

Adjumani Apicultural Initiative (A.A.I.)



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Introduction.

Agriculture has always been one of the most important economic activities in Sudan. According to the CIA World Factbook¹, it accounts for up to 38% of Sudan's Gross Domestic Product (GDP), while employing up to 80% of the population. An estimated 70% of agricultural production is carried out in the southern parts of the country due to the favorable soil and climatic conditions in the region. Despite the fact that the cultural and ecological settings in southern Sudan are expedient for agricultural production, the growth and development of the industry has been greatly limited by various factors: Little or no governmental support, inadequate technology, lack of skills, and political instability. The 21 year long civil war, for example, led to a massive destruction of lives, livelihoods and property; it also displaced more than 4 million people, about half of which fled the country.

Today, Sudan remains one of the poorest countries in the world with an estimated 40 to 60% (CIA World Factbook) of its citizens at home and in exile still surviving on less than a dollar² a day. Although these figures were escalated by the civil war, the Sudanese Government and the Sudan People's Liberation Army (SPLA) recently signed a comprehensive peace agreement which aimed at restoring peace in the region. Nonetheless, its success undeniably lies in the hands of the citizens whose values and livelihoods have been significantly shattered during the war. Muhammad Yunus, the winner of the 2006 Nobel Prize for peace, during his speech remarked that, 'lasting peace cannot be achieved unless large population groups find ways to break out of poverty'. From a similar perspective, this project looks at poverty reduction as a necessary means for building peace in southern Sudan.

What must be done?

The long-term objective of the Adjumani Apicultural Initiative (A.A.I.) is to reintroduce, promote and support modern apiculture in Southern Sudan through offering practical training and technical support to interested farmers, youth groups, hobbyists and students pursuing a career in agriculture and sustainable rural development.

Why Apiculture?

Since immemorial times, honey has always played a very important role in the lifestyles of the Nilotic people of South Sudan. Despite being a natural sweetener, a main ingredient of traditional skin care products and beer, honey is believed to not only cast away bad omens but also bring togetherness, good luck and happiness to the family and the community according to my grandmother. For these seemingly mystical properties, traditional/religious leaders used/use honey in various ceremonies: To please the rain gods, to bless marriages, to name a newborn child, to resolve conflict and conclude successful community meetings. Potential suitors also gave honey to their intended partners to express their love and affection during courtship.

Growing up in Sudan and later in Uganda, I noticed that obtaining honey was based on bee hunting; where specialists roamed the forests to spot established bee colonies on hollow tree trunks. These trees were later cut down as the honey was harvested. This method worked very well in the earlier years, however, as the population grew with time, the environmental impacts of bee hunting became more and more unsustainable, leading to its abolition by the post colonial governments. To satisfy the increasing regional demand for honey and its diversifying uses, the people resorted to the use of wooden logs, clay pots and straw baskets for honey production. From this context, it can be asserted that, if reintroduced, promoted and supported, bee keeping can take a center stage in building a sustainable local economy in southern Sudan.

Benefits of Bee Keeping

- It can reduce poverty – Bee keeping is a source of employment, generates income from local and regional markets, and encourages self-reliance for both urban and rural populations whose livelihoods depend on subsistence agriculture.
- Bee keeping is a source of foreign currency through the export of honey and other products.
- It diversifies the local agricultural output by adding bee-keeping products like honey, bee's wax, pollen and royal jelly in to the local and regional economy.
- Bee-keeping is an environmentally friendly activity – Being pollination agents, bees enhance seed and fruit formation hence promoting plant reproduction and eventually favors increased vegetation cover and higher agricultural production. It also requires less energy and little or zero non-biodegradable chemicals
- Financial benefits: It has a very high growth potential; low initial and operational capital, easy to practice along side other agricultural activities and requires small piece of land.

¹ The CIA World Fact Book. <https://www.cia.gov/cia/publications/factbook/geos/su.html>

² Poverty in Sudan, The Rural Poverty Portal, <http://www.ruralpovertyportal.org/english/regions/africa/sdn/index.htm>

How should it be done?

The overall strategy of the project is to start a small-scale modern apiary at Alere Refugees Vocational Institute (A.R.V.I.) in northern Uganda, specifically Adjumani district. The apiary will initially operate under the agriculture department at A.R.V.I. where it will serve not only as a practical training facility for agribusiness students, interested individuals, groups and farmers but also raise funds through the sale of its products, to finance A.A.I. operations as well as to improve and expand A.A.I. extension services.

Opened in 1998 by a team of volunteer teachers, A.R.V.I. offers alternative educational opportunities to disadvantaged Sudanese refugee students who are unable to attain high school education. Its curriculum comprises short certificate courses ranging from agribusiness to carpentry. The courses are designed to equip A.R.V.I. students with the necessary knowledge and practical skills that enable them to engage in self employment and poverty alleviation activities in their respective communities. Knowing that A.R.V.I. graduates will play a very important role in the reconstruction of their war torn nation, integrating A.A.I. with the A.R.V.I.'s department of agriculture will enable and encourage agriculture graduates to undertake modern bee keeping as a sustainable agricultural activity.

When should it be done?

The project is scheduled to start in Mid May 2007. The first phase, which lasts about three weeks, involves clearing the land, building a storage hut and placing a perimeter fence around the apiary site. The second phase can only start after the completion of the storage hut; early June. It concerns purchasing and installing all the necessary equipment. Most of the equipment is locally available in Uganda and the beehives can be constructed by the carpentry and joinery department using local materials. Other equipment like the honey extractor can be ordered from Kenya. The longest duration for this phase can be as much as five weeks. The last phase can start while the second one is being implemented. It can last an estimated four weeks. It involves conducting a bee-keeping seminar with the help of the instructors, familiarizing the instructors with the equipment, introducing the nuclear colonies in to the beehives and writing the overall project report. The latest finishing date for this project will be mid August 2007.

Expected outcomes and future prospects

The most valuable output of the project will be the agriculture graduates of A.R.V.I. According to the head of department, the department has achieved an annual average of 30 graduates. On implementing the project, these graduates will have been equipped (through hands on learning) with the necessary knowledge and skills for starting and running a small scale apiary in their respective communities. However, the net benefit of beekeeping are difficult to quantify. 'The major economic benefits from beekeeping are as a result of pollination' (Steve Balogh, 2007)³. For example, increased agricultural production and forestry development.

Unlike in temperate regions where bee keeping is limited by seasonality, in the tropics this activity can be carried through out the year and up to two harvests per year are attainable (Nichola Bradbear, FAO, 2003)⁴. 'A well-managed hive with a good strong colony can produce between 50 and 120 kg of honey annually.' (Stephen O. Adjare, FAO, 1990)⁵. Basing on previous experience on beekeeping in Venezuela, I am convinced that a Langstroth beehive in Adjumani district can yield up to 32 kg of honey per harvest. A kilogram of honey costs an equivalent of \$4 at the local market. Hence with 20 initial hives, A.A.I. Is capable of generating more than \$5000 from both honey and bees wax annually. At this rate, A.A.I. Will not only be capable of financing its own operations but also expand the range of services it offers. In the long run A.A.I. will introduce A.A.I. Loan Scheme. This organ will not only loan beehives to interested individuals and groups but also offer technical, administrative and marketing assistance to potential bee-keepers.

Conclusion.

A successful funding, a 24 year long living experience in both Uganda and Sudan, personally knowing the stakeholders at A.R.V.I, a hands on practical and theoretical professional training form Simon Bolivar United World College of Agriculture, my current studies (Human Ecology) at the College of the Atlantic and personal commitment to working with this project during its entire life-cycle will definitely enable me to implement and achieve the goals and objectives of A.A.I.

3 Economic implications of Africanised bees, Steven Balogh, Bee for Development, UK
<http://www.beesfordevelopment.org/info/info/africanised/economic-implications-of-.shtml>

4 Strengthening Livelihoods, Exploring the Role of Beekeeping in Development – Nicola Bradbear, Bees for development 2002

5 Beekeeping in Africa, **Stephen O. Adjare**, FAO Agricultural Services Bulletin 68/6, Food and Agriculture Organisation of the United Nations Rome, 1990