



## INNOVATIONS IN THE BEEKEEPING SECTOR IN THE REPUBLIC OF MACEDONIA

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### Background

Farmer innovator and farmers innovation means spontaneously creation of new products, new production system, technology or adaptation of existing ones according own needs with own knowledge, skills and creativity. Farmer's innovations in Republic of Macedonia are still not very well recognized and valorized.

The best practice examples result from a case study in the Municipality of Kumanovo, situated in Northern Macedonia are identified and presented in the paper.

The innovations found are classified in three categories: 1) Technology of beekeeping; 2) Protection of bees from pests and diseases; 3) Protection and sustainable utilization of natural resources

### Best practices in local innovation

#### Innovations in beekeeping technology

##### Drilling machine for hive frames



**Innovator:** Jordan Dzimrevski

**Benefits:**

Decreasing of damages during drilling

Saving time

##### Dadant- Blat hives with 8 frames and equal hive bodies



**Innovator:** Mire Kuzmanovski

**Benefits:**

Faster development of the bee's family  
Easy manipulation with hives  
Providing enough space for honey storage  
Utilization of all material for construction of hives

##### Feeding machine (Dosing pump)



**Innovator:** Novko Velickovski

**Benefits:**

Dosing of the necessary quantity of liquid food according to the needs  
Easy transport of food  
Avoidance spilling liquid food  
Avoidance grasping between bee's families

##### Protection from woodpeckers



**Innovator:** Jordan Dzimrevski

**Benefits:**

Decreased winter losses caused by woodpeckers