

## Loss results from additional surveys by Dewey M. Caron

There are others that are also doing survey of bee losses. Here are three mega reports from U.S. (our BUP survey results), Canadian and European survey results. Last year I also posted these three reports to the pnwhoneybeesurvey site (in September). See Report for last year:

## REPORTS OF BEE LOSSES – U.S., CANADA & EUROPE

Posted on [September 6, 2015](#) **REPORTS OF BEE LOSSES – U.S., CANADA & EUROPE**

### 2015-2016

**United States – preliminary summary 50 states. (almost 5770 beekeepers, estimated 15% of U.S. colonies) – last year 22.3%**

### OVERALL LOSS RATE 28.1%

## Colony Loss 2015-2016: Preliminary Results



MAY 4TH, 2016

Note: This is a preliminary analysis. Sample sizes and estimates are likely to change. A more detailed final report is being prepared for publication in a peer-reviewed journal at a later date.

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The Bee Informed Partnership (<http://beeinformed.org>), in collaboration with the Apiary Inspectors of America (AIA) and the United States Department of Agriculture (USDA), conducted the tenth annual national survey of honey bee colony losses, funded by the USDA NIFA.

For the 2015-2016 winter season, a preliminary 5,756 beekeepers in the United States provided validated survey responses. Collectively, these beekeepers managed 389,083 colonies in October 2015, representing about 15% of the country's estimated 2.66 million managed honey producing colonies<sup>1</sup>. An estimated 28.1% of the colonies managed in the United States were lost over the 2015-2016 winter. This represents an increase in losses of 5.8percentage points compared to the previous 2014-2015 winter, but is close to the 10-year average total winter loss of 28.6% (see figure 1).

Just over half of the survey respondents (59%) experienced winter colony loss rates greater than the average self-reported acceptable winter mortality rate of 16.9%.

Beekeepers not only lose colonies in the winter but also throughout the summer. In 2015, summer losses, at 28.1%, were the same as winter losses. When all results were combined, beekeepers lost 44.1% of their colonies between April 2015 and March 2016. This high rate of loss is close to the highest annual loss rate over the 6 years we have collected annual colony loss numbers.

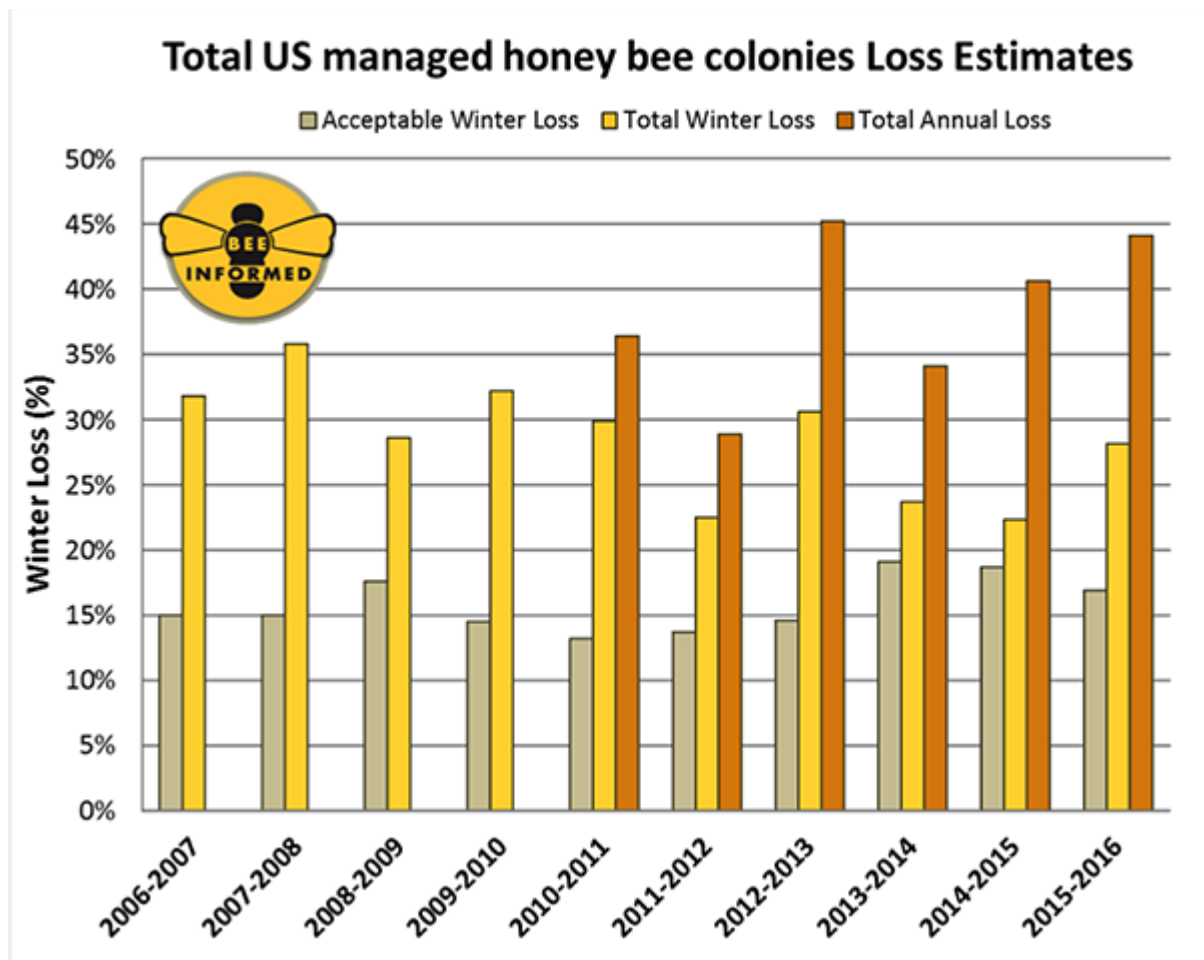


Figure 1: Summary of the total overwinter colony losses (October 1 – April 1) of managed honey bee colonies in the United States across nine annual national surveys. The acceptable range is the average percentage of acceptable colony losses declared by the survey participants in each year of the survey.

This survey was conducted by the Bee Informed Partnership, which receives a majority of its funding from the National Institute of Food and Agriculture, USDA (award number: 2011-67007-20017).

<sup>1</sup> Based on NASS 2015 figures

<sup>2</sup> Previous survey results found a total colony loss in the winters of 22% in the winter of 2014/15, 24% in 2013/2014, 30% in 2012/2013, 22% in 2011/2012, 30% in 2010/2011, 32% in 2009/2010, 29% in 2008/2009, 36% in 2007/2008, and 32% in 2006/2007 (see reference list).

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survey of managed honey bee 2013–2014 annual colony losses in the USA. *Apidologie*, 1–14. DOI:10.1007/s13592-015-0356-z

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**CANADA – summary of 10 provinces, (almost 442.000 colonies, 61% of total estimated colonies in Canada) – last year 16.4%**

**OVERALL LOSS RATE 16.8%**



2016-CAPA-Statement-on-Colony-Losses-July-19[1].pdf

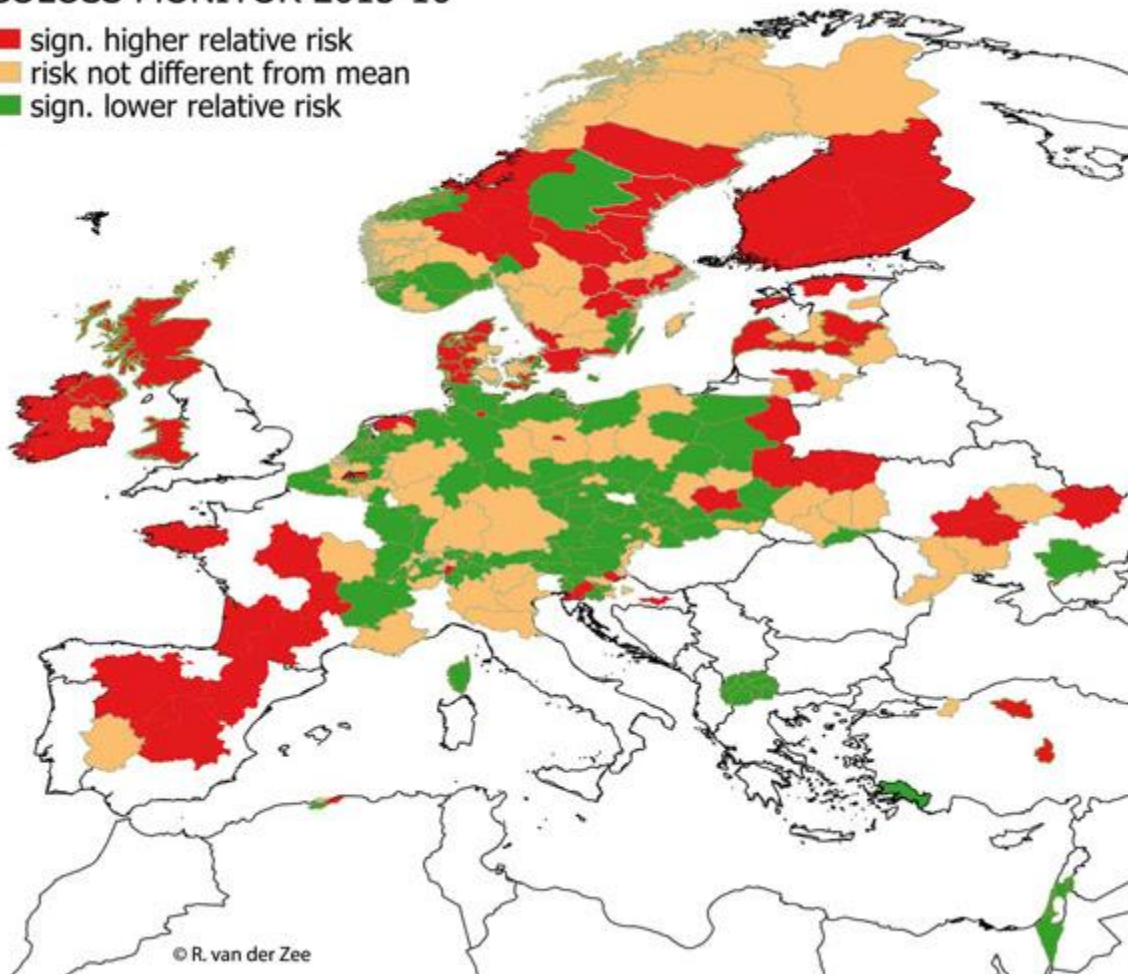
**EUROPE – summary for 29 countries (18,693 respondents, almost 400,000 colonies – (last year 17.4%)**

**OVERALL LOSS RATE=11.9%**

The honey bee research association COLOSS<sub>1</sub> has today announced the preliminary results of their international study of colony losses over the 2015-16 winter. Data were collected from 29 countries in this initiative, which is the largest and longest running international study of honey bee colony losses. In total 18,693 respondents provided overwintering mortality and other data of their colonies. Collectively, all responding beekeepers managed 399,602 honey bee colonies. The overall proportion of colonies lost was estimated as 11.9 %.

### COLOSS MONITOR 2015-16

- sign. higher relative risk
- risk not different from mean
- sign. lower relative risk



Co-Chairs of the COLOSS Core project for colony losses monitoring Dr Alison Gray and Dr

**Robert Brodschneider say:** *"These loss rates vary considerably between countries. In this year's survey the highest losses were found in Ireland and Northern Ireland, followed by Wales and Spain. The pattern of loss rates differs from last year, when higher mortality and loss rates were found in central Europe and countries to the east. This year the higher loss rates tend to be in the west and northern countries, although Spain had high rates of loss in both years. All the loss rates quoted here include losses due to unresolvable queen problems after winter, as well as colonies that died over winter for various reasons. Losses due to queen problems were unexpectedly high in some countries and this will be a matter of further investigation."*

The protocol used to collect this COLOSS data has been internationally standardized<sup>2,3</sup> to allow comparisons and joint analysis of the data. A more detailed analysis of risk factors calculated from the whole dataset, as well as further colony loss data from other countries, will be published later in the year.

Romée van der Zee of the COLOSS Core project for colony losses monitoring says: "Spring and early summer (March-July) were cold in Norway, Scotland, Sweden, Denmark and Ireland, with mean temperatures ranging from 12.8 - 14.4 °C. This may have had negative effects on colony development, resulting in both relatively high numbers of dead colonies and unsolvable queen problems after winter. A more detailed analysis may reveal the effects of other important factors, such as the role of the honey bee parasite *Varroa destructor*."

#### Footnotes

1. COLOSS is a honey bee research association formerly funded by the European Union COST Programme (Action FA0803) and currently by the Ricola Foundation – Nature & Culture, which aims to explain and prevent massive honey bee colony losses. COLOSS does not directly support science, but aims to coordinate international research activities across Europe and worldwide, promoting cooperative approaches and a research programme with a strong focus on the transfer of science into beekeeping practice. COLOSS has 781 members drawn from 91 countries worldwide. Its President is Prof. Peter Neumann of the University of Bern, Switzerland.

Website <http://www.coloss.org/>

1. The standard protocols are available in The COLOSS BEEBOOK. Volumes 1 and 2 are available online at: <http://ibrabee.org.uk/index.php/component/content/article?layout=edit&id=3664>

3. The COLOSS BEEBOOK Volume 2 is available in hard copy from:-

<http://ibrabee.org.uk/index.php/component/k2/item/3028>

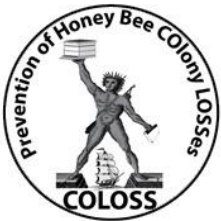
4. Press release written by:-

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