



Spotlight

Working Group 4: Honey bee diversity & vitality

Members of Working Group 4 have invested considerable effort over the last few years towards a pan-European investigation into understanding the effects of honey bee genotype and environment on colony performance and vitality. To promote their goal, a number of workshops were arranged, which will culminate in the publication of a special issue of the *Journal of Apicultural Research*.

Palermo Workshop

Researchers and students met in Palermo, Sicily for 5 days in early November to discuss future directions for the Working Group, including plans to establish permanent evaluation stations across European where selective breeding and evaluation can occur.

The group also met to further finalize publication of their experimental results, and to complete *BEEBOOK* writing



Forthcoming special issue in *Journal of Apicultural Research*

In 2013, a special issue consisting of 5 peer-reviewed papers reporting the results of the Genotype-Environment Interactions Experiment will be published by the International Bee Research Association.

- Büchler *et al.* Survival of honey bee colonies depends on their genetic origin and local adaptation.
- Hatjina *et al.* Population dynamics of European honey bee genotypes under different environmental conditions.
- Uzunov *et al.* Behavioural characteristics of honey bee colonies of different genetic origin in different European environments.
- Meixner *et al.* Disease prevalence in honey bee colonies of different genetic origin in different European environments.
- Francis *et al.* Comparing methods for subspecies differentiation.



Additionally, members published their vision for conserving honey bee diversity, as well as methods employed for their collaborative experiment. Ultimately, the group seeks to conserve bee diversity in Europe and to establish sustainable breeding strategies for the future.

Meixner *et al.* (2010) Conserving diversity and vitality for honey bee breeding. *J. Apicult. Res.* 49: 85-92.

Costa *et al.* (2012) A Europe-wide experiment for assessing the impact of genotype-environment interactions on the vitality of honey bee colonies: methodology. *J. Apic. Sci.* 56: 147-158.