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Abstract:
Honeybee workers play a major role within the colony by taking care of the breeding of larvae until the supply in food of the entire colony, by division of tasks. The age polyethism offers to the worker the capacity to carry out successively the totality of these tasks, following its age. It is known that the worker switches the tasks following a gradient internal-outside the hive during its imago life, the oldest workers making the foraging tasks. However, the available food in agricultural landscape is managed by the entomophilous crop phenology. To insure the food resource income in the colony, the workers have to adapt their life histories according to the available food. The originality of this work concerns the use of the RFID technology (Radio Frequency IDentification), recently adapted to the honeybee. This tool allows to follow continuously income/outcome of the bees during all their lifespan. Emergent workers are tagged with a transponder just before being introduced in the colony.
1640 workers life history were followed in this study, born in various periods of the season, during the bloom of the entomophilous crops versus not. For the first time the results allowed to characterize exactly the bee's life history by behavioural analysis. This characterization shows that the temporal available food dynamics of the resources in agricultural landscape influences strongly the life history of bees at the individual level.

Keywords: Age polyethism, foraging activity, radio tagging technology (RFID), food availability, agricultural landscape, *Apis mellifera L.*