

Honey and Bumble Bee Field Tests

Welcome To Eurofins Agrosience Services

Eurofins Agrosience Services offers a wide range of honey and bumble bee studies following standard or special designs. All studies are planned and performed by a highly experienced team of scientists and technical personnel. The bee studies (*Apis mellifera* L., *Bombus terrestris*) are conducted according to current OEPP/EPPO, CEB, OECD and EFSA guidelines under semi-field and field conditions throughout Europe (e. g. Germany, Spain, France, Italy, Denmark and Greece) as well as in China, USA and Brazil.

Special study designs include long-term studies with over-wintering, studies in the relevant crop (e. g. sunflower, citrus, melon, maize, nectarine, peach, apple) where the product comes into its use and residue studies with bees.

Portfolio

- Standard studies according to EPPO Guideline No. 170
- Brood test according to OECD guidance document number 75, and EFSA guidance document
- Coated seeds – effects of guttation or dust
- Simulation of aphid honeydew on wheat (according to CEB draft Guideline No. 230)

Honey Bee Field and Semi-Field Studies

In accordance with current OEPP/EPPO Guidelines and EFSA guidance document, fields of at least 2500 m², or at least 2 ha are used for field studies. In each field, at least six commercial bee hives are set-up for further assessments on bee mortality, flight intensity in the crop and behaviour of the bees in front of the hives and crop area. The condition of the colonies as well as the brood development is recorded once before treatment and then frequently over the study to at least one month after treatment.



Portfolio

- Standard studies according to OEPP/EPPO Guideline No. 170 and EFSA guidance document
- Long-term studies (bee health: 1 - 4 years)
- Homing behaviour studies (RFID or classic): for honey bee and bumble bee
- Coated seeds – effects of dust
- Coated seeds – effects of guttation
- Brood feeding test in accordance with the OEPP/EPPO Bulletin No. 22 (1992 a+b) and with partly integration of the OECD guidance document number 75

Bumble Bee Semi-Field Studies

Eurofins Agrosience Services performs semi-field studies with bumble bees (*Bombus terrestris* L.) in commercial greenhouses and tunnel tents. The objective of the studies is to evaluate the side effects of the test item after application during the flowering period and high activity of bumble bees. In situations where residual effects are expected, bumble bees can be introduced following a waiting period after the application. Test items can be applied by drip irrigation system and / or by foliar application. Assessed endpoints are bumble bee flight, mortality and the condition of the colonies.

Special Skills

- Dust application (semi-field and field studies) according to the OEPP/EPPO Guideline No. 170
- Honey bee studies from seeding to flowering (dust, guttation, flowering), including long-term examination on the bee colonies

- Residue studies with different crops (e.g. oilseed rape, maize, melon, apple, peach, citrus, soybean, cotton, buckwheat, coffee, rice, sunflower) under semi-field and field conditions. Samples from a beehive (e.g. nectar, honey, pollen and wax) as well as forager bees collected in front of the hives and samples from the crop can be taken (nectar and pollen from single flowers via capillary)
- Bumble bee (*Bombus terrestris* L.) studies are carried out under greenhouse conditions or in tunnel tents (e.g. in tomatoes, cucumber, zucchini) in Spain or Italy

Industry partnerships

- LAVES Institut für Bienenkunde, Celle
- Länderinstitut für Bienenkunde, Hohen-Neuendorf
- Long-term cooperation with local farmers
- Participations, Memberships: AG Bienenschutz, ICPPR, international ringtest groups to work on OECD guideline proposals

Eurofins Agrosience Services Is Part Of Eurofins Scientific; A Leading Provider Of Analytical Services.

The Agrosience Group offers unparalleled expertise to the crop protection industry; with over 750 staff globally and more than 80 fully owned facilities across 25 countries, we are committed to developing and growing in order to meet the needs of the Agrosience industry.

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