

PRESS RELEASE

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Understanding honey bee colony losses

Four papers published today in the *Journal of Apicultural Research* describe the results of surveys of beekeepers in 22 countries worldwide. Two present information on losses of honey bee colonies from the 2012-13 winter gathered from a total of more than 22,000 beekeepers together owning nearly 1 million colonies.

The first paper¹ reports colony losses from the USA for the 2012-13 winter. These losses were much higher than reported for the previous year (22.5%), but at approximately 30%, they are exactly average for losses since the recent surveys began in 2006-7. The difference between the last two years highlights the differences in the weather experienced. Amateur beekeepers tended to blame losses on factors which should be within their control, such as starvation, or weak colonies going into winter, whilst commercial beekeepers tended to blame factors outside their control such as pesticides and queen problems. The parasitic mite *Varroa* was a key factor reported, but the symptoms of "Colony Collapse Disorder" were low down the list of reported causes.

Meanwhile, the second paper² reports the results from standardised questionnaires developed by members of the COLOSS research association from 19 mainly European countries. For the first time, the authors have attempted to model the influence of various factors on the losses, with some striking results. Significant factors identified with colony losses were the age of queen bees in colonies going into winter, the treatment of varroa, and access by foraging honey bees to agricultural crops such as oilseed rape and maize. This could support the current concerns about pesticides widely used on these crops, but there is also growing evidence that the decline for bees in areas of intensive agriculture may be because mass flowering crops provide food for only part of the year in a landscape otherwise devoid of bee forage, and also that these crops may provide poor quality food for bees. The third paper³ documents for the first time colony losses in Luxembourg from 2010-2012. Although a small country, the losses reported seem to fit in well with what is known of losses in neighbouring countries.

Finally, in contrast to these results from the northern hemisphere, the last paper⁴ reports data from South Africa. Whilst these losses (29.6%) are comparable with those reported elsewhere, the causes seem to be different. The main cause reported by the South African beekeepers is the Cape honey bee, which acts as a social parasite in colonies of the more common savannah honey bee. The authors emphasise that the causes of colony loss experienced in the northern hemisphere, although present in South Africa, appear to be less threatening there, and uniquely African factors seem to be more significant.

IBRA Science Director and *JAR* Senior Editor Norman Carreck says: "*We are now eight years into the story of increased honey bee colony losses, and these new papers increase our confidence that we are beginning to understand the causes*"

[Ends]

FOR FURTHER INFORMATION PLEASE CONTACT

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NOTES FOR EDITORS:-

1. The paper "A national survey of managed honey bee 2012-2013 annual colony losses in the USA: results from the Bee Informed Partnership" by Nathalie Steinhauer and colleagues is available at: <http://www.ibra.org.uk/articles/US-honey-bee-colony-mortality-2012-13>
2. The paper "Results of international standardised beekeeper surveys of colony losses for winter 2012-2013: analysis of winter loss rates and mixed effects modelling of risk factors for winter loss" by Romée van der Zee and colleagues is available at: <http://www.ibra.org.uk/articles/COLOSS-honey-bee-colony-loss-surveys-2012-13>
3. The paper "A survey on some factors potentially affecting losses of managed honey bee colonies in Luxembourg over the winters 2010/2011 and 2011/2012" by Antoine Clermont and colleagues is available at: <http://www.ibra.org.uk/articles/Bee-colony-losses-in-Luxembourg-2010-2012>
4. The paper "A survey of managed honey bee colony losses in the Republic of South Africa - 2009 to 2011" by Christian Pirk and colleagues is available at: <http://www.ibra.org.uk/articles/Colony-losses-in-South-Africa-2009-11>
5. 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. The association 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 more than 300 members drawn from 63 countries worldwide. Its President is Prof. Peter Neumann of the University of Bern, Switzerland. Website <http://www.coloss.org/>
6. The International Bee Research Association ("IBRA") is the world's longest established apicultural research publishers and promotes the value of bees by providing information on bee science and beekeeping worldwide.
7. IBRA publishes the peer reviewed scientific journal the *Journal of Apicultural Research*, founded by IBRA in 1962. It includes original research articles, theoretical papers; scientific notes and comments; together with authoritative reviews on scientific aspects of the biology, ecology, natural history, conservation and culture of all types of bee. The ISI Impact Factor (2012) is 1.926 and the ISI 5-year Impact Factor is 1.447:- <http://www.ibra.org.uk/categories/jar>
8. IBRA publishes *Bee World*, founded by the Apis Club in 1919. This is now an accessible and topical journal containing the latest bee research, news, reviews and other relevant information for the bee scientist, beekeeper, and anyone with an interest in bees:- <http://www.ibra.org.uk/articles/Bee-World>
9. IBRA publishes and sells books on bee science, bee conservation and beekeeping and also provides bee information services. IBRA is a Registered Charity, and its Council of Trustees boasts some of the world's leading bee scientists.
10. Membership of IBRA costs just £33.00 annually. Membership benefits include receipt of four quarterly issues of *Bee World* and discount on all IBRA publications.

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