NATIONAL HONEY REPORT

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HONEY MARKET FOR THE MONTH OF December, 2010
IN VOLUMES OF 10,000 POUNDS OR GREATER UNLESS OTHERWISE STATED

Prices paid to beekeepers for extracted, unprocessed honey in major producing states by packers, handlers & other large users, cents per pound, f.o.b. or delivered nearby, containers exchanged or returned, prompt delivery & payment unless otherwise stated.

- REPORT INCLUDES BOTH NEW AND OLD CROP HONEY -

(# Some in Small Lot --- +Some delayed payments or previous commitment)

ARKANSAS				
Soybean	light amber	$1.38		
CALIFORNIA				
Cotton	extra light amber	$1.49		
DAKOTAS				
Clover	white	$1.55	-	$1.70
FLORIDA				
Orange	white	$1.55		
Pepper	light amber	$1.30	-	$1.40
MISSISSIPPI				
Soybean	extra light amber	$1.45		
Wildflower	light amber	$1.30		
MONTANA				
Clover	White	$1.55	-	$1.60

Prices paid to Canadian Beekeepers for unprocessed, bulk honey by packers and importers in U. S. currency, f.o.b. shipping point, containers included unless otherwise stated. Duty and crossing charges extra. Cents per pound.

Too Few to Report

Prices paid to importers for bulk honey, duty paid, containers included, cents per pound, ex-dock or point of entry unless otherwise stated.

Argentina				
Mixed Flowers	white	$1.49	-	$1.58
Mixed Flowers	extra light amber	$1.49	-	$1.55
Brazil				
Mixed Flowers	light amber	$1.35	-	$1.37
ORGANIC	light amber	$1.49	-	$1.55
ORGANIC	extra light amber	$1.62	-	$1.70

COLONY, HONEY PLANT AND MARKET CONDITIONS DURING DECEMBER, 2010

APPALACHIAN DISTRICT (MD, PA, VA, WV): Colder than normal temperatures arrived in December and stayed for most of the month. A little relief back to more normal temperatures came near the end of the month. Several medium sized winter storms hit the area and produced some snow. However, most of the snow disappeared after a few days and the ground is bare again. Beekeepers have provided supplemental feeding to colonies remaining in the area during the winter as several were moved to the west coast to help with pollination. Beekeepers were busy with equipment maintenance and meeting and workshop attendance.

ALABAMA: Sustained cold temperatures across Alabama have kept bees in the hives and in tight clusters. Bees were raising some brood on stored honey and pollen but were collecting very little food. There were some reports of bees starving with plenty of honey on the hive. Small clusters can move very little and if honey is not right over the top of the cluster, bees can starve or freeze during extended cold periods. Losses were reported at 20% to 30% so far. Some beekeepers were feeding bees. There was honey available for sale in all areas of Alabama.

ARIZONA: Temperatures in Arizona were below normal levels the first and last week of December and above normal levels the rest of the month. The range statewide in temperatures for the month was a high of 85 degrees in Coolidge and Marana to a low of 24 degrees below zero at the Grand Canyon. There was precipitation at 5 of the 22 reporting stations in Arizona the first week of December, zero stations the second week, and from 20 to all 22 stations the rest of the month. The main nectar and pollen sources for bees in the state were desert plant bloom, citrus and melons. Bee activity was limited during the month. Beekeepers have been or are continuing to make preparations to move colonies to other locations for pollination of nut and fruit trees. Demand for honey remained good.

ARKANSAS: Various trees provided pollen and nectar. Colonies were in generally good condition. Temperatures were above normal and rainfall was adequate. Demand and supply were both good.

CALIFORNIA: At the start of the month, cool and dry conditions were prevalent across California. As the month progressed, widespread precipitation all across California occurred as a vigorous frontal system was pushed through the State by a low pressure system. A series of vigorous storm systems battered the state, producing high winds, heavy rains and heavy mountain snowfall. Southern California in particular was hard hit by this system, with widespread flooding and rock and mudslides reported, along with small stream and urban flooding. Northern California was enjoying relatively moderate precipitation amounts, with heavy snowfall across the Sierra Nevada and the Siskiyou and Southern Cascade ranges.

Bee hives continue to enter San Joaquin County and other central valley winter staging areas. Where available, bees are feeding on bottlebrush, yellow mustard and some of the earliest eucalyptus trees bloom as well as Lavatera maritime, commonly called tree mallow. Beekeepers are providing sucrose, corn syrup and other supplements to the bees' regular diet from flowers.
Valley almond growers hope for healthy bees in 2011: Honeybee colonies pollinate Central Valley almond orchards and other crops each February. Since 2006, some beekeepers across the nation have seen poor survival over winter because of the still-unsolved problem called colony collapse disorder. Almonds are the fifth-largest crop in the central San Joaquin Valley. At $801 million, it ranked behind milk, grapes, cattle/calves and citrus. It wouldn't happen without the bees. They spread pollen from bloom to bloom, allowing each flower to start developing into a nut. Each February, about two-thirds of the nation's 2.5 million commercial colonies are placed in the Valley's almond orchards and is the biggest pollination event in the world. Beekeepers nationwide lost 33.8% of their colonies last winter, according to a survey by the U.S. Department of Agriculture. The loss was 29% the previous year and 35.8% the year before that. Colony collapse disorder was not the only cause -- diseases, weather and other factors play a part -- but the disorder is getting much of the attention. The stress on the bee supply has driven up the cost of renting colonies for almond pollination, usually two per acre. The average rent per colony is projected at $158 in 2011, up from $151 this year, according to a survey by the California State Beekeepers Association. That's more than triple the typical cost before the disorder appeared.
Despite the bee trouble, Valley growers have continued to produce big crops most years. Experts say the pollination seasons have had enough of the mild days that get bees flying.

COLORADO: It has been rather mild in Colorado for most of this early winter season. During this time of year, beekeepers in Colorado are busy preparing for the upcoming season. Most commercial beekeepers have transported their bees to green pastures in the Southern United States and to the almond groves in California. Some bees were looking a little light and while others were heavy. Most looked healthy overall. The mite numbers seemed to be under control. This fall some beekeepers in Colorado utilized vaporized oxalic acid or a 3.2 percent solution of oxalic acid as a miticide with very good results in their attempts to control parasitic varroa mites. This type of control is considered an integrated pest management (IPM) practice. The real measure of mite control will not be known until beekeepers hives begin working the almond groves in California around the first part of February. There seems to be an adequate supply of honey with good demand at the present time in Colorado. Due to the shortage of domestic honey there seems to be consistent pressure for wholesale prices to rise. Current prices in Colorado for wholesale honey are as follows: white honey is averaging $ 1.60 to 1.65 per pound while extra light amber is averaging $1.55 per pound. Wholesale light capping bees wax is averaging $2.25 to $3.50 per pound. The misuse of insecticides and herbicides continues to be a major issue among beekeepers in Colorado. An educational program within the agricultural community may be very beneficial to all involved. For more information about the Colorado Honey Association, email them at: Info@ColoradoBeekeepers.org.

FLORIDA: Several periods of abnormally cold weather hindered beekeepers efforts to increase their colonies numbers through much of the month. The shorter days in early and mid December also affected the reproductive cycle of bees in a negative way. When the days started to become longer in late December the bees increased their brood more rapidly. Warmer weather near the end of the month also helped increase the number of bees in the colonies. Beekeepers were building their hives numbers and also improving the bees' general health in preparation for the late January move for California almond pollination. Bee health was generally good, but many producers were treating for Varroa mites and Nosema. The sporadic cold spells led to a widespread lack of nectar forcing beekeepers to feed their hives. Sand pine pollen was available in many parts of the state, with wildflowers available in some areas. There were few other sources of nectar or pollen. Many honey producers were reporting yields of approximately 70% of normal. There were several factors leading to the decrease in production including periods of above or below normal rainfall, cool periods in the spring, and excessive heat at times in the summer. It was reported that maple bloom, which normally occurs around the first of January, is expected to be about a week late this year.

GEORGIA: A cold front swept through at the end of the month. The bees were reported to be doing well in all areas after the beekeepers have inspected the hives and are now prepared for the winter. Most of the hives were being supplemented with feed to ensure a healthy hibernation over the next month. Queens have been ordered for the January splitting of hives. However, some were not available due to a mite problem and cannot enter the U.S. A. Later shipment dates have been reset for those previously ordered and postponed. The beekeepers were building up their hives after some losses during the last year and gearing up for the spring. Red Maple is starting soon and much needed pollen will be available as the rains dry out and the bees can get out of the hives more. The price for honey and beeswax is strong. Honey ranges from $1.65 for wildflower and $2.50 for Tupelo per lb.

IDAHO: It has been cold and snowy in Idaho early this winter season. During this time of year, beekeepers in Idaho are busy preparing for the upcoming season. With their bees securely in storage for the short dormant period, the time will arrive shortly when beekeepers will be transporting their bees to green pastures and almond groves in California. After arriving in California about the middle of January, the bees will be providing pollination services in the almond groves until the end of March, 2011. Beekeepers in Idaho have been working with Penn State University to identify pathogens that may be responsible for CCD. Penn State is one of the Universities that has been at the forefront of this research effort and has devoted countless hours of research and dollars in attempts to help solve the problems confronting the honey industry. Recently a Section 18 exemption was sought on behalf of beekeepers in Idaho, Oregon and Washington States. The request was made to the Environmental Protection Agency (EPA) for the use of Hopguard, currently unregistered with EPA. Hopguard is a hop derivative miticide. If approved, Hopguard use would be for a limited period of time. Hopguard was developed for control of varroa mites. Section 18's is for emergency exemption use only. At this time, the Section 18 for Hopguard has completed the mandatory 30 day comment period in the Federal Register. No comments were received from the public regarding this EPA request. Many beekeepers have indicated that this miticide, if approved by the EPA, would offer another alternative to present available treatments for mite infestations. There seems to be an adequate supply of honey with good demand at the present time in Idaho. Due to the shortage of domestic honey there seems to be consistent pressure for wholesale prices to rise. Current prices in Idaho for wholesale honey are as follows: white honey is averaging $ 1.50 to $1.65 per pound. Retail honey is averaging $2.50 to $3.00 per pound. The Idaho Honey Industry Association held their Annual Conference on December 1-3, 2010 in Boise, Idaho at the Red Lion Downtowner. The Association had a good attendance at their conference. For more information about the Idaho Honey Association, contact 208-888-0988. The 2011 North American Beekeeping Conference and Tradeshow were held in Galveston, Texas January 4-9, 2011. For anyone interested in expanding their horizon internationally may be interested in the New Zealand National Beekeepers Association Conference. This conference will be held in Auckland, New Zealand, June 26-30, 2011. For more information contact Bob Russell by phone 09 294 8656 or email Mr. Russell at: bob.russell@paradise.net.nz.

ILLINOIS: Honey has been harvested. Due to relatively mild weather conditions particularly earlier in the month, the bees were generally overwintering very well. Beekeepers did express some concern that bees were disappearing from the hives and leaving them empty. The bees did not appear to have died; they just left. Many meetings were held to discuss this phenomenon. Illinois Beekeepers and local bee clubs increased their meetings and workshops to address the aforementioned missing bees issue as well as general bee handling information. Information about Illinois Beekeepers (ISBA) meetings/workshops and those of ISBA Affiliate Associations is available on the ISBA website.

IOWA, KANSAS, MISSOURI, NEBRASKA: Temperatures across the state were about three degrees below normal. Conditions were dry, with average precipitation about one inch below normal. Orders for two, three and four pound package bees along with queens are being taken for mid-April deliveries. Australian bees were not permitted for entry due to Apis Cerana. These bees are used heavily for the pollination of the California almond crop.
Curt Bronnenberg has replaced Donna Braums as President of (IHPA) Iowa Honey Producers Association. Also, Grant Gillard has replaced Scott Moser as President of (MSBA) Missouri State Beekeepers Association. The Nebraska Beekeepers Association will vote in its January meeting, on proposed changes of its Constitution and bylaws.

INDIANA: Colonies were in good condition having experienced no major outbreaks of disease or insects. Honey has been harvested. Bees seemed to be overwintering fairly well. There were no major problems to report. The Indiana Beekeepers Association (IBA) and the Indiana State Beekeeper's Association (ISBA) as well as local clubs hosted workshops. Of particular interest were the beginning beekeeper workshops. Many seasoned beekeepers were retiring and selling their hives. Information on both organizations and their affiliates may be found on their individual websites.

KENTUCKY: It has been unusually cold in Kentucky. Some beekeepers were able to open their hives at the end of December and found them in good condition.

LOUISIANA: Various trees provided pollen and nectar. Colonies were in good condition. Temperatures were below normal and rainfall was adequate. Supply and demand were good.

MICHIGAN: Bees were in winter cluster as they attempt to survive a cold month. Most beekeepers have stopped supplemental feeding and are depending on stockpiled sugar near the cluster of bees for sustenance. Some beekeepers are hopeful that warmer temperatures forecasted for December 30 will allow some cleansing flights. Activities for beekeepers include planning for 2011 and general maintenance of hives.

MINNESOTA: It has been cold and snowy in Minnesota early this winter season. During this time of year, beekeepers in Minnesota are busy preparing for the upcoming season. Most commercial beekeepers have transported their bees to green pastures in the Southern United States and to the almond groves in California. At this point of time, beekeepers in the Minnesota have expressed the fact that their bees are looking a very healthy. Mite levels seemed to be under control and were at the lowest level in the past 5 years. However, the real measure of control will not be known until beekeepers hives begin working the almond groves in California around the first part of February. There seemed to be an adequate supply of honey with good demand. Due to the shortage of domestic honey there seems to be consistent pressure for wholesale prices to rise. Current prices in Minnesota for wholesale honey are as follows: white honey is averaging $1.50 to $ 1.60 per pound.
The University of Minnesota will be conducting a beginning beekeepers course March 12-13, 2011 at the St. Paul, Minnesota campus titled, "Beekeeping in Northern Climates Short Course". This course is meant for individuals who have not kept bees in the past. In addition there will be a part 2 course to the above mentioned course and it will be held on April 16, 2011 also at the St. Paul, Minnesota campus. For more information regarding these courses contact: Gary Reuter at 612-624-6740 or email: reute001@umn.edu.

MISSISSIPPI: In the southern areas of the state some hives were being treated for a virus and beekeepers were regaining control of the hives. In the northern areas, losses appeared to be about average. Due to the cold weather, however, many hives have not been inspected and must wait until it warms up and the bees can be looked over. Most of the hives were being supplemented with feed because the fall honey flow did not materialize as expected. The Red Maple blossoms should appear around January 10-15, weather permitting. Demand and prices remained strong as and there seemed to be a new interest in beekeeping around the southern areas.

MONTANA: During most of December, temperatures remained near normal across much of the state. However, the North Central district and Northeast district experienced below normal temperatures. The Northeast district was the coldest district with an average temperature of 11 degrees. The South Central district was the warmest with an average temperature of 24 degrees. West Yellowstone received the most precipitation during December at 5.34 inches. Topsoil moisture measurements at the end of December measured 0 percent very short, compared to 3 percent last year; 7 percent short, compared to 33 percent last year; 81 percent adequate, compared to 63 percent last year; and 12 percent surplus, compared to 1 percent last year. Subsoil moisture measured 11 percent short and very short, while 89 percent of subsoil moisture measurements were adequate or surplus.
Migratory colonies wintering in California staging yards were in generally good condition. Mite problems were under control. And, the bees were clustered tightly in the cool, wet weather that has been experienced in California this winter. Keepers anticipated beginning to move their colonies into early almond orchards later in January with good demand for strong colonies. Rental prices were reported to be similar to last year. Honey demand was good.

NEW ENGLAND: In New England the month of December exhibited cold, seasonal temperatures replacing the earlier abnormally warm weather. This weather pattern offered little rain or snowfall with only measureable snowfall in high level terrain. Moisture levels were below average but seasonally adequate. Early December weather was erratic with on and off cold and mild weather. The entire region experienced a dry, early fall which in turn left many regional pocket areas with colonies short on stores and this occurrence has joined with the present cold, store depleting weather. Low stores coupled with the usual cold, harsh weather of winter in the future, will surely mean a high mortality rate for over wintered populations. The bees early on had a chance to reorganize themselves, haul out the dead and go on cleansing flights. New England has been good and favorable going into the winter for beekeepers. There are no significant pollen and nectar sources with most finished for the year. The few sources left were fall aster, heath, mum blossoms, perennial bachelor buttons and Johnny jump ups, which amazingly exhibited some bright orange pollen. The current rapidly colder conditions have finished all food sources for the season. In New England, beekeepers have closed up their hives for the winter. Bees are snuggled in their hives but

reportedly the clusters are smaller than desired. Over wintering procedures entails installing mouse guards, entrance reducers and insulation boards between inner and outer covers and/or boards under the screens to ensure proper ventilation. As needed, colonies are being fed on an occasional warm day, sugar water syrup 2:1, otherwise with sugar candy and fondant with homosile boards strategically placed in order to add to the stored food that was left after surplus honey was drawn off. In New England, the average consumption is 60 lbs of honey throughout the winter. If the weather pattern stays cold it won't hurt the bees as long as the hives have good ventilation. In New England, hives normally lose 5 to 10% of their population due to winter related issues. Cold weather will not adversely affect bees as much as condensation will. Colonies should be ventilated to abate this problem. Many keepers report that bees have exhibited the usually late winter pattern of clustering just under the inner cover. However, clusters are tight enough to keep the bees safe. Some keepers have registered early colony losses presumably due to low cluster size, low stores and erratic weather temperature swings. The most important thing in a healthy hive is nutrition. Hives weaken under the stress of protein deficiency. Limited pollen and nectar means less brood and poor nutrition. Reportedly, this year's honey stores on brood frames are very small although in many cases large quantities of pollen are found. This will likely contribute to creating a greater winter loss as many colonies are light and their winter bees were not developed under the best of conditions. Colonies overall are reported to be in fairly good condition with mite problems under control and bee dead out losses to be within expected levels. Harvesting and extracting honey is virtually completed. This year's honey crop numbers have not been finalized as some locations have exhibited very low production. Some yields are half what they usually are. Keepers are giving estimates at 50 to 60 lbs per colony on average. Honey sales have been excellent going into the holiday season. Keepers have crafted many products from the fruits of their hives to sell for the holiday season primarily as stocking stuffers such as decorative honey decanters, candles, creams, lip balms and many edible holiday treats. The holiday season brings on an increase demand for local honey especially at local farmers markets and all retail/wholesale outlets that are selling evergreen holiday decorations such as Christmas trees. Reportedly honey sales remains very good and continues to grow with supplies of new crop honey being available. Prices quoted for 1 lb bottled units were higher at $6.00 to $9.00 mostly $8.00 occasionally higher inclusive of all varieties; for food service operations prices were slightly higher with wholesale 5 gallon units at $150.00 to $200.00 mostly $175.00 and occasionally lower for both light and dark raw and natural honey depending on variety and quality.

NEW YORK: Some cleansing flights were reported on December 29 in Western New York, due to warmer daytime temperatures and sunny skies. Beekeepers continued to provide bulk sugar on hive frames to allow extra nourishment to the hive. A beekeeper who has moved some hives to Florida for the winter reported supplemental feeding to hives there also, as cold weather has thwarted most pollen collection in the recent week in Florida. He reported very minimal pollen collection at this time. Demand for honey remained strong.

NORTH CAROLINA: The month of December was colder than normal throughout the state. It was the second coldest on record in the western part of the state. Temperatures ranged 50-52 degrees for the highs throughout the state and the lows were at 30-33 degrees. The precipitation levels remained below normal even with substantial snow accumulations in the latter part of December.
Beekeeping classes were being held throughout the state with many beginning classes getting started. Joining one of the local chapters of NCSBA (NC State Beekeepers Association) is one of the best ways to learn beekeeping and stay up to date on successful beekeeping methods. Bees should be checked for signs of starvation and supplemental feeding done when temperatures are over 50 degrees. Holiday sales were excellent for available supplies.

NORTH & SOUTH DAKOTA: Bees were in their over winter locations which were spread as far as the delta area of Mississippi to California. Most were being fed and awaiting new crops this spring for pollination activities. Cool, wet weather in California was slowing crop progress.

OHIO: Limited cleansing flights have occurred with the brief warm-up at the end of the month. Beekeepers have been concerned with maintaining hives during a cold December and supplementing hives with sugar near the cluster of bees. Honey supplies are very tight at local levels and wholesalers have had to visit neighboring states for ample supplies for retail operations. The domestic honey market is expected to remain strong in the coming year, and there is some speculation that some beekeepers who maintain hives for pollination could switch and focus on honey production. With the current ban of Australian bees in the US, there could also be greater demand for bee colonies in the Western states to assist with pollination.

OKLAHOMA: Pine and cedar provided pollen and nectar. Colonies were in generally good condition. Temperatures were above normal. Supply was low and demand was increasing.

OREGON: Oregon experienced slightly above normal temperatures and precipitation during December. The highest daytime temperature during December was 65 degrees in Roseburg, Oregon. The low temperature of the month was minus 25 degrees in Burns. Total precipitation (rain or melted snow/ice) ranged from 17.12 total inches in Detroit Lake to 1.44 total inches in Bend. Migratory colonies wintering in California staging yards were in generally good condition. Mite problems were under control and bees were clustered tightly in the cool, wet weather in California this winter. Keepers anticipated beginning to move their colonies into early almond orchards later in January with good demand for strong colonies. Rental prices were reported to be similar to last year. Honey demand was good. Wild plant and irrigated farm crop pollen and nectar sources were finished for the season.

SOUTH CAROLINA: Not available at time of release.

TENNESSEE: Most colonies in Tennessee were in good shape for overwintering. Feeding has been required in a few areas of the state. We are experiencing a colder than average winter and the bees are clustered for the winter.

TEXAS: Dandelion, elm and various flowers provided pollen and nectar. Colonies started out the month in generally good condition and improved thought out the month. Temperatures were above normal and there was little to no rain fall. Supply and demand were good.

UTAH: It has been cold in Utah early this winter season. During this time of year, beekeepers in Utah are busy preparing for the upcoming season. Most commercial beekeepers have transported their bees to green pastures in to the almond groves in California. At this point of time, beekeepers in the state have expressed the fact that their bees are looking a little light, with some very healthy and others not as healthy. The mite numbers seemed to be under control. There have been some losses as noticed by beekeepers in Utah as they were working their hives this fall. The real measure of control will not be known until beekeepers hives begin working the almond groves in California around the first part of February.

The supply of honey was light with good demand for available supplies. Due to the shortage of domestic honey there seems to be consistent pressure for wholesale prices to rise. Current prices in Utah for wholesale honey are as follows: light amber honey is averaging $ 1.30 per pound while extra light amber is averaging $1.45 to $1.65 per pound. Wholesale light and dark capping bees wax is averaging $2.25 per pound. The Utah Beekeepers Association 2010 Annual Conference was December 2-3, 2010, in Salt Lake City, at the Utah Department of Agriculture and Food Building. There was a great attendance this year. For more information about the Utah Honey Association, contact: 435-673-5340.

WASHINGTON: Bees were in their winter locations. Weather has been mixed but generally cloudy and cold, with some snow or occasional rain. There has not been much sunshine at lower elevations. There has been plenty of precipitation for the month of December. The snowpack in the mountains was looking good at this time.

WISCONSIN: Honey has been harvested. Due to snow drifts, beekeepers were finding it difficult to check on hives. Where possible, they were ensuring that food stores were plentiful and that hives were healthy. Treatments for tracheal and varroa mites as well as other aphids continued as necessary.
Many local Wisconsin Bee Clubs held meetings and workshops during December. Many also came together to network and celebrate the end of the year. Links to local clubs and other information are available online at the WHPA website.

U.S Exports of Honey By Country, Quantity, and Value

	Year to Date		November 2010	
	Quantity Kilograms	Value Dollars	Quantity Kilograms	Value Dollars
COMB & NATURAL HONEY PACKAGED FOR RETAIL SALE - - -				
Algeria	7,245.0	17,490	0.0	0
Bahamas, The	12,607.0	38,048	0.0	0
Bahrain	32,061.0	77,823	0.0	0
Barbados	4,729.0	11,881	0.0	0
Bermuda	4,084.0	24,312	0.0	0
Cayman Islands	475.0	2,561	0.0	0
Chile	499.0	3,946	499.0	3,946
China	11,040.0	48,526	4,139.0	19,350
Costa Rica	1,504.0	3,651	0.0	0
Germany(*)	300.0	2,730	0.0	0
Guyana	2,940.0	19,821	0.0	0
Honduras	1,008.0	8,729	654.0	5,910
Hong Kong	17,214.0	81,094	0.0	0
Iceland	2,769.0	13,397	0.0	0
Indonesia	40,462.0	104,708	5,926.0	14,384
Israel(*)	60,900.0	252,735	60,900.0	252,735
Japan	190,080.0	780,328	14,298.0	64,447
Korea, South	344,671.0	1,319,174	131,486.0	527,073
Kuwait	290,428.0	704,937	41,484.0	100,694
Libya	0.0	0	0.0	0
Malaysia	2,474.0	17,882	0.0	0
Mexico	2,322.0	6,492	0.0	0
Netherlands	686.0	4,773	0.0	0
Netherlands Antilles(*)	5,735.0	29,527	392.0	3,277
Pakistan	31,312.0	91,508	0.0	0
Panama	0.0	0	0.0	0
Philippines	188,469.0	465,307	0.0	0
Qatar	1,123.0	2,726	0.0	0
Russia	0.0	0	0.0	0
Saudi Arabia	0.0	0	0.0	0
Singapore	18,209.0	47,660	0.0	0
Taiwan	90,272.0	214,560	0.0	0
Turkey	0.0	0	0.0	0
United Arab Emirates	282,525.0	774,313	87,805.0	213,129
Vietnam	3,686.0	15,912	0.0	0
Yemen(*)	471,351.0	1,989,736	0.0	0

NATURAL HONEY, NOT ELSEWHERE INDICATED OR SPECIFIED - - -				
Australia(*)	1,378.0	5,877	0.0	0
Bahamas, The	49,599.0	134,420	2,449.0	16,118
Barbados	15,218.0	78,946	840.0	4,557
Belize	0.0	0	0.0	0
Bermuda	8,212.0	44,826	0.0	0
Cambodia	1,954.0	11,473	0.0	0
Canada	460,622.0	1,733,794	19,080.0	67,024
Cayman Islands	889.0	9,456	0.0	0
China	55,025.0	82,815	0.0	0
Costa Rica	1,753.0	7,302	0.0	0
Denmark(*)	0.0	0	0.0	0
Ecuador	0.0	0	0.0	0
Germany(*)	18,624.0	102,114	0.0	0
Guatemala	16,325.0	35,215	0.0	0
Guyana	1,916.0	8,190	0.0	0
Hong Kong	34,707.0	121,435	6,704.0	23,008
India	18,600.0	137,826	0.0	0
Indonesia	46,743.0	126,268	0.0	0
Israel(*)	120,060.0	428,823	0.0	0
Jamaica	14,967.0	61,200	0.0	0
Japan	363,775.0	687,862	11,349.0	42,785
Jordan	4,120.0	10,000	0.0	0
Korea, South	10,714.0	29,924	0.0	0
Kuwait	8,240.0	20,000	0.0	0
Leeward-Windward Islands(*)	4,067.0	19,800	0.0	0
Malaysia	217,328.0	400,198	202,302.0	361,340
Mexico	1,200.0	3,416	0.0	0
Netherlands	4,974.0	37,520	0.0	0
Netherlands Antilles(*)	13,253.0	64,824	975.0	2,869
New Zealand(*)	665.0	5,047	0.0	0
Panama	26,396.0	131,445	815.0	4,557
Philippines	12,230.0	81,085	771.0	6,709
Qatar	6,180.0	15,000	0.0	0
Russia	2,890.0	15,930	0.0	0
Saudi Arabia	115,050.0	432,964	18,000.0	83,700
Singapore	24,123.0	89,569	4,046.0	16,305
Thailand	78,485.0	195,967	7,317.0	17,759
United Arab Emirates	1,325.0	5,000	0.0	0
United Kingdom	6,919.0	16,793	0.0	0
Venezuela	490.0	2,631	0.0	0
Vietnam	209,468.0	377,971	0.0	0
Yemen(*)	2,000.0	10,000	0.0	0
GRAND TOTAL	**4,103,664.0**	**12,959,213**	**622,231.0**	**1,851,676**

U.S Imports of Honey By Country, Quantity, and Value

	Year to Date			November 2010		
	Quantity Kilograms	Value Dollars	CIF Value Dollars	Quantity Kilograms	Value Dollars	CIF Value Dollars
WHITE HONEY – NOT PACKAGED FOR RETAIL SALE - - -						
Argentina	6,274,553.0	19,413,320	19,856,444	532,421.0	1,648,928	1,678,541
Australia(*)	0.0	0	0	0.0	0	0
Austria	2,250.0	15,435	16,074	0.0	0	0
Brazil	980,229.0	3,038,085	3,143,725	94,476.0	320,911	332,345
Canada	8,341,437.0	29,241,653	29,417,653	927,431.0	3,355,426	3,371,214
Chile	38,727.0	117,920	117,922	0.0	0	0
China	599,040.0	1,710,354	1,776,195	56,640.0	179,412	186,912
Egypt	0.0	0	0	0.0	0	0
France(*)	17,843.0	83,951	95,066	0.0	0	0
Germany(*)	894.0	4,200	6,869	0.0	0	0
Guatemala	64,118.0	171,556	173,038	0.0	0	0
India	3,554,811.0	9,483,388	9,890,488	236,842.0	602,124	638,115
Indonesia	6,324,816.0	11,256,701	12,096,758	0.0	0	0
Italy(*)	10,262.0	59,215	62,920	0.0	0	0
Japan	13,418.0	41,005	42,937	10.0	2,360	2,435
Malaysia	36,540.0	62,483	65,772	0.0	0	0
Mexico	1,247,346.0	3,999,605	4,077,681	51,732.0	133,212	135,012
Moldova	0.0	0	0	0.0	0	0
Morocco	0.0	0	0	0.0	0	0
New Zealand(*)	19,023.0	53,646	58,355	0.0	0	0
Peru	0.0	0	0	0.0	0	0
Poland	0.0	0	0	0.0	0	0
Russia	0.0	0	0	0.0	0	0
Spain	196.0	3,758	3,816	0.0	0	0
Switzerland(*)	0.0	0	0	0.0	0	0
Taiwan	0.0	0	0	0.0	0	0
Thailand	249,600.0	759,360	800,715	0.0	0	0
Turkey	0.0	0	0	0.0	0	0
Ukraine	57,000.0	157,525	159,649	0.0	0	0
United Kingdom	3,249.0	35,015	37,187	0.0	0	0
Uruguay	326,838.0	1,006,161	1,014,499	0.0	0	0
Vietnam	515,400.0	1,170,312	1,262,165	0.0	0	0
EXTRA LIGHT AMBER HONEY – NOT PACKAGED FOR RETAIL SALE - - -						
Argentina	6,749,211.0	21,379,610	22,014,317	590,917.0	1,885,206	1,926,349
Australia(*)	19,502.0	65,332	66,332	0.0	0	0
Brazil	1,902,768.0	5,771,813	6,000,420	227,036.0	679,605	696,779
Canada	135,098.0	559,730	562,477	27,962.0	113,751	114,244
Chile	19,251.0	59,703	62,203	0.0	0	0
China	37,760.0	98,780	103,900	0.0	0	0
France(*)	0.0	0	0	0.0	0	0
Hungary	0.0	0	0	0.0	0	0
India	6,747,050.0	17,832,043	18,482,183	748,323.0	1,803,456	1,938,980
Italy(*)	11,962.0	45,397	52,586	0.0	0	0
Laos	18,600.0	41,943	44,943	0.0	0	0
Malaysia	5,463,845.0	9,540,482	10,501,276	73,080.0	129,508	146,160
Mexico	684,893.0	2,151,824	2,171,324	0.0	0	0
Mongolia	0.0	0	0	0.0	0	0
New Zealand(*)	60,819.0	107,267	112,930	4,932.0	8,699	9,048
Pakistan	36,787.0	93,808	98,808	0.0	0	0

Peru	18,600.0	52,997	54,997	0.0	0	0
Romania	93,800.0	272,891	272,896	18,760.0	54,203	54,204
Taiwan	937,860.0	1,735,041	1,872,780	0.0	0	0
Thailand	811,250.0	1,727,233	1,843,957	74,400.0	139,872	151,872
Turkey	0.0	0	0	0.0	0	0
Ukraine	113,400.0	314,034	316,545	19,000.0	54,150	55,150
Uruguay	198,683.0	567,803	587,159	0.0	0	0
Vietnam	249,680.0	550,776	588,263	0.0	0	0

LIGHT AMBER HONEY – NOT PACKAGED FOR RETAIL SALE –

Argentina	3,343,749.0	10,136,762	10,451,859	433,488.0	1,353,014	1,382,383
Australia(*)	23,882.0	117,151	117,503	0.0	0	0
Austria	0.0	0	0	0.0	0	0
Brazil	5,783,704.0	16,047,115	16,679,222	264,338.0	760,235	785,480
Bulgaria	0.0	0	0	0.0	0	0
Canada	40,251.0	172,836	173,742	0.0	0	0
Chile	18,762.0	59,100	60,100	0.0	0	0
China	96,000.0	216,000	227,924	0.0	0	0
Dominican Republic	13,752.0	28,533	31,014	0.0	0	0
Egypt	600.0	2,500	2,760	0.0	0	0
France(*)	131.0	2,887	2,964	0.0	0	0
Germany(*)	43,232.0	196,398	201,999	0.0	0	0
Guatemala	0.0	0	0	0.0	0	0
Hong Kong	6,840.0	43,320	44,940	0.0	0	0
Hungary	6,804.0	37,545	39,445	0.0	0	0
India	5,383,891.0	12,778,724	13,600,009	186,946.0	437,092	468,478
Indonesia	1,386,928.0	2,390,644	2,541,644	0.0	0	0
Italy(*)	5,733.0	74,110	80,516	1,088.0	14,258	16,769
Korea, South	126.0	2,117	2,127	0.0	0	0
Kyrgyzstan	78,000.0	180,960	196,660	78,000.0	180,960	196,660
Malaysia	9,540,594.0	14,790,184	16,032,649	455,068.0	512,822	565,253
Mexico	704,846.0	2,001,272	2,046,097	509.0	2,592	2,808
New Zealand(*)	201,758.0	530,575	558,757	26,119.0	123,490	126,685
Pakistan	0.0	0	0	0.0	0	0
Peru	18,600.0	54,684	55,154	0.0	0	0
Philippines	220.0	2,072	2,271	220.0	2,072	2,271
Romania	37,520.0	105,967	105,969	0.0	0	0
Saudi Arabia	3,240.0	18,000	19,738	0.0	0	0
Singapore	40,600.0	73,080	76,580	0.0	0	0
Spain	12,957.0	99,704	103,213	0.0	0	0
Sri Lanka	252,880.0	472,885	501,849	0.0	0	0
Taiwan	649,765.0	1,199,507	1,257,701	40,297.0	83,829	88,445
Thailand	469,200.0	1,013,961	1,098,963	74,400.0	156,240	170,576
Ukraine	154,000.0	420,130	425,456	0.0	0	0
United Kingdom	54,009.0	167,157	171,011	40,000.0	131,161	132,266
Uruguay	307,243.0	835,230	864,621	0.0	0	0
Vietnam	17,858,560.0	40,057,945	41,934,388	1,982,200.0	4,573,594	4,841,985

NOT OTHERWISE SPECIFIED OR INDICATED ---

Argentina	222,528.0	702,676	718,828	74,020.0	234,474	236,454
Australia(*)	28,722.0	214,229	225,117	0.0	0	0
Brazil	668,443.0	1,723,639	1,796,445	18,760.0	46,994	49,994
Bulgaria	2,206.0	11,286	13,170	2,206.0	11,286	13,170
Canada	975,113.0	2,935,732	2,945,345	0.0	0	0
Czech Republic	0.0	0	0	0.0	0	0
Dominican Republic	120,889.0	203,084	216,244	7,390.0	18,697	19,439
Egypt	12,045.0	23,925	25,725	0.0	0	0

France(*)	966.0	9,764	12,788	138.0	2,191	2,335
Germany(*)	101,005.0	509,781	528,531	11,988.0	66,940	69,040
Ghana	0.0	0	0	0.0	0	0
Greece	1,737.0	16,947	17,465	576.0	5,684	5,738
Honduras	0.0	0	0	0.0	0	0
India	92,120.0	236,203	250,053	0.0	0	0
Israel(*)	2,629.0	21,023	21,596	0.0	0	0
Italy(*)	1,069.0	7,584	8,235	0.0	0	0
Lithuania	9,216.0	41,472	44,397	0.0	0	0
Malaysia	114,979.0	156,871	178,139	0.0	0	0
Mexico	560,633.0	1,538,175	1,551,054	10,341.0	36,289	38,639
Moldova	13,654.0	70,506	75,030	11,404.0	60,396	64,116
Morocco	446.0	2,394	2,493	0.0	0	0
New Zealand(*)	382,756.0	1,495,942	1,515,710	21,736.0	87,976	93,126
Poland	4,508.0	32,052	32,421	593.0	4,446	4,682
Russia	44,497.0	321,460	331,128	0.0	0	0
Saudi Arabia	90.0	2,560	2,650	0.0	0	0
Spain	5,878.0	16,991	17,892	0.0	0	0
Switzerland(*)	2,016.0	11,369	12,169	0.0	0	0
Taiwan	2,114.0	16,876	17,798	0.0	0	0
Thailand	0.0	0	0	0.0	0	0
Ukraine	19,000.0	50,350	54,324	0.0	0	0
United Kingdom	400.0	6,326	8,026	0.0	0	0
Vietnam	18,560.0	38,048	42,048	0.0	0	0

COMB AND RETAIL HONEY –

Argentina	2,268.0	17,791	18,976	0.0	0	0
Armenia	5,095.0	24,570	25,859	0.0	0	0
Australia(*)	14,650.0	86,386	107,477	0.0	0	0
Austria	46,651.0	370,979	397,689	1,406.0	21,774	22,843
Brazil	5,183.0	53,570	55,354	285.0	6,087	6,192
Bulgaria	83,230.0	295,507	310,872	0.0	0	0
Canada	788,299.0	3,934,626	3,951,475	65,866.0	339,016	340,582
Chile	0.0	0	0	0.0	0	0
China	3,996.0	12,925	15,273	0.0	0	0
Croatia	243.0	2,096	2,159	0.0	0	0
Cyprus	0.0	0	0	0.0	0	0
Denmark(*)	3,584.0	15,338	16,616	0.0	0	0
Dominican Republic	50,931.0	111,545	116,765	0.0	0	0
Egypt	5,588.0	18,631	19,813	1,200.0	2,650	2,891
France(*)	98,610.0	694,680	718,177	476.0	5,800	5,972
Georgia	400.0	4,000	4,400	0.0	0	0
Germany(*)	99,279.0	494,907	516,195	1,373.0	12,953	13,525
Greece	49,184.0	473,895	491,744	0.0	0	0
Guatemala	6,263.0	9,046	9,846	0.0	0	0
Hungary	26,253.0	158,728	167,374	3,146.0	34,035	34,885
India	2,176,162.0	4,764,540	5,020,787	234,000.0	486,000	515,650
Indonesia	402.0	6,419	6,736	0.0	0	0
Israel(*)	7,659.0	51,570	54,604	2,261.0	16,090	17,583
Italy(*)	65,734.0	262,082	277,086	6,093.0	69,090	71,188
Korea, South	0.0	0	0	0.0	0	0
Lebanon	3,000.0	41,350	43,173	0.0	0	0
Lithuania	10,032.0	48,627	53,490	1,944.0	11,727	12,900
Malaysia	199,013.0	323,348	346,646	21,399.0	34,000	37,735
Mauritius	3,645.0	10,217	11,240	3,022.0	5,088	5,219
Mexico	9,862.0	21,107	25,491	2,124.0	7,812	7,818
Moldova	18,903.0	99,067	108,230	4,004.0	20,604	22,683
Nepal	181.0	5,400	5,750	0.0	0	0
Netherlands	892.0	3,431	3,607	0.0	0	0

New Zealand(*)	273,672.0	1,590,589	1,649,710	13,596.0	180,049	184,437
Pakistan	0.0	0	0	0.0	0	0
Peru	0.0	0	0	0.0	0	0
Philippines	23.0	2,904	3,253	0.0	0	0
Poland	44,014.0	141,232	155,454	5,324.0	12,858	15,053
Portugal	10,245.0	68,332	71,175	2,970.0	19,822	20,411
Russia	12,926.0	105,289	115,818	2,764.0	28,207	31,028
Spain	101,549.0	568,036	589,764	540.0	5,519	5,806
Sweden	0.0	0	0	0.0	0	0
Switzerland(*)	136,880.0	668,519	693,921	0.0	0	0
Taiwan	96,501.0	208,658	221,543	20,982.0	32,544	35,646
Turkey	37,039.0	217,452	224,605	0.0	0	0
Ukraine	58,451.0	202,039	222,244	13,494.0	51,425	56,568
United Kingdom	66,159.0	398,747	404,602	409.0	3,777	3,985
Uzbekistan, Republic of	1,836.0	6,608	7,269	0.0	0	0
Vietnam	156,405.0	347,020	373,659	39,000.0	83,850	90,450
FLAVORED HONEY –						
Austria	0.0	0	0	0.0	0	0
Canada	4,128.0	23,362	24,875	0.0	0	0
China	18,908.0	97,647	106,009	0.0	0	0
Denmark(*)	5,000.0	13,228	13,720	0.0	0	0
France(*)	225.0	2,476	2,596	0.0	0	0
Germany(*)	9,642.0	176,065	180,139	0.0	0	0
Italy(*)	6,802.0	100,144	104,170	285.0	4,630	4,733
Japan	2,790.0	54,070	54,814	0.0	0	0
Korea, South	126,596.0	919,473	933,582	2,550.0	81,150	82,006
Mexico	122,701.0	1,220,521	1,231,506	23,736.0	231,603	234,075
New Zealand(*)	2,539.0	26,827	27,458	0.0	0	0
Portugal	6,675.0	44,980	46,816	0.0	0	0
Singapore	15,638.0	69,030	71,030	0.0	0	0
Spain	3,797.0	22,601	23,327	0.0	0	0
Switzerland(*)	0.0	0	0	0.0	0	0
Taiwan	19,453.0	14,640	17,718	0.0	0	0
Thailand	57,990.0	229,998	240,513	0.0	0	0
GRAND TOTAL	**402,884.0**	**3,015,062**	**3,078,273**	**26,571.0**	**317,383**	**320,814**

Notes:

1. Data Source: Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics

2. (*) denotes a country that is a summarization of its component countries.

3. Users should use cautious interpretation on QUANTITY reports using mixed units of measure. Commodity groups on a value report will reflect a total of all statistics for each commodity in the group in DOLLARS, whereas a QUANTITY line item will show statistics on the greatest number of like units of measure for grouped commodities.

4. Product Group : Harmonized

Pacific Northwest Honey Bee Pollination Economics Survey 2010

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Since 1986 the Honey Bee Laboratory at Oregon State University has conducted an annual survey of pollination economics in the Pacific Northwest (PNW). The information from each year of the survey has been made available both regionally and nationally. The information has proved to be most useful to individual beekeepers who generate income from pollination rental, which is the primary source of income for the majority of commercial beekeepers in the PNW. The report for 2010 represents 25 years of summarizing the general state of pollination economics in the PNW. This is the longest running examination of pollination economics for any region in the U.S.

The use of managed honey bee colonies for commercial crop pollination remains the most important function of the PNW beekeeping industry. The vast and diverse agriculture of the region relies on a healthy and strong beekeeping industry to maintain optimum production. An enhanced knowledge of pollination economics is crucial to every beekeeper that enters into the world of commercial crop pollination.

The USDA National Agriculture Statistical Service estimates that there are 92,000 production honey bee colonies in the PNW (Oregon and Washington). With these numbers there are some interesting hypothetical calculations that can be made. For instance, if all growers of crops that require or benefit from managed honey bee pollination in the PNW, were to rent 2 colonies for each acre of crop that relies on and/or benefits from bee pollination (ca. 350,000 acres), the resulting pollination requirement would utilize 700,000 colony rentals. If we multiply the hypothetical rentals by the 2010 average colony rental fee ($70^{85}) it results in a potential pollination rental income of nearly 50 million dollars for PNW beekeepers. If we add to this the estimated 2010 California almond pollination income, available to PNW commercial beekeepers ($25 million), we end up with a potential gross pollination rental income of 75 million dollars. Another way to look at this is by asking the question, 'how much pollination income, under optimized conditions, should have been produced from one commercial PNW honey bee colony in the year 2010?' For 2010 that figure is approximately $815 per hive. Which is obviously unattainable, if for no other reason than the impossibility of one colony being sequentially utilized in all of the necessary cropping systems required to produce such a hypothetical per colony income.

Comparing the hypothetical PNW rental income (50 million $) to the farm-gate value of the crops pollinated in the PNW (2.75 billion $) shows that the money spent by growers to ensure adequate pollination is

about 1.8% of the total crop value. This is an impressive illustration of what a remarkable bargain pollination rental is to the at-large commercial agricultural industry of the PNW.

The 2010 pollination survey continues to illustrate the critical reliance of PNW beekeepers on income generated from colony rentals. For 2010 the average commercial beekeeper reported receiving 73% of his or her annual operating gross from pollination rental, which is a slight increase from the 2009 crop year. This percentage shows the dominance of pollination rental income to a PNW beekeeper's financial "health".

Recent increases in the average pollination rental fee have been strongly influenced by the dramatic rise in the pollination rental fees paid by California almond growers. In 2005 almond growers responded to a perceived shortage of colonies by dramatically increasing the price they were willing to pay for pollination; this continued into the 2009 pollination season where the average almond pollination fee was 150^{25}. For 2010 the average fee paid for almond pollination was 137^{20} which is the first decrease seen in 5 years; however almonds are still by far and away, the highest rental crop for PNW beekeepers. Almond pollination is a target crop for nearly all commercial beekeepers in the Pacific Northwest and represents the beginning of the annual pollination season.

For 2010 the average pollination rental fee, computed from commercial colony rentals on all crops reported (including almonds), was 70^{85}. This is a 21% decrease from the average pollination fee paid in 2009 (89^{90}) (see Table 1). This decrease is strongly influenced by the corresponding decrease in the average fee for almond pollination in 2010. Table 2 provides the average rental fees by crop and a comparison to the average fee received in 2009. For table 2 only crops where at least 3 commercial beekeepers reported rentals are listed.

During the past ten years the average pollination rental fee has increased from 33^{65} (2001) to 70^{85} (2010), an increase of 210%. While dramatic gains in pollination fees have occurred, it needs to be stressed that honey bee colony rental was for many decades, an underpaid service to the agricultural industry at-large. It is really only within the past decade that rental fees have begun to more accurately reflect the enormous value-added service of managed pollination. Figure 1 depicts the average pollination fee paid since the beginning of the PNW pollination survey in 1986.

Within the PNW, tree fruits (apples, pears and sweet cherries) have been and remain the dominant crop types for pollination income. In 2010 the combination of apples, pears and sweet cherries and accounted for 40% of all reported rentals and 21% of all reported pollination income. Paradoxically, the single most important crop for PNW beekeepers is grown in California, *i.e*., almonds. Almonds were responsible for 27% of all rentals and 52% of all rental income in the 2010 survey (see Table 4). Almonds have consistently produced a high average pollination fee and for the past five years have displayed remarkable fee increases compared to the 2005 average fee of 79^{40}: for 2006, 129^{20}; for 2007, 137^{35}; for 2008, 148^{15}; and for 2009, 150^{30}.

In 2010 the combination of California almonds and PNW tree fruit accounted for 67% of all rentals and 79% of all pollination income, which illustrates the dominance and importance of these crops for a commercial

PNW beekeeper (see Table 4). All other PNW cropping systems that utilize honey bee pollination, contributed 21% of the beekeeper's gross pollination income in 2010.

In terms of acreage, apples are the largest crop grown in the PNW (almost 200,000 acres) and this is reflected by the large number of reported rentals (23.5% of all rentals and 16% of the total reported rental income).

The average PNW commercial honey bee colony was rented 2.1 times in 2010 and this includes California almonds. This is a slight increase from 2009. This statistic had been trending downwards since 1999 when the average number of rentals per colony was 2.8. Does this actually reflect the real world situation? Are PNW commercial beekeepers concentrating on almonds and tree fruit (which historically provide the major sources of pollination income) and reducing the number of colonies involved in minor crop pollination? Following almond pollination, are colonies being shifted away from pollination to concentrate on honey production? At this time our data are not able to provide reasonable answers to these questions.

For the 2010 pollination season, an average rental fee of $\$70^{85}$, combined with an average of 2.1 pollination rentals per colony, results in an annual per colony pollination income of $\$148^{80}$. Table 3 displays the data concerning the trends of ever larger individual operations, and the increasing per colony income derived from pollination. With the "average" commercial operation running 3,284 colonies, a hypothetical 2010 gross pollination income for the "average" commercial beekeeping operation in the PNW was $488,660.

The combined colony numbers from those commercial beekeepers who responded to the 2010 survey, (59,948 hives), represent about 65% of the USDA's estimate of commercial colony numbers in Oregon and Washington. Therefore, if we divide the total reported pollination income of the survey respondents ($8,885,774) by a factor of 0.65, we have a ball park estimate of the pollination income generated by commercial beekeeping in the PNW in 2010, *i.e.,* a regional pollination income of approximately 13.5 million dollars. This is far more than the "estimates" assigned to the bee industry by agricultural economists, who, for reasons unexplained, usually do not even include pollination rental income in their evaluation of beekeeping economics. Pollination income in the PNW far exceeds the value of honey and wax sales for our regional beekeeping industry. Pollination rental income is frequently four to five times greater than honey and wax sales in any given year. This disparity between pollination income and combined honey/wax sales has increased dramatically, especially in the past few years, concurrent with the impressive rise in pollination rental fees.

The 2010 survey once again asked commercial beekeepers to report the total number of full-time or full-time equivalent employees working for their operations. An interesting way to look at this question concerning the average number of full-time employees, is to ask "what is the colony equivalent", meaning, how many colonies are necessary in order to hire one full-time employee? That figure was very close to 1,500 colonies/employee in 2004 and 2005. The reported "colony equivalent" for 2010 is 960 hives which is little changed from the 2009 "colony equivalent" of 996 colonies. Lower colony equivalent numbers suggest that hives are receiving more intensive management, which ultimately means healthier hives.

While colony income from pollination rental is a critical statistic, so therefore is the annual cost to maintain a healthy hive of honey bees. Numerous commercial beekeepers, who have over the years maintained accurate cost accounting records, have reported colony maintenance costs that are very reasonable relative to today's economy. The average annual hive maintenance cost was $157 per colony for the year 2010. The range in individual responses was from a high of $220/hive to a low of $110/hive. This wide range suggests that beekeepers should try to be more precise in calculating their operational costs. If you can't answer the question of your operating cost on a ***per colony basis***, you should reconsider adjusting your operational accounting system.

For 2010 the average colony maintenance cost is once again higher than the average per colony pollination income. From the 2010 survey data, pollination income was 148^{80}/colony and the colony maintenance cost was $157; a difference of 8^{20} per colony. This illustrates that the net operational profit needs to be generated by sources of income outside of pollination rental, most frequently, honey production.

In interpreting the average pollination fee for an individual crop (Table 2), it is important to recognize that the reliability of the "average" is strongly influenced by the number of reported rentals. The "average" for almonds should be considered very realistic because of the large number of beekeepers and rentals reported for this crop, and such is also the case for tree fruit in the PNW. For this year's survey report, pollination rental averages for crops with fewer than 3 beekeepers reporting, have been excluded from Table 2, but these low reported crops have been included for computing the average pollination fee for all reported rentals.

It is important to remember that the data presented here represent the pollination rental situation of a hypothetical "average" commercial beekeeper in the Pacific Northwest. For individual beekeepers the survey results are most useful as benchmarks against which they should compare their individual operations. Let it be stressed again that all of these "projections" are only as accurate as the data provided by responding beekeepers. The projections also assume that the participating beekeepers collectively represent the mainstream of commercial beekeeping in the Pacific Northwest.

I wish to again thank all those beekeepers in Oregon and Washington who took the time to participate in the survey, which over the past 25 years, has generated the most accurate assessment of commercial pollination known in the U.S. It has been an illuminating and rewarding activity to track the pollination economic conditions of the Pacific Northwest for the past quarter century. Over the years feedback received from the beekeeping industry suggests that this work has been of assistance to PNW beekeepers in their pollination management and I wish them all ever improving fortune in the coming years.

Table 1. Average Pollination Fee 2001 - 2010

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
33.65	36.40	36.45	38.65	51.30	73.85	70.65	81.15	89.90	70.85

Table 2. 2010 Average pollination fees as reported by 18 commercial beekeeping operations.

Crop	No. Rentals	Avg. Fee	Fee +/-[1]
Pears	6,239	45^{90}	-10.7%
Cherries	14,546	46^{80}	-9.1%
Apples	29,433	49^{00}	-1.5%
Berries[2]	5,734	32^{25}	-16.0%
Blueberries	11,488	39^{60}	-6.8%
Vegetable seed	7,345	55^{75}	+3.7%
Clover seed[3]	4,027	44^{20}	-4.3%
Squash & Pumpkin	2,392	48^{90}	+3.4%
Meadowfoam	4,910	45^{25}	0%
Almonds	33,738	137^{20}	-8.7%

Average Pollination Fee = **70^{85}**

[1]% change from 2009
[2]Includes blackberries, raspberries, Marion berries, & Logan berries.
[3]Includes red & white clover as grown for seed.

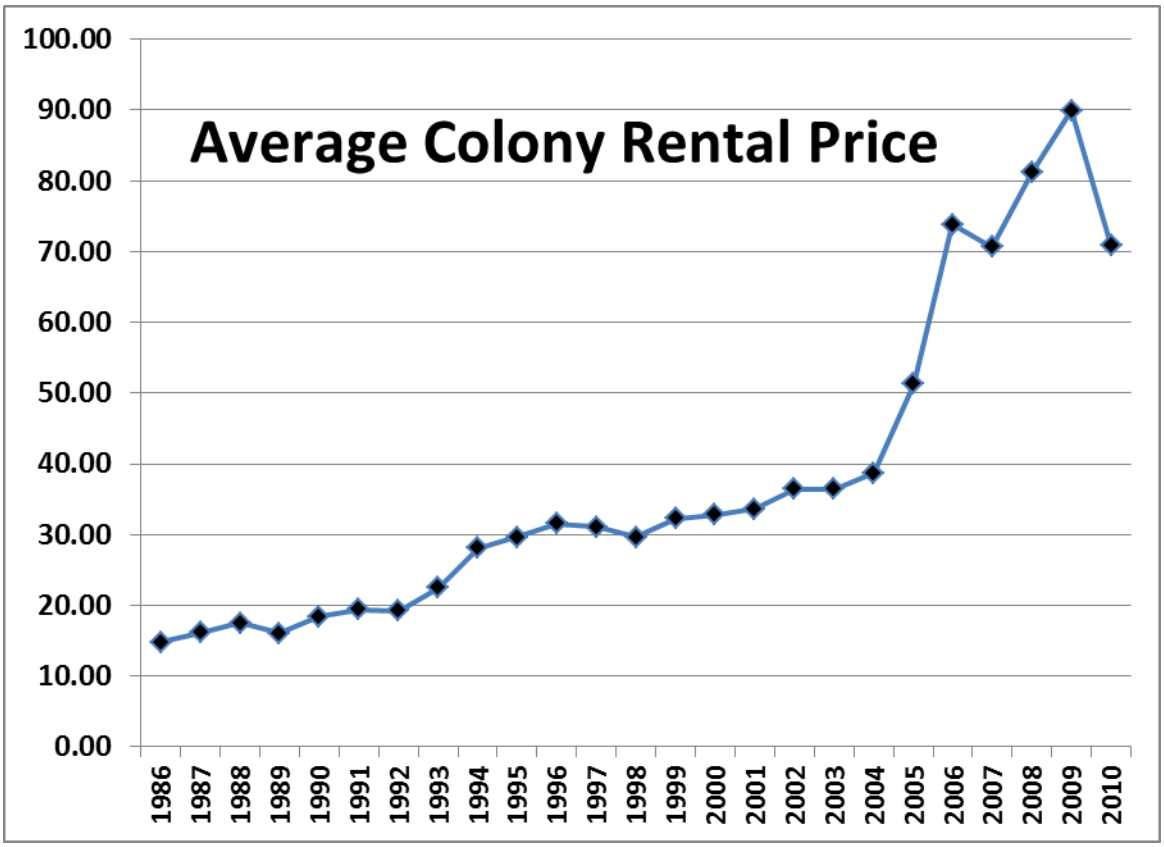
Table 3. Average colony numbers, average rental fee per hive, and average annual rental income per hive for a hypothetical commercial beekeeping operation in the Pacific Northwest 1992-2010.

Year	Average No. Colonies	Average Rental Fee	Average Annual Rental Income per Colony
1992	765	$19.25	$49.70
1993	990	$22.50	$62.25
1994	1,225	$28.10	$78.70
1995	1,348	$29.60	$78.15
1996	1,350	$31.55	$97.50
1997	1,504	$31.05	$92.20
1998	1,153	$29.65	$83.00
1999	2,058	$32.25	$89.30
2000	2,055	$32.85	$77.40
2001	3,168	$33.65	$64.60
2002	4,255	$36.40	$63.75
2003	2,612	$36.45	$86.40
2004	3,555	$38.65	$74.60
2005	2,055	$51.30	$112.85
2006	3,855	$73.85	$151.10
2007	3,091	$70.65	$176.60
2008	4,800	$81.15	$154.20
2009	5,140	$89.90	$164.50
2010	**3,284**	**$70.85**	**$148.80**

Table 4. Pollination rentals and income by crop type as reported by 18 PNW commercial beekeepers in 2010.

Crop	# Rentals	% of total rentals	Rental Income	% of total rental income
Tree Fruit	50,218	40.0%	$2,408,221	27.1%
Almonds	33,738	26.9%	$4,628,560	52.1%
All other crops	41,417	33.1%	$1,848,992	20.8%
Total	125,373		$8,885,774	

Figure 1. PNW average pollination fee for all crops {including almonds}: 1986 – 2010.



Summary Information - 2010

Number of participating commercial beekeepers = **18**

Number of colonies in the survey = **59,948**

Total colony rentals = **125,373**

The average colony pollination rental fee (for all beekeepers, for all crops including California almonds) was:

$70.85

The average commercial colony was placed in **2.1** pollination sets in 2010, for an average per hive rental income of **$148.85**

The average commercial bee operation maintained 3,284 colonies and grossed **$488,660** in pollination rental income for 2010.