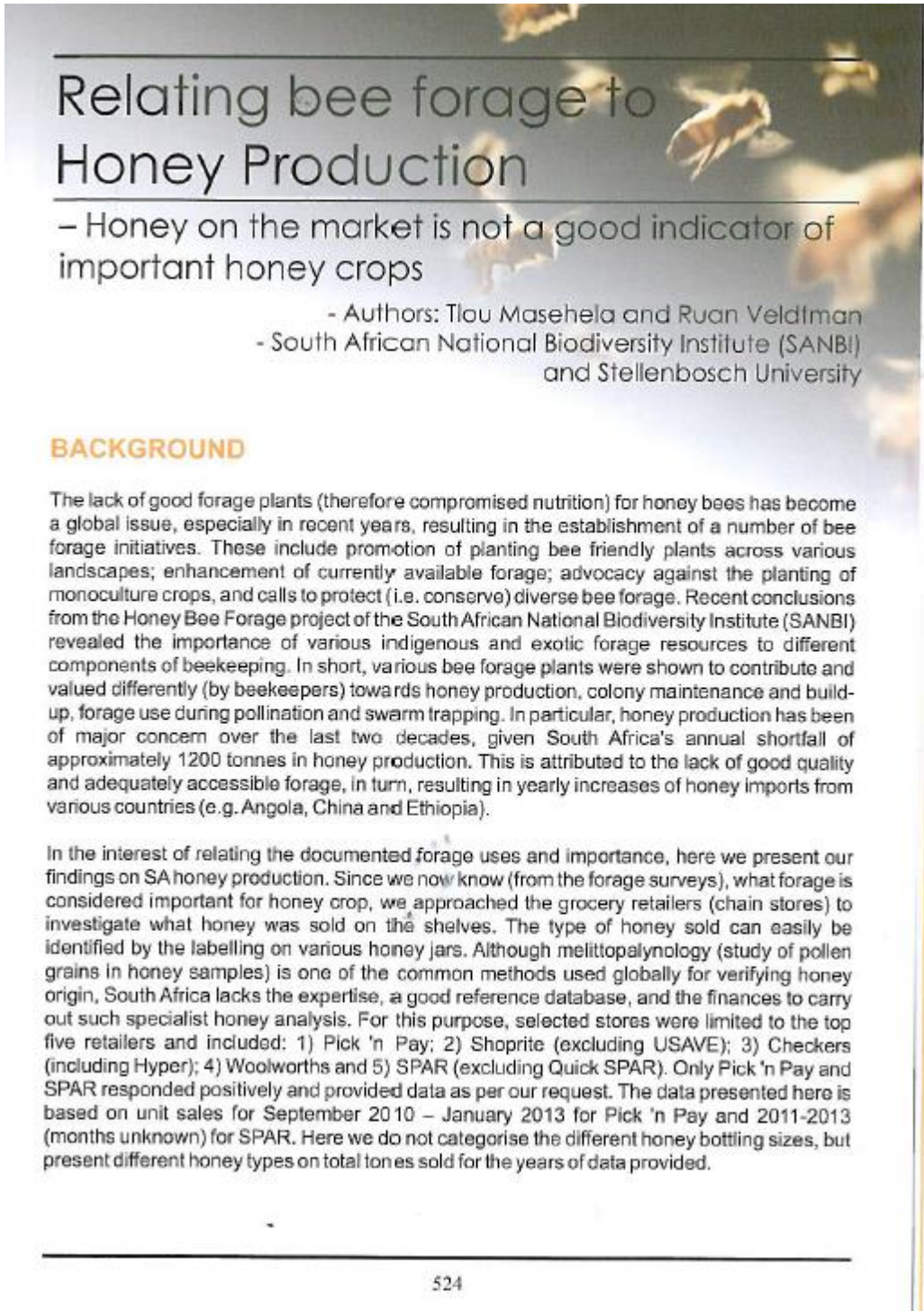




Relating bee forage to Honey Production

– Honey on the market is not a good indicator of important honey crops

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BACKGROUND

The lack of good forage plants (therefore compromised nutrition) for honey bees has become a global issue, especially in recent years, resulting in the establishment of a number of bee forage initiatives. These include promotion of planting bee friendly plants across various landscapes; enhancement of currently available forage; advocacy against the planting of monoculture crops, and calls to protect (i.e. conserve) diverse bee forage. Recent conclusions from the Honey Bee Forage project of the South African National Biodiversity Institute (SANBI) revealed the importance of various indigenous and exotic forage resources to different components of beekeeping. In short, various bee forage plants were shown to contribute and valued differently (by beekeepers) towards honey production, colony maintenance and build-up, forage use during pollination and swarm trapping. In particular, honey production has been of major concern over the last two decades, given South Africa's annual shortfall of approximately 1200 tonnes in honey production. This is attributed to the lack of good quality and adequately accessible forage, in turn, resulting in yearly increases of honey imports from various countries (e.g. Angola, China and Ethiopia).

In the interest of relating the documented forage uses and importance, here we present our findings on SA honey production. Since we now know (from the forage surveys), what forage is considered important for honey crop, we approached the grocery retailers (chain stores) to investigate what honey was sold on the shelves. The type of honey sold can easily be identified by the labelling on various honey jars. Although melittopalynology (study of pollen grains in honey samples) is one of the common methods used globally for verifying honey origin, South Africa lacks the expertise, a good reference database, and the finances to carry out such specialist honey analysis. For this purpose, selected stores were limited to the top five retailers and included: 1) Pick 'n Pay; 2) Shoprite (excluding USAVE); 3) Checkers (including Hyper); 4) Woolworths and 5) SPAR (excluding Quick SPAR). Only Pick 'n Pay and SPAR responded positively and provided data as per our request. The data presented here is based on unit sales for September 2010 – January 2013 for Pick 'n Pay and 2011-2013 (months unknown) for SPAR. Here we do not categorise the different honey bottling sizes, but present different honey types on total tonnes sold for the years of data provided.

FINDINGS, IMPLICATIONS FOR HONEY CROP PROVISION AND MANAGEMENT

During the 2010-2013 period, Pick 'n Pay sold honey to the total of 1252t. In contrast, SPAR only sold 21t of honey during 2011-2013. Majority of the honey types sold just under 20t during this period (Table 1). Of exception, was honey labelled as pure, kosher, natural pure, raw and unknown. Sales for these honeys ranged between 20 and 750t (Table 1). Interestingly, the unknown honey category topped the sales for both retailers for the prescribed period (see Table 1). Numerous request and follow ups with retailers were unsuccessful in providing additional information regarding this category (unknown), replying/stating that bottlers are not able to supply them with this information.

Table 1: Comparison of honey type unit sales for Pick 'n Pay and SPAR for years 2010-2013 and 2011-2013 respectively

Retail Stores	Honey type	Total honey units sold		
		0-1-20 t (100-20000kg)	20-150 t (20000-150000kg)	150-750 t (150000-750000kg)
Pick 'n Pay (Sep 2010- Jan 2013) and SPAR (2011 - 2013)	Cape honey	3.4	-	-
	Champagne	16.2	-	-
	Citrus	4.4	-	-
	Creamed	4.1 [0.2]	-	-
	Eucalyptus	13.2 [0.1]	-	-
	Fynbos	3.4 [0.1]	-	-
	Kosher	-	142.8	-
	Natural	0.1	-	-
	Natural pure	-	27.98	-
	Pure	[0.2]	-	254.2
	Pure champagne	8.3	-	-
	Pure raw	2.0	-	-
	Raw	[0.4]	27.17	-
	Strandveld Fynbos	5.4	-	-
	Unknown	[19.8]	-	732.3
	Wild flowers	6.8 [0.1]	-	-

honey unit sales for SPAR

Although renowned honey crops (by forage survey and beekeepers) such as citrus, eucalyptus, fynbos and wild flowers were represented on the honey types, their sales value were minimal. This can be attributed to the lack of these honey types (in turn lack of forage), their price range (possibly high), and aspects of consumer preference or their obliviousness to honey sources. At the same time, the labelling of other honey types (i.e. natural and raw) is concerning as this not only possibly casts doubt within consumers and their honey preferences, but also makes it difficult in attaining the likely honey crop (and thus forage) contribution to the honey itself. We assume that the unknown honey category might be blends of different types of honey (including imported honey) and this can be extended to honey types such as creamed, pure and pure raw. Could this be an ill omen for local honey (now and in future)? Does it encourage further honey imports or does it highlight honey production constrains locally due to the lack of good bee forage?

If we are to fully understand the value of each honey crop as stipulated by beekeepers (i.e. Eucalyptus), is crucial that their contribution is in most instances (if not always) is reflected in various products derived through beekeeping (i.e. honey). The economics thereof, in terms of honey sales, will also easily support the declarations on the importance of various forage sources. Perhaps methods relating to pollen analysis in honey needs to be adopted and practiced to establish the true importance of various forage contributions and their origin. This will also put more emphasis on the value of different forage for various beekeeping practices (i.e. honey production vs colony maintenance). For a forage conservation and management component, this will be meaningful motivation and prioritizations of key honey crops in order to ensure their value promotion, accessibility and availability enhancement.

Perhaps there is a need to conduct studies similar to this but at a wider scale (although the reluctance of respondents to give such data, similar to the SA forage data, makes the value of doing this questionable). A reasonable time frame of five years would be valuable to measure, evaluate and update importance forage sources of preference for honey production. In the same manner, the labelling of various honey types can be improved (corrected) to reflect various forage contribution and importance. This will surely help educate the South African public on honey source and hopefully lead to more discerning palates. This is the only way that local honey production operations will be able to survive far cheaper bulk imports. If all honeys are seen as simply honey, no one will care where it comes from.

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