

The Purpose of Life

Rakesh Gupta



What is the basic reason of our existence?

What is our most significant contribution to the ecosystem?

If we, the honeybees, were to ask these simple questions to ourselves, the only response would be 'cross pollination'.

However, humans generally evaluate us only on the basis of our honey production capacity. It is an absolute error of judgment and we tend to differ from all such perceptions which are essentially the outcome of immense greed. Cross pollination will remain our primary function in life - it justifies our very existence. Honey is secondary. This difference of opinion, over the ages has ensured that our relationship with humans lies in tatters. During the same time, however, we evolved an amazing relationship of inter-dependence with flowers. Since neither of us can develop in isolation, this alliance symbolizes trust, hope and progress. It also ensures conservation of the ecosystem by cross pollination of a wide variety of flora, a service that is silent, efficient, continuous and meaningful.

Pollen is a major source of protein for us. With a complete range of amino acids, it is also rich in folic acid, linoleic acid, carotenoids, bioflavonoids and phytostereols. Sourced from different flowers, its protein content and the nutritional values also differ. But for us, reason overrides the taste and we generally prefer to collect pollen with high protein index. A mix of pollen and nectar constitutes our daily feed and is absolutely necessary for our growth, immunity and efficient execution of our age defined functions. Scarcity of pollen adversely affects our propagation and our very survival.

Crops are also pollinated by other insects also but our numerical strength ensures that we emerge as the most efficient pollinator of all. We are the most organized, disciplined and controllable pollinators. In contrast, the numerical strength in humans normally generates confusion, chaos and anarchy.



Bee Hive on a frame.

(Picture Credit: Team NHD)

Needless to say, through cross pollination we enhance productivity in a variety of crops. Studies have established that productivity increases by about 67% in sunflower, about 64% in onion, 43% in mustard and in coconut by about 40% simply because of our well timed involvement. Fruits, vegetables and crops pollinated by us with variable but very effective results include Walnut, Apple, Cherry, Lychee, Lemons, Cashew, Cardamom, Strawberry, Apricot, Plum, Almond, Peach, Guava, Pomegranate, Buckwheat, Cantaloupe, Okra, Clover, Fennel, Coriander, Cucurbits, Sesbania, Sesame, Turnip, Beans etc. This list is only an indicator that humans stand to lose a lot by disregarding our crucial function.

There are two significant dimensions of this cross pollination activity. Even a casual observer will realize that the pollen pellets we carry in our pollen baskets situated on our hind legs, on our way back to the hive is always of a single colour – red, yellow, beige, purple, orange etc. Considered to be a mass of nearly one million to two million pollen grains, each such pollen pellet is never composed of multiple coloured pollen grains. The reason is that while collecting pollen on a foraging flight, individually, we confine ourselves to same species of flowers – a phenomenon defined by humans as 'floral fidelity'. The pollen adhering to plumose hairs covering our body cross pollinates flowers of the same type that we subsequently visit. We realize that on one foraging flight, our movement on different species of flowers will defeat the very process of cross pollination.

Another aspect of pollen collection is that each pollen pellet carried by us individually is of uniform size and weight. There is absolutely no variation. However, the mass and weight of the pollen pellets will differ amongst our sister bees. We relentlessly perform a fine balancing act because uniformity in weight of both pollen pellets is necessary to maintain equilibrium during flight. This complex activity is performed constantly and effortlessly without any access to mechanical arrangements - an example in precision and perfection for humans !

The environmentalists should accept us as an effective indicator of the balanced eco-system. The farming community must realize our role as a principal factor in agricultural production. Please realize that extensive and uncontrolled use of pesticides and insecticides intimidates us. It is a major threat to our survival. Over the ages we have managed to live to tell the tale despite your efforts to decimate us. May we now humbly request you to immediately bring an end to this insensitivity. Please do not ignore us. Please do not procrastinate. Otherwise, the day is not far off when we may simply cease to exist and you will visualize us only in your thoughts. It will then be too late to resurrect us.

Think, how long will you survive then ?

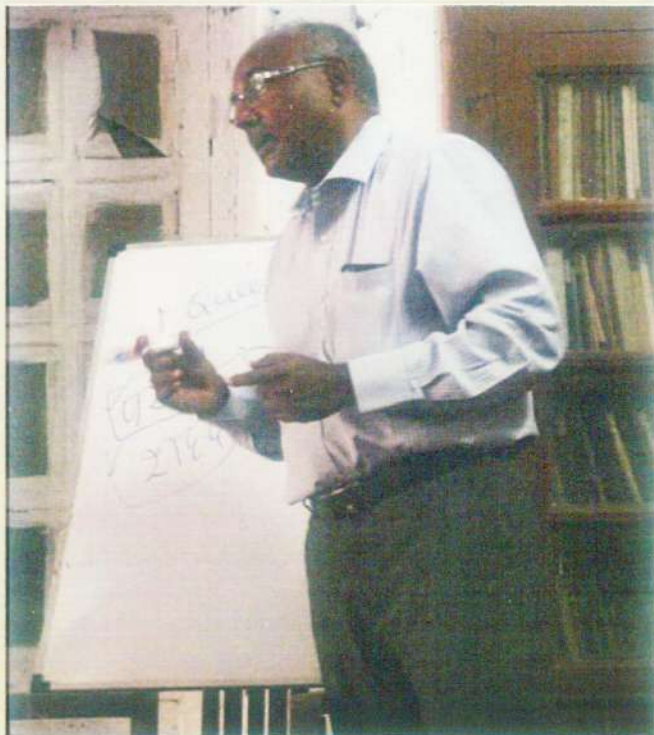
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The article is contributed by Mr. Rakesh Gupta, from Golden Hive Foundation, who avidly works towards spreading awareness about bees, and their amazing role in ecosystems and our lives. He brings with himself experience, exposure, passion and new ideas for bee keeping. INTACH along with Golden Hive Foundation organised an apiculture workshop in September 2017, Gandhi Smarak Nidhi in Chhatarpur, Madhya Pradesh. The workshop was attended by 20 participants mostly comprising of local farmers who received theoretical, hands on and interactive training from Mr. Rakesh Gupta. He

meticulously explained the life and workings of bee, and particulars of bee keeping. It was especially significant for farmers considering the important role of bees as pollinators that aids crop productivity. Participants were able to observe bees and their behaviour closely under the guidance of Mr. Rakesh.

The workshop also resulted in setting up of bee box at Gandhi Smarak Nidhi that is thriving with the bees enjoying the nectar from ber or Indian Jujube (*Ziziphus mauritiana*) and has already lead to a successful extraction of honey and bee wax.

Some of the highlights from the workshop.



Mr. Rakesh Gupta explaining the life of bees and providing hands-on experience to the workshop participants.

(Picture Credit: Team NHD)



Enthusiastic students.

(Picture Credit: Team NHD)