Dynamic of bees population: an example in south of France on lavender nectar flow.

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Lavender honey is characteristic of Provence but nectar flow is known to weak honey bees colony.

This study focus on colonies evolution (weight, activity, population and brood) and environment (flowering level and nectar flow) after the distribution of mountain apiary to 2 Valensole plateau areas (04) during the lavender nectar flow in 2007.

The weight increase is coherent with flowering, nectar flow characteristic and colonies activity between the two lavender areas but not with hive population.

As soon as the colonies arrived on lavender, the activity increases and laying decreases in comparison with mountain activity. This phenomenon varies from the lavandin flowering and leads to a progressive population decrease during the whole nectar flow. Evolution of colonies depends on the observed apiary and depopulation results on weak replacement of bees in this study.

Some vitality indexes were employed to characterize apiaries: laying quantity, and mortality per day, global survival rate or aged bees survival rate and average life (Bühlmann method adapted for capped brood). The comparison of these different rates from mountain and the two lavender areas gives us unknown reference until now. It’s proved that colonies are sensitive to nectar flow conditions for adaptation with the environment and for surviving.

We propose measurement as a whole leading to global vision of colonies dynamic in time. These really original results are consistent with the literature about bees.