International Bee Research Association

Providing information on bee science

INTERNATIONAL BEE RESEARCH ASSOCIATION

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PRESS RELEASE

[Immediate, 25/1/16]

An effective control for varroa

The parasitic mite *Varroa destructor* (varroa) is generally agreed to be the greatest threat facing honey bees worldwide. Despite much research, losses continue due to lack of effective control measures, because the mite has become resistant to several commonly used chemicals. The natural product oxalic acid has been widely used in mainland Europe, but surprisingly, little previous research has directly compared different methods of application, their efficacies, and their adverse effects on bees.

In this paper published today in the *Journal of Apicultural Research*, Hasan Al Toufailia, Francis Ratnieks and colleagues from the Laboratory of Apiculture and Social Insects at the University of Sussex, compared three methods of applying oxalic acid under UK field conditions. They compared trickling, spraying and sublimation at three doses, using 110 honey bee colonies in winter. They found that all three methods could give high varroa mortality, but that the sublimation method (heating crystals to vaporise them inside the hive) was superior, because it gave higher varroa mortality at lower doses. Sublimation using 2.25g of oxalic acid also resulted in significantly less worker bee mortality in the ten days after application than either trickling or spraying, and lower bee colony mortality four months later in mid spring. Colonies treated via sublimation also had greater brood area four months later than colonies treated via trickling, spraying, or control colonies.

The authors conclude that: *"This confirms that applying oxalic acid via sublimation in broodless honey bee colonies in winter is a highly effective way of controlling* V. destructor *and causes no harm to the colonies".*

IBRA Science Director Norman Carreck says: *"the publication of this study is very timely, as an oxalic acid product has for the first time recently been approved in the UK, and beekeepers will want to see these results obtained under UK conditions" .*

[Ends]

FOR FURTHER INFORMATION AND INTERVIEWS PLEASE CONTACT

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NOTES FOR EDITORS:-

1. The paper: "Towards integrated control of varroa: comparing application methods and doses of oxalic acid on the mortality of phoretic *Varroa destructor* mites and their honey bee hosts" by Hasan Al Toufailia, Luciano Scandian and Francis Ratnieks is available here:-
http://www.tandfonline.com/doi/full/10.1080/00218839.2015.1106777

2. The Laboratory of Apiculture and Social Insects (LASI) at the University of Sussex studies honey bees and other social insects. Social insects are the insects that live in a colony with a queen and workers like many bees, ants, wasps and termites. LASI research studies the honey bee and other social insects "in the round" addressing both applied and basic questions. The applied research is aimed at helping the honey bee and beekeepers, whilst the basic research studies how insect societies function. http://www.sussex.ac.uk/lasi/

3. The International Bee Research Association (IBRA) founded in 1949 is the world's longest established apicultural research publishers and promotes the value of bees by providing information on bee science and beekeeping worldwide.

4. In association with the Taylor & Francis Group, 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. It is published four times a year: http://www.tandfonline.com/loi/tbee#.

5. In association with the Taylor & Francis Group, 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. It is published five times a year. The ISI Impact Factor (2014) is 1.895 and the ISI 5-year Impact Factor is 1.942:
http://www.tandfonline.com/loi/tjar#.VdWK8_lVikp

6. 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.

7. IBRA membership rates 2016:-

IBRA Membership including *Bee World* (£36 €50 $US57)
IBRA Membership including online *Journal of Apicultural Research* (£90 €125 $US141)
IBRA Membership including online and print *Journal of Apicultural Research* (£150 €208 $US235)
For all IBRA membership enquiries please visit the IBRA website:-
http://ibrabee.org.uk/index.php/2013-05-01-02-30-7/2014-12-12-12-06-01

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