MANAGEMENT OF COMMERCIAL BOMBUS COLONIES IN OPEN FIELDS

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“Honey bees are not domesticated animals. It is possible to keep bees in a hive only because we understand their biology. Beekeeping is the application of our knowledge of bee behaviour.”
Bumblebees are a group of about 250 species all over the world.

(Williams et al., 2008)
In general, *Bombus* species have an annual life cycle.
Nectar provides sugar and water

Pollen is a rich source of protein
Bombus species are active under cold, cloudy and windy conditions.
Bumblebees are capable of buzz pollination.
Bumblebees (Bombus spp.) are well known important pollinators for both the pollination of wild flowers and pollination services in outdoor, greenhouse horticulture and orchards.
Entomophilous

Nectar, Pollen, Nectar + Pollen

Climatic Data

Native Insect Fauna

Honey bees? Bumblebees? Mason bees?
BUMBLEBEES
In commercial use, the foraging range determines the optimal density of bumblebee colonies for facilitating pollination services.
The fields have to be described with its size, shape and also with the number of plants, varieties of trees, plant ratios, age of the trees.
The foraging behaviors of the bees and the biology of the plants, the weather conditions in the agricultural area during the flowering period are also important.
• We need both wild pollinators and managed bees to pollinate our crops.

• Managed bees are safe resources – if the wild pollinators are not available.