

Bee Flora & Their Distribution



What is Bee Flora???

- Honey bees collect nectar and pollen from a variety of plants which are known as **bee flora** or **bee forage** or **bee pasture** or nectar and pollen plants.
- Nectar is source of honey, meeting the carbohydrate requirements of honey bees
- Whereas pollen is a source of protein



Bee Flora...

- The flora of an area is characteristic of its agro climatic conditions and as such varies from place to place
- This flora is also a food base for large number of pollinators.
- Out of **3,52,000** species of flowering plants in the world nearly **3,08,000** species (**87.5 %**) are pollinated by animals (including insects, birds, bats, etc.)
- Honey bees pollinate a large majority of these plants

Pollination by Honey Bees...



- Pollination is an ecosystem service provided by the bees that is almost always taken for granted.
- In simple terms bees make more fruits and seeds for us by collecting nectar and pollen then the quantity of honey they make.
- Hence, it is essential to understand various types of bee flora and their blooming phenology in a given area to conserve bee colonies.

List of Important Bee Flora

Sr. No.	Common name	Botanical name	Family
1	Stone and pome fruits	<i>Prunus & Pyrus spp.</i>	Rosaceae
2	Bramble	<i>Rubus ellipticus</i>	Rosaceae
3	Barberry	<i>Berberis lycium</i>	Berberidaceae
4	Honey suckle	<i>Lonicera angustifolia</i>	Caprifoliaceae
5	Yellow clover	<i>Medicago denticulata</i>	Leguminosae
6	White clover	<i>Trifolium repens</i>	Leguminosae
7	Egyptian clover	<i>Trifolium alexandrinum</i>	Leguminosae
8	Hirad	<i>Terminalia chebula</i>	Combretaceae
9	Jamun	<i>Syzygium cumini</i>	Myrtaceae
10	Eucalyptus	<i>Eucalyptus sp.</i>	Myrtaceae

List of Important Bee Flora

Sr. No.	Common name	Botanical name	Family
11	Bottle brush	<i>Callistemon lanceolatus</i>	Myrtaceae
12	False acacia	<i>Robinia pseudoacacia</i>	Leguminosae
13	Wild cherry	<i>Prunus puddum</i>	Rosaceae
14	Cruciferous oil seeds	<i>Brassica spp</i>	Cruciferae
15	Rubber	<i>Hevea brasiliensis</i>	Euphorbiaceae
16	Maize	<i>Zea mays</i>	Graminae
17	Sunflower	<i>Helianthus annuus</i>	Compositae
18	Shisham	<i>Dalbergia sissoo</i>	Leguminosae
19	Wild rose	<i>Rosa moschata</i>	Rosaceae
20	Ber	<i>Zizyphus jujuba</i>	Rhamanaceae

Qualities of a Good Bee Flora...

- For commercial beekeeping, large crop acreage with good floral qualities is required
- Following are the qualities of good bee flora:
 1. Long flowering period
 2. High density of flowers per unit of the plants
 3. Good quality of nectar with high concentration of sugars
 4. Easy accessibility of the nectaries to the honey bees and ease in collection of nectar
 5. Availability of flora in the close vicinity of the apiary

Important Honey Flow sources in Pakistan

- Flora secreting abundance of nectar and having large plantations is known as **honey flow source**.
- Some of important honey flow sources are:
 - Eucalyptus,
 - Brassica (sarson & toria)
 - Soapnut
 - Citrus
 - Litchi
 - Berseem
 - Rubber
 - Cotton
 - Jamun
 - Sunflower,
 - Shisham
 - Acacia





Figure 8.1 Bushes of *Plectranthus* in bloom
(Autumn honey flow flora)



Figure 8.2 *Toona ciliata*, a summer honey flow
source



Figure 8.3 *Acacia catechu*, monsoon honey
flow or dearth period flora



Figure 8.4 *Brassica* sp, a winter honey flow
crop



Figure 8.6 *Eucalyptus*, summer honey flow
source



Figure 8.5 Sunflower, a summer honey flow
crop