

The impact of apiculture on herbaceous species and range characteristics in Wedza District, Zimbabwe



ZIMBABWE



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Introduction

- Cropping and livestock husbandry are the main sources of rural livelihoods (Murungweni *et al.*, 2012)
- Climate change and anthropogenic factors adversely affect livestock and crop production (IPCC, 2007), with negative implications on sustainability of livelihoods
- Apiculture is an alternative source of livelihoods (ecologically, economically, socially, traditionally important) (FAO, 2014).



Importance of apiculture

Plant pollination



Honey



Cosmetic powders



Beeswax

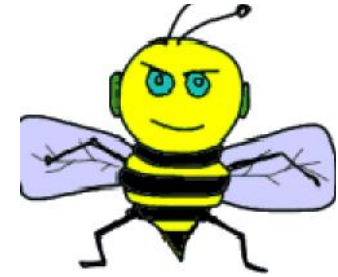


Wax candles



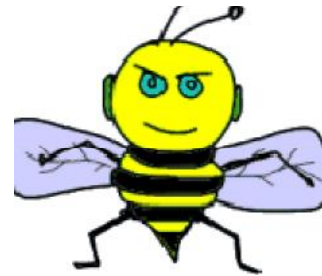
ECOLOGICAL???

Objectives



Broadly:

- to assess the effects of apiculture on rangelands in Wedza District, Zimbabwe.



Specifically:

to determine the impact of apiculture

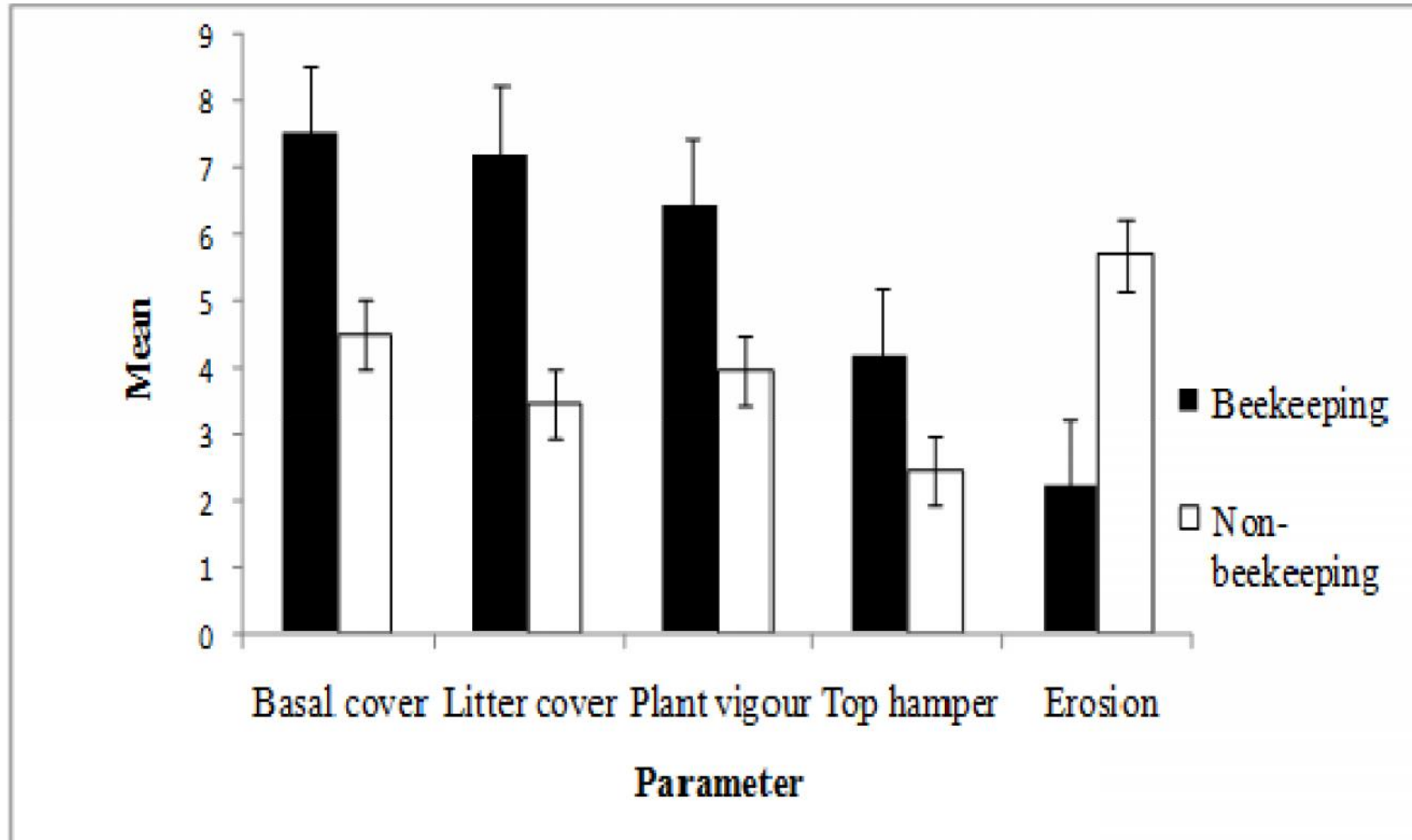
- on herbaceous species diversity and composition
- and range characteristics (litter cover, erosion, plant vigour and basal cover).

Materials, methods, data analysis



- Ward 9, Wedza District, NRII, Zimbabwe
- 2 beekeeping, 2 non-beekeeping sites studied
- 25 x 0.5m x 0.5m quadrats for herbaceous species assessments in each site
- SPSS ver 21 used for data analysis

Results



Results continued

Table 1. Species diversities in the beekeeping and non-beekeeping sites

Site	Shannon (H)	Simpson (1-D)
Beekeeping Sites	3.34 ^a	3.19 ^b
Non-Beekeeping Sites	0.96 ^a	0.95 ^b

^{a,b}Means with different superscripts are significantly different ($P < 0.05$)



Discussion

- Pollination increases fruit yield and size, seed numbers
- Controlled natural resource harvesting eg firewood or thatch grass allows a diversity of species in BK sites
- Grazing management practiced in BK sites, hence more basal and litter cover, and more palatable species
- Reduced defoliation improves plant vigour in BK sites.
- Minimal fire and grazing encourage top hamper
- Livestock trampling and compaction causes soil erosion



Conclusion

- More conservation efforts employed in BK than NBK sites have resulted in higher species richness, plant vigour, basal cover, litter cover and diversities in the BK sites.
- Apiculture is thus ecologically important for sustainable livestock production, hence rural livelihoods.

THE END



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