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A Season's Performance of an Apis Indica Colony at Errabedda

by

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Introduction

THE indigenous variety of honey bee *Apis indica* has been a poor honey yielder as compared with its counterpart *Apis mellifera* of the temperate countries. Yields of *Apis indica* recorded in the hill country have been on an average 20 lbs. (*Tropical Agriculturist* Vol. CXVI, 1960). The yield of honey is dependant on favourable weather, availability of nectar yielding plants and the rapid build-up of the Colony to take full advantage of the nectar flow. The following observations were made of an *Apis indica* colony hived in a 9 frame hive and sited at Errabedda.

Errabedda is situated on the Welimada—Haputale Road at an elevation of approximately 4,000 ft. The natural patna land of Uva has given way to Eucalyptus plantations of the Forest Department. The predominant flowers are therefore the three species of Eucalyptus varieties popularly known as the Red Gum, Blue Gum, and the Black Gum. The rainfall is much lower than that of the hills in Nuwara Eliya or Haputale and is more or less the dry zone type.

Materials and Methods

1. Bee Colony *Apis indica* local variety.
2. 9 and 6 frame hives with standard brood frames and supers.
3. Brood and Super Frames fitted with wired Comb foundation sheets.
4. A smoker.
5. Centrifugal Honey extractor.

Data

Apis indica Colony (GS 9) selected for this observation was captured in the coconut area of Kurunegala District. It had been in Errabedda for over $1\frac{1}{2}$ years. As this Colony showed a rapid build-up, it was transferred from the 6 frame hive to a 9 frame hive on 12th September 1966. On the date of transfer to a 9 frame hive, it had a brood strength of 5 frames. Requeening was done from stock by removal of the Old Queen and two frames of brood. The colony successfully requeened itself at the end of April and subsequent build-up and performance were as follows:—

A SEASON'S PERFORMANCE

Date	Brood Strength and Work Done	Honey Harvest
10. 4. 67	Division taken with old queen and two frames of brood	
20. 4. 67	Six queen cells seen	
End April	New queen seen	
18. 5. 67	Four frames of brood and eggs	
28. 5. 67		8 frames
11. 6. 67	Four frames brood and eggs two frames stores	
24. 6. 67		4 frames
12. 7. 67	Five frames brood and eggs two frames stores and two comb foundations	
28. 7. 67	Five frames brood & eggs & two	13 frames
11. 8. 67	Five frames brood and eggs and 1 frame stores and two C. F.	
17. 8. 67		21 frames
29. 8. 67	Seven frames brood and eggs and 1 frame stores	
7. 9. 67	Seven frames brood & eggs and one frame stores	15 frames
28. 9. 67	Seven frames brood & eggs and 1 frame stores	
12. 10. 67		22 frames
31. 10. 67	Brood strength come down to 6 frames and appearance of drone brood	
23. 11. 67	Division was taken with two frame brood and eggs only. Queen and 3 frames of brood being left behind in parent hive	
31. 12. 67	Colony transferred from 9 frame to a 6 frame hive	
	TOTAL	83 frames

Extraction of honey was done by using a centrifugal Honey extractor. After the honey extraction, all drawn out super combs were replaced so that there was no effect lost by the bees in building up combs for storing surplus honey.

Flowering

Main nectar plant of the area is Eucalyptus. Flowering of this was noticed on 20. 5. 67. The other flowering plants were the Acacias. There was continuous flowering of the different species of the Eucalyptus for the period extending from May to October so that the entire harvest was dependent on Eucalyptus flowers.

Rains

Rainfall figures during the period were as follows:—

January	5 .57″	11 days	July	2 .12″	5 days
February	5 .08″	9 days	August	1 .68″	3 days
March	6 .19″	9 days	September	1 .22″	6 days
April	6 .89″	13 days	October	10 .26″	12 days
May	3 .24″	11 days	November	12 .67″	22 days
June	1 .52″	13 days	December	4 .87″	5 days

There was continuous dry weather in July, August, September that greatly helped the foraging activities of the bees.

Discussion

The flowering of the main honey plant—Eucalyptus—coincided with the building up of the Colony since requeening. The foraging activities of the bees were therefore uninterrupted. The provision of a 9 frame hive gave the colony more room for the build up of the brood nest. The standard hive now in use has only 6 frames in the box, so that in an average colony leaving the two end frames the outer sides of which are generally used by bees for stores, the possibility of the brood nest expansion is generally upto 5 frames of brood. With the provision of a nine frame hive it was possible to allow for a brood nest upto 7 - 8 frames.

The 9 frame box used, placed no restriction on the expansion of the brood nest thus allowing for the maximum possible breeding capacity. This resulted in a more than average foraging population. The record honey harvested however, was also the result of an extremely heavy nectar flow season. Weight of honey obtained from a frame varied from $\frac{1}{2}$ to $\frac{3}{4}$ lb. and an average of $\frac{1}{3}$ lb. per frame. Eighty three frames of honey thus harvested, yielded 66 lbs. This has been a record for *Apis indica* under our conditions.

During the period under observation there was no tendency for swarming. The appearance of a drone brood was noticed only in November after the main honey flow season. A division taken from this Colony was brought to Peradeniya on 28th November 1967. This has been used for successful requeening by grafting of Peradeniya Colonies and the performance of these colonies is being watched.

The performance of this Colony is an indication of the possible potential of the indigenous bee *Apis indica* under good honey flow conditions. To test the continuity of the good honey production performance it would be necessary to requeen as many observation hives in Bandarawela and Gurutalawa with the selected queens of this strain and observe whether the non-swarming rapid build up and honey collection qualities of the parent colony.

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