

# 2010 Eastern Beekeeper Pollination Survey

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In the fall of 2010, 125 surveys were sent electronically and via snail mail to beekeepers offering rental bees in the Mid-Atlantic region of east coast USA. Discounting undeliverable, hobbyists, individuals reporting no pollination, there was an approximate 25% return rate same as 2009 return rate. The 2008 survey involved fewer respondents as a pilot project. (See Caron, D.M. 2010. Honey Market News XXX # 3 April 14: pgs 9-11).

In 2010, 9 commercial beekeepers (20,181 col total; 2242 average/individual) and 16 semi-commercials (1459 total colonies; ~96 average/individual) returned valid surveys. This represents response of one additional commercial beekeeper and five additional semi-commercial beekeepers from 2009 survey. (Note: Commercial beekeeper is here defined as individuals with 300 or more colonies; semi-commercials maintain from 50 to 300 colonies). Table 1 summarizes the responses for 2010.

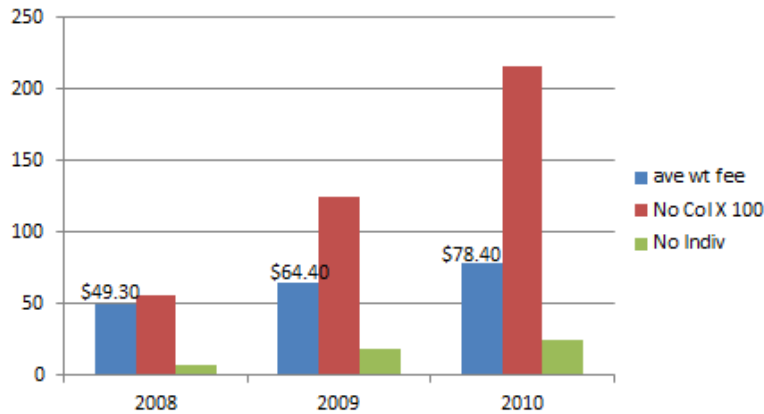
**Table 1. Number of beekeepers who rented colonies for each of 13 commodities, total number of states represented, total colony rentals reported for each crop, colonies/acre rented by crop (range), pollinating fee (weighted average), fee range for each crop rental and change in weighted average fee (decrease in ()). 2010 Mid-Atlantic Beekeeper Survey.**

Crop	No Indiv	No states	No Col	No col/ac	Ave fee	fee range	change from '09
apples	19	7	4418	0.3-2/ac	\$53.80	\$35-80	\$14.90
Berries	1	1	3	3/ac	\$55.00		\$6.70
blueberry	14	7	17,079	0.8-2/ac	\$69.10	\$50-90	(\$0.20)
cranberry	6	3	6079	1.6-2/ac	\$74.40	\$65-90	\$1.40
Cherries	1	1	55	1/ac	\$55.00		\$4.10
Cucumber	8	5	4707	0.4-1/ac	\$58.85	\$28-78	\$0.65
melons	12	6	2785	0.2-1/ac	\$67.50	\$50-80	(\$2.40)
pumpkins	13	5	1438	0.5-1/ac	\$80.70	\$35-90	\$20.00
Squash	5	4	163	0.33-1ac	\$54.00	\$51-75	(\$4.30)
Strawberry	10	4	81	0.5-2/ac	\$58.45	\$50-70	(\$8.35)
truck cps	6	2	25		\$63.20		
watermelon	6	4	270	1-2/ac	\$67.00	\$50-80	\$5.10
almond	2	1	7920		\$130.70	\$130-135	\$54.90
average	25		45,023		\$78.40		

The weighted pollinating fee average for just over 45,000 colony rentals for 2010 was \$78.40. This is a 22% increase from the previous year (\$64.40 over 2009 weighted average of \$64.40). The overall average pollinating fee for the 3 survey years 2008-2010 is represented graphically in Figure 1. In 2010 the 25 responding beekeepers reported managing 21,640 colonies for which they reported 45,023

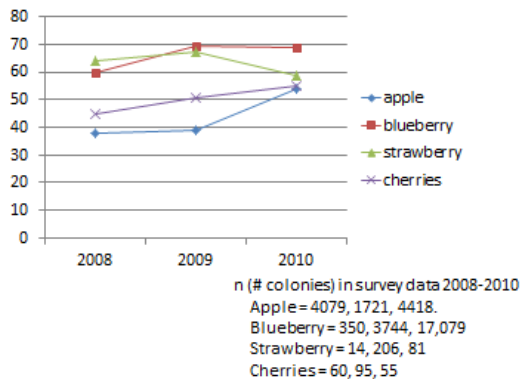
rentals (2.1 rentals/colony). These rentals generated over \$3 ½ million (\$3,532,501) gross pollination income.

**Figure 1. Average weighted pollination fee, Number colonies and Number individuals surveyed, 2008-2010**

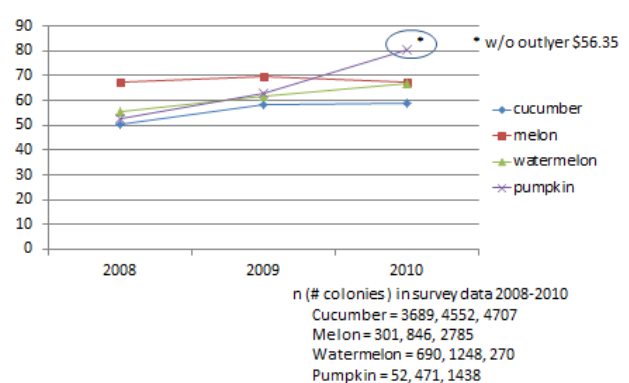


The change in average rental price for 12 commodities for which numbers were gathered in last 2 survey years is shown in the last column of Table 1. An increase in average rental prices were noted for 8 commodities ranging from \$0.65 (cucumber) to \$54.90 (almonds) and a decrease for 4 crops (blueberry, melons, squash and strawberries - the last 2 commodities involving a small number of colony rentals -163 and 81 respectively). Weighted average and number of colonies rented for 4 fruit crops is shown in Figure 2 and for 4 cucurbit crops in Figure 3 for the past 3 survey years.

**Figure 2. Average weighted pollination rental fee - selected fruit 2008-2010**



**Figure 3. Average weighted pollination rental fee – selected cucurbits 2008-2010**



Four commodities demonstrated a dramatic increase in rental price (apples, almonds, pumpkins and watermelons) and two had dramatically lower average rental price (strawberries and squash). In apples (for which 19 of 25 total individuals reported rental activity), average gain was \$14.90 over previous year (apple pollination was well represented both years in survey responses). Almonds, with only 2 individuals supplying data, an even larger gain of \$54.90 in average rental fee occurred. In

the case of the 2 cucurbits, pumpkin, due to one outlier in PA who rented >73 % of total colonies at highest price (\$90), a \$18.00 average gain was realized from the previous year. Subtracting this outlier, the remaining 12 renters (402 col) had a weighted average of \$56.35 which was \$5.35 below previous year; watermelon had a \$5.10 average increase, though colony numbers were below 25% of previous survey year.

One of the 4 crops reporting a lower rental income average was strawberry. In 2010, 10 individuals rented 81 colonies (over 50% fewer than reported for the previous year) with a weighted average (\$58.45) that was \$8.35 less than the previous year. In squash the decrease for 163 rental units was \$4.30. Caution is advised in comparison of one year with another as data may not be an actual reflection of an increase, merely a different pool of respondents and numbers of colonies. For some commodities, the numbers of individuals and/or colonies rented is not robust.

The largest number of individuals (19 of 25) reported apple orchard rental in 2010, followed by blueberry (14). Ten individuals rented colonies to strawberry growers, but only used 81 colonies. Melon and pumpkin growers were the most popular cucurbit rentals, followed by cucumbers. Only 270 watermelon rentals were reported this past year – nearly 700 and over 1200 were included in the data for the earlier 2 survey years but weighted average rental price (\$67.00) was up in 2010. New in the report this year are rentals for growers of truck crops (tomato, eggplant, cucurbits, beans and peppers). In 2 states, 25 colonies were rented to such growers at \$63.20 weighted average rental price.

More states are represented in the pollination rentals this year compared to last and more colony numbers (12,477 in 2009 survey vs 21,640 this year) and more than double the rentals (21,745 rentals in 2009 vs 45,023 this year).

There is a wide range in the number of colonies rented per growing area (expressed in Table 1 in acres). Some returned surveys did not indicate the acreage pollinated, just numbers of colonies. Not knowing the acreage might indicate a lack of communication between beekeeper and grower or it may simply reflect inadequate records at the time of completing the survey. The range of prices for pollination was been quite broad all 3 years of the survey. Price differences per crop (in the major rental crops nearly 2 fold) may reflect past practices, level of competition or uneven business skills of the beekeepers.

In 2009 survey, 2 individuals reporting almond rental (\$75.80 average/colony) and this single crop represented 11.4 % of eastern beekeeper income. In this survey, still with 2 individuals reporting almond rentals, the average rental price jumped to \$130.70/colony and total rental income represents 29.4% of eastern beekeeper pollination income (see table 2). Fruit rentals, as reported last year, continues to lag in rental price value (10% of rentals but generating only 7% of total fee), although the average rental price is considerably elevated over last year (~\$15.00); almond rental is most beneficial (18% of rentals but generating nearly 30% of rental fee), even with only 2 individuals represented in the survey. Blueberry rental replaced cucurbit rentals this year as second most common rental and % value.

**Table 2. 2010 Pollination rentals and income by crop type - 25 Commercial and Semi-comm bkprs**

<u>Crop</u>	<u>No Col</u>	<u>% col</u>	<u>Total fee value</u>	<u>% value</u>
Tree Fruit	4473	9.9%	\$241,310	7.0%
Blueberry	17,079	37.9%	\$1,181,380	33.6%
Cranberry	6079	13.3%	\$452,240	12.4%
Cucurbits	9363	20.8%	\$607,891	17.3%
Almond	7920	17.7%	\$1,034,200	29.4%
Other	109	< 0.01%	\$6,480	<0.01%
<b>Total</b>	<b>45,023</b>		<b>\$3,523,501</b>	

#### Comparison to West coast – PNW Survey

This represents the 3<sup>rd</sup> year of collecting data for eastern beekeepers. Mike Burgett has been doing a survey of OR and WA (Pacific Northwest – PNW) beekeepers who rented colonies for the past 25 years. In the 2010 survey (n=18 commercial beekeepers), he reported a 21% drop in the average weighted rental fee (\$70.85), a drop of \$29.05 from \$89.90 average the year before), the most significant drop in the 25 year history of this survey. (Burgett, M. 2011. **National Honey Report – Vol. XXX - #12. Jan: pgs 12-18.**) With the equally dramatic 22% increase of the weighted average of eastern beekeepers ( to \$78.80), eastern beekeepers now are reporting a higher rental average than Pacific Northwest beekeepers.

Almonds, responsible for 27% of all rentals and 52% of all rental income in the 2010 PNW survey were cited as largely responsible for the drop in average rental price. For western beekeepers rental income in almonds decreased 8.7%,(average fee drop from \$150 to \$137.20 compared to the previous year). For eastern beekeepers, this one crop rental [with only 2 individuals reporting rental information] represents 29% of total gross income. The fee reported by the 2 eastern beekeepers sending bees to CA for almonds (\$130.70) was very close to the fee reported by PNW beekeepers (\$137.20) in the two 2010 surveys. Both surveys reported 2.1 average annual rentals per colony.

Caution is advised in comparisons of one year or one region to another. Prices reflect only those individuals who elected to participate in this survey. With increasingly robust numbers, I am however confident that rentals and fee for pollination rental services reported here are representative of the mid-Atlantic region beekeepers of the Eastern U.S.

Sincere thanks to participating beekeepers for their interest and taking time to complete a survey. Also thanks to Dr. Ramesh Sagili, OR State Univ, with survey assistance and Dr. Michael Burgett for sharing his PNW survey results.