**MEMORANDUM:**

**FROM**: Gary L. Lay, ARA

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**TO:** Janet Eubanks

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**DATE:** June 09, 2014

**RE:** Additional Guidance for Minimum Rental Analysis – Land Use Authorizations

Non Linear Rights of Way (R/W) Rental:

 Survey of Rent Determination for Apiary Sites and Agricultural (Cropland) Trespasses

In accordance with your consultation request (L13055), I have consulted with area BLM Realty Staff to identify their specific needs in the region, two areas of interest were recognized; Apiary Sites and Agricultural (Cropland) Trespasses. The following discussion addresses these two issues. The intended use of this report is to provide the BLM with a rental schedule for apiary sites and agricultural (cropland) trespasses in Montana, North Dakota and South Dakota to become effective January 1, 2014.

Attachment 2-1

### Apiary Sits

An apiary (also known as a bee yard) is a place where [beehives](http://en.wikipedia.org/wiki/Beehive_%28beekeeping%29) of [honey bees](http://en.wikipedia.org/wiki/Honey_bee) are kept. Traditionally [beekeepers](http://en.wikipedia.org/wiki/Beekeeper) (also known as apiarists) paid land rent in [honey](http://en.wikipedia.org/wiki/Honey) for the use of small parcels. Some [farmers](http://en.wikipedia.org/wiki/Farmer) will provide free apiary sites, because they need [pollination](http://en.wikipedia.org/wiki/Pollination), and farmers who need many hives often pay for them to be moved to the crops when they bloom.[[1]](#footnote-1)

### Sites

There are generally two types of beekeeping: stationary and migratory. Stationary beekeeping is primarily focused on the production of honey in a single location. Migratory beekeeping involves transporting bee colonies several times a year for crop pollination or moving bee colonies to produce different varieties of honey. In the off-season winter months bee colonies are stockpiled, usually in southern states, while waiting for crops to bloom. During this time they do not produce honey. Each of these types of beekeeping requires the use of land on which to place the bee hives (structures where the colonies live).

Honey production varies yearly and regionally depending on rainfall, soil conditions, temperatures, cropping patterns, and hive management. Typical yield for stationary colonies may be only 10 to 25 pounds per colony in desert locations compared to 40 to 50 pounds per colony in populated areas. Colonies placed on or near irrigated cropland tend to have the highest honey yields of 50 pounds or more.

There are estimated 115,000 – 125,000 beekeepers in the United States. The vast majority are hobbyists with less than 25 hives.  Commercial beekeepers are those with 300 or more hives.  The number of U.S. honey bee colonies producing honey in 2013 was 2.64 million (based on beekeepers who manage five or more colonies), up 4% from 2012.2 Many commercial beekeepers migrate their colonies during the year to provide pollination services to farmers and to reach the most abundant sources of nectar.  Commercial beekeeping operations are frequently family businesses that are handed down from generation to generation.

Honey production in 2013 from producers with five or more colonies totaled 149 million pounds, up 5 percent from 2012. The average producer price per pound was $2.121, up 6% from $1.992 in 2012. The 2013 crop was valued at $317.1 million.[[2]](#footnote-2)

Honey is produced in every state, the following states were the top five honey producing states in 2013:

State Pounds Produced Dollar Value of Production

1. North Dakota 33,120,000 $67,565,000
2. Montana 14,946,000 $31,088,000
3. South Dakota 14,840,000 $30,570,000
4. Florida 13,420,000 $27,377,000
5. California 10,890,000 $22,869,000

**United States Honey Production Up 5 Percent**

Honey production in 2013 from producers with five or more colonies totaled 149 million pounds, up 5 percent from 2012. There were 2.64 million colonies producing honey in 2013, up 4 percent from 2012. Yield per colony averaged 56.6 pounds, up 1 percent from the 56.0 pounds in 2012. Colonies which produced honey in more than one State were counted in each State where the honey was produced. Therefore, at the United States level yield per colony may be understated, but total production would not be impacted. Producer honey stocks were 38.2 million pounds on December 15, 2013, up 20 percent from a year earlier. Stocks held by producers exclude those held under the commodity loan program.

**Record High Honey Prices**

Honey prices increased to a record high during 2013 to 212.1 cents per pound, up 6 percent from 199.2 cents per pound in 2012. United States and State level prices reflect the portions of honey sold through cooperatives, private, and retail channels.

### Analysis

Research indicates that rental rates for typical apiary sites on private land used for honey production are paid in honey to the landowner, typically at a rate equivalent to approximately 1% of the honey produced from a typical site consisting of 100 colonies. Since it is not practical to receive payment in honey, NASS data was used to estimate the dollar value of 1% of honey production per site of 100 colonies located in Montana, North Dakota and South Dakota. US production data is also considered. Due to the fluctuation in annual honey yield and price, an average of the years of 2012 and 2013 was used to determine the value of 1% yield per 100 colonies as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  **2012** |  **2013** | **2-Year Average** | **Value of 1% Yield per 100 Colonies**  |
| **US Colonies (1,000’s)** | 2,539 | 2,640 | 2,590 | $116 |
| Yield per Colony (Lbs.) | 56 | 56.6 | 56 |
| Average Price per Lb. | $1.99 | $2.12 | $2.06 |
| Price per Colony | $111.44 | $119.92 | $115.68 |
|  |  |  |  |  |
| **Montana(1,000’s)** | 145 | 159 | 152 | $148 |
| Yield per Colony (Lbs.) | 52 | 94 | 73 |
| Average Price per Lb. | $1.95 | $2.08 | $2.06 |
| Price per Colony | $101.40 | $195.52 | $148.46 |
|  |  |  |  |  |
| **North Dakota (1,000’s)** | 480 | 480 | 480 | $137 |
| Yield per Colony (Lbs.) | 69 | 69 | 69 |
| Average Price per Lb. | $1.92 | $2.04 | $1.98 |
| Price per Colony | $132.48 | $140.76 | $136.62 |
|  |  |  |  |  |
| **South Dakota (1,000’s)** | 260 | 265 | 263 | $119 |
| Yield per Colony (Lbs.) | 63 | 56 | 60 |
| Average Price per Lb. | $1.95 | $2.06 | $2.00 |
| Price per Colony. | $122.85 | $115.36 | $119.11 |
|  |  |  |  |  |

Based upon the above data the comparable rental rates for honey production on a typical site on private land within the study area, and United States overall, range from $116 to $148 per year. Considering the narrow range of the data the appraiser estimates the BLM Site fee for Apiary Sites at $132 which is the middle of the range. Typical site size is estimated at one acre.

 Attachment 2-4

**Agricultural Trespasses (Cropland)**

There are instances where lands that are owned by the United States of America/Bureau of Land Management are being utilized as crop land in conjunction with privately held ownerships. Regardless whether the crop production is dryland or irrigated the land being considered is always viewed as being dryland as USA/BLM does not provide irrigations rights, any irrigation water being applied to the land is through the private operator who is farming the parcel. The following discussion and analysis is based upon current lease agreements for dry cropland.

After an extensive research which involved discussions with regional farming operations and agricultural lenders the following conclusions were derived.

1. Most cropland is being leased on a share crop basis with the landowner receiving ⅓ to ½ of the harvested crop. The variances is dependent upon the production cost shared by the owner.
2. The cash lease basis is less common than the share crop basis. Currently the accepted rate for cash leases is $0.90 per bushel of the proven average yield (dry land wheat) per acre for the entire leased property. There is no discount for fallow acres.

Based upon the above scenario the following table is to be used in determining the per acre lease rate for cropland cash leases.

|  |  |  |
| --- | --- | --- |
| Yield Rate | Rate | $$/Acre Lease Rate |
| 30 Bu. | .90 | $27 acre |
| 35 Bu. | .90 | $32 acre |
| 40 Bu. | .90 | $36 acre |
| 45 Bu. | .90 | $41 acre |

To determine the average proven yield for a specific area the BLM Realty Staff is encourage to contact the leasee first, then verify the information with the local USDA Farm Service Agency and/or the local county extension agent. Both of these resources are an excellent in determining and confirming proven yield rates.

Anytime there is an unusual situation or questions arise that fall outside the Minimum Rental Analysis – Land Use Authorizations for Non Linear Rights of Way (R/W) Rental, or this supplemental memorandum, contact Tim Hansen, Client Service Manager, the Office of Valuation Services-BLM Team at 303-969-5368 or email: timothy\_hansen@ios.doi.gov.

Attachment 2-5

1. Wikipedia Attachment 2-2 [↑](#footnote-ref-1)
2. National Agricultural Statistics Service, US Dept of Agriculture March 21, 2014 Attachment 2-3 [↑](#footnote-ref-2)