Increase in honeybee populations with continued use of HiveAlive™

Results from long-term field trials, France 2014-2015

Trial conducted by Véto-pharma, France

Introduction

HiveAlive is a complementary feed for bees made from a patented blend of seaweed and land based extracts. Previous long-term field trials carried out in Greece resulted in an increase in colony population compared to control as well as maintenance of low Nosema spore levels when HiveAlive was added to the feed in spring and autumn. In order to further investigate these observations, similar trials were carried out in France.

Method

There were two groups in this trial, control group and HiveAlive group, all with equalised population and one year old queens. There were 18 hives in the control group which were fed sugar syrup on its own and 17 hives in the HiveAlive group which had HiveAlive added to the sugar syrup. HiveAlive was added at a rate of 2.5ml per L syrup. See Table 1 for feeding regime.

Table 1

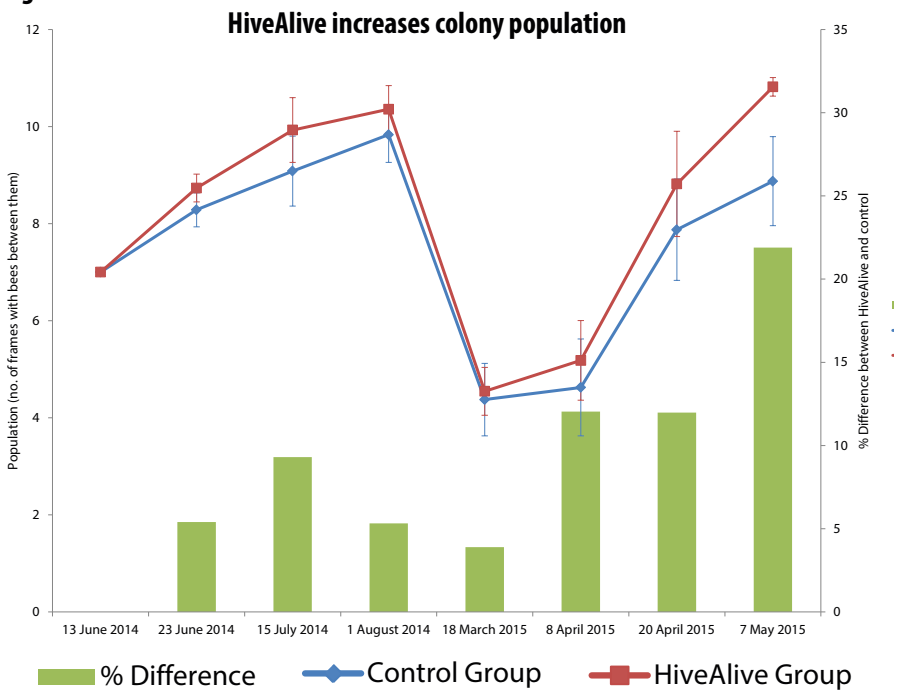
	Date	Control group	HiveAlive group
Summer	16th June	2L syrup	2L syrup + 5ml HiveAlive
	23rd June	1L syrup	1L syrup + 2.5ml HiveAlive
	15th July	1L syrup	1L syrup + 2.5ml HiveAlive
Autumn	4th September	1L syrup	1L syrup + 2.5ml HiveAlive
	2nd October	1L syrup	1L syrup + 2.5ml HiveAlive
Winter		Candy	Candy
Spring	23rd March	2L syrup	2L syrup + 5ml HiveAlive
	7th April	2L syrup	2L syrup + 5ml HiveAlive

A number of parameters of colony health were monitored before, during and after the trial to assess the effects of feeding HiveAlive in syrup compared to control. Parameters monitored included colony population, amount of brood coverage, number of total frames in hives, food stores (honey and pollen) and amount of drawn out wax.

Results

The number of spaces between frames that was full of bees was used as a method of assessing colony population. As expected, colony population increases for both groups during the first sampling period (summer) but more bees were observed in HiveAlive colonies compared to control (5% increase). Sampling was not taken over the winter period but resumed in March of the following year. A steady increase was observed coming into the summer and again, the HiveAlive group had significantly more bees than the control group at the end of the trial period showing a 20% population increase (Fig. 1).

Figure 1



The amount of brood on frames was measured in terms of area coverage (m^2) of frames per hive. As expected, the amount of brood increased in both groups coming into the summer period. During the last sampling period in May, there was almost a 40% increase in brood in the HiveAlive group compared to control (Fig. 2).

Figure 2

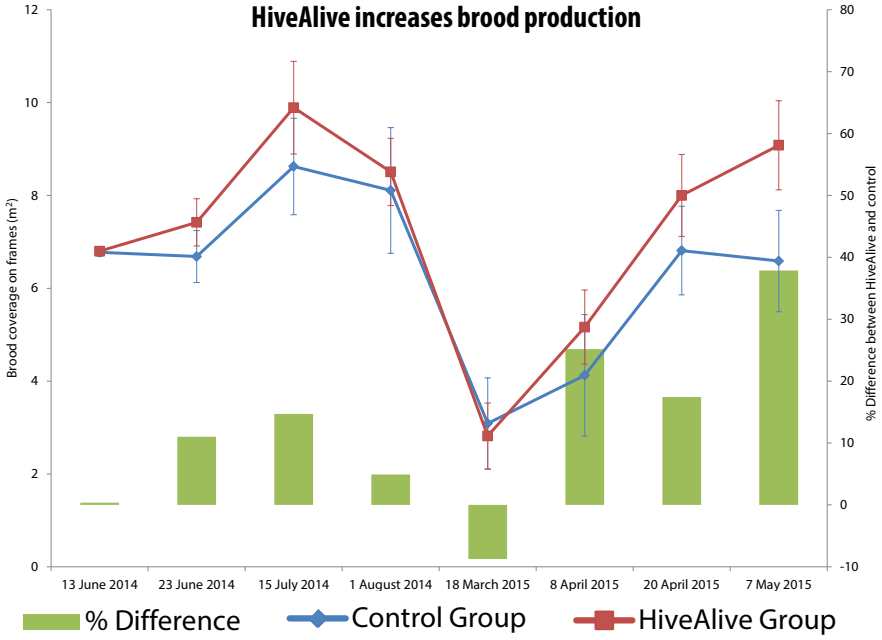
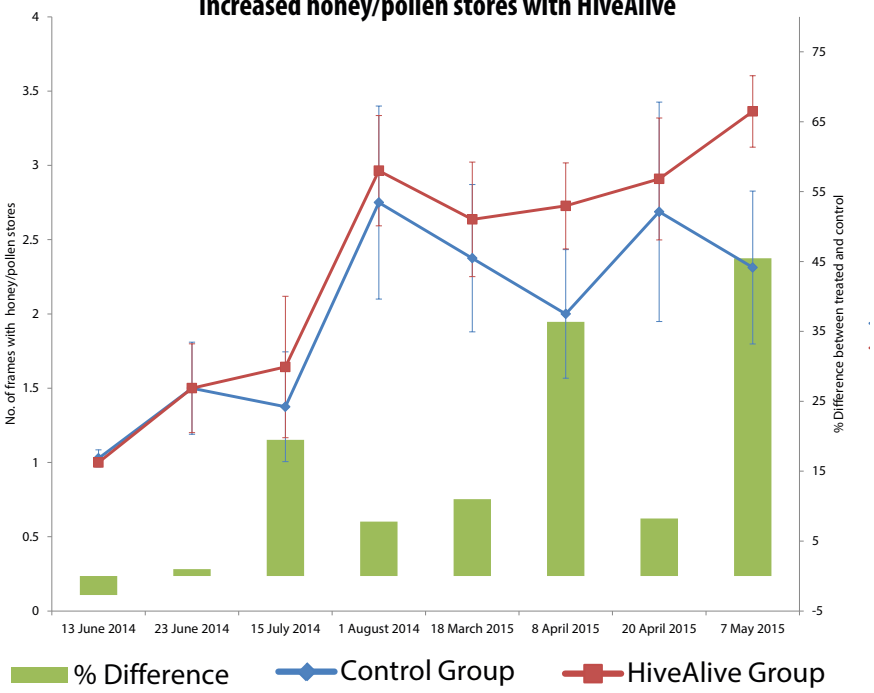


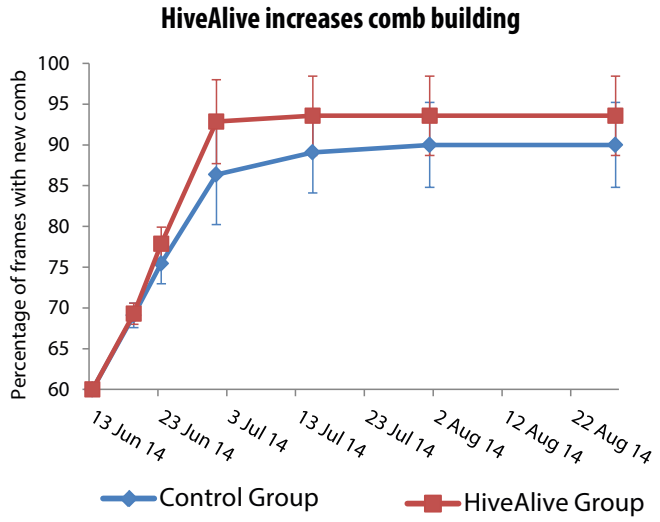
Figure 3



The amount of pollen and honey stored by hives was also monitored by counting the number of frames of stores per hive. By the end of the trial period, there was an increase of over 40% in food stores of the HiveAlive group compared to the control (Fig. 3).

The ability of colonies to draw out new wax comb was monitored for the first summer period after feeding began. Just three weeks after feeding began, the HiveAlive group were drawing out 7% more comb than the control group (Fig. 4).

Figure 4



Discussion

The results obtained in this trial were similar to results obtained in previous long term field trials in Greece. This further demonstrates the role of HiveAlive in long term maintenance of healthy and more productive colonies. Results suggest that optimum benefits are observed when colonies are fed in spring and autumn every year.