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Risk Management Programs for Honey Bee Producers in Wyoming

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Objective

Analysis For

Informed

Decision Making



Introduction:

Two major United States Department of Agriculture (USDA) programs are designed to provide risk management tools for managers of honey bee colonies and the production of honey. The first is the **Emergency Assistance for Livestock, Honey Bees, and Farm-Raised Fish Program (ELAP)** operated by the USDA Farm Service Agency (FSA). The second is the **Apiculture Pilot Insurance Program** operated by the USDA Risk Management Agency (RMA). Each of these two programs is described and illustrations are provided of how they may be of assistance to Wyoming honey bee producers.

Emergency Assistance for Livestock, Honey Bees, and Farm-Raised Fish Program:

Background

The Emergency Assistance for Livestock, Honey Bees, and Farm-Raised Fish Program (ELAP) was authorized under the Food, Conservation and Energy Act of 2008 (the 2008 Farm Bill). The program provides emergency assistance to eligible producers of honey bees who have a loss due to disease, adverse weather, or other conditions, including losses due to blizzards and wildfire, as determined by the Secretary of Agriculture.

Assistance under ELAP is for losses **not covered** under three other Supplemental Agriculture Disaster Assistance Payment Programs established in the 2008 Farm Bill. Specifically these other programs are the: Livestock Forage Disaster Program (LFP), the Livestock Indemnity Program (LIP), and the Supplemental Revenue Assistance Program (SURE).

Sections 12033 and 15101 of the 2008 Farm Bill define the scope of ELAP. These sections authorize the Secretary of Agriculture to provide payments to producers of honey bees to aid in the reduction of losses due to disease, adverse weather, or other conditions such as blizzards and wildfire. ELAP covers some species, loss conditions and losses that are **not eligible for other disaster assistance programs**. Honey bee producer losses covered under ELAP are losses of feed that was intended as feed for honey bees, the cost of purchasing honey bee feed that does not normally occur, and honey bee colony losses.

General Provisions

As with other standing disaster programs, ELAP payments are annually limited to a maximum of \$100,000 per person or legal entity. The \$100,000 limit is a combined limit on the sum of all payments from the following standing disaster programs: LIP, LFP, SURE and ELAP. For example, if a producer subject to a payment limit of \$100,000 receives a \$75,000 SURE payment (and no payments under LIP and LFP), then the maximum payment the producer could receive under ELAP is \$25,000. In addition, for losses in 2009, 2010 and 2011, a person or legal entity with an average annual adjusted nonfarm gross income that exceeds \$500,000 for the relevant period will not be eligible to receive ELAP payments.

ELAP has a **risk management purchase requirement**. To be eligible for ELAP payments, eligible producers must have purchased crop insurance for each **insurable commodity, excluding grazing land**. (This provision is pertinent to honey bee producers who produce other **insurable commodities**). **Insurable commodities** are those for which a plan of insurance can

be obtained from the USDA's Risk Management Agency. Risk management assistance for **noninsurable** commodities is generally available through the Noninsured Crop Disaster Assistance Program (NAP) administered by the USDA's Farm Service Agency (FSA), the same agency that administers ELAP. To be eligible for ELAP assistance producers must have obtained an RMA policy or plan of insurance or NAP coverage for all crops **except for grazing land**.

Producers whose only agricultural commodity is honey bees must obtain coverage against losses through one of two federal programs. They must either purchase federal insurance coverage through the RMA pilot Apiculture Insurance Product or obtain coverage for honey bees through the Non-Insured Crop Disaster Assistance Program (NAP) offered by the Farm Service Agency. Honey bee producers who do not obtain RMA insurance or NAP coverage are not eligible for ELAP.

Socially disadvantaged farmers and ranchers, as well as "limited resource farmers" or "beginning farmers" are **exempt** from the risk management purchase requirement. There is also an "equitable relief" provision under which the Secretary of Agriculture may provide equitable relief on a case-by-case basis from the risk management purchase requirement.

Specific Provisions

The 2008 Farm Bill provides for up to \$50,000,000 per year nationally to provide emergency relief under ELAP to producers of livestock, honey bees, and farm-raised fish. The 2008 Farm Bill specifies that ELAP is for losses due to "disease, adverse weather or other conditions such as a blizzard or wildfires, as determined by the Secretary (of Agriculture). Under the rule, eligible adverse loss conditions include disease, adverse weather, and other conditions that are determined by the Farm Service Agency Deputy Administrator on the behalf of the Secretary (of Agriculture). In general, adverse weather includes but is not limited to events such as hurricanes, floods,

blizzards, wildfires, extreme heat, and extreme cold.

ELAP is implemented to fill in the gap and to provide assistance under other conditions as the Deputy Administrator (of FSA) determines are appropriate. The program is intended to provide broad coverage of losses not covered by other standing disaster programs. Eight different types of losses were identified by FSA (as of September 11, 2009) as examples of losses that could be addressed by ELAP. Losses for which honey bee operations are eligible for ELAP payments are as follows.

An eligible honey bee producer is an operator that has a risk in a honey production or pollination farming operation for the purpose of producing honey or pollination for commercial use on the beginning date of the adverse weather or eligible loss condition.

Eligible honey bee producers can receive ELAP assistance if they have **losses of feed that was intended for feed for honey bees**. The feed loss must have occurred in the county where the eligible adverse weather or eligible loss condition occurred.

Eligible honey bee producers can receive ELAP assistance if they have **additional honey bee feed costs that are not normally incurred**. The additional feed cost must arise due to an eligible adverse weather or an eligible loss condition that results in a feed purchase.

Eligible honey bee producers can receive ELAP assistance if they have **honeybee colony or honeybee hive losses** due to eligible adverse weather or eligible loss conditions including, but not limited to, **colony collapse disorder**, earthquakes, floods, hurricanes, tornadoes, and volcanic eruptions that occurred in the county where losses were incurred. In the case of colony collapse, the colony collapse disorder must be certified or otherwise documented by a competent third party.

Note that **losses that are not related to eligible adverse weather or other eligible loss conditions**, as determined by the FSA Deputy Administrator, are **not covered under ELAP**.

ELAP Payment Calculations and Examples:

Payment calculations are explained by example. Further explanation of the payment determinations can be provided by FSA personnel based on FSA software for payment determinations. **Note that all compensation calculations are subject to an annual national proration factor if the total eligible losses under ELAP exceed \$50,000,000.**

Example 1: A Wyoming honey bee producer suffered a loss of 1,000 pounds of purchased sugar to feed eligible honeybees at a cost of \$ 500 which occurs because of a flood during the production year. The producer files the appropriate documentation to support the feed purchase and cost. The lost purchased feed is therefore an ELAP eligible feed loss and, therefore, is compensated at the rate of 60 percent of the producer's actual cost. The 60 percent rule has been established under the provisions of the program. The amount of ELAP compensation will be:

$$[\text{Cost of Purchased Feed that was Lost}] \times [0.60] = \text{Compensation for Feed Lost}$$

In example 1, the compensation received by the producer is therefore $[\$500] \times [0.60] = \300 .¹

Example 2: An unexpected blizzard occurs in the county where a honey bee producer operates and makes his usual feed source for the honey bees inaccessible. The producer buys 400 pounds of sugar for honey bee feed because of the blizzard at a cost of \$200 to sustain the eligible honey bees for a short period of time. The cost of purchasing the sugar is an additional feed cost that the producer does not normally incur and is an eligible cost under ELAP. The producer can be compensated, by rule, at a rate of 60 percent for this feed cost that is not normally incurred. ELAP compensation will be:

$$[\text{Cost of Feed Purchased above Normal}] \times [0.60] = \text{Compensation for Additional Feed Cost}$$

¹ Consider a year in which the eligible losses under ELAP totaled \$75,000,000. Then the proration factor would be $\$50,000,000 / \$75,000,000 = 0.67$, so the payment would be \$200, the initial estimated compensation payment of \$300 multiplied by the proration factor of 0.67.

In example 2, the compensation is: [\$200] x [0.60] = \$120.

A Wyoming-based honey bee producer has a pollinator business that operates in both Wyoming and California. The producer has no other insurable farm or ranch commodities but purchases RMA apiculture pilot insurance coverage to satisfy the risk management purchase requirements. At the beginning of the Wyoming pollination season, the producer has 1,000 colonies of honey bees. By the end of the Wyoming pollination season, however, the producer has only 200 colonies because of 800 colonies have been lost because of colony collapse disorder, as certified by a competent third party. Documentation provided by the producer establishes that the honeybee producer spent \$48,000 to replace the 800 colonies lost, or \$60.00 per colony. ELAP compensation to the producer for the loss of colonies will be as follows:

[Replacement Cost] x [0.60] x [Producer's Share] = Compensation for Colony Collapse.

As discussed above, by rule, the producer receives 60 percent of the estimated loss.

In example 2, the compensation payment will therefore be:

[\$48,000] x [0.60] x [1.00] = \$28,800.

The major use of ELAP by honey bee producers has been to offset the costs of bee colony replacements resulting from colony collapse disorder.

ELAP Summary:

ELAP is a standing disaster assistance program established by the 2008 Farm Bill. ELAP addresses losses not covered under LIP, LFP, and SURE. Honey bee producer losses that may be compensated under ELAP are the eligible losses of feed intended for honeybees, additional feed costs, and the loss of colonies. Honey bee operators are subject to the risk management purchase requirement for all agriculture commodities except for grazing land.

The Apiculture Pilot Insurance Program:

Background

The Risk Management Agency (RMA) offers an apiculture pilot insurance program. The program is a group risk insurance pilot program that was introduced in about half of the states in 2009. The Apiculture pilot program uses the same indices, technology, methodology, and rating methods that have been established by RMA for the Pasture, Rangeland, and Forage Rainfall Index (RI-PRF) and for the Pasture, Rangeland, and Forage Vegetation Index (VI-PRF) pilot programs.

The Apiculture Pilot Insurance Program provides a safety net for beekeepers' primary income sources—honey, pollen collection, wax and breeding stock. Apiculture systems consist of different types of plants or crops and often contain mixtures of different species, each with different growth habits and seasons, vegetation greenness and health, rain requirements, and other climate conditions to maintain plant growth over an extended period of time. Honey production has been shown to be directly dependent upon forage growth/productivity which is linked to the rainfall and vegetation indexes that are used in the Pasture, Rangeland, and Forage (PRF) pilot programs on which the Apiculture Pilot Insurance Program is based.

The Apiculture Pilot Insurance Program for a state uses either the rainfall and vegetation greenness indexes of the Pasture, Rangeland, and Forage (PRF) pilot programs to estimate local rainfall and plant health, allowing beekeepers to purchase insurance protection against production risks.

The vegetation index is used for the Apiculture Pilot Insurance Program (VI-API) in Wyoming. The vegetation index, known as the Normalized Difference Vegetation Index and commonly referred to as the NDVI, is calculated using satellite data on plant greenness from the U.S. Geological Survey Earth Resources Observation and Science data center.

Operational Procedures for the Apiculture Pilot Insurance Program:

Producers are required to select geographic "points of reference" identified by the longitude and latitude that best represent the locations the honey bee producers want to insure. These points of reference the **GRID IDs** for each grid whose NDVI values will

form the basis for the insurance the producer will purchase. Historical data on NDVI values for each potential grid are available to the producer and the producer's insurance agent through the RMA home page. This information can be used by a producer to see how often a specified NDVI contract would have provided an indemnity over time and what the size of the indemnities would have been.

A producer's honey bee colonies do not have to be at a location or **GRID ID** during the insured **index interval** (practice). However, a producer must certify the selected practices support vegetation necessary for the insured **crop**, which, in the case of the Apiculture Pilot Insurance Program, is **apiculture with the ability to produce honey**. Colonies can be moved during an **index interval** (practice) and a honey bee producer can insure colonies in an area (specific **GRID ID**) for a index interval or period other than when honey bee colonies are physically located in the grid of interest. There are allowances for such things as a "lag" effect whereby the condition of vegetation early in the growing season (in one index interval) may lead to mature vegetation that supports honey production in another index interval when the bees are located in that grid.

The Apiculture Pilot Insurance Program can be used to insure against reductions in honey production. If the NDVI value is sufficient low relative to its average (or normal value), a producer will receive an indemnity. The NDVI values for each grid are normalized so that the index value of 100 always represents the average value for a grid NDVI. Honey bee producers recognize that the Apiculture Pilot Insurance Program does not measure a producer's direct production or loss of honey. In Wyoming, honey bee producers must insure honey production using a vegetation index.²

For purposes of the Apiculture Pilot Insurance Program an insurable **colony** is **a group of honey bees housed in a managed hive used for apiculture, which does not include wild or feral bees.**

² Historical data on NDVI values for all index intervals in all grids may be obtained from RMA at the following URL: http://prfvi-rma.tamu.edu/run_epl. Producers can use drop down lists to identify their state, then their county and the grid within the county.

Producers do not have to insure all of their insurable colonies. A producer may elect to insure either all or only some of their insurable colonies in a county. For an individual honey bee producer, the insured colonies are only those insurable colonies, located in the county listed on their accepted application, reported on or before the colony reporting date that they elect to insure. The same colonies cannot be insured under more than one plan of insurance or in more than one state during a crop year. For example, if a Wyoming-based honey bee producer has 1,000 colonies and elects to insure 750 colonies in Wyoming's Fremont County under the API Crop Provisions, then the same colonies cannot be insured in a California county when the producer moves them there for citrus pollination and honey production. However, the remaining 250 colonies could be either in another Wyoming county or another state under the applicable apiculture plan of insurance for that location (if, in the case of a different state, such a plan is available where such a plan could be based on either a vegetation index or a rainfall index).

In the Apiculture Pilot Insurance Program, the **crop year** begins on January 1 and ends on December 31. Producers in Wyoming had to sign up for the program by September 30, 2010, the **sign up date** for the program, in order to have insurance coverage for their honey crop in 2011. Producers must report the colonies for which they have acquired insurance by the **colony reporting date** (equivalent to the **acreage reporting date** for other crops as described in the basic provisions of the PRF vegetation index program for other crops).

The crop year is divided into periods that are described as **index intervals**. These **index intervals** each represent a period of time during which the NDVI data are collected that is used to calculate expected and final grid index values. An insured honey producer may select more than one index interval during a crop year for each share and grid ID. Not all index intervals may be represented in a particular grid. **Only index intervals that would provide vegetation for honey bee production (as determined by RMA) are available for any specific grid.** In Wyoming, the winter intervals are not available. The general index intervals for the Apiculture Pilot Insurance Program are defined as follows: January through March index interval February through April index interval March through May index interval April through June index interval

May through July index interval
June through August index interval
July through September index interval
August through October index interval
September through November index interval
October through December index interval

For insurable honey bee colonies in a particular grid, a producer must select the index intervals in which honey production is to be insured. A particular grid may have a mixture of plant species maturing at different times of the year. For instance, late season vegetation may be available within a particular grid. If a Wyoming honey bee producer wants to insure against loss of honey production due to a decline in forage growth/productivity upon which honey production is dependent, the honey bee producer must decide when there could be a decline in forage growth/productivity that could lead to a decline in honey production. For instance, if poor growing conditions could lead to low forage growth/production in the late season July through September index interval, a honey bee producer may choose to insure against forage loss in that three month interval.

An insured honey bee producer may select any of the index intervals available in a particular grid. However, the selected grid index interval(s) cannot contain any month in more than one interval in each grid ID and share in a county. For example, if an insured honey bee producer selects the July through September interval then the producer cannot select any other interval that contains the months of July, August or September for the same grid ID, type and share in the county. Thus, a producer who selects the **July through September index interval** is precluded from insuring honey bee colonies in the May through July, June through August, August through October and September through November index intervals for the same grid ID and share in the county.

Basic Apiculture Pilot Insurance Program Terms

Several variables affect how much insurance coverage may be purchased for honey bee colonies in a specified grid. These variables, which have specific definitions for the Apiculture Pilot Insurance Program, are as follows:

County Base Value: The **County Base Value** is based on honey production and uses a 5-year rolling average of USDA National Agricultural Statistics Service (NASS) data on honey production. The honey yield data

per honey bee colony are based on the NASS State Average and the price of honey is the national honey price for a given year. Computationally, **county base value = yield per colony x price per unit of yield.**

Coverage Level: The **Coverage Level** is the percentage of the County base value a honey bee producer selects for insurance coverage on honey production. A producer can choose a coverage level of **70, 75, 80, 85, or 90 percent** of the county base value. A honey bee producer must insure **all** grids in a county at the same coverage level.

Protection Factor: The **Protection Factor** is a value between **60 and 150 percent** (selected in one percent increments) that a honey bee producer selects. Producers often select coverage levels and protection factors to reflect the value of the honey from the honey bee colonies they are insuring. For example, if a producer realizes that his value of honey production is similar to the county base, the producer will select a coverage value/protection factor combination to provide a level of protection similar to the county base value of honey from a colony. The protection factor selected by a producer must be applied to all grids in a county.

Dollar Amount of Protection: The **Dollar Amount of Protection** per colony is equal to the county base value of honey per colony multiplied times the coverage level selected by the honey bee producer multiplied times protection factor selected by the honey bee producer. Consequently, there insured will only have one dollar amount per colony for a particular county.

Producer Share: The **Producer Share** is the honey bee producer's share of honey production for the insured colony(s). If the honey bee producer has all insured colonies located on his own property during the production season, his share is likely to be 100 percent. But if the honey bee producer has colonies located on another entity's property to so that his honey bee colonies benefit from the vegetation/forage on the other entity's property, there may be some share arrangement for the honey production whereby the honey bee producer receives less than a 100 percent share.

Unit: The *Unit* is the insured colonies within or assigned to a grid ID, by share and index interval in a particular county.

Policy Protection per Unit: The *Policy Protection per Unit* is equal to the dollar amount of protection per colony multiplied number of insured colonies multiplied by the share.

Policy Protection per Policy: The *Policy Protection per Policy* is the sum of the policy protection per unit for all insured units.

In summary, the above variables are used to calculate the level of protection provided to a honey bee producer under the Apiculture Pilot Insurance Program. The *county base value* is determined by the Risk Management Agency. The value of other variables used to specify the *dollar amount of protection* per colony (*coverage level* and *protection factor*) are chosen by the honey bee producer. These choices determine the *Policy Protection per Unit* and *Policy Protection* values.

The Apiculture Pilot Insurance Program utilizes the NDVI Index at the grid level on several ways to determine indemnity payments for honey bee producers. The following variables are based on NDVI values for each grid:

Expected Grid Value: The *Expected Grid Value* is determined by the Federal Crop Insurance Corporation based on the mean (average) accumulated NDVI values by index interval calculated using gridded data, corrected for temperature, normalized and expressed as a percentage. The *expected grid value* for a grid is therefore always equal to 100 or 100 percent. The expected grid value is known prior to the September 30 sales closing date preceding the start of the crop year on January 1 for the Apiculture Pilot Insurance Program.

Final Grid Index: The *Final Grid Index* is determined by the Federal Crop Insurance Corporation based on the current NDVI values of each grid ID and index interval during the crop year. The *final grid index* value is expressed as a percentage. An index value that exceeds 100 indicates that the NDVI value for the grid index has an above average value. An index value below 100 indicates that the NDVI for the grid has a below average value. The *final grid index* value for each index interval is published after the close of the index interval.

Premium Calculations

Premium calculations for the Apiculture Pilot Insurance Program are similar to those of other group risk management products. The *premium rate* is a dollar amount per \$100 of insurance liability (the maximum indemnity payment under the provisions of the contract equals the *dollar protection per colony*, as previously specified. The premium rate is multiplied by an adjustment factor of 0.01 to express the premium rate on a dollar of protection basis.

Premium subsidy rates are similar to those for other group risk products and subsidy rates decrease as coverage levels increase (Table 1).

Table 1: Premium Subsidy Rates for Group Risk Insurance Products

Coverage Level (%)	Subsidy Rate (%)	Administrative Fee (per contract)
70	59	\$30
75	59	\$30
80	55	\$30
85	55	\$30
90	51	\$30

Premiums for the Apiculture Pilot Insurance Program are calculated as follows:

Total Premium per Unit = Dollar Amount of Protection per Colony x Insured Colonies/Unit x Premium Rate per \$100 insurance x Adjustment Factor (0.01) x Producer share.

Premium Subsidy per Unit = Total Premium per Unit x Subsidy Rate.

Producer Premium per Unit = Total Premium per Unit – Premium Subsidy per Unit

Apiculture Pilot Insurance Program Indemnities

Indemnities are paid to a honey bee producer when the NDVI when the *final grid index* value falls below the *trigger grid index* value.

The trigger grid index value, determined by the expected NDVI value and the coverage level decision made by the honey bee producer, is defined as:

Trigger Grid Index = Expected Grid Index x Coverage Level.

If a honey bee producer wants a relatively high Trigger Grid Index value, the producer selects a relatively high coverage level. Such a choice, holding the protection factor unchanged, would result in a lower percentage premium subsidy and a higher producer premium.

If the *Final Grid Index* value is less than the *Trigger Index* then an indemnity is due. The amount of the indemnity is determined using two variables, the first of which is the *Payment Calculation Factor*, defined as:

Payment Calculation Factor = (Trigger Grid Index – Final Grid Index) / [Trigger Grid Index – (Expected Grid Index x Total Loss Factor)]

For the 2011 crop year and subsequent crop years, a *total loss factor* has been included in the determination of the *payment calculation factor*. The *total loss factor* is a factor used in the payment calculation to establish the level of loss at which the total indemnity amount of an insured unit is payable. This is the level at which the vegetation essentially has zero production. The factor will be set by the Risk Management Agency at 0.30 unless otherwise specified in the special provisions. With a factor of 0.30, the policy will pay out the total indemnity amount for the unit when the final grid index is less than or equal to 30 percent of the expected grid index. The total indemnity will never be more than 100 percent of the policy protection for the unit.

The second variable is the *Policy Protection per Unit*, as defined above, and the indemnity for each unit is determined by applying the *Payment Calculation Factor* to the *Policy Protection per Unit* as follows:

Indemnity per Unit = Policy Protection per Unit x Payment Calculation Factor.

The values for the *Final Index* for each GRID and index interval are reported by the Risk Management Agency after the close of that index interval, so insurance indemnities can be made in a timely manner.

A Wyoming Example

A producer has 100 honey bee colonies in Fremont County. The producer wants all of these colonies for 2011. The producer will use the Wyoming Apiculture Pilot Insurance Program to insure the honey production from these colonies which is based on the Pasture, Rangeland, and Forage Vegetative Index Insurance product (VI-PRF).

First consider a producer's apiculture insurance decision. The producer's contract choices and the RMA-determined parameters for apiculture insurance and the applicable grid are described below (Table 2).

Growing conditions in Fremont County and GRID ID 59856 in the May through July 2011 index interval are not conducive to forage production and the Final Grid Index value for this index interval is 60. The Final Index value is less than the Trigger Index value of 90 specified by the producer and so an indemnity will be paid under the apiculture contract. By late summer forage production improves somewhat but is still below average and the Final Grid Index for the August through October index interval is 80. This value is also less than the Trigger Index value of 90 selected by the producer, and so an indemnity will also be paid to the honey bee producer for the second index interval.

The honey bee producer's apiculture insurance indemnities are calculated as follows:

May through July indemnity = Policy Protection per Unit x Payment Calculation Factor

$$= \$4,577 \times \{(90 - 60) / [(90) - (100 \times 0.30)]\}$$

$$= \$4,577 \times \{(30) / [(90) - (30)]\}$$

$$= \$4,577 \times \{(30) / [(60)]\}$$

$$= \$2,289$$

August through October indemnity = Policy Protection per Unit x payment Calculation Factor

$$= \$1,962 \times \{(90 - 80) / [(90) - (100 \times 0.30)]\}$$

$$= \$1,962 \times \{(10) / [(90) - (30)]\}$$

$$= \$1,962 \times \{(10) / [(60)]\}$$

$$= \$327$$

As the Final Index values are known soon after the close of an index interval, the honey bee producer is likely to receive two separate indemnity payments so that indemnities are made in a timely manner associated with the loss in honey production.

Table 2: Insuring Honey Production from Honey Bees in Fremont County

Contract Data	Specification or Calculation	Value
County Base Value	Specified by RMA	\$80.73/colony
Protection Factor	Producer selects a value from 60% to 150% to achieve the desired protection level	90%
Coverage Level	Producer selects from alternatives of 70, 75, 80, 85, or 90%	90%
Dollar Amount of Protection per Colony	\$80.73 x 0.90 x 0.90	\$65.39/colony
GRID ID/Index Intervals	A point of reference is used to specify the colony location relative to where forage would support honey production	GRID ID 59856
May through July	Chosen by producer	70 colonies
Aug through Oct	Chosen by producer	30 colonies
Insured Share Percent	Chosen by insured	100 percent for all colonies
Premium Rate May -July Aug - Oct	Specified by RMA Specified by RMA	0.1510 0.1702
Unit Protection May - July Aug - Oct	\$65.39 x 70 x 1 \$65.39 x 30 x 1	\$4,577 \$1,962
Policy Protection	Sum across all units.	\$6,539
Total Premium May - July Aug - Oct	\$4,577 x 0.1510 \$1,962 x 0.1702	\$691.00 \$334.00 Total = \$1,025
Premium Subsidy	0.51, as specified by RMA, based on 90% coverage; \$1,025 x .51	\$522
Producer Premium	\$1,025 - \$522	\$503
Trigger Index	Expected Grid Value (always 100) multiplied by the coverage level, as selected by the producer; 100 x .90	90

Apiculture Insurance Summary

The Apiculture Pilot Insurance Program (VI-API) is available to honey bee producers in all Wyoming counties. It is the only crop insurance program available for managing honey production risks. Premium rates are subsidized so that honey producers can expect to pay less than the actuarially fair premium for the coverage they obtain out of their own pockets. However, on a proportional basis, subsidies are lower when producer select higher coverage levels.

In Wyoming, the program, a group risk insurance plan linked closely to the Pasture Range and Forage (PRF) insurance product for Wyoming, is based on vegetation growth indexes that have been shown to be linked to honey production. Wyoming honey producers with operations in other states may find that a

similar RMA product is available in those state, but that product may be based either on vegetation indexes, as in Wyoming, or on rainfall indexes. In Wyoming (and in other states in which vegetation indexes are used), the vegetation indexes are defined for specific geographic grids of approximately 4.8 miles by 4.8 miles in size and each producer must select the specific grids that provide forage for their colonies.

Finally, producers should recognize that the Apiculture Pilot Insurance Program, like other group risk plans, does not link indemnity payments directly to a producer's actual losses but to forage production that affects honey production. So producers must recognize that sometimes they may experience losses but not receive indemnities, while at other times they may receive indemnities even when they do not incur losses.



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