Honeybees in South Africa

– what landowners can do to help

South Africa's indigenous honeybees are managed by beekeepers for honey harvest and to provide a crop pollination service.

Managed honeybees are vitally important for food production in South Africa. More than 50 crops rely on insect pollination.

Beekeepers use various flowering plants to provide forage (food) for their colonies throughout the year. Eucalyptus trees, crops, indigenous trees and shrubs, urban gardens and even roadside weeds are used to provide the pollen (protein) and nectar (carbohydrates) that the honeybees need to build a strong and healthy colony.

It is difficult to sustain sufficient healthy honeybees for crop pollination. For honeybee populations to withstand pests (e.g. *Varroa* mite) and diseases (e.g. American Foulbrood), as well as pesticide exposure, a healthy diet is crucial for a fully-functioning immune system.

Bee-friendly policies and practices can help secure forage for honeybees, and thereby support South Africa's beekeeping industry and increase agricultural crop production.

All landowners have a role to play.

Good honeybee forage > good crop pollination > good crop yield and quality

Types of forage important to honeybees

Eucalyptus trees (gum trees) provide a reliable pollen source and nectar flow, and the different species flowering at various times of the year makes them a dependable forage resource for colonies.

Indigenous plants that are important to beekeepers include: fynbos species (e.g. ericas, proteas, buchus and mesembs); aloe species (e.g. *Aloe greatheadii*); indigenous thorn trees (e.g. *Vachellia karroo* [sweet thorn] and *Ziziphus mucronata* [buffalo thorn]) – the latter two provide important winter forage for honeybees in the northern regions of South Africa.

Some ***agricultural crops*** (e.g. canola, lucerne, sunflowers, citrus) are significant forage resources for honeybees when flowering. Many beekeepers rely on growers of these crops agreeing to allow colonies to be placed on their farms.

Weeds – some indigenous (e.g. winter weed) and some exotic (e.g. Echium) – also provide important flowering resources for honeybees.

Lists of plant species important to beekeepers will be available on www.sanbi.org.za

What landowners can do

As current habitat and forage resources are dwindling, we need to ***protect and maintain existing bee-friendly vegetation*** and plant more bee-friendly plants.

Landowners can undertake the following:

Consider ***allowing access to beekeepers.*** Local beekeeping associations are listed on www.sabio.org.za

Work with beekeepers to ensure that beehive sites are ***secure and inaccessible to vandals***.

One of the big challenges for beekeepers in South Africa is that their hives are often damaged or honey is stolen.

Protect natural vegetation on your farm and always consider plant resources when implementing management plans, Environmental Impact Assessments and agricultural best practice.

Although eucalyptus trees can be invasive, the goal should be to manage gum trees to limit the likelihood of invasion and reduce the impact on honeybee forage.

Landowners with gum trees should identify the species and their location on the farm.

Those without could consider planting certain non-listed species (e.g. *E. ficifolia* or *E. gomphocephala*) in areas where they are not a threat to water resources or an invasive risk.

Eucalyptus trees should be removed if they are along water courses, within protected areas or in ecosystems identified for conservation purposes.

Six species of eucalyptus are listed (see names below) on the proposed Invasive Alien Species regulations to be promulgated under the National Environmental Management: Biodiversity Act, (NEMBA) 2004 as "Category 1b" (i.e. they must be 'contained'). However, several provisions have been made because of their value to beekeepers, e.g.: they are not listed if 1) they are in certain biomes; 2) they are within cultivated land; 3) within 50m of homesteads; or 4) they are mature trees in urban areas.

Eucalyptus camaldulensis - River red gum
Eucalyptus cladocalyx - Sugar gum
Eucalyptus conferruminata - Spider gum
Eucalyptus diversicolor - Karri
Eucalyptus grandis - Saligna/Rose gum
Eucalyptus tereticornis - Forest red gum

They can also be demarcated by permit (in Category 2) as bee-forage, wind-rows or woodlots. More information will become available on www.invasives.org.za

Remember that ***agro-chemicals*** can have a major impact on all insects. Education on chemical application and safety is needed amongst farmers, farm workers and extension officers as off-label use is likely a problem in South Africa. Growers should discuss spraying regimes with beekeepers.

Consider ***planting bee-friendly plants*** when gardening, planting wind-breaks or when rehabilitating after a development (e.g. dam walls, road berms, etc.).

Check with your local nursery which varieties occur in your area to avoid invasion problems or hybridisations with veld species in the vicinity.

Consider ***planting complementary crop plants*** (such as lavender or basil) or even fodder crops (like lucerne, clovers or vetch) that provide important honeybee forage.

Do not unnecessarily spray or remove weeds that are attractive to bees.

This brochure was produced as part of the material emanating from SANBI's projects on pollination and honeybee forage.

Visit www.sanbi.org for more information or contact Mbulelo Mswazi (Outreach Officer) on m.mswazi@sanbi.org.za

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