

INFORMATION SHEET:

Crop plants as honey bee forage

South Africa's honey bees play a vital role in human lives because they are managed by beekeepers to provide a pollination service to agricultural crops (about 50 crops in South Africa). Some of these crops provide good nutrition for the honey bees in terms of nectar (carbohydrates) and pollen (protein). But some crops (e.g. pears) are more "hard work" for the honey bees and do not provide good nutrition – even though we want the honey bees to pollinate the crops.

Some **agricultural crops** (e.g. canola, lucerne, sunflowers and citrus) are a very good forage resource for honey bees. And many beekeepers in South Africa specifically ask the farmers if they can place their beehives on the farm for the nectar and pollen resources when these crops are flowering. There is a definite need for clear communication between the growers and the beekeeper, as poor communication or lack of understanding can result in the beekeeper not being contacted when the spraying of insecticides or pesticides is to take place, and the colonies can be killed.



Sunflower fields are important to beekeepers
in the north of South Africa
[photographer: Tlou Masehela]



Canola fields are important to beekeepers in
the Western Cape
[photographer: Annalie Melin]

Agro-chemicals have been found by some studies to be one of the leading causes of honey bee deaths across the Northern Hemisphere. Common insecticides such as neonicotinoids and pyrethroids have been shown to negatively affect learning behavior, foraging activities, and nest site orientation by honey bees. The correct management of agro-chemicals therefore plays a large role in the sustainability of crops as a honey bee forage resource. Education and awareness on chemical application and safety is needed amongst farmers, farm workers and extension officers as use contrary to label instructions is likely a problem in South Africa.

What we need to do about crops important as honey bee forage

- Promote bee-friendly agricultural practices, particularly in relation to agro-chemicals. Honey bees spend many days in crop land (pollinating or foraging), and are therefore very susceptible to off-label use of pesticides.
- Encourage landowners who have important bee-forage crops on their land to consider allowing access to beekeepers in a controlled manner, and encourage them to communicate with the beekeepers about any agro-chemical regime on the land.
- Encourage landowners to plant complementary crops (such as lavender or basil) or rotate land with legume crops that are important bee-forage resources.
- Encourage landowners to not unnecessarily remove or spray weeds attractive to bees (e.g. wild radish, cosmos, etc.)

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