

Why India's highway bee corridors may help wild pollinators more than managed honeybees

BY TREYA SINHA

A Golden Hive Foundation advisor explains why NHAI's planned highway bee corridors are ill-suited to managed honeybee colonies, while fresh research from Jammu shows wild native pollinators already flourish in comparably disturbed roadside habitats.

NHAI's proposed bee corridors along highways offer poor habitat for managed honeybee colonies, even as new research shows wild native bees are already thriving in similarly disturbed roadside landscapes.

As the National Highways Authority of India considers planting bee-friendly flora along its corridors, one of the country's most experienced apiarists is pushing back on the framing. The scheme is being discussed as a potential boost for commercial beekeeping. Rakesh Gupta, chief advisor at Golden Hive Foundation, says that reading misunderstands what a managed hive actually needs to survive.

A PLANTING SCHEME IS NOT A BEEKEEPING PLAN

Gupta's objection starts with basic hive biology. A managed colony needs staggered,

continuous floral resources across the year, not a seasonal burst of blooms. The three species most often floated for such corridors, neem, karanj and jamun — cannot deliver that.

Neem offers limited nectar, karanj and jamun more, but all three flower in roughly the same window, giving at most 60 days of usable floral cover. For the remaining ten months, the bees would have nothing.

“There is no way that these three species alone will create a viable, marketable honey profile.”

Golden Hive has had no conversation with NHAI on the proposal so far, he confirms.

THE TRAFFIC ITSELF IS A HAZARD

Beyond resource scarcity, Gupta points to a more immediate threat: the road. He lists three distinct ways managed bees die along busy corridors — collisions with vehicles during the day, being pulled into the low-pressure wake behind fast-moving traffic, and disorientation at night, when bees are drawn toward headlights and often don't survive the encounter.

A planting scheme does nothing to address any of this. "At best, this can provide temporary refuge for small beekeeping operations," he says, not the "prime locations" the idea is sometimes pitched as.

POLLUTANTS AND HONEY PURITY

There's also a quality problem. Gupta raises the possibility that heavy metals from vehicle emissions could be absorbed into nectar and pollen gathered close to highways, weakening the therapeutic properties that give honey both its market value and its certifiability.

LITTLE RELIEF FOR MIGRATORY BEEKEEPERS

India's small beekeeping families already move hives hundreds of kilometres to chase flowering cycles, and Gupta doesn't think roadside plantations will meaningfully ease that burden.

Over time, he allows, the corridors might add marginal resources for bees and other pollinators, but only for a limited stretch of the year. Any plan that wants to put rural and tribal beekeepers first, ahead of commercial operators, needs to reckon with the

operational limits of apiary work rather than promise benefits it can't structurally deliver.

WILD POLLINATORS ARE ALREADY DOING THIS WORK

That gap, between conservation value and commercial value, is reinforced by recent fieldwork from the Jammu region of the northwestern Himalayas. Over two years, researchers at Sher-e-Kashmir University of Agricultural Sciences and Technology recorded more than a thousand non-honeybee pollinators across 21 species, and found that roadside vegetation and farmland supported greater diversity than undisturbed forest.

Blue-banded bees, carpenter bees and small carpenter bees turned up in particularly high numbers in these disturbed habitats, sustained by the mixed, near-continuous flowering of weeds and crops, something natural meadows couldn't match over the same period.

The implication is that NHAI's corridors, if they help anyone, are more likely to help unmanaged, wild pollinators than the commercial hives the scheme is sometimes discussed alongside. Solitary and semi-social native bees can exploit patchy, opportunistic floral resources in a way that a managed colony, dependent on predictable nectar flow, simply cannot.

For now, the bee corridor proposal remains a planting concept, not a beekeeping policy, and Gupta's reservations point to a basic conflation at its centre. Supporting pollinator conservation along highways and supporting commercial apiculture are not the same undertaking, and treating them as one risks shortchanging both.