

## THE BEEKEEPER'S LAMENT

Among many threats to imported honeybees, the varroa mite has wiped out virtually all feral swarms in the U.S. Pesticides, parasites, disease and habitat loss have dramatically diminished native pollinators. What's left – honeybees managed intensively by a handful of beekeepers – are on “life support.”

So reports Hannah Nordhaus in *The Beekeeper's Lament: How One Man and Half a Billion Honeybees Help Feed America* (2011).

Honeybees pollinate a third of our fruits and vegetables, about 90 varieties, at a value of 15 billion dollars a year – think almonds, lettuce, apples. Without bees, our diet would be much poorer.

And honeybees survive because Central Valley California almond growers need vast numbers of them to pollinate 740,000 acres of trees blooming simultaneously every February. Because almond blossoms aren't very attractive to bees, beekeepers must place 2-3 colonies per acre – 1.5 billion hives, 2/3 of all the U.S.'s bees – to get the job done.

Pollination fees allow diehard beekeepers to survive economically -- just, and them to keep their hives going – just.

Some farmers apparently think bees should be one more agricultural machine, like a combine. Beekeepers know better.

Since 2006 one third of the national bee herd (a million colonies) has perished each year. There's little cell repair in the insect world, so sick bees don't get better. Any wound

means death. Threats to honeybees include pesticides, wax moths, robber bees, hive beetles, nosema, tracheal mites, chalkbrood, South African fire ants, Crazy Raspberry ants, grasshopper plagues, viruses, and, deadliest of all recently, varroa mites and Colony Collapse Disorder. Beekeepers must monitor these constantly, and protect their bees from them if they can.

In the “feedlot” atmosphere of the almond orchards in February – a single 400 mile long bee yard – this is not easy, as bees from far-flung places continually swap parasites and diseases.

Without beekeepers’ constant application of miticides, the varroa mite would soon eliminate all honeybees.

Colony Collapse Disorder (CCD) is more complicated. Bees simply disappear, by the millions, and scientists study the few that remain. Apparently stress and disease weaken their immune systems. Nordhaus strongly suggests, to this reader anyway, that honeybees have been forced too far out of natural rhythms and too far into the world of agricultural machines.

They are not in a state of nature: forced to awake and pollinate in midwinter when they should be hibernating, living in a state of artificial or peak bloom, fed on corn syrup when nectar is unavailable, foraging nutritionally poor monocrops instead of wild meadows, kept alive on drugs – all may contribute to CCD.

Among pollinators, only honeybees reproduce massively enough to meet big agriculture’s needs. A queen bee can lay thousands of eggs a day. To assure peak production, beekeepers nowadays breed queens by artificial insemination, as many as 3,000 daily, and ship them all

over the world to replace queens killed annually, or even monthly, lest numbers should dip.

Honeybees were domesticated before the first Egyptian pyramid was built, and have followed humans from continent to continent ever since.

Honey is distilled nectar, collected by 50,000-80,000 bees per hive, collectively travelling 55,000 miles to visit more than 2 million flowers. Wonderful! But for how much longer?

For John Miller, Norhaus' protagonist, beekeeping means hard work, much long distance travel, uncertain income and constant predicaments. With new threats and stress, a marginally profitable venture becomes yet more marginal. Beekeepers can't even own the bees, which come and go as instinct drives them. And beekeepers must plan for disaster every year.

But surely honey must sweeten their endeavors? Alas, because it's not federally regulated, much of our honey is adulterated with other sweeteners, sometimes as much as 80%.

Therefore "100% pure honey" on a label may be pure supermarket poetry, and conscientious beekeepers like John Miller cannot compete.