STUDY REGARDING THE HONEY-BEARING POTENTIAL OF MIROSLAVA VILLAGE, IAŞI COUNTY

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Abstract

Miroslava village is located in the central part of Iaşi County, respectively 47^{0}08' North latitude and 27^{0}29' East longitude, being framed in terms of beekeeping in the bio-beekeeping area of Moldova Plateau, being characteristic the gathering of type II. The honey-bearing potential of the village, estimated at over 107000 kg offered by bees from species composition of forests in the area, spanning approx. 660 ha, respectively crops, orchards, pastures, meadows, etc., occupying over 4000 hectares, would allow maintenance under stationary beekeeping of around 880 beehives.

Key words: honey-bearing potential, bees, honey, flora, forests

INTRODUCTION

Miroslava village is located in the central part of Iaşi County. It is placed at the south-western limit of Iaşi City, respectively 47^{0}08' North latitude and 27^{0}29' East longitude. The area of Miroslava village, with the 13 component countryside is of 8270 hectares [8].

The climate is temperate continental specific to Europe. The average annual temperature is 9.8^{0}C, indicating a thermal balance favourable to the development of forest vegetation from the area.

Average annual rainfall is 557 mm. The dominant winds are predominantly north-western and south-eastern and reach the highest speeds in winter season, without causing obvious damage to vegetation.

These aspects are specific to the bio apiarian area of Moldova Plateau, which provides optimal conditions for practicing beekeeping activities.

MATERIAL AND METHOD

Research towards fulfilment of this paper was performed in the Miroslava village area.

The area where the Miroslava village is located represented an excellent study material for this paper, due to the richness and diversity of wild flora existing in the forests, orchards, meadows and pastures and crops.

Investigated forestry area covers a surface of about 740.8 hectares, of which about 658 ha have a highly beekeeping interest. Also, various crops, pastures, meadows and orchards existing, which span on approximately 2484 ha, provides significant amounts of nectar.

In order to carry out study it was necessary to identify the species of beekeeping interest from the area and the area occupied by them. Once done this, considering the productive potential of each species of beekeeping interest, it could be calculated, by using the usual methodology, both the total honey bearing potential of the area as well as the gathering potential which is about a third [1-7].

Subsequently, knowing the average annual quantity of honey gathered by a beehive, respectively the standard load with hives per hectare in pastoral beekeeping, it could be calculated the necessary of beehives which can optimally capitalize this potential (honey balance).

RESULTS AND DISCUSSIONS

From the data provided by Ciurea forestry district were extracted information related to species which are of interest and the areas occupied by them. *(fig. 1)*. Based on these data, subsequently we were able to calculate the total production respectively, the gathering honey production *(tab. 1)*.

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It can be seen that in the structure of the forest are found two species, valuable in terms of beekeeping interest, linden and acacia, which together can provide over 98 tons of honey. The other forestry species have less importance in terms of beekeeping interest, particularly as a source of honeydew.

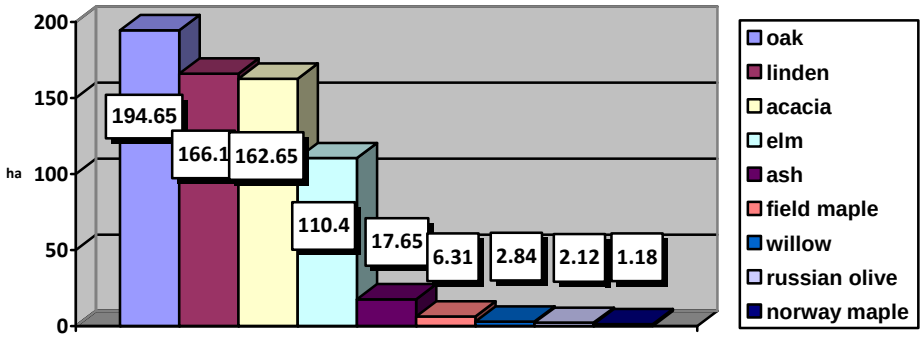

Fig. 1 The main forestry species from the studied area

Table 1 Honey-bearing potential of Miroslava village forests

Nr. crt.	Species	Surface (ha)	Average production (kg/ha)	Potential production (kg)	Gathering production (kg)
1	Oak	194.65	20	3893	1298
2	Elm	110.40	20	2208	736
3	Ash	17.65	20	353	118
4	Field maple	6.31	20	126	42
Total honeydew source		**329.01**	**-**	**6580**	**2194**
5	Acacia	162.65	1000	162650	54217
6	Linden	166.10	800	132880	44293
Total nectar source		**328.75**	**-**	**295530**	**98510**
Total		**657.76**	**-**	**302110**	**100704**

From the data collected from Miroslava village hall were identified the main sources of meliferous sources consisting from crops, orchards, pastures and meadows. According to the area covered by them was estimated, the honey-bearing potential, which is over 20 tons *(tab. 2; fig. 2, 3)*.

The honey bearing potential of Miroslava village of approximately 120 tons can be capitalised throughout stationary beekeeping, meliferous sources providing a continuity of harvest in the active season.

Stationary beekeeping can be recommended for the acacia and linden gathering, where productions can be about 54, respectively 44 tons.

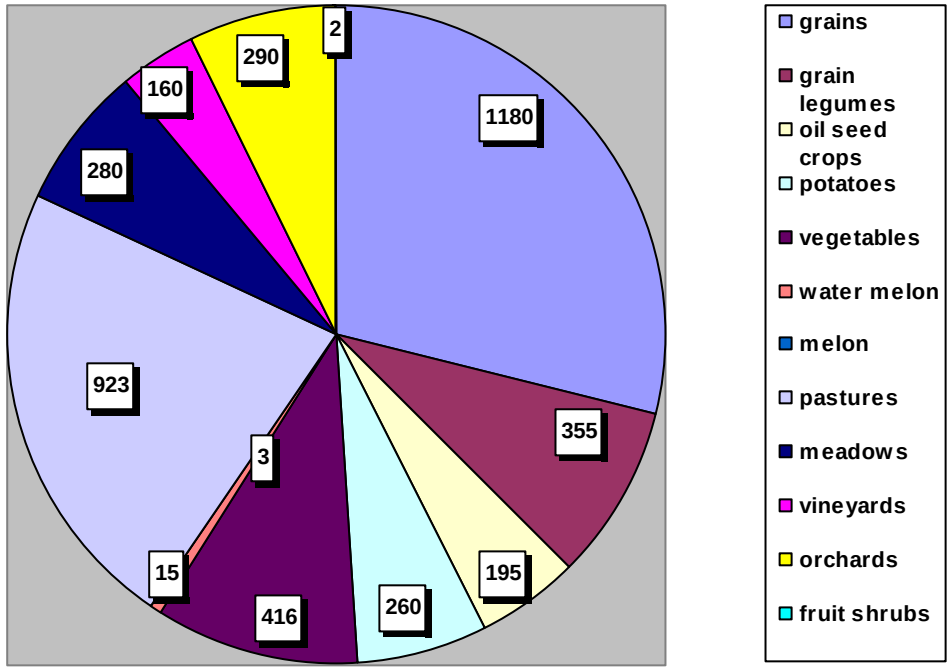

Fig. 2 The share of crops, pastures, meadows and orchards in the studied area

Table 2 Honey-bearing potential of crops, pastures, meadows and orchards

Nr. crt.	Specification	Surface (ha)	Average production (kg/ha)	Potential production (kg)	Gathering production (kg)
1	Grain legumes	355	30	10650	3550
2	Oil seed crops	195	60	11700	3900
3	Vegetables	431	25	10775	3592
4	Pastures	933	5	4665	1555
5	Meadows	280	50	14000	4667
6	Orchards	290	20	5800	1933
	Total	**2484**	**-**	**57590**	**19197**

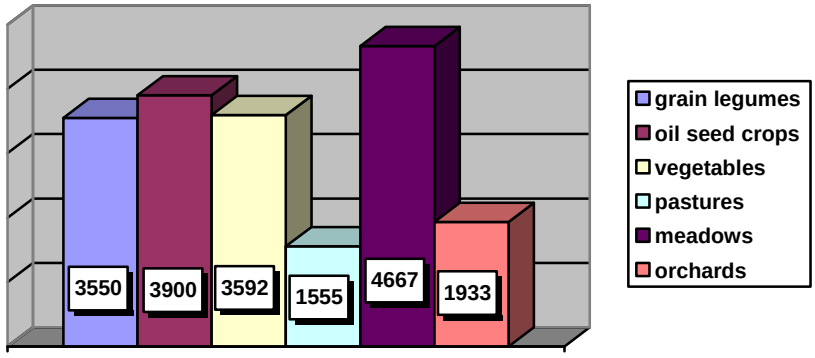

Fig. 3 Honey-bearing potential of crops, pastures, meadows and orchards (kg)

If we consider that a colony of bees of medium power consumes an amount of 90 kg of honey during one year for their own needs, and for a swarm is needed half of that amount, and assuming that the number of families increased by 20% (swarms) and the amount of output honey planned is estimated at 25 kg, the final result indicates an amount of about 124 kg of honey annually gathered by each bee colony.

Dividing the honey-bearing potential determined in the Miroslava village area to the amount of honey annually gathered by each hive, results that the studied area offers optimal conditions under stationary beekeeping for 966 swarm bees.

In circumstances where, for acacia and linden gathering would practice pastoral beekeeping, in the area, according to the recommended standards of loading with hives per hectare, can be brought about 2280 beehives for acacia gathering, respectively about 1320 beehives for linden gathering.

CONCLUSIONS

Miroslava village from beekeeping point of view is located in the bio apiarian area of Moldova Plateau, which provides optimal conditions for a gathering of type II.

Honey-bearing potential of Miroslava village was estimated at 119901 kg.

Forests from the area offer a potential of 100704 kg honey, almost entirely determined by two valuable species in terms of honey, acacia and linden.

The honey-bearing potential of crops, pastures, meadows and orchards was estimated at 19197 kg.

Under stationary beekeeping the area offers optimal conditions for 966 swarm bees which can produce 24150 kg of honey.

In terms of pastoral beekeeping in the area can be brought about 2280 beehives for acacia gathering, respectively about 1320 beehives for linden gathering.

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