The background features abstract, overlapping green geometric shapes in various shades of green, creating a modern and dynamic visual effect. The shapes are primarily triangles and polygons, some with thin white outlines, set against a white background.

# **BEEES AND AGROFORESTRY FOR IMPROVED LIVELIHOODS IN RURAL ZIMBABWE**

26<sup>th</sup> September 2018

**APIEXPO AFRICA 2018 - ABUJA NIGERIA**

**Presented by Jacquie Gowe**

# INTRODUCTION

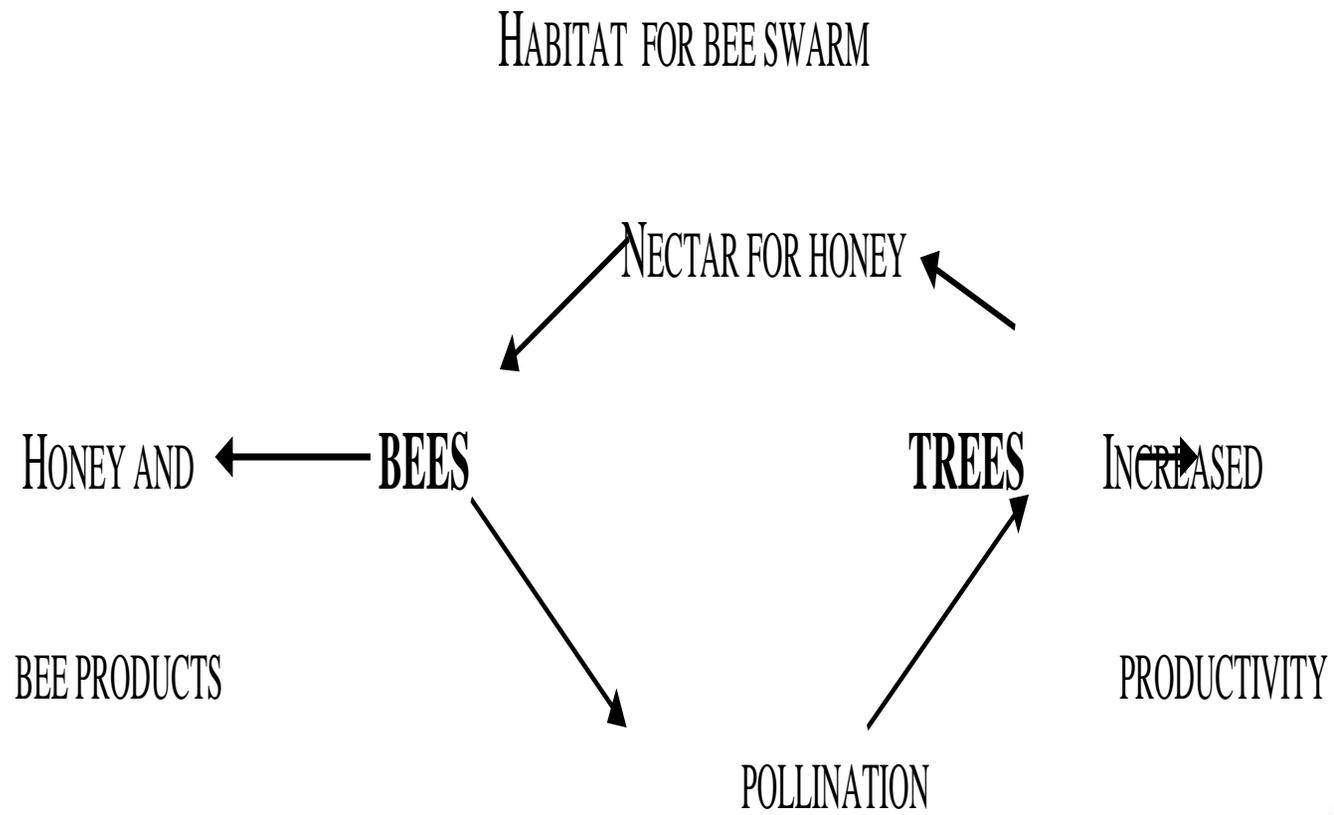
- ▶ Agroforestry is one of the sustainable technologies that have been promoted in Southern Africa for the past three decades.
- ▶ Its importance has grown over the years as an alternate solution to the many challenges faced by rural communities.
- ▶ The challenges have been exacerbated by climate variability.
- ▶ Zimbabwe is experiencing more extreme patterns (longer and more frequent dry spells and fewer more intense rain days UNDP 2016)
- ▶ In response most governments in Southern Africa including Zimbabwe are seeking for climate smart solutions that improve rural livelihoods.
- ▶ Beekeeping is one such option of live hoods that is less dependent on fluctuating rainfall patterns and it is getting attention as an alternative option.

# BEEKEEPING IN ZIMBABWE

- ▶ Beekeeping in Zimbabwe has been practiced for over 50years (Nyatsande *et al* 2014)
- ▶ Low uptake due limited knowledge amongst farmers and extension staff limited research and markets
- ▶ Poor apiary husbandry (organic beekeeping 2011) bees are left to find the forage and water
- ▶ Low honey production due to limited source of forage especially during the dry seasons
- ▶ High rates of absconding experienced
- ▶ The sector is now embracing agroforestry in its training to fill in the gaps and also addressing socio-environmental challenges (World Agroforestry Centre 2015)

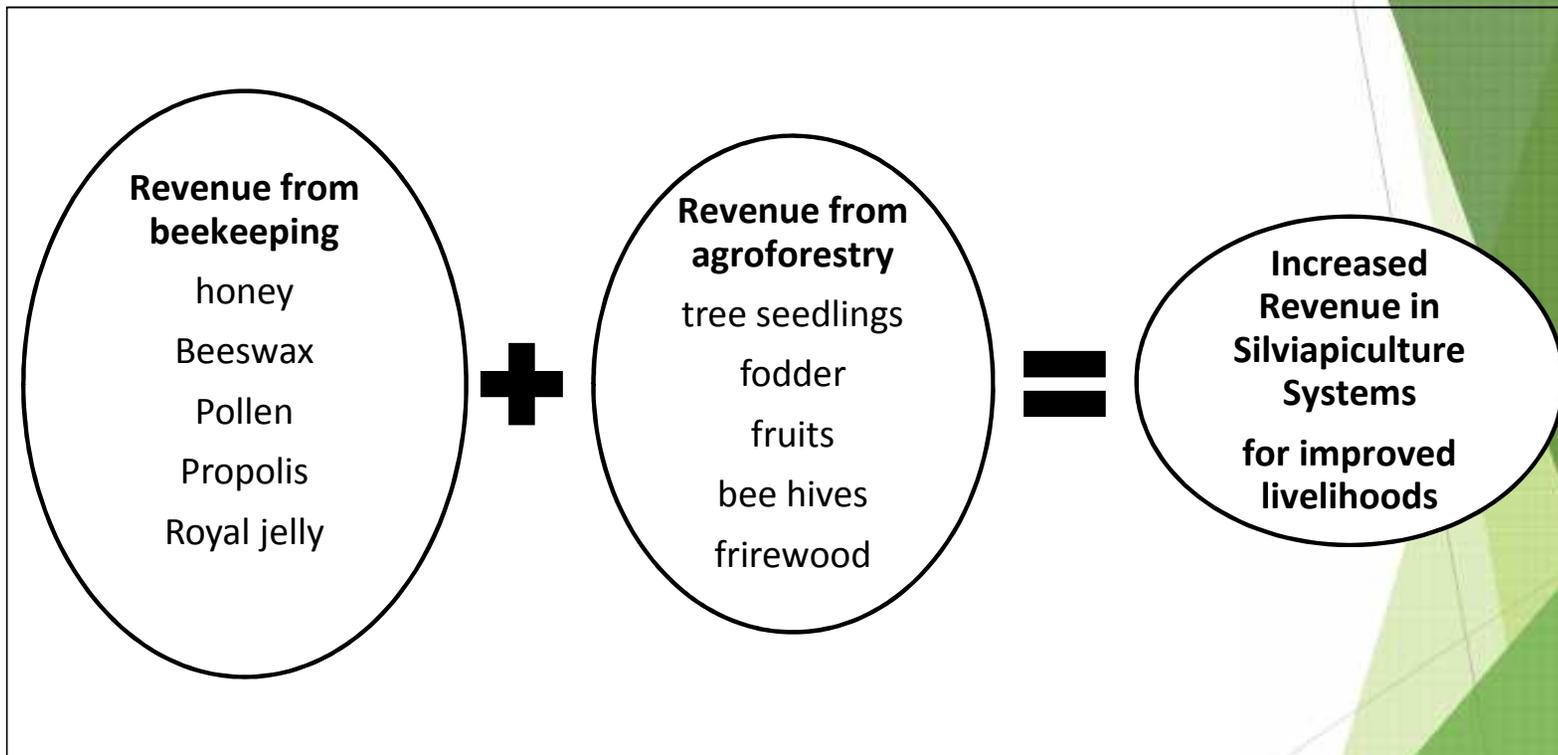
# AGROFORESTRY

- ▶ Agroforestry as a climate smart agriculture  
...contributes immensely to the welfare of the bees
- ▶ It increases bee productivity and enhanced livelihoods for communities (World agroforestry Centre 2015)
- ▶ Silviculture is one such agroforestry system that combines two live hoods based technologies : tree production and beekeeping to address challenges faced by vulnerable communities in the semi-arid regions



<b>Agroforestry Tree Species</b>	<b>Bee keeping</b>	<b>Fodder bank</b>	<b>Live fence</b>	<b>Food and nutrition</b>	<b>Pest control</b>	<b>Soil fertility</b>	<b>Fuel wood</b>
Jatropha Curcas	*		*				
Leucaena sp	*	*				*	*
Exotic fruit trees (guava, mango, pawpaw, citrus)	*			*			
Indigenous Trees ( <i>Berchemia discolor nyii</i> )	*			*			
Eucalyptus	*						*
Neem	*				*		
Moringa oleifera	*			*			

Contribution to livelihoods outcomes	How?
Contribution to food security?	Improved crop and livestock productivity
Contribution to nutrition?	Exotic and indigenous fruits, honey
Contribution to poverty reduction?	Employment creation for casual labourers
Contribution to gender equality / empowerment? Bee keeping	6077 beneficiaries (91% men and 9% Females)
Contribution to gender equality / empowerment? Tree production	8621 beneficiaries (73% men and 27% females)
Contribution to climate change adaptation	Alternate source of livelihoods
Contribution to household income	\$178 696 realised in three years from honey. \$29 per household in 3 years.
Contribution to biodiversity and agro biodiversity conservation?	Improved use of NTFP, Agroforestry for fire management (Indigenous fruit tree seedlings - 2351 and exotic fruit tree seedlings- 4482)
Contribution to socio- cultural sensitivity?	Bee associations formed
Contribution to scientific debate	Silviapiculture
Contribution to policy	Evidence to policy makers



## Conclusion and recommendations

- Incomes from honey are still very low to make meaningful contribution at household level especially for group related projects.
- As such there is need to improve access to vital information on forage and forage crops including trees in order to achieve high yield from apiaries.
- Women participation is still very low for both beekeeping and agroforestry technologies. Gender inclusion with projects specifically targeting the dis-advantaged groups is recommended. More research is needed to make the technologies more gender sensitive.
- Uptake of technologies is still low and fragmented. To address the challenges of low uptake for both agroforestry technologies and bee keeping, this paper recommends taking up agroforestry as a carrier technology for beekeeping and vice versa as the livelihoods options complement one another.
- Based on this review the need for combining trees on farm with beekeeping at farm level cannot be overemphasized as the benefits are multiplied.
- Agroforestry and beekeeping are livelihoods based options that are capable of improving livelihoods especially in the face of climate variability.
- When combined farmers have access to many socio- economics and environmental benefits from the silviapiculture.
- This paper recommends taking up agroforestry as a carrier technology for beekeeping and vice versa taking into consideration the complementarity of the two livelihoods based options.

## References

- Environment Africa (2017). End of letter of agreement report on Forestry Forces: Forests sustainably managed for communities, environment and shock resilience (unpublished).
- Nyatsande S., Chitesa A., and Shayamano I. (2014) Bee keeping in Zimbabwe Paper presented at the APIEXPO Africa 2014 held in Harare 6-11th October, 2014.
- Organic bee keeping (2011) African organic agriculture training material, FiBL
- TechnoServe, (2015). Bee keeping as a business: Business solutions to poverty Presentation by TechnoServe August 4 2015 Swaziland
- UNDP (2016). Mapping of selected hazards affecting rural livelihoods in Zimbabwe A district and ward analysis. Available at [http://www.unfccc.int/gender\\_and\\_climate\\_change/items/7516.php](http://www.unfccc.int/gender_and_climate_change/items/7516.php) accessed 11 March, 2015
- World Agroforestry Centre, (2015). Eastern and Southern Africa Regional Strategy 2015-2024. Nairobi