

Ecological infrastructure Case study 9

Conserve natural veld, grow bee-friendly plants and encourage good farming practices, which can help keep honeybee populations strong, ensuring they continue working our fields and giving us 'free' pollination services.



The buzz factor



WESTERN CAPE

Important fruit and seed crops in the winter rainfall area of the country depend on the pollination services of wild and domesticated honeybees. Since seasonal crops only produce flowers for some months of the year, these insects need to forage for food elsewhere at other times of the year. During months when no crops need pollinating, the wild veld provides food, allowing the hives to grow strong, produce ample honey so their workers can be ready for pollination season. Healthy hives and adequate pollination services are essential to agricultural production, the economy and agriculture-linked jobs.





Next time you're pushing a trolley through the fruit and veg section of your local supermarket, imagine how different the shelves would look if there were no pumpkins, butternut, marrows, onions, cauliflower, broccoli or avocados stacked in piles for your convenience. Strip from the aisles all apples, pears, plums, mangos, litchis, lemons, oranges and grapefruit. Now get rid of the macadamia nuts, cashews and almonds.

While you're at it, you can take the sunflower and canola oil out of your trolley too, along with the margarine.

These are just some of the important food crops produced around the country which need wild insects to pollinate the flowers that then produce the fruits and seeds we need in order to have a rich and diverse diet. Some 35% of food grown around the world comes from crops that need pollinators to complete their lifecycles.

In a province like the Western Cape, where the winter rainfall makes it ideal for citrus and soft fruit, the industrious work of wild bees and other pollinators gives between R400 million and R2 500 million worth of services to the deciduous fruit industry every year (2008 figures) according to the South African National Biodiversity Institute's (SANBI) 2011 National Biodiversity Assessment.





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This doesn't include the managed hives which beekeepers ship from orchard to orchard every spring to assist farmers with hired pollination services.

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A large farm might need as many as a thousand hives or more to work all its fields and orchards, but this means shipping domesticated hives during the working season, which can stress a hive tremendously. Some beekeepers report losing as many as a quarter of their swarms (via absconding or death) due to the stress of shepherding them from field to field.

That's why it's important to have healthy, strong hives – which means the bees need to eat well all year round.

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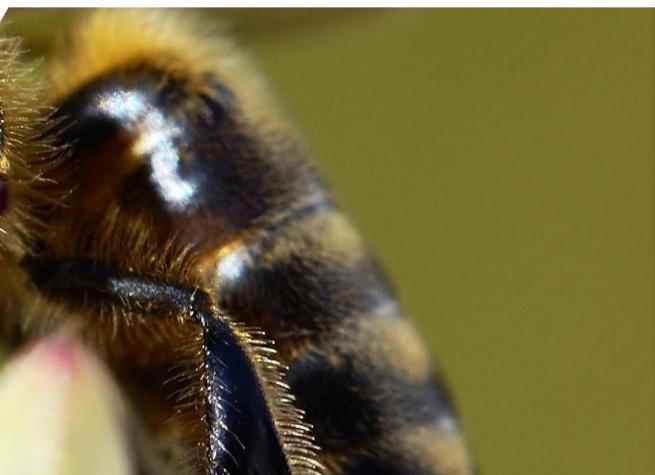
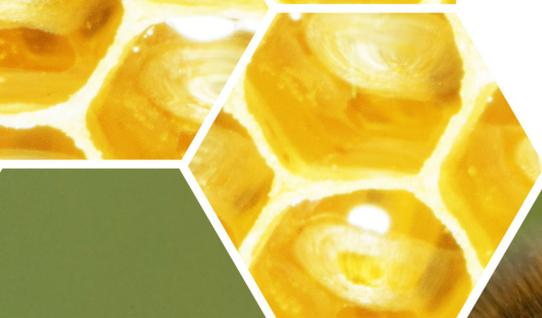


SANBI recommends encouraging the planting of bee-friendly plants in city parks, along road verges and in gardens. Farmers should do the same, while adopting bee-friendly pest control management in their fields.

In the Cape, the wild veld is an important source of food for hives during the winter months. You only need to slide a frame of honeycomb out of a hive to see just how diverse the food of a healthy hive is: each little hexagonal cell of honey, with its wax cap, could be dusted with purple, blue, yellow or orange pollen. This kaleidoscope is testimony to the many wild flowers visited by the bees.

Unfortunately bees are losing their natural forage. If natural veld is replaced by spreading cities or monocrop agriculture, like certain tree plantations, non-flowering crops or crops that only flower at a certain time of year like the fruit trees, this erodes the dietary diversity which bees and other pollinators need all year round.

While some agricultural crops may flower, they might not be a good and nutritious food source for bees.





Even though certain invasive alien plants are good food sources for bees – eucalyptus, for example – the wider ecological damage caused by these invasions means it's wiser to remove the plants if they are in ecologically sensitive areas, such as along watercourses or in ecosystems identified for conservation purposes. Large-scale removals of eucalyptus can have an impact on bees' foraging opportunities, so removals must be carefully considered – according to the regulations, eucalyptus can be left in non-sensitive areas.

The general public should encourage the planting of bee-friendly plants in city parks, along road verges and in gardens. Farmers should do the same, and can consider bee-friendly planting for windbreaks or when rehabilitating dam walls or road berms. Besides protecting their natural veld as a bee-forage resource, farmers could also demarcate their eucalyptus stands to less sensitive areas and adopt bee-friendly pest control management in their fields, such as limiting the use of certain pesticides and chemicals at times of the year when bees are active.

An abundant, flowering natural veld means honeybees will be well fed, and their hives will thrive. Healthy bee hives are linked directly with high crop yield, which has spin-offs into the economy and agriculture-linked jobs.



R400 - R2500
MILLION ANNUAL VALUE
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