Field Trial Report

A new protein supplement from Vita (Europe) Ltd was tested in extensive field trials and found to increase honey production by up to 18% (2.54 kilograms more honey per colony fed with VitaFeed Nutri compared with control colonies fed only with sugar syrup).

Objective

The environmental stresses endured by honey bees continues to increase, with factors such as climate change, crop spraying and monoculture leading to a decline in worldwide honey production.

The importance of the quality of wintering bees and the quality of bees after winter is well known; less well studied is the importance of the quality of bees during the honey flow.

Honey bees need protein but not all pollen has the same protein content. Previous work has shown that bees increase their pollen consumption by 50% when the percentage of protein in pollen drops from 30% to 20%. When protein content drops, bees turn to their own body reserves. This in turn reduces their lifespan, their brood-rearing capability and therefore the development of the colony. To maintain a high rate of honey production, a source of pollen with at least 24% protein content, or a suitable alternative, is required.

These field trials, conducted over two seasons, aim to show the importance of protein content in honey bee nutrition for the development and sustenance of bee populations during the harvest, by using the protein supplement VitaFeed Nutri to achieve increase honey production.

Material & Methods

The trials were conducted over the 2012-13 and 2013-14 seasons at three apiaries in Argentina. The colonies of each apiary were divided into “experimental” (fed with VitaFeed Nutri) and “control” (fed only with sugar syrup) groups.

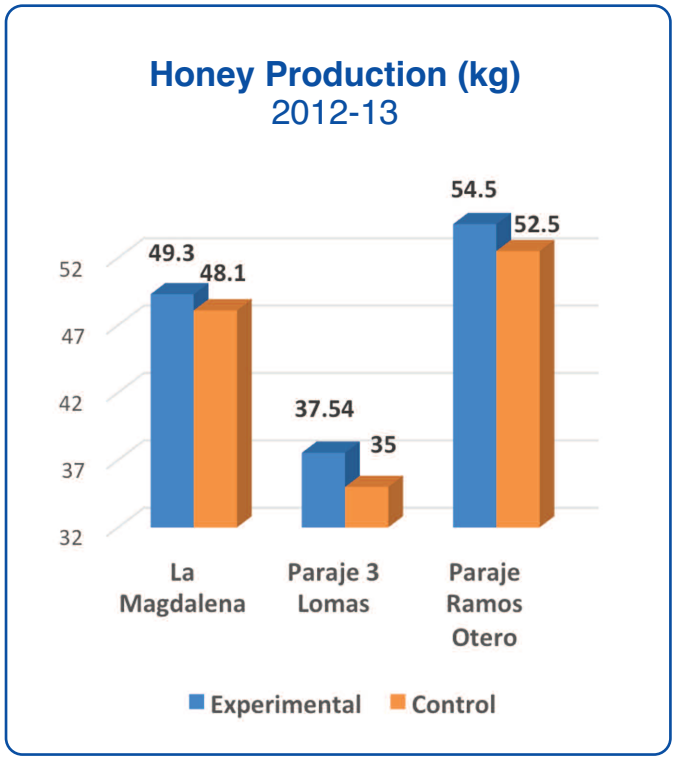
According to manufacturer’s instructions for use during the honey flow, experimental colonies had 10 grams per colony of VitaFeed Nutri powder sprinkled over the top of the brood frames in three repetitions, with an interval of approximately 10 days.

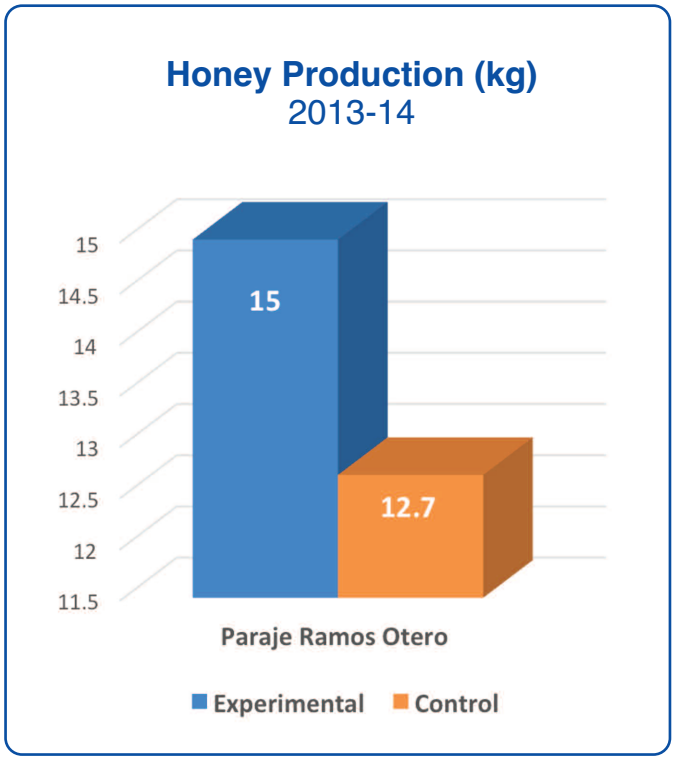
Honey supers were marked before extraction with supers from experimental and control colonies kept separate. After extraction, the total weight was divided by the number of colonies in that group and the average quantity of honey produced per colony calculated.

Results

Season 2012-13

		Honey Production (kg)		
	No. of Colonies	**Experimental**	**Control**	**Increase**
La Magdalena	30	49.3	48.1	1.2
Paraje 3 Lomas	44	37.54	35	2.54
Paraje Ramos Otero	50	54.5	52.5	2.3
			Mean	**2.01**





Season 2013-14		Honey Production (kg)		
	No. of Colonies	Experimental	Control	Increase
Paraje Ramos Otero	50	15	12.7	**2.3**

In the 2012-13 season, the experimental colonies (fed with VitaFeed Nutri) produced 1.2 kg, 2.54 kg and 2.3 kg (average: 2 kg) more honey than the control colonies. The following season, the experimental colonies produced 2.3 kg (18%) more honey than the control colonies.

Conclusion

Despite the critical importance of nutrition (particularly protein content) to honey production, it is a widely ignored aspect of designing management strategies for the beekeeping business.

It is commonly believed that bees don't require additional protein during a honey flow but the variability and differing availability of pollen can have a big impact on productivity.

Supplementing bees' diet with a well-balanced, protein-rich food such as VitaFeed Nutri can result in a significantly increased honey yield.

VITA®
We Care for your Bees