



Pollinator Stewardship Council
1624 Idlewood Ave., Akron, OH 44313
www.pollinatorstewardship.org
832-727-9492

March 24, 2017

Contact: Michele Colopy, Program Director
progdirector@pollinatorstewardship.org

Honey Bee Colony Increases Are Fleeting

The USDA- National Agricultural Statistics Service (NASS) released a report of honey production and bee colonies March 22, 2017. Beekeepers were divided into two groups: those with more than five hives, and those with less than five hives. Additional data was collected for this survey including number of apiary workers, down 1,000 employees in 2016 from 2015; and operational expenses with a decrease in expenses for woodenware and foundation in 2016 compared to 2015.

Compared to 2015, pollination income and sales of nucs, queens, and hive products *decreased* \$19,650 for beekeepers with five or more colonies. Honey production increased from 720,000 pounds in 2015 to 766,000 pounds in 2016, an *increase of 6%*. The footnote does state, “It is possible to harvest honey from colonies that did not survive the entire year.”

While the total in the charts for 2015 and 2016 of the number of colonies shows an increase of 115,000 honey producing colonies, that number is not indicative of a change in pollinator health. When you compare the two charts, ten states show a loss of 37,000 honey producing colonies. Six states saw no changes in the number of colonies. When you consider how hives can multiply, and how quickly they can be killed or dwindle across a season, 115,000 honey producing colonies is not indicative of changes in the cumulative impact of pesticides, pests, pathogens, and poor forage affecting managed honey bees.

Beekeepers are adept at managing their honey bees, making splits (dividing one strong hive to make a second hive). However, they also may have to combine two weak hives into one hive. This cycle of splitting and combining occurs across the pollination season. A beekeeper can begin their year with 100 hives, lose 100 hives, and yet end the year with 100 hives.

For example: If 100 hives (2 deeps, 10 frame, 4 to a pallet) are available for pollination

100 hives pollinate almonds
-8 hives lost to pesticide exposure from neighboring field to almond orchard
-2 hives lost to Varroa
90 hives travel to apples
-6 hives lost to weather and pesticide exposure
84 hives remaining
+16 splits are made from among the 84 hives
100 hives travel to cranberries
-30 hives lost due to fungicide applications on the crop
70 hives travel to pasture land for four weeks
+20 splits made from among the 70 hives
90 hives travel to pollinate row crops in the south staying for the balance of the summer
-54 hives lost while pollinating row crops
36 hives remain to go into winter

A beekeeper can begin with 100 colonies, and end the season with 36 colonies. In this scenario a beekeeper would suffer an overall 65% loss of honey bees. While losses can sometimes be made up with splits from strong hives early in the season, in this real-world of U.S. beekeepers a total loss of 100 hives still occurred.

For the EPA to fulfill its mission and, protect Americans from significant risks to human health and the environment where they live, learn and work, we must use the best available scientific information and effectively enforce federal laws. Pollinator poisoning is the central issue to reverse the dangerous downward trend in pollinator health. Specific steps can be taken to protect pollinators:

- Support a Moratorium on Insecticidal Seed Coatings.
- Bee-kill Incidents Must Be Addressed.
- Conduct a Comprehensive Exposure Assessment.
- Scientists Must Be Allowed to Do Their Work Free of Political Interference.
- Create a Beekeeper Committee to Meet Regularly and Communicate Beekeeper.
- USDA Bee Lab Supervisors Need to be able to talk directly with beekeepers.
- Changes in pesticide application practices needed.

- Toxicology testing should be expanded to include all ingredients applied by growers/applicators.
- State Pollinator Protection Plans promotion of apiary registration as a risk mitigation strategy is ineffective.
- Unnecessary herbicide use on public lands and rights-of-way should be stopped immediately.
- Longer-Term Reforms Needed
 - Toxicity testing of formulated products and tank mixtures of formulated products must be required by US EPA for registration purposes.
 - A new model for local enforcement of pesticide laws and regulations is needed.
 - Greatly expanded monitoring of toxins entering the environment and beehives must be immediately implemented.
 - An independent system for pesticide toxicity and risk assessment is needed.
 - Comprehensive cost-benefit / efficacy analysis should always be done before pesticide registrations are approved.
 - Comprehensive evaluation of the potential for adverse effects of RNAi-based pesticides must be done before any product registrations are approved.
 - The effect of fungicides and herbicides on the honey bee microbiome should be fully investigated.

Strong actions must be taken to restore the bee industry to health. Beekeepers value deeply the relationships they have developed over the years with farmers, ranchers, and specialty crop producers. Because beekeepers need to maintain this vitally important bond, the vast majority of honey bee poisonings go unreported. It should not be assumed that merely because something is not reported, that it is not a major problem. A culture of silence on the issue of pesticide poisonings has developed. A dedicated group of beekeepers, comprised of experts in the field of pesticide hazards, working closely with scientific advisers and other groups who are interested in solving the problem of unsustainable colony losses by evaluating all stressors, including pesticides, is a formula for success.

The 115,000 colony gain reported in the NASS survey is countered by losses at the beginning of the pollination season of 5,000+ colonies due to pesticide exposure from neighboring crops near almonds. More colonies will be lost this year as they migrate along the crop pollination circuit. Acknowledging improvements in honey bee health cannot be summed up by simply a one-time hive count.

Honey, NASS, March 22, 2017, <http://usda.mannlib.cornell.edu/usda/current/Hone/Hone-03-22-2017.pdf>

Pesticide Policy Proposal for Pollinators, Pollinator Stewardship Council, Feb. 2017,

<http://pollinatorstewardship.org/wp-content/uploads/2017/01/Feb.-3-2017-newsltr-Pesticide-Policy-Proposal-for-Pollinators.pdf>

Honey, NASS data comparison of colonies 2015 vs. 2016

	2015	2016	difference
State	Honey producing colonies 1/	Honey producing colonies 1/	
	1,000	1,000	
Alabama	7	7	0
Arizona	26	27	1
Arkansas	24	24	0
California	276	310	35
Colorado	29	32	3
Florida	220	215	-5
Georgia	69	96	27
Hawaii	14	16	2
Idaho	89	97	4
Illinois	8	10	
Indiana	6	7	1
Iowa	36	37	1
Kansas	8	7	-1
Kentucky	5	5	0
Louisiana	49	50	6
Maine	10	12	2
Michigan	90	89	-1
Minnesota	122	124	2
Mississippi	15	19	4
Missouri	10	8	-2
Montana	146	159	13
Nebraska	57	48	-9
New Jersey	12	12	0
New York	58	64	6
North Carolina	12	12	0
North Dakota	490	485	-5
Ohio	17	15	-2
Oregon	71	74	3
Pennsylvania	17	19	2
South Carolina	19	16	2
South Dakota	290	280	-10
Tennessee	7	6	-1
Texas	126	133	7
Utah	27	31	4
Vermont	5	6	1
Virginia	6	5	-1
Washington	73	84	11
West Virginia	5	5	0
Wisconsin	52	54	2
Wyoming	38	40	2
Other States 5/ 6/	30	35	5