

# Honey bee forage plants: what you can do to help our honey bees

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According to a recent study undertaken by the South African National Biodiversity Institute (SANBI), gum trees, certain crops, indigenous trees and shrubs, flowering plants in suburban gardens and even roadside wildflowers or weeds are all critically important to South Africa's indigenous honey bees.

Forage availability and accessibility for honey bees are a large constraint to beekeepers in South Africa, who manage colonies to harvest honey and provide a pollination service to growers of pollination-dependant crops. A lack of good quality and variety of forage can lead to unhealthy honey bee colonies that are more vulnerable to pests and diseases. This, in turn, can lead to insufficient pollination of our important agricultural crop flowers, leading to decreased yield or quality of the food crop.



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You can thank a pollinator for one out of every three bites of food you eat, as insect pollinators are needed for approximately 35% of all food production globally. Honey bees pollinate about 50 crops in South Africa, and this pollination is worth approximately R10,3 billion per annum.

A major factor in the decline of honey bees around the world is a lack of good forage plants that provide the nectar (carbohydrates) and pollen (protein) sources that bees require for their nutritional health. It is, therefore, critical to plan and conserve agricultural and peri-urban landscapes to support our honey bees.

## Eucalypts as an important forage resource

Beekeepers in all South African provinces are dependent on gum trees as a forage resource for their honey bees. Eucalyptus provide a reliable pollen source and nectar flow, and can be used almost year-round as there are several species that flower at different times of the year.

Some Eucalyptus species can invade land and have a negative impact on biodiversity and water resources, or cause erosion and increase fire risk. However, because gum trees have value (for timber, for bees, for shade, for aesthetics, for protection from wind and dust, etc.), they should only be cleared where they are invading and have a negative impact.

This is why the Alien and Invasive Species Regulations (promulgated under the National Environmental Management: Biodiversity Act, 2004 (NEMBA) in 2014) are nuanced for eucalypts. Landowners should know that not all gum trees need to be removed. Eucalyptus species within streams (riparian areas), protected areas or ecosystems identified for conservation purposes should be removed.



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Six species are listed in the Regulations as "Category 1b" invasive species, which means they must be 'controlled' even outside riparian areas. But even these listed gum species can be demarcated by permit as Category 2 Invasive Species under NEMBA as bee-forage areas, wind-rows or woodlots. Several gum species that are important bee forage (e.g. *Eucalyptus sideroxylon* and *E. gomphocephala*) are not listed in the Regulations and, therefore, could be maintained or planted in non-riparian areas.

[Find more information on the NEMBA regulations and specific eucalyptus species.](#)

Beekeepers are highly dependent on eucalyptus and the unconsidered removal of eucalyptus will cause a serious shortage of honey bee forage. Landowners who have eucalyptus on their land are encouraged therefore to carefully consider any removals and make sure they are adhering to the Alien and Invasive Species Regulations.

## What we can do for honey bees

Crops, indigenous plants and weeds are also critical to South Africa's honey bees. All landowners play an important role in providing habitat and forage for our managed and our wild honey bees. In addition to the eucalyptus ideas above, you can help in any of the following ways:

- Allow beekeepers access to utilise the forage resources on your land, and work with the beekeepers to make sure hive sites are secure and inaccessible to vandals.
- Protect your natural vegetation through incorporating pollinator habitat or forage concerns into agricultural best practice, land-clearing authorisations (i.e. do not unnecessarily clear virgin land), Environmental Impact Assessment processes, and land use planning policies and tools.
- Consider planting indigenous bee-friendly plants when gardening, planting windbreaks or when rehabilitating after a development (e.g. dam walls, road berms, etc.) Be sure to plant plants that are appropriate to your specific area. Check with your local nursery for subspecies or varieties that occur locally to avoid invasive problems or hybridisations with veld species in the vicinity.

## Important indigenous plants

Indigenous plants that stand out as important forage for South African beekeepers include: fynbos plant species (e.g. ericas, proteas and mesembs), several species of aloe (including mountain aloe), shrubs like wild asparagus and buchus, and indigenous trees such as Vachellia karroo (sweet thorn) and Ziziphus mucronata (buffalo thorn). Many regional vegetation types (like Karoo, Bushveld and indigenous forest) are also critical.

- Honey bees will visit any flowering crop (especially the very attractive ones like canola, lucerne, sunflowers, citrus) as well as other flowers and weeds. Please take this into account when spraying chemicals - consult the label and adhere to its instructions. Be careful of chemicals when gardening too.
- Encourage public land planting programmes (e.g. under power lines, along road verges, or urban greening programmes) to consider bee-friendly plant species first.
- Consider planting complementary crop plants (such as lavender or basil) or fodder crops (like clovers or vetch), or rotate land with legumes crops, as these are all important honey bee forage.
- Do not unnecessarily spray or remove weeds that are attractive to bees (e.g. wild radish, cosmos, etc.)

Bee-friendly policies and practices can help increase agricultural production or yield.

Fewer honey bees could mean fewer crops, less food and more poverty for humans. We all have a role to play in looking after this vital insect. Enjoy planting and protecting forage resources for our honey bees! A lists of bee-friendly plants are available on [www.sanbi.org](http://www.sanbi.org) (search "bee-friendly")

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