

Agrobiodiversity Conservation For Promotion Of Apiculture And Household Welfare.

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Introduction:

I inherited fallow land that was used to grow annual crops from my father in 1987. I started growing beans, sweet potatoes before planting bananas. After my retirement from UPDF in 1992, my retirement package was invested into crop growing and bee keeping. I planted on it about one acre banana in which I locally conserve a lot of biodiversity near my apiary (as indicated in figure 1). Some plant species like ovacadoes, local tomatoes, mangoes, guavas, dodo and some medicinal plants were volunteer plants in the banana garden but I deliberately conserve them because they are useful. I then planted species like passion fruits, egg plants, modern ovacadoes, robusta coffee and arabica coffee, *Calliandra caloyrthus*, *Leuacena sp*, castor oil, pigeon peas, setaria grass, velvet beans and pumpkins. Also in the neighborhood of my apiary I have other fields grown with eucalyptus, cassava, sweet potatoes, cyperus trees, flame tree (*Erythrina abyssinica*), *Ficus sp*, Irish potatoes, maize, sorghum and elephant grass. All these plant species give pollen and nectar to the bees and some are used for feeding my cow and goats. At the edge of the plantation, I planted some trees like Eucalyptus and Patula to stop the wind from destroying my bananas. The bees use sap of some waxy trees like Patula and wild cassava to repair their hives. I use the flame trees and wild cassava to support beehives.

I used to do my farming with no much help. But since 1998, my family has been collaborating with PLEC scientists on land management and agro-biodiversity conservation. Below in Table 1 I am indicating benefits I have got from the collaboration;

Table 1 Benefits from collaboration with PLEC

Before	PLEC intervention	Current Situation
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collaboration		
<ul style="list-style-type: none"> - Adverse effects on the banana plants during dry seasons - Poor performance of bananas due to; <ul style="list-style-type: none"> • High populations of many different plant species intercropped • Improper spatial arrangement of the different plants in the field 	<p>Trained me in techniques of better management of different plant species in banana plantation e.g. planting setaria grass along soil water conservation structures and both setaria and elephant grass on boundaries, and having right plant populations with right spacing.</p>	<ul style="list-style-type: none"> - Well managed banana plantations throughout the year - Increased yields - Increased fodder; harvested setaria grass for livestock.
<p>-My orange and avocado trees could not yield well</p>	<ul style="list-style-type: none"> - Facilitated me to acquire high yielding grafted orange and avocado fruit trees. - Taught me to manure it well 	<p>I am expecting:</p> <ul style="list-style-type: none"> - Increased fruit yields - Increased income through fruit sales
<p>- No farm record keeping and not minding of costs or benefits.</p>	<p>Trained me in record keeping for better farm management</p>	<p>-Improved record keeping and ability to do cost/benefit analysis for my farm.</p>
<ul style="list-style-type: none"> - High post harvest losses of maize, beans and Irish potatoes - Low prices during harvest. 	<p>Trained me in modern storage facilities for farm produce.</p>	<ul style="list-style-type: none"> - One improved store for maize and Irish potatoes - I am now able to sell my produce when prices go up.
<p>- I used to grow whatever I wanted even inter planting in bananas without consulting my wife</p>	<p>Sensitized us of gender issues and enabled me to be gender sensitive in my and farm operations.</p>	<p>- Harmony now prevails in my family as workload is now shared amongst members.</p>
<p>- Failing to cooperate with my fellow farmers</p>	<p>Facilitated me to work and plan with other farmers for development by formation of associations.</p>	<p>- I can work easily with other farmers in Bushwere and I am now an active member of Bushwere Zero grazing and Crop Integration Association (BUZECIA). We have now started writing up proposals for funding. I am chairman of MPEFA</p>

<ul style="list-style-type: none"> - I had fears of owning a good breed of cow because of lacking good and enough fodder. - I used to loose my bees as they go far hunting for pollen and nectar from far. 	<p>Encouraged and enabled me to properly integrate and manage different plant species on my farm for livestock and bee keeping.</p>	<ul style="list-style-type: none"> - My farm is ever with flowering plants from which bees collect pollen and nectar. - My bees are always busy in my fields and their hives, therefore I harvest more and better honey. Each jellican of honey is worth Shs 60,000/= - I bought a crossbreed cow, which I call Mercy. - Better fodder for my cow and goats. I am expecting a lot of milk from the variety of fodder species I feed to the cow.
<ul style="list-style-type: none"> - I lacked ability and self-confidence to share experiences with others. Did not encourage my wife to attend meetings and trainings. 	<p>PLEC built my capacity and confidence by helping me to see that I am a good farmer and explaining to me the good and bad impact of my practices. I have learnt a lot also from farmer exchange visits organized by PLEC. Encouraged us to go with wives to meetings, workshops and demonstrations</p>	<ul style="list-style-type: none"> - Improved self esteem and communication skills. - Increased experience, confidence and organizational skills. I have demonstrated 3 farmer groups, workshop participants twice and many visitors and local leaders. My wife attends workshops etc. and is also a member of BUZECIA. She is happy and willing to try out and manage well new practices on farm.

Recent improvements include:

- 1) I have made more modern hives of KTB type (about 20 of them)
- 2) I have planted more trees in my apiary for nector and pollen collection by bees
- 3) I have sensitized other farmers' groups like BUZECIA, Kiringu (elderly) group of Bushwere, BUDEG and Karuhiira group whose members have started bee keeping.
- 4) I have attained more training in bee keeping technology
- 5) I am a committee member of Ankole districts (Mbarara, Bushenyi and Ntungamu districts) Bee Keeping Association.
- 6) I have increased on biodiversity of pastures by increasing land area and planting many types. This I have done it to be able to meet feeding needs of my Mercy cow which calved and gave me a heifer which I named Gift

7) My family now has milk to drink and daily income from milk sales. My neighbours buy milk from me.

Final Remarks: On behalf of my family and on my own behalf, I would like to thank PLEC scientists for having increased my capacity to conserve and use the natural resources I have sustainably. Also, I thank the organizers of this workshop to have facilitated me to come and share my experience with you. I also thank you to have listened to me. Finally I invite you to come and visit my farm in Bushwere demonstration site, in Mwizi sub-county, Mbarara district