

# The Bee Forage Year Workshop

By Catherine Caulwell, The Organic College.

This workshop was designed using Development Education principles of participatory learning.

## Method

Participants were given a laminated sheet of a specific bee forage plant giving the height, the forage offered, other species supported and other noteworthy information about the plant including when it is flowering and hence offering bee forage. See worksheets PDF supplied

Participants also got a modified top bar from a beehive. After the whole group spread out in a circle from a central point (stump with nails hammered around the edge, symbolising the bee colony) they each pushed or drove the top bar with a mallet into the ground in front of each participant.

Participants were then asked to organise themselves in the right place around the created circle of topbars on the basis of their bee forage plant flowering time so that they represented the year of flowering sequentially. (set one person as the starting point, eg blackberries) This encouraged all the participants to show their forage sheets to each other and hence got intermingling and orientation happening.

The workshop facilitator then explains the energetics of bee foraging, energy expended Vs energy gained and worked with the participants such that they represented the bees flight to the forage and the return flights with either sugary nectars (carbon) or pollen (nitrogen) to the hive with different colour wool.

The added environmental gains of biodiversity support from the foraged plant species and the liquid carbon pathway that all plants (especially in diverse natural systems) partake in, were explained by the facilitator as we went around the foraging year. Nitrogen fixing and soil augmentation by many of the forage plant species was also highlighted.

Reference materials are supplied.

## Learnings from the Field Exchange Bee Forage Workshop.

- This workshop seemed to work well and participants' feedback indicated that both novices and beekeeping experts learnt and gained perspective from the workshop experience.
- More time than an hour would be preferable.
- Participants, especially school children, could develop their own worksheets.
- The representative forage energetics threads could be plaited/twisted to better indicate high sugar forage as compared to lower sugar content forage.
- Participants could be asked to step forward and sit/kneel if they were less than 1M bee forage plant they represented and those with bee forage plants of greater than 10M could step back and put their hands in the air to represent the trees!



The Bee Forage Web on site a month after the original workshop. Detail below.



## Reference Materials that informed this Workshop;

Nitrogen: the double-edged sword Christine Jones, PhD

[https://amazingcarbon.com/PDF/JONES 'Nitrogen' \(21July14\).pdf](https://amazingcarbon.com/PDF/JONES 'Nitrogen' (21July14).pdf)

"Secrets of the Soil Sociobiome" with Dr. Christine Jones (Part 1/4)

["Secrets of the Soil Sociobiome" with Dr. Christine Jones \(Part 1/4\) - YouTube](#)

The Role of Fungi in Plant Establishment and Growth **BY MICHAEL P. AMARANTHUS, PH.D.**

<https://thenaturalfarmer.org/article/the-role-of-fungi-in-plant-establishment-and-growth/>

Bee Flora in Ireland

<http://galwaybeekeepers.com/flora/>

Native Irish Trees and Shrubs

<https://www.treecouncil.ie/native-irish-trees>

Irish Butterflies Photo Guide

<http://www.irishbutterflies.com/>

<https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Butterfly-Poster.pdf>