## Empowerment through Edible Forestry Athena Mikros and Riley Hawkins

### **Project Objective**

To create a sustainable organic farm to be affiliated with a 52 Kids Foundation dormitory. To provide resident students with a source of food for consumption and sale. To promote healthy eating habits, responsible community values, and ultimately the success of students in Kamuli District, Uganda.

#### Background/Problem:

Food shortages and famine are serious problems in Kamuli District, Uganda. The majority of people in the Kamuli District depend on subsistence farming for their livelihood, but are unable to produce enough food due to the lack of access to capital, environmental constraints, and the lack of adequate irrigation<sup>1</sup>. This has serious implications for the future development of the Kamuli District. Many families enlist the help of their children in order to help with the harvest or the planting, and this severely impacts their academic performance. Malnutrition can also inhibit performance and limit future prospects.

52 Kids Foundation is a small non-profit that works in conjunction with the Kapida Organization "to ignite a grass roots movement within the children, families, and communities of Uganda, East Africa to be self-reliant and flourish without aid." They do this by selecting one child from 52 of the most desperate families in Kamuli District and provide them with the means to reach their highest potential. They pay for school fees, school supplies, medical fees, and also work with the families to ensure that the home environment is suitable for achieving the kids' highest potential. Recently, they have finished the construction of a soon to be self-sufficient dorm that will house students during the school week so that they do not have to walk several hours to school each day. Following their belief that charity in itself does not encourage sustainable, lasting change, 52 Kids has decided to require that the families of the children staying at the dorm contribute something to 52 Kids, whether it be a pineapple or volunteer labor. Our farm will help 52 Kids achieve their goal of a completely self-sufficient dorm by providing the dorm with food for consumption as well as sale. The families and the children will be able to contribute to the self-sufficiency of the dorm by providing labor, expertise, and leased land for the farm.

#### Solution:

The farm will be about 4 acres in size, with the potential for expansion as opportunity allows. It will be located on land leased to 52 Kids by one of the families. Prior to the construction of the dorm, 52 Kids secured a 20 year lease from the widowed mother of one of the 52 kids. During this process, the foundation had to overcome numerous legal and cultural obstacles, including the right of male relatives to the land among other issues. But because 52 Kids and Kapida have had such a large presence in the community, social capital in the form of trust networks allowed them to secure the lease and finish construction. It is this social capital that gives us confidence that the farm will be successful and sustainable. 52 Kids has already contacted several families with land that have access to sufficient water about this potential project. These families are interested in supporting 52 Kids because of the foundation's strong commitment to the community.

Much of the expertise required to start the farm will be provided by an experienced employee of 52 Kids and other family members of the kids. Athena and Riley will provide an administrative role while emphasizing the importance of local knowledge. To assume that we know more than local farmers about local farming conditions would most likely jeopardize the project, thus we will rely on community members to help start the farm. We would encourage the use of sustainable and organic agriculture, such as edible forest practices and the use of natural fertilizers. Local farmers have demonstrated knowledge and experience with edible forestry and the types of crops grown are also

<sup>1</sup> http://kamuli.go.ug/index.php?option=com content&task=view&id=18&Itemid=33

<sup>2</sup> http://www.52kids.org/mission.html

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suitable for this type of farming<sup>3</sup>.

Edible forestry is a type of farming based on "...putting plants together in woodland-like patterns that forge mutually beneficial relationships, creating a garden ecosystem that is more than the sum of its parts." It incorporates plants of different sizes and types, providing a large degree of diversity in as little space as possible, while still ensuring minimal environmental impact, which is essential to the sustainability of the project. Ultimately, we will be able to create a farm with a high yield of food while requiring minimal maintenance.

Bananas would be an obvious choice of perennial planting that will bear fruit in 2- 3 years or sooner. Bananas are always in high demand, as matukie (mashed bananas) is a staple of the Ugandan diet. Bananas are also easy to sell and would make a very good cash crop. Banana trees would also offer plenty of shade that would be needed for the growth of the other plants in the garden. Passion fruit is another obvious choice, as it is both nutrient rich, prolific and in high demand. Cassava is a third choice of local interest as this is another food basic found in the area. Pineapple is also in high demand and easily grown. Annual plants we could add to the edible forest would be ground nuts, eggplants, tomatoes, onions.

Seeds and other supplies will need to be procured by 52 Kids employees prior to our arrival to Uganda. Based on Riley's experience in Uganda as well as 52 Kids experience with various projects, we will rely on local, respected community members to purchase the necessary supplies. 52 Kids has found that strong social connections allow them to procure higher-quality seeds and supplies.

Labor will be provided almost entirely voluntarily by the children staying at the dorm, as well as graduated secondary-school members of 52 Kids. In return for paying for higher education, 52 Kids requires that the kids provide one year of volunteer work for the foundation. In two years, the first class of secondary school graduates will provide four student laborers. After that, it is expected that 3-7 students will graduate each year. These students will be able to provide labor full-time. In return for staying at the dorm, the kids will be required to supply the farm with a certain amount of labor each week. Families will have the option of providing some of their time to the farm as their contribution to 52 Kids. In the first two years, we will hire an employee of 52 Kids to help supervise the construction and initial phase of the farm project. We also have reserved some of our budget for supplemental labor. If we find that it is necessary, we will send someone to take classes at a Ugandan Agriculture extension nearby. We would also like to hire a local professional to run annual agriculture workshops, but this is dependent on budget constraints. This would extend the education to the whole community, rather than just the students who work on the farm. It is our hope, however, that within a few years, the farm will be entirely run by students.

## **Future Implications:**

The farm will create a sustainable source of food and income for the dorm, as well as provide the students a strong sense of traditional community values and a valuable opportunity to expand their education and gain experience in working with others. Their experience at the farm will aid them in 52 Kids goal of helping the children "...become self-reliant and break the vicious cycle of poverty they were born into." <sup>5</sup>

#### Personal Experience:

Riley traveled to Uganda in 2008 and worked with 52 Kids for two weeks. There he made valuable contacts and learned much about the culture as well as the environment in Kamuli District. Both he and Athena have done some work on small farms, Riley in his home state of Vermont and Athena this past summer, where she shadowed several professors who were trying to recreate ancient Hawaiian sustainable farming practices. Both have made commitments to work on the student-run farm at

<sup>&</sup>lt;sup>3</sup> John Koerner of 52 Kids Foundation

<sup>4</sup> http://www.edibleforestgardens.com/about gardening

<sup>5</sup> http://www.52kids.org/contractors house.html

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Colorado College and made contact with experts in the areas of edible forestry and tropical farming.

## Budget:

1st Year Operations total: \$6250

-Land rental: \$500

-Labor:

-Management: \$1500 -Supplemental labor: \$750

-Training: \$250 -Facilitation: \$250

-Water System: \$2250

-Other inputs:

-Tools: \$250 -Seeds: \$500

2nd Year Operations total: \$3750

-Land Rental: \$500

-Labor:

-Management: \$1500 -Supplemental labor: \$250

-Training: \$125

-Facilitation: \$125

-Water System: \$1000

-Other Inputs:

-Tools: \$125 -Seeds: \$125

Total cost of farm for two years: \$10,000

\*All estimates provided by 52 Kids Foundation

52 Kids has also offered supplemental funding as available