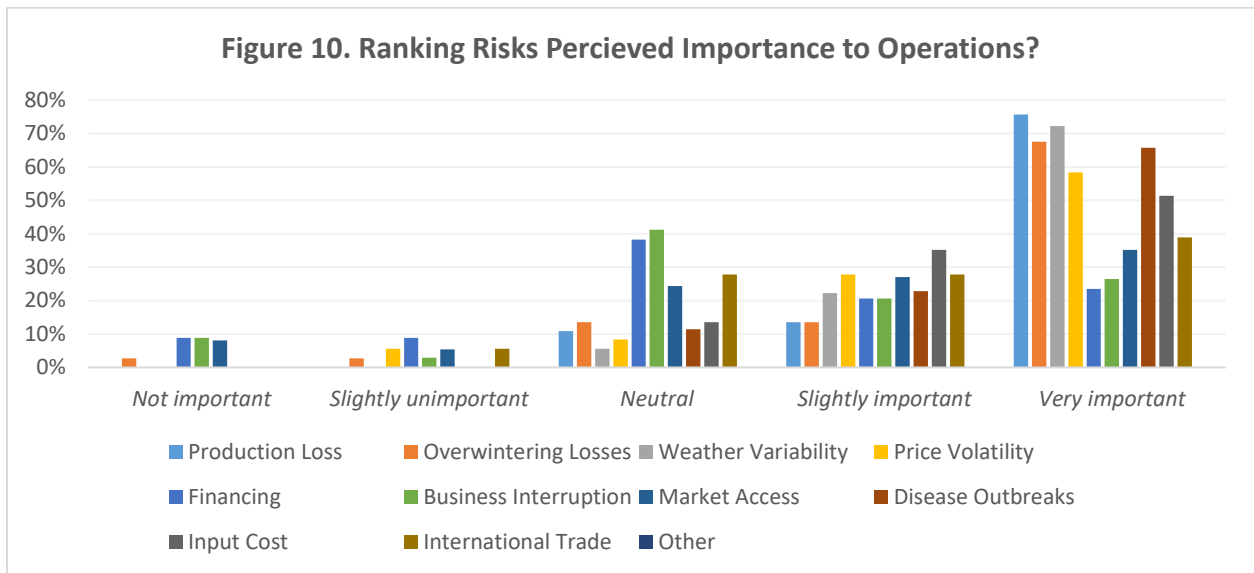
- Lacombe

## Risk Identification and Ranking

### Quantitative Analysis

#### Ranking of Operational Risks

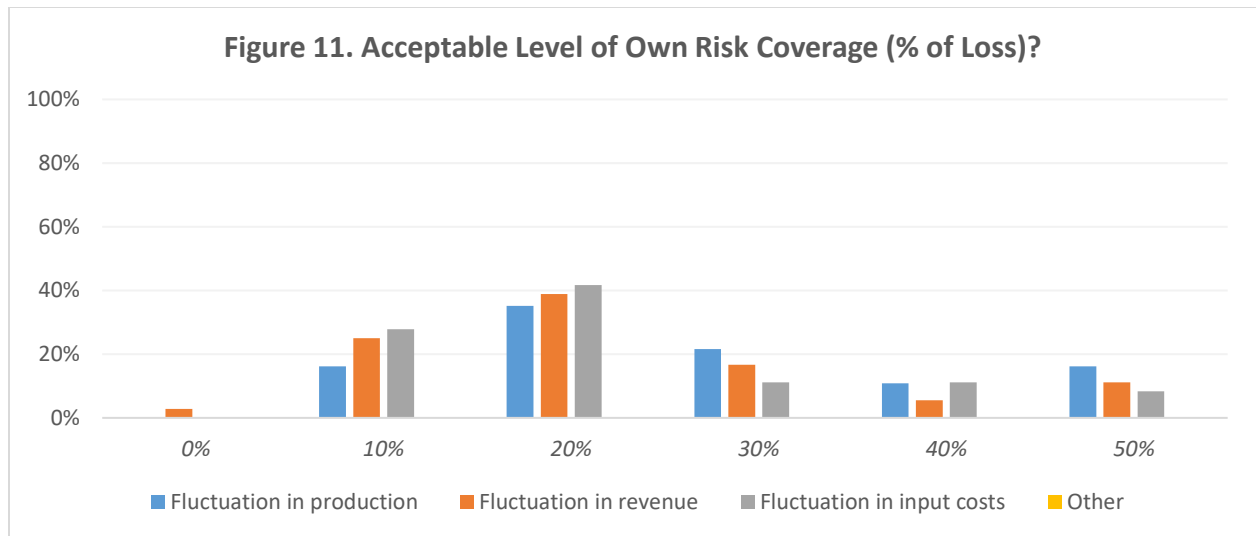
Albertan beekeeping operations face many different risks and categorizing them by level of importance would allow AFSC to determine if the current BRM programs are covering the most appropriate risks. Along this line, respondents were asked to rank a list of risks as to their perceived level of importance. The results of this survey question can be seen in Figure 10.



The top five risks facing Albertan beekeeping operations as ranked by beekeepers are (in order from most severe to least): production loss, weather variability, overwintering losses, disease outbreaks and price volatility.

#### Acceptable Level of Own Risk

Respondents generally felt that they were willing to cover the first 20% of risk, regardless of the risk type. It is interesting to note however that respondents are more willing to take on a higher risk of production loss as compared to an increase in input costs as currently AFSC insurance is centered on production risks. This could potentially explain the low participation rate in AFSC BRM programs as they are not covering the risk that producers are feeling most exposed too.



When Figure 10 is taken with Figure 11 an interesting contradiction appears as in Figure 11 producers appear most sensitive to input costs, whereas in Figure 10 producers are more concerned about production risks.

### Qualitative Analysis

Producers largely agreed on two things:

- 1) Production was the risk that they were most concerned about and;
- 2) They were willing to cover a 20% fluctuation (be it in production, revenue or input costs) on their own.

Pests, disease, weather, and management skill (typical risks to production) were brought up at over half of the IAG's, supporting the survey in that production is of serious concern to producers.

Sector health was brought up at all 5 meetings, and when those comments are analyzed they appear to explain the apparent discrepancy (see below for comments directly from producers at the IAG's).

As previously mentioned, a contradiction does appear when looking at the willingness to accept a fluctuation of 10% and 30%; where it appears that when production and input cost fluctuations are compared, producers are more willing to accept a higher fluctuation in production than input cost.

It is possible that this discrepancy is the result of two independent actions happening in the background:

- 1) Producers are beginning to reach a point where they are unable to absorb any more increases in input costs and;



- 2) Honey production is so stable that producers are willing to accept a larger fluctuation because the chances of it happening are very small.

It was brought up repeatedly throughout the IAG's that input costs have been rising whereas honey yields and prices have stayed relatively constant. Producers expressed concerns over this trend, as year on year they had watched their margins get tighter. It is possible that it is now to the point where while most beekeepers are able to withstand a 20% fluctuation in input costs, a larger (and possibly growing) proportion of them have had their margins thinned to the point that they can only withstand 10%. Discussion (as well as recorded comments) from the IAG's appear to support this theory. If this is a growing concern, there may be an opportunity for an input cost BRM product (such as an AgriStability add on or top up) to cover this growing risk that producers are becoming exposed to.

Throughout the IAG process, AFSC heard that honey yields were typically very stable. AFSC reached out to Alberta Agriculture and Forestry (AF) who provided honey yields per colony from 2009-2018. When analyzed, it was found that the average yield for this 10 year period was 126.5 lbs/colony with a standard deviation of 5.8 lbs/colony; supporting what was heard at the IAG's. As production is so stable, producers may be more willing to accept a theoretical fluctuation in production as they believe the chances of it happening (fluctuating 30%) are very low. This would account for the higher number of respondents indicating that they would accept a 30% fluctuation in production as compared to input costs.

### Producer Comments

*"Unmanaged neighboring hives affect our hives."*

Westlock

*"Production (the function of what else is happening)."*

Lethbridge

*"Biggest costs are labor, sugar. Prices are set in the States dictates what Canadian Producers will get."*

Lacombe

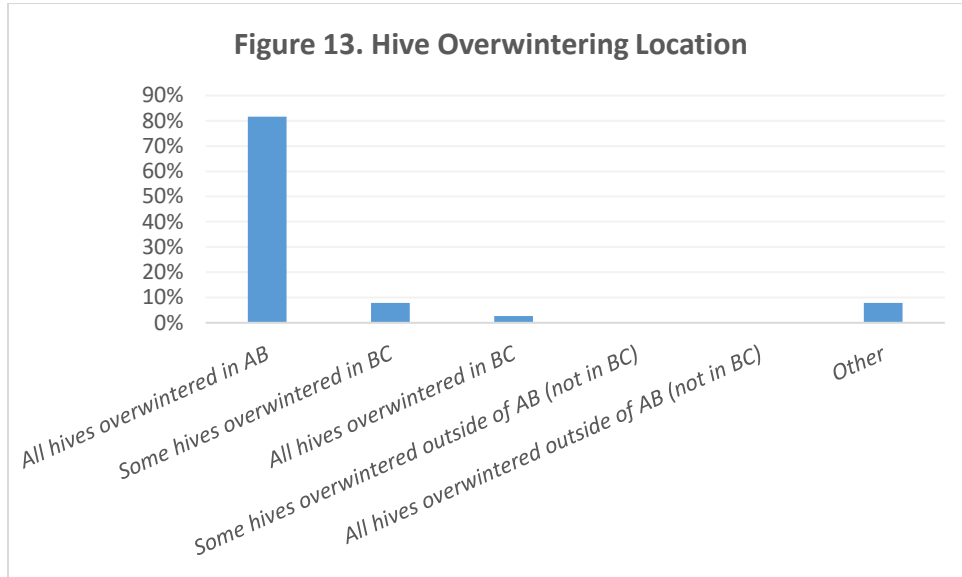
*"Prices haven't changed in the past 10 years. Costs increase faster than prices."*

Vermilion

## Bee Overwintering Insurance

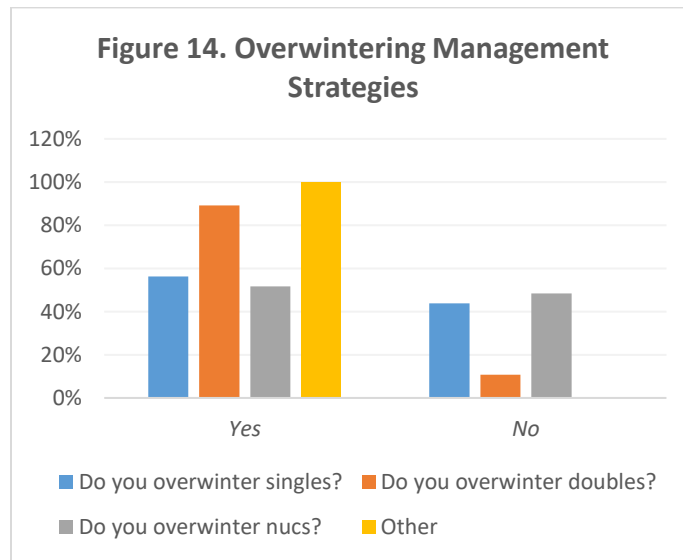
### Quantitative Analysis

Producers were asked where they overwinter their hives. The results of this survey question can be found in Figure 13.



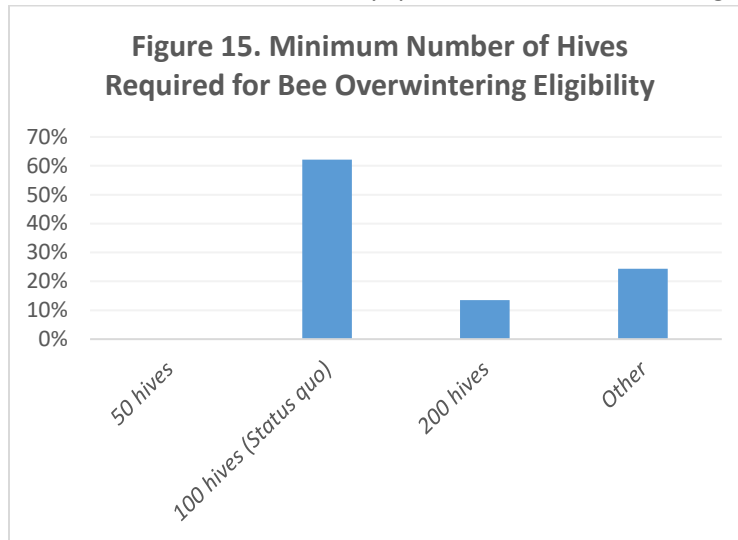
82% of all hives are overwintered in Alberta, with 8% of respondents splitting their hives between Alberta and British Columbia.

Respondents were then asked to indicate what practice that they use to overwinter their hives. The results of this survey question can be found in Figure 14.



AFSC's current eligibility rules surrounding Bee Overwintering insurance restrict coverage to doubles. With 56% of respondents overwintering singles, it suggests that this ineligibility could be a major factor as to why producers are not using the Bee Overwintering insurance program. This could be a potential area of program improvement for AFSC.

Finally, respondents were asked if AFSC's minimum hive eligibility of 100 was, in their opinion, an acceptable number. The results of this survey question can be found in Figure 15.



Respondents agreed with AFSC's current minimum number of hives to be eligible for the Bee Overwintering insurance program

### Qualitative Analysis

While most of the producers overwintered their hives within Alberta, very few of them used AFSC's Bee Overwintering insurance. In discussions at the IAG's there were multiple reasons for this including:

- 1) Producers felt that the insurance was not required as winter hive survival was so strongly related to management;
- 2) Not meeting the eligibility requirements;
- 3) Deductible on the insurance product was too high and;
- 4) OFI practices and program deadlines.

If producers feel that winter survival is not a peril that requires insurance there is little reason to believe that they will take it, regardless of any changes that AFSC makes to the program. In the IAG's however not all producers were in agreement on this point and so there is cause to revise the program to reflect the other concerns that producers raised.

Producers agreed with the 100 hive minimum to be eligible for Bee Overwintering insurance, however they did not agree with AFSC's policy to only insure doubles. It was clear that more and

more producers were successfully overwintering singles and that if AFSC wanted to get them interested in the program it would have to open the program up to them. Furthermore, AF has provided AFSC with data that shows overwintering of singles is no riskier statistically than overwintering doubles (Appendix). The suggestion coming from the IAG's was that AFSC allow singles to be eligible for overwintering insurance.

Currently, Bee Overwintering insurance has a deductible of 10%, which when coupled with the area average means that producers have to suffer what they consider a catastrophic loss before they are eligible for a payment. This is mitigated somewhat once a producer has been in the program for 7 years and is entirely on their own survival rate however it still means that a producer needs to suffer a larger loss in order to trigger a payment. In the IAG's it was suggested that this deductible be removed, and coverage be limited at 80% (or some other level, although producers largely agreed that they could cover the first 20% loss themselves) of a producer's long-term average. It is worth noting that this would bring it more in line with how AFSC's annual crop insurance program (including Honey Production) operates.

While these changes appear to be small, producers in the IAG's indicated that acting on them would make the Bee Overwintering program much more relevant and appealing to Albertan Beekeepers.

Program deadlines and inspection dates were also of concern to IAG participants, with some of them indicating that they had to deviate from best management practices in order to comply with AFSC's dates. There was no clear consensus on what the dates should be however, and while there was a suggestion to leave it flexible and allow it to float year to year that may not be logistically possible. AFSC will have to work with the ABC on this going forward to determine the best course of action.

### **Producer Comments**

*"Winterkill is 95% manageable."*

Westlock

*"20% is normal risk."*

Vermilion

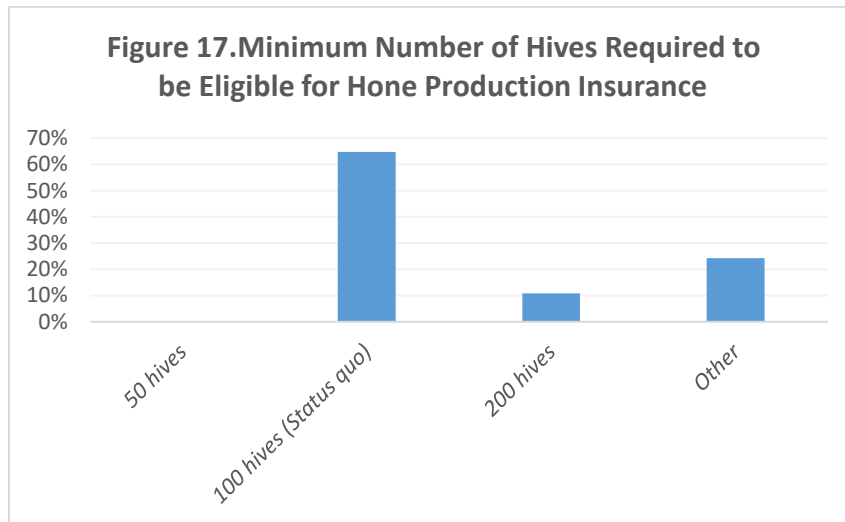
*"Changed management practices to get insurance, but not best practice."*

Falher

## Honey Production Insurance

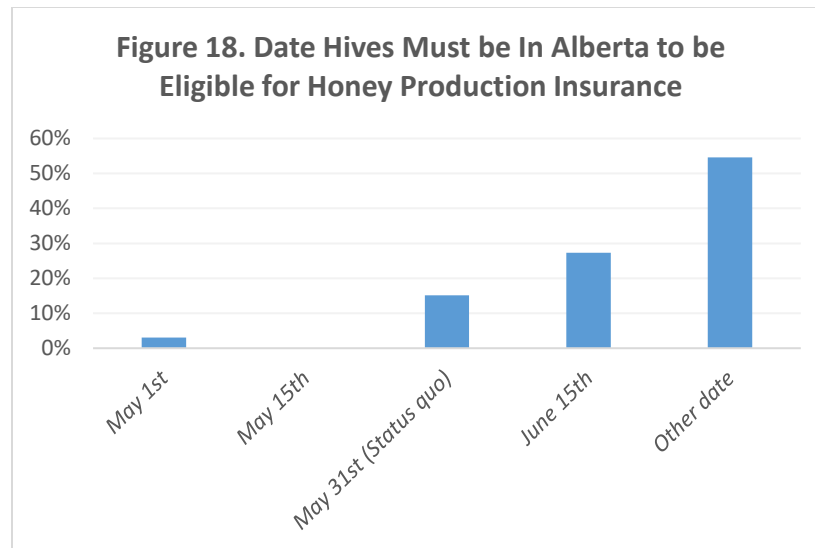
### Quantitative Analysis

AFSC has a similar minimum hive number (100 hives) to be eligible for honey production insurance. Respondents were asked if, in their opinion, this was an acceptable number. The results of this survey question can be found in Figure 17.



Respondents agreed with AFSC’s current minimum number of hives to be eligible for the Honey Production insurance program.

AFSC had previously had June 20 as the date that hives were required to be back in Alberta. At the suggestion of industry this was moved back to May 31. Respondents were asked, in their opinion, what the most appropriate date would be. The results of this survey question can be found in Figure 18.



The majority of respondents chose 'Other', however this category was then split. 5 respondents (representing 15%) suggested moving it back to June 20<sup>th</sup> and 7 respondents (representing 21%) wanted it moved to July 1<sup>st</sup>. Taken all together (and including other suggestions of later dates such as 'June 25<sup>th</sup>' or 'mid to late June' from the 'Other' category), this resulted in 72% of total respondents wanting the deadline to be moved to June 15<sup>th</sup> or later. See Appendix.

### Qualitative Analysis

IAG participants had several concerns surrounding AFSC's Honey Production insurance program:

- 1) Beekeepers who also provide pollination services ineligibility for the program and;
- 2) Date that hives are required to be back in the province.

A significant portion of beekeepers also provided pollination services (24%) which currently makes them ineligible for Honey Production insurance. Opening up this eligibility would not be difficult for AFSC, however it would require that producers be willing to provide more information so that AFSC could adjust the coverage for the difference in potential yields between pollination hives and straight honey hives. The producers present did not see a problem with this and welcomed the change so that they could be eligible.

A small portion of producers overwinter their hives in British Columbia, and some also offer early season pollination services in B.C. before the season starts in Alberta. Regardless, the date that AFSC currently requires hives to be in Alberta in order to be eligible for Honey Production insurance is May 31<sup>st</sup> (previously it had been June 15<sup>th</sup> however at the request of the Provincial Apiculturist it was moved up). Producers feel that the May 31<sup>st</sup> date is too early and would like to see it pushed back. While there was no date that the IAG participants all agreed on it was determined that it should be sometime between June 15<sup>th</sup> and July 1<sup>st</sup>.

Logistically some dates are more desirable than others from AFSC's viewpoint, however it will take consultation with the ABC as well as AF to determine the appropriate date. Factors that will need to be considered are potential yield implications, coverage (and deductible) implications and producer and AFSC logistics.

**Producer Comments**

*"Majority of producers in this meeting have a higher average than the risk area."*

Westlock

*"Now considering using Honey or BOW insurance with weather changes, high fluctuation, wonder if current management practices are sufficient."*

Lacombe

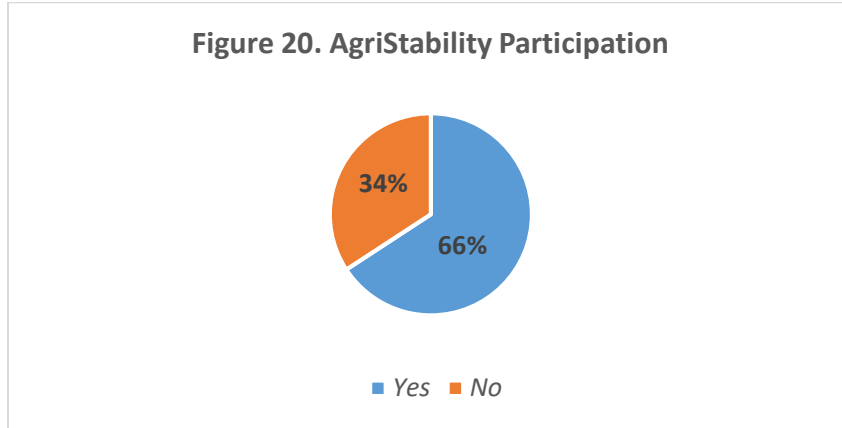
*"More interested in covering revenue."*

Fahler

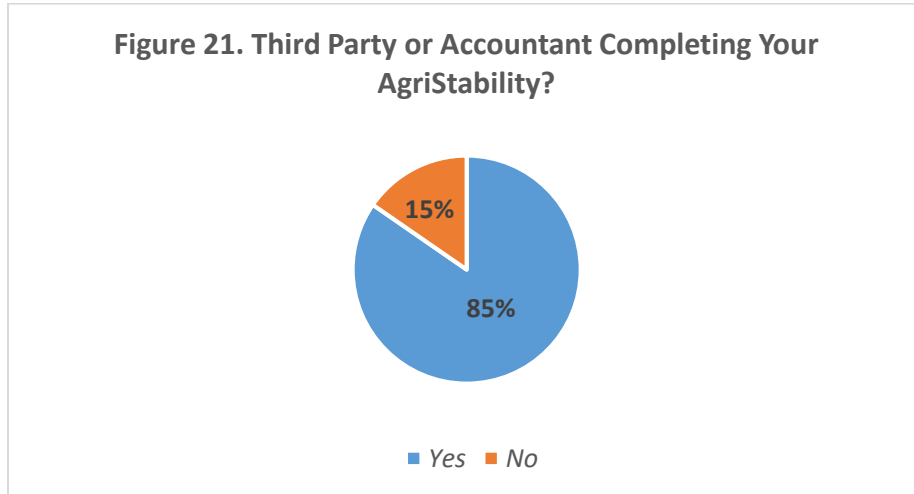
## AgriStability

### Quantitative Analysis

A majority of the respondents participated in AgriStability, as shown in Figure 20.



Of the 66% of respondents who participated in AgriStability, an overwhelming majority of them had an accountant or other third party filing their claims for them. When compared to Alberta wide metrics (composed of all industries), respondents were slightly higher (85% of respondents as shown in Figure 21 vs 79% industry wide, as found in 2019 BRM Review Industry Advisory Group’s).



A higher percentage of respondents attributed program complexity as a reason for accountant involvement than the provincial average found in 2019 BRM Review IAGs (44% of respondent’s vs 30% provincial average). Additionally, a significant divergence between respondents and provincial averages was the difference in opinions around the level of support that AFSC provided in filling out AgriStability forms. ‘AFSC support is inadequate for me to complete AgriStability myself’ was the second highest reason for use of third parties (at 27%) on a



provincial basis, whereas respondents felt it was the least likely reason at 6%, as shown in Figure 22.

These findings are interesting, as they appear to contradict each other. If AFSC is providing adequate support for producers to complete AgriStability applications themselves (as suggested by the respondents), it is unclear why so many elect to use third parties.

‘Other’ was the second highest reason for use of third parties to fill out and file for AgriStability. Respondents were asked to specify their reason if they selected ‘Other’ and analysis of these comments may help to explain the high number of accountants used. These comments are in Figure 23. While complexity is listed as a root cause for some (2/8 comments), the majority revolve around other reasons such as a lack of time and that it is easier for the accountant to be involved directly and consistency.

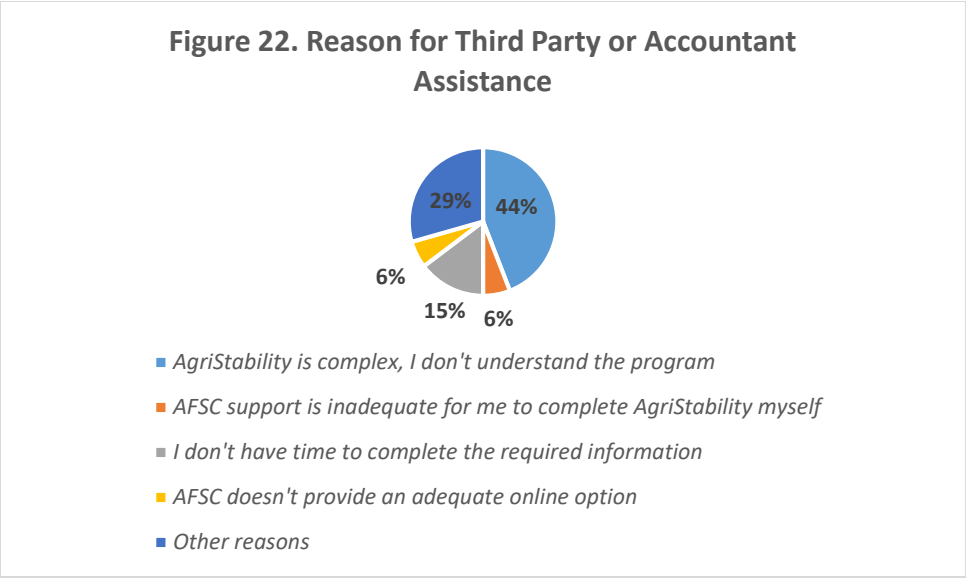
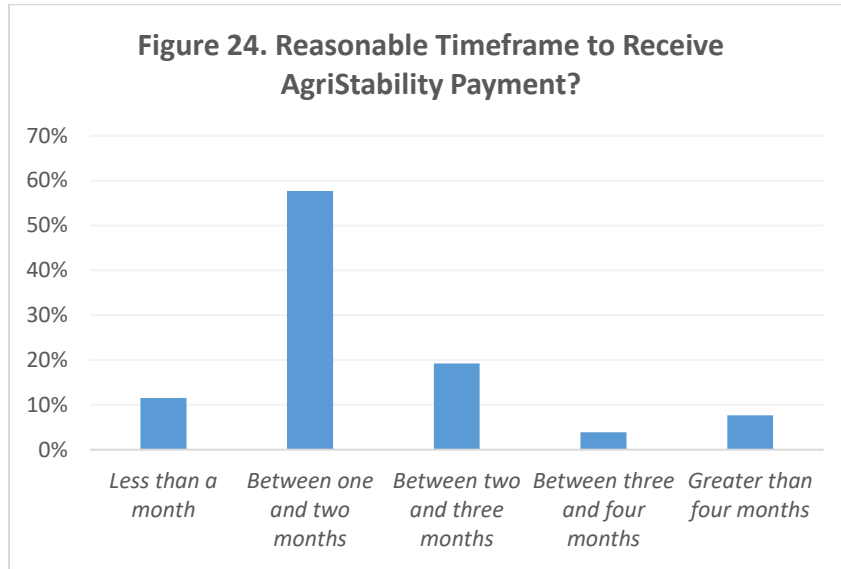


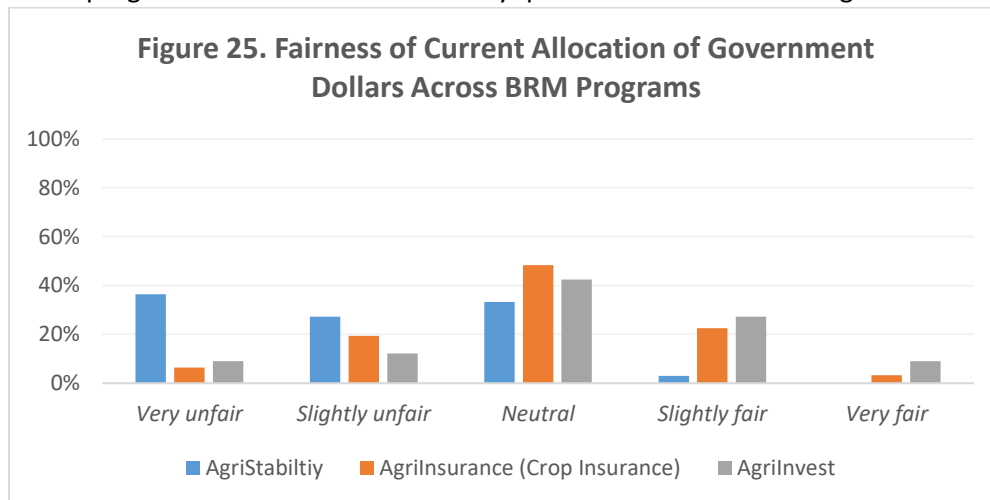
Figure 23. Other Reason for Using a Third Party to Complete AgriStability
For consistency I keep using my accountant, also I am swimming in government paperwork as is!
More comfortable with accountant filling out the forms, inventory changes, etc.
My accountant isn't knowledgeable in AgriStability rules and despite having gone from 3000 hives to 2000 hives triggered no help to rebuild.
Constant behind the scenes changes. Mostly need more transparency and ability to know cost/benefit.
The forms for AgriStability are not appropriate for beekeeping and the reality of keeping bees . Accurate info of the cost + revenue of Beekeeping cannot be accurately conveyed in the forms we are asked to fill out.
It's easier for our accountant to provide information and communicate back and forth.
Too busy with several businesses in two countries.
I am in a partnership and need to work with his accountant.

Respondents were asked what they felt what a reasonable timeframe to receive an AgriStability payment in was. The results of this survey question can be found in Figure 24.



Respondents felt that they should receive an AgriStability payment within one and two months after having all forms submitted. This is in line with what AFSC has heard from the industry as a whole and it is a concern that is being worked on as a part of the BRM Review at both the federal and provincial levels. AFSC does currently offer advances on AgriStability payments, however producers are required to repay any over payments, and concerns over this has limited their uptake.

Respondents were asked about the fairness of the funding distribution through the three federal BRM programs. The results of this survey question can be found in Figure 25.



36% of respondents felt that AgriStability was unfairly funded. Even though the majority of respondents had previously indicated that they do not participate in AgriInsurance (Figure 8), Figure 25 shows that they are neutral to the level of funding that it receives.

## Qualitative Analysis

Albertan beekeepers have similar concerns about AgriStability as other industry groups; and their comments mirror both what AFSC heard at this years BRM IAG's as well as last years. Producers were concerned about the predictability, timeliness and simplicity of the program. They also felt that governments were 'changing the goal posts' on producers both between as well as within each of the successive agreement frameworks and that education on the program could be improved.

These are all well known concerns surrounding AgriStability, and as part of the BRM review AFSC is working with both the provincial and federal governments to try and improve the program in these key areas. More specifically to the beekeeping industry, producers had concerns over how AFSC was sourcing it's prices and how adaptable the AgriStability forms were to beekeeping.

The concerns around AgriStability prices stem from AFSC having multiple hive prices across it's business lines. It was suggested that AFSC work to harmonize those prices as beekeepers felt that the differences between the prices put them at a disadvantage. Furthermore, producers felt that any changes to these prices were largely unannounced and as a result were a contributing factor to the complexity and lack of predictability of the program. For example, AFSC's lending division places a value of \$0 on hives, whereas in AgriStability they are worth \$219 for 2018 (which represents an increase of 10% over what hives were valued at in 2017). In this particular example this unannounced increase in the value of a hive pulled the producer out of an AgriStability payment.

The AgriStability program is available across Canada to all sectors and is designed as a whole farm program leading it to be a fairly broad brush. Beekeepers had concerns that the forms available to them were set up too specifically for a cattle and/or grains and oilseeds operation and as a result they were unable to accurately reflect what was happening on their farm. Interestingly, when discussing this issue with producers it was discovered that beekeepers view themselves as being more akin to orchards than cattle or grain and oilseed producers. That producers feel that the program is 'better' in other areas (ex. Saskatchewan) or that other production methods are more representative of their own (ex. Orchards) seem to indicate that there is an opportunity to educate producers as well as AFSC staff. This is because there are no program specific forms, and the program is the same across all jurisdictions.

Finally, producers felt that education on AgriStability could be improved. As previously mentioned, a higher percentage of beekeepers use third parties to enroll in the BRM programs (including AgriStability) than does the agriculture industry as a whole. This was made clear to AFSC staff throughout the IAG's as well as from discussions with the ABC. Furthermore, there is a chance that accountants do not fully understand the BRM programs available to beekeepers' operations. An example of this the AgriInvest enrollment statistics, where beekeepers are ~20% less likely to enroll in the program (which has a low barrier to entry) as compared to the agriculture sector as a whole.

**Producer Comments**

*“Heard that AgStab is a waste of time from accountants recommending people not join.”*

Westlock

*“Have been in AgriStability but have never seen a payment so what is the benefit?”*

Lethbridge

*“Would like to see AgStab more predictable and easier to follow. Want to understand the calculations. Too much of a black box. More transparent!!”*

Lacombe

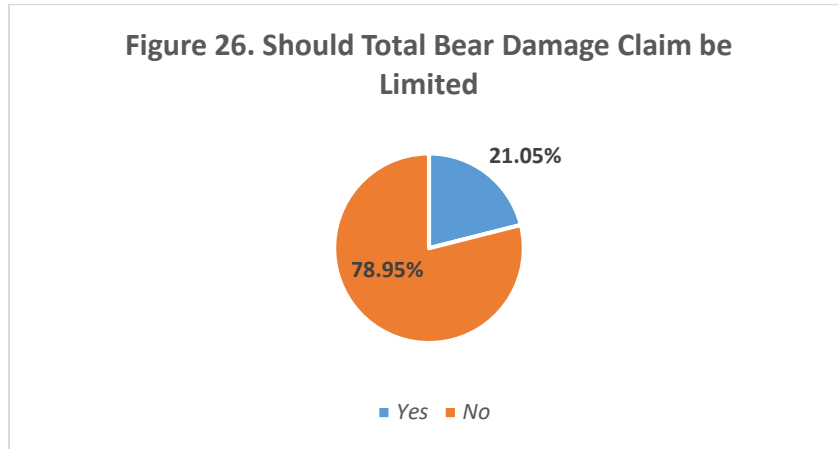
*“Diversified so program doesn’t work.”*

Vermilion

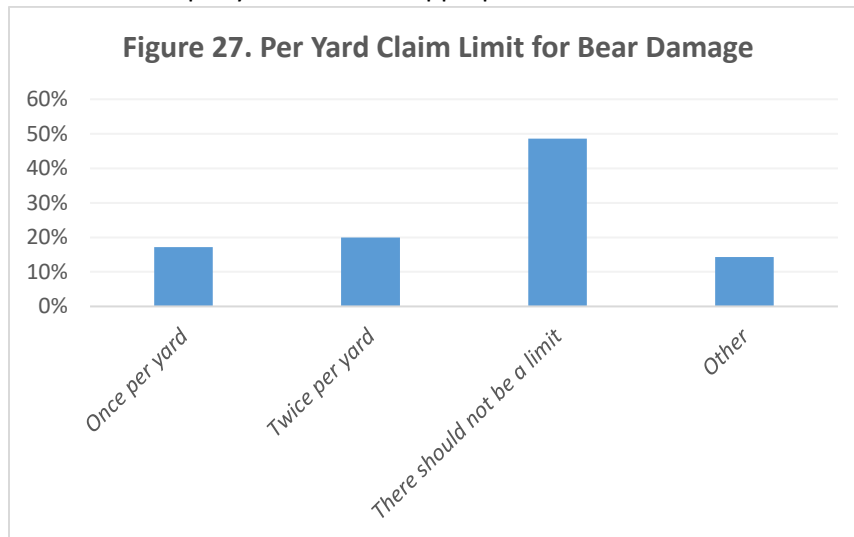
## Wildlife Damage

### Quantitative Analysis

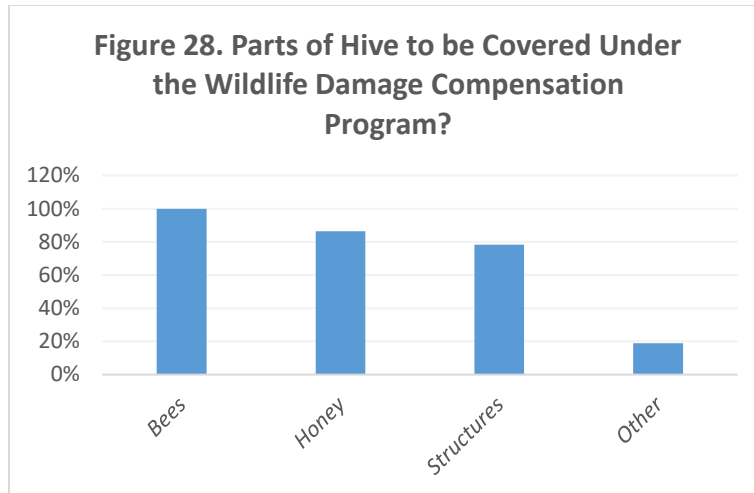
The majority of respondents felt that there should not be a limit on how many bear damage claims a producer files in a season (Figure 26).



Producers were then asked on a per yard basis, should there be a limit to how many times a claim can be filed for bear damage (ie. Should repeat claims be allowed to be filed)? And if so, what would an appropriate limit be? Again, producers felt that there shouldn't be a limit. However, as Figure 27 shows it was not as strong of a majority, with 37% of producers feeling that a limit of 1 or 2 claims per yard would be appropriate.



When asked what part of the hive should be covered under the Wildlife Damage Compensation program, Figure 28 shows 100% of respondents felt that the bees should be covered. A majority of respondents also felt that the honey and the structures should be covered (86% and 78% respectively).



Bear damage was of significant concern to respondents with 39% of respondents answering that bear damage is very important to their operation. Figure 29 shows that number climbs to 76% when 'slightly important' is included.

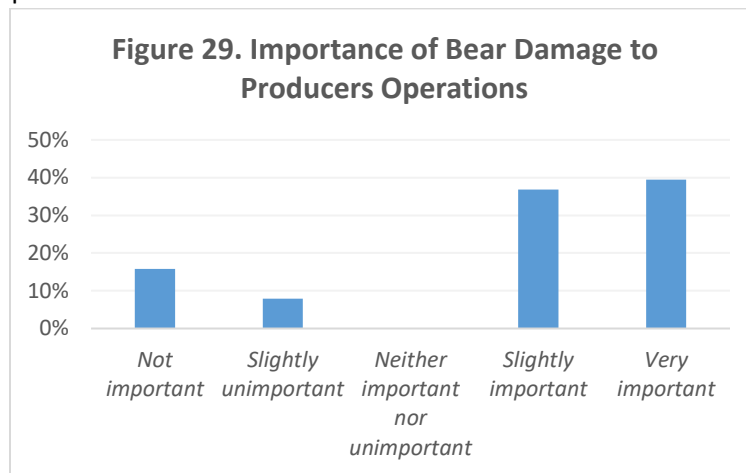
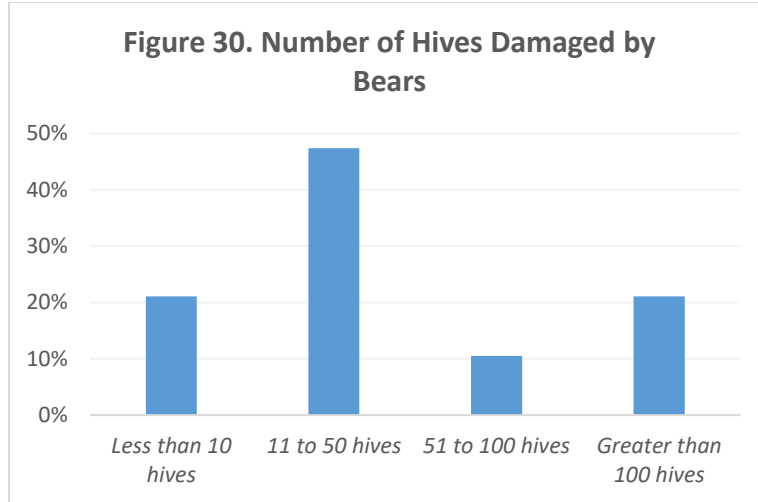
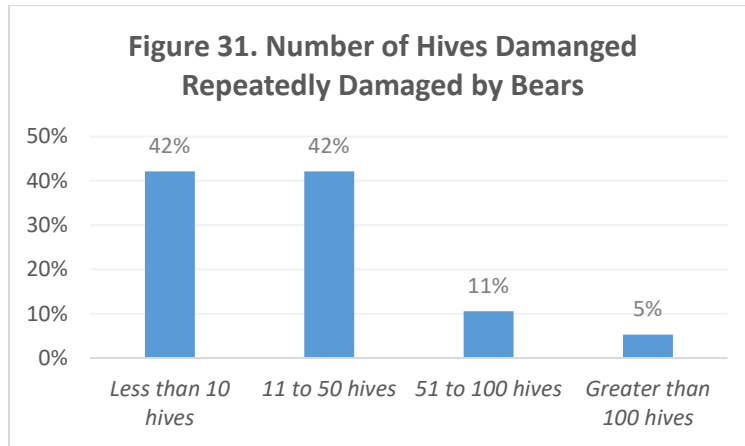


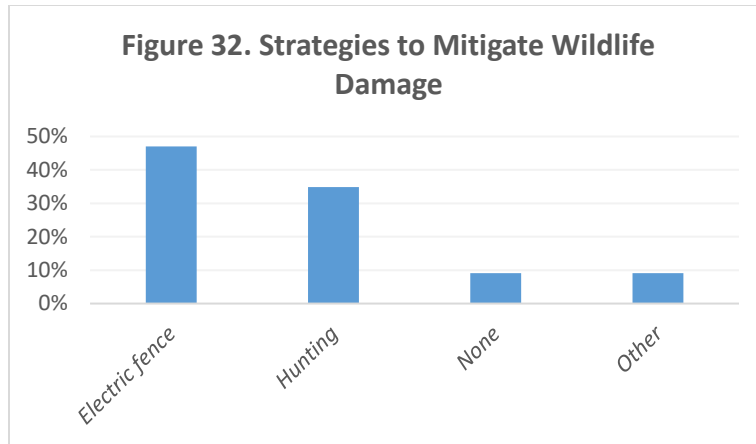
Figure 30 shows nearly half of respondents (47%) had 11-50 hives damaged by bears on a yearly basis. 21% of producers had more than 100 hives damaged by bears on a yearly basis. 100% of respondents had at least 1 hive damaged by a bear this past season.



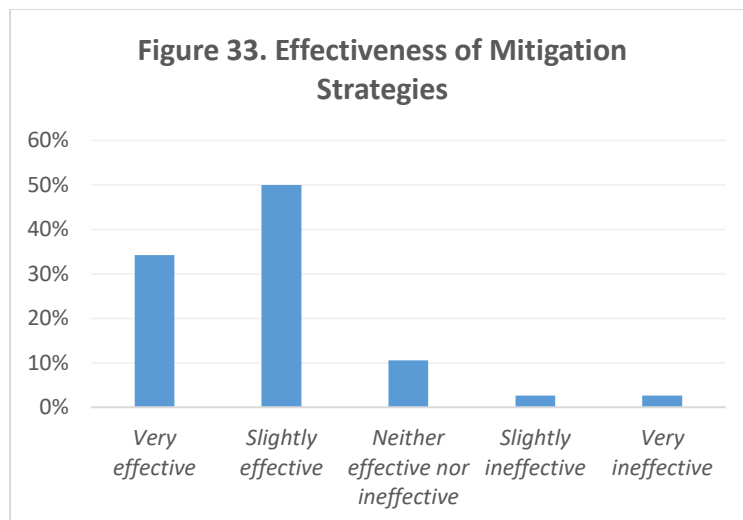
Interestingly, while 21% had more than 100 hives damaged in a season Figure 31 shows that only 5% had more than 100 hives damaged more than once. 84% of respondents had 50 hives or less repeatedly damaged by bears.



Electric fences were the main strategy to deter bears from damaging hives, followed by hunting as shown in Figure 32. Respondents viewed their strategies as effective, with 84% indicating that they felt these measures were slightly effective or better, as shown in Figure 33.



*Respondents were asked what type of mitigation strategies they employed, and to select all that applied. Hence, a producer may have chosen more than one option. Therefore an example of the interpretation of results would be: 47% of respondents used electric fences as a part of their mitigation strategy.*



**Qualitative Analysis**

Wildlife damage, specifically bear depredation, is of major concern to producers and it was brought up as a concern regardless of IAG meeting location. Interestingly, while there are areas of the province that are under an annual bear threat, the rest of the province seems to experience bear damage as more of a one-off, or as a side effect of another event. For example, AFSC heard how the wildfires of the spring/early summer had driven the bears to areas where they normally would not have been and as a result hives were damaged this year that had never previously been threatened.

The main strategy that producers used to protect their hives was electric fences, and while they were reasonably effective, they were not silver bullets. According to producers, once a bear learned what is on the other side of the fence they will push through, electric or not.



Additionally, producers have a problem with people stealing their solar fencers, and at \$600-\$800 a fencer this can become an expensive problem quickly.

AFSC suggested approaching bear damage to hives in a similar way to how stacked hay is currently approached. A producer would be fully compensated the first time that their hive was damaged regardless of whether there were any mitigation strategies present. The second time the hive was damaged, a producer would only receive full compensation for the damage if they had deployed a mitigation strategy; otherwise they would receive 50% compensation. The third time a hive was damaged a producer would receive either 0% (if they did not employ any mitigation strategy) or 50% compensation if they had employed one originally but not upgraded it since then.

Producers were supportive of this approach; however, they requested a modification to account for the fact that for some of them bear damage was not a yearly problem. The suggested modification was to have a 'decaying counter' so that if a location was damaged by a bear one year, but not for several years after that, the record of the bear damaging the location would be erased.

**For example:**

A bear damages a hive in Year 1. The producer believes that this was an isolated event and for that reason does not implement any mitigation strategies. There is no bear damage in Years 2, 3, or 4. In Year 5 the hive is damaged again.

If a 'decaying counter' strategy is used the producer would be eligible for full compensation in both Year 1 as well as Year 5. If not, then the producer would only be eligible for full compensation in Year 1 and would receive 50% in Year 5.

There was a concern amongst producers that if a 'decaying counter' (or a similar mechanism) was not employed they would be required to fence all their hives, even if bear damage only occurs once every 5 years (or longer). This would represent a significant amount of time, money and effort on the part of the producer for a very infrequent (or once in a lifetime) risk. In instances where the damage is more frequent, a producer would still see a reduction in compensation if a location is damaged yearly. In this instance the producer would need to move their hives to a new location (or implement more stringent mitigation strategies) in order to again be eligible for compensation.

Producers strived to clean up and repair damaged hives as soon as possible, often within the day that the damage was discovered. This is both because a damaged hive will attract more bears (which will cause further damage) and because a damaged hive does not produce honey. In some instances, a 'homeless' swarm of bees will actually interfere with other functioning hives. With all of this in mind, it was felt that it was unreasonable to make a beekeeper wait a day or two for an adjuster to come and assess the damage. On the other hand, it seemed just as unreasonable to assume that an adjuster could respond in a day to every damaged hive.

The stacked hay approach was viewed favorably in the IAG's, and it would address the issue of repeatedly damaged hives. It is important to note however that 84% of producers report that 50 or less of their hives are damaged more than once a season (see Figures 30 and 31). This reinforces that not only are beekeepers implementing mitigation strategies, but that these strategies are working.

### Producer Comments

*"Need to have fence to keep bears out and shouldn't be eligible for compensation if there is no fence"*

Westlock

*"Concern over theft of solar fencers"*

Lethbridge

*"Massive influx of wildlife due to forest fires"*

Falher

*"Like the way stacked hay program works for paying 1<sup>st</sup> year, then reduced payment"*

Vermilion

## Appendix

### AFSC Past Honey Production and Bee Overwintering Statistics

#### Honey Production

Crop Year	# of Subs	# of Hives	\$ Coverage	Premium	Loss
2000	37	47,314	\$ 3,104,595	\$ 410,820	\$ 826,531
2001	56	72,118	\$ 4,827,997	\$ 700,855	
2002	58	74,688	\$ 5,745,327	\$ 818,029	\$ 1,234,192
2003	62	74,069	\$ 11,094,806	\$ 1,586,465	\$ 2,639,650
2004	64	72,255	\$ 8,697,569	\$ 1,310,081	\$ 552,412
2005	59	71,153	\$ 5,627,435	\$ 851,002	\$ 740,061
2006	57	67,306	\$ 4,763,584	\$ 790,275	\$ 133,182
2007	47	50,536	\$ 4,515,208	\$ 671,210	\$ 459,629
2008	43	50,298	\$ 4,486,237	\$ 706,086	\$ 690,956
2009	41	50,264	\$ 10,375,876	\$ 840,412	\$ 915,831
2010	50	65,353	\$ 13,491,007	\$ 1,328,186	\$ 933,367
2011	47	63,734	\$ 13,034,488	\$ 1,398,650	\$ 1,082,526
2012	44	63,198	\$ 12,784,186	\$ 1,151,727	\$ 1,030,899
2013	44	61,652	\$ 14,349,969	\$ 1,257,796	\$ 1,814,791
2014	43	62,398	\$ 15,492,063	\$ 1,529,802	\$ 1,969,088
2015	46	81,125	\$ 22,420,520	\$ 2,405,771	\$ 2,174,961
2016	40	75,061	\$ 15,146,161	\$ 1,422,468	\$ 86,505
2017	27	54,884	\$ 10,155,183	\$ 844,953	\$ 352,993
2018	23	53,732	\$ 12,596,367	\$ 1,038,689	\$ 1,046,495
2019	20	42,958	\$ 10,157,359	\$ 771,292	
<b>Total</b>			<b>\$ 202,865,940</b>	<b>\$ 21,834,568</b>	<b>\$ 18,684,069</b>

### Bee Overwintering Insurance

Crop Year	# of Subs	# of Hives	\$ Coverage	Premium	Loss
2009	35	44,141	5,293,520	382,808	270,675
2010	27	23,724	2,843,220	200,891	371,513
2011	27	24,503	2,923,120	205,534	300,935
2012	25	27,101	3,233,400	242,817	565,564
2013	29	26,688	3,988,740	315,822	487,501
2014	27	21,090	3,393,357	298,751	70,159
2015	25	25,672	4,441,360	404,482	143,390
2016	23	23,923	3,142,821	318,231	269,056
2017	12	11,687	1,697,494	180,335	282,480
<b>Total</b>			<b>\$ 30,957,032</b>	<b>\$ 2,549,671</b>	<b>\$ 2,761,272</b>

### Inter-Provincial Comparison

#### Alberta

##### Honey Production Insurance

- Province is divided into 4 Risk Areas which coverage is initially based upon
- Coverage is based upon a producers individual yields, and as a producer insures with AFSC they are transitioned to their own individual coverage.
  - A blend of available yield records and historical yields for the client's risk area are used when there are 4 or fewer yield records available.
  - The average of up to 15 of the most recent yield records are used when there are 5 or more yield records available.
- Clients can elect coverage levels of 50, 60, 70, or 80 percent of their average yield.
- Clients must have a minimum of 100 hives and must insure all of their hives.
- Producers who provide pollination services are not eligible for coverage.
- Hives that are transported away from the primary location are returned on or before May 31 and reported to AFSC
- Coverage is for a loss in production only, there is no coverage for quality loss.

##### Bee Overwintering Insurance

- Provides coverage for the loss of bees, in excess of normal losses, resulting from naturally occurring perils beyond management control.
- Clients must have a minimum of 100 hives to be eligible and must insure all hives overwintered in Alberta.
- Clients must be registered, operate under and meet the requirements of the Bee Act in Alberta.
- Coverage begins November 1 and ends May 15.
  - AFSC's On Farm Inspections (OFI) determines what hives are insurable through a fall inspection prior to the hives being wrapped.

- Winter loss is determined the following spring through an inspection by OFI when the bee's are unwrapped.
- Coverage is excluded for:
  - Hives overwintered outside of Alberta.
  - Hives that AFSC OFI inspects and deems too weak to survive the winter.
  - Leafcutter bees and nucs.
  - Single brood hives stored outdoors.

#### **Wildlife Damage**

- AFSC does not currently cover wildlife damage

#### **British Columbia**

The Province of British Columbia does not offer any crop insurance programs for its beekeepers. The only program available to BC beekeepers is AgriStability.

#### **Saskatchewan**

##### **Honey Production Insurance Program**

- Coverage is determined using individual average yields, based on 10 years of verified production information
  - For new producers or producers who are missing production data the long term provincial area average yield will be used
- Clients can select coverage levels of 50, 60 or 70 percent of their average yield.
- Clients must have a minimum of 100 hives to be eligible and must insure all eligible hives.
- Producers must be registered with the Saskatchewan Beekeepers Development Commission.
- Hive reports must be filed on or before June 25.
- Insurance will not be provided for colonies that have been moved for pollination.

##### **Bee Mortality Insurance Program**

- Coverage is based on an individual deductible that is calculated using a combination of the beekeepers individual overwintering loss experience and/or the provincial long-term average (if individual records are unavailable).
- A beekeeper must have a minimum of 100 colonies and be registered with the Saskatchewan Beekeepers Development Commission to be eligible.
- All colonies are subject to a fall inspection by SCIC to assess the hive's 'winter readiness'. Only colonies that meet industry standard criteria at time of inspection will be insurable.
- Minimum 8 frame single colonies are eligible. Nucs are not insurable.
- Coverage begins after the fall inspection by SCIC and will continue until the colonies are inspected in the spring.

- In the spring, beekeepers with a concern about winter survival must notify SCIC, for an adjuster to inspect and determine losses, prior to colonies being unwrapped or moved outside.
- If SCIC is not notified of a loss in the spring, coverage will terminate on May 15.

#### **Wildlife Damage**

- Saskatchewan's Wildlife Damage Compensation Program will pay for losses to honey bees' as a result of bear damage.
  - This includes: hive components, colony damage and Lost honey.
- SCIC will cover 80% of the material cost for construction bee-yard fences, to a maximum of \$5000 annually.
  - If there is no electric fence around bee colonies, compensation will be paid for bear damage to bee colonies and their structures only on the first occurrence per yard.
    - Subsequent claims on the same bee yard will not be paid if no fence is erected.
      - If a fence is erected, there is no limit to how many times a producer can claim on a yard.

#### **Ontario**

##### **Bee Health Production Insurance**

- The bee health plan covers colony losses caused by weather conditions or disease and pest infestation that occurs during the overwintering period.
  - Eligible perils include: excessive moisture, excessive cold, excessive wind, ice damage, flood, frost and diseases and pests with no means of adequate control
- Up to 70% coverage level

##### **Wildlife**

- Ontario's Wildlife Damage Compensation program covers not only damage from bear predation but also skunk, raccoon and deer damage to bee colonies.
- Beehives, bee colonies and/or beehive-related equipment are eligible for compensation when damaged by an eligible predator.
- Beekeepers are not permitted to destroy or dispose of the beehive, bee colony or beehive-related equipment reported damaged until the bee investigator has seen it and agreed that it can be disposed of.

## Risk Assessment for Possible Program Changes

### Honey Production Insurance

#### Date Change

While producers felt that the requirement to have their hives in Alberta by May 31 was too restrictive, opinions were mixed on what date they would prefer. Hive movement across provincial lines must be reported to Alberta Agriculture and Forestry (AF) and the Provincial Apiculturist. This means that AF has a record of when producers are moving their hives. AFSC looked at these records to see if any of the dates suggested by producers stood out.

According to these records only 1 producer moved their hives into Alberta after June 15. Additionally, the Provincial Apiculturist feels that if AFSC used the June 15 date the loss in honey production would be negligible as the majority of the honey production comes later in the summer (mid-late July).

#### Eligibility of Pollinators

Producers who also participate in pollination are currently ineligible for AFSC's Honey Production insurance. The concern (from AFSC's perspective) is that pollination hives do not yield the same as hives that are used only for honey production.

A potential solution to this problem is to prorate a beekeepers production between the two hive types. AFSC would require two additional pieces of information:

- The clients pollination contracts so that AFSC could determine how many hives were involve in each type of production.
- Pollination hive yield data from AF so that AFSC could create an initial area average (as producers participated they would be weaned off of this area average an onto their own individual yields).

### Bee Overwintering Insurance

#### Overwintering of Singles

AFSC currently does not insure single brood chamber colonies stored outdoors for overwintering insurance. Overwintering of singles is a management strategy that is getting to be more and more popular (as shown in this year's survey). AF provided AFSC with data that demonstrates that there is little to no additional risk in overwintering singles vs doubles; especially in more recent years. It is also worth noting that Saskatchewan covers single brood colonies over the winter and does not have any specific premiums or risk ratings for singles vs doubles.

**Figure 1.** Overwintering Double Brood versus single brood Chamber Colonies and Percent Average Winterkill

Season	Double	Single
2010-2011	25	38
2011-2012	20	19
2012-2013	29	26
2017-2018	25	29
2018-2019	20	22
Average Winterkill	24	27

Note: Table provided by AF and the Alberta Provincial Apiculturist.

### Overwintering Date and Coverage Level Changes

Producers expressed concern around the restrictive nature of the dates that AFSC requires for overwintering insurance inspections. The suggested date changes would put AFSC more in line with AF and when their overwinter survival assessments are done (May 22). Looking at the winter survival rate in Figure 1, they are clustered around 20-30%, which is currently the level of loss that AFSC requires producers to cover on their own. This means that potentially changing the dates would have a minimal effect (if any) on AFSC's risk level.

Increasing the coverage level so that producers only cover the first 20% of their loss (similar to crop insurance) could result in a potential increase in the level of liability taken on by AFSC. This increase is not guaranteed however because the coverage level would be based on their own individual survival rate. So while they may potentially trigger increased claims initially (when they are building up their coverage and are using the area average), once they transition to their own survival rate this risk is mitigated.

### Moral Hazard Concerns

The suggested changes to both the Honey Production and Bee Overwintering insurance programs have the potential to increase the moral hazard of the programs. Discussions with On Farm Inspections (OFI) and other AFSC personnel has resulted in several strategies that will mitigate this risk. They include:

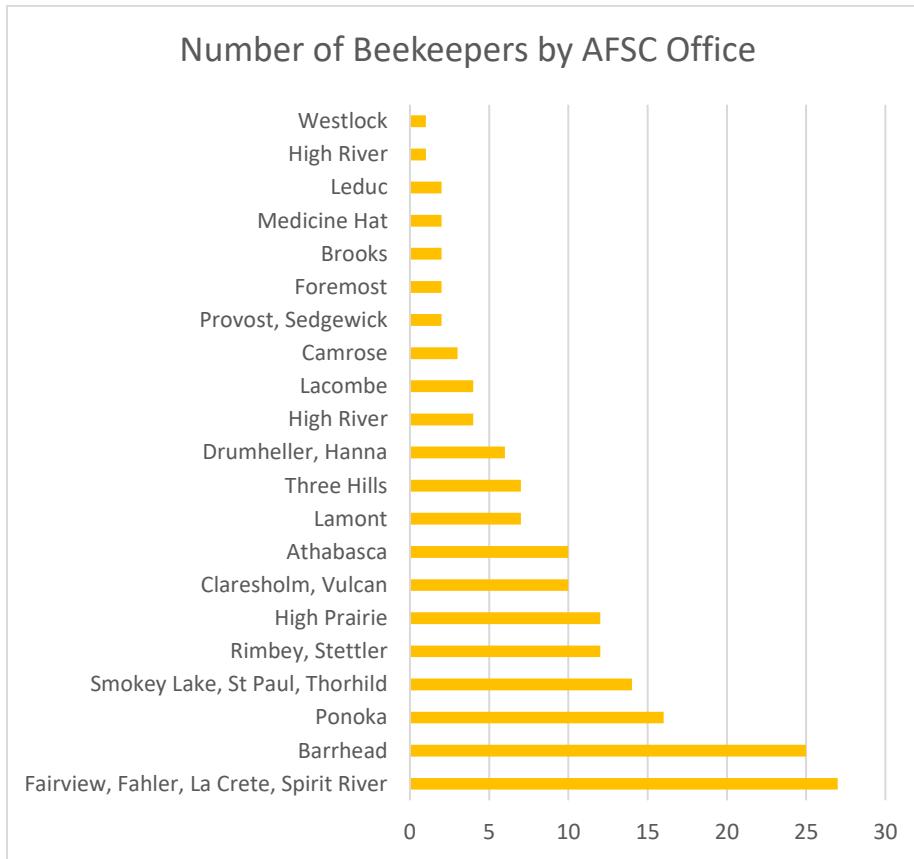
- Adding an additional clause that would require beekeepers to notify AFSC by a certain date if they feel that their bee overwintering insurance is in a claim position.
  - If producers do not notify AFSC by the deadline (or notify AFSC that they are not in a claim position) OFI would not go out and inspect their hives.
- Stress test different types of individual averages to determine the 'sweet spot' between providing adequate coverage for back to back loss events and reflectively stepping down a beekeepers coverage for year on year claims.
- Tightening the tolerances on the percentage of error allowed in reporting how many hives a producer has insured with AFSC.



- Periodically audit bee producers.

If these program design elements are added to the insurance programs, AFSC should be adequately protected from any additional moral hazard that results from the suggested changes. The vast majority of beekeepers are honest and will not look to exploit AFSC's programs and these design elements are targeted to a small minority.

### Alberta Beekeeper Distribution by AFSC Office Location



Note: Provided to AFSC by the ABC. 169 beekeepers in total.

A lack of communication and education on AFSC's programs was a theme throughout the IAG meetings. This graph shows which AFSC offices are nearest to the highest number of Alberta beekeepers. This could represent a potential sales opportunity for AFSC.