ODFL Project Prospectus

Small Animal Husbandry Facility

Manyesa, Malawi

PROJECT NAME:

Manyesa/KEF Small Animal Husbandry Facility

PROJECT SUMMARY:

This project will build a facility to raise goats and chickens in the village of Manyesa, Malawi. The goats will produce milk and the chickens will produce eggs, both of which will be used to help feed the children in the village's school. Excess milk, eggs, chickens, and goat meat will be sold in local markets to help fund teachers and operations at the school. The project will be overseen by the Kasimu Education Fund Committee that helps manage the Manyesa village school. The overall goal of the project is to help the village of Manyesa achieve economic self-sufficiency by 2018, while still ensuring its capacity to operate its school. ODFL's investment will be $10,000.

PROJECT PARTNERS:

One Dollar for Life (ODFL); Kasimu Education Fund (KEF).

One Dollar For Life helps American students and philanthropreneurs build classrooms, medical clinics and other small-scale infrastructure projects in the developing world from donations as small as one dollar (hence its name). Since its founding in 2007, ODFL has completed 92 such projects in nine of the poorest countries in Asia, Central America, and Africa. ODFL is a registered 501(c)3 non-profit with principal offices in Palo Alto, CA.

The Kasimu Education Fund was founded in 2005 to help provide secondary school scholarships to students in the village of Manyesa, Malawi. Since then, it has helped fund the construction of two elementary school and three high school classrooms in the village. Additionally, it has funded the construction of 17 latrines and provided daily food supplements for the village's 1,400 children. KEF is an IRS-registered 501(c)3 non-profit with principal offices in Mountain View, CA.

PROJECT MANAGEMENT:

One Dollar For Life

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Kasimu Education Fund

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PROJECT DATES:

May 2017 – August 2018

ABOUT THE COMMUNITY:

Malawi is the 4th poorest country in the world. The per capita income is $2.46 per day. In rural areas, such as the one this project addresses, it is much less. The village of Manyesa is part of the Zomba administrative district in the southeastern part of the county.

The community consists of the village of Manyesa itself, together with 15 other small "sub-villages," all within 3 kilometers walking distance of Manyesa. They include the smaller villages of Khoza, Pamdera, Lihaka, Nsomera, Chirombo, Kundembe, Kwalimbila, Kuzphazi, Malili, Mbatata, Dumisa, and Chingolo. All together these 16 communities include some 7,000 people. In addition to the school there are several

small shops, 6 restaurants, 2 boarding schools, 1 small medical clinic, and 1 prison. All of these people and organizations are target markets for the eggs and meat produced by the project.

In 2006, the Kasimu Education Fund began a program of educational development for the village. Over the next 10 years it would fund construction of two elementary school classrooms and three high school classrooms. Additionally, it funded solar electrical systems to light the classrooms and operate a few computers, 17 latrines for the students and staff, scholarships for graduates to attend national teacher and nursing colleges, and a food program that today feeds some 1,400 children per day. By all measures, these investments have proven extraordinarily successful. More than 20 of the village school's graduates have already gone on and completed a national college degree. Eight have returned and are teaching in the Manyesa school today.

Since 2008, ODFL has participated in various parts of these projects including helping fund classrooms, desks, solar electrical systems to light the classrooms, scholarships for graduates to attend national teacher's college and more. The overall operation of the school is overseen by the Kasimu Education Fund Committee, which includes Construction, Operations, and Scholarship sub-committees. All committees are staffed by village members. All produce auditable reports of their financial operations.

ABOUT THE PROJECT:

The project is one component of a larger, three-part campaign, the purpose of which is to provide the village a path to economic self-sufficiency by 2018. One component of the campaign is a drip irrigation system intended to double the production of maize (corn) which is the village's nutritional staple. The second component is a grind mill which will grind the corn into flour suitable for cooking and for feeding livestock. The capacity of the mill will be sufficient that the operators can take in grain from surrounding farmers and mill it at a modest profit. KEF has already secured a commitment for funding of the mill from the Lowney Foundation. This is the highest cost part of the entire project.

The third and present element in the larger project will use the corn raised by the drip irrigation system and ground in the grind mill to feed chickens for eggs and goats for

milk. It will require construction of chicken coops and goat pens and then the raising and harvesting of 2,000 chickens and 50 goats. Half of the chickens will be Layers, producing eggs. The other half will be Broilers which will be sold for meat.

The combined purpose of all of these projects is three-fold:

- Provide a reliable source of high quality protein to the children of the school
- Earn income through which to pay the teachers and other expenses of the school
- Offer vocational training and eventual employment to the children of the school

The school has donated a small parcel of land adjacent to the school on which will be built a combination of chicken coops and pens for goats. Students from the school will be able to work in the facilities, first as a laboratory for learning agricultural practices, and then, in limited numbers, for sustaining employment. For details on all the financial elements discussed in the following paragraphs, see Tables 1 – 4, following.

The chicken coops will be of such size as to be able to raise 1,000 layers (for eggs) and 1,000 broilers (for eating) at one time. It is estimated that 80% of the layers are laying at any time. Construction of the chicken coops will cost $5,100. Construction of the goat pens will cost $3,100. The typical productive Layer lays 280 eggs per year. Each egg sells in the Manyesa (Zomba) area for between 70 and 90 MK depending on the size and grade. Therefore, it is estimated that the layers will produce 224,000 eggs per year ((1000 * 80%) * 280) for a revenue equivalent of MK17,920,000 (224,000 * 80). At the current exchange rate of MK725 = USD1, that is approximately $24,700 per year. Additionally, the layers can be sold at the end of a year for a small sum that more than recoups their acquisition cost.

Broilers are raised for their meat and do not lay eggs. It takes 8 weeks for a broiler to grow from a chick to being fully grown and ready to be sold. This makes 6.5 raising/harvesting cycles per year. A fully grown broiler sells in the Manyesa (Zomba) area for approximately MK3,000. An estimated 90% of broilers survive until maturity. Therefore, it is estimated that the broiler-raising side of the operation can

produce MK17,550,000 (1000 * .9 * 6.5 * 3000) At the current exchange rate of MK725 = USD1, that is approximately $24,200 per year. See Revenue model in Table 2 for details.

The costs for construction of the chicken coops are detailed in Table 1, below. The costs for the Layers and Broilers are detailed in Tables 2 and 3 respectively, below. The combined profits from the sales of eggs, Layers and Broilers after deducting all known costs are detailed in Table 4, below. Summarizing from Table 4, the operation of the chicken raising facility is projected to produce a profit-equivalent of $30,100 the first year. This is called "profit-equivalent" because not all the product is expected to be sold at market prices. Rather, it will be devoted to feeding the school's students, with only the excess product being sold. The exact amount for each destination is still being worked out. But the point to be commended is that it appears there is sufficient "profit" in the operation to enable it to be self-sustaining after the first year.

The elaboration of the Goat Revenue Model is still underway. It is expected to be completed by May 13, 2017.

Together, the three components of the overall self-sufficiency project produce a full-cycle protein delivery system which should be economically viable at current market conditions and not need further investments beyond the current cycle. As such, it meets the overall objective of helping the village achieve economic self-sufficiency by the year 2018, while still providing sustaining support for operation of the school.

EVALUATION:

We rate this a <u>High Priority</u> investment based on these factors:

- Fact that funding has been secured for the grind mill part of the larger project
- High impact the project will have on students' diets
- Contribution to economic self-sufficiency for the village
- Contribution the project will make to village school curriculum
- Employment opportunities afforded school students
- KEF's successful track record as a steward of ODFL investments

Table 1

Startup Costs

Description	Quantity	Price per Item	Total Amount
Rolls of mesh Wire A98	2	MK 145,000	MK 290,000
Rolls of chicken wire	2	MK 45,000	MK 90,000
Bags of Cement	200	MK 6,750	MK 1,350,000
Blue gum poles	50	MK 1,800	MK 90,000
Padlocks	9	MK 9,500	MK 85,500
Door Frames	9	MK 28,000	MK 252,000
Rolls of DPC Paper	25	MK 2,500	MK 62,500
Roofing Nails	50 kg	MK 1,800	MK 90,000
2 X 6 X 18 Timbers	45	MK 7,500	MK 337,500
Iron Sheedts 12 ft	50	MK 10,200	MK 510,000
Wire Nails 6d	20	MK 1,050	MK 21,000
Wire Nails 4d	15	MK 1,050	MK 15,750
Solignum	10	MK 9,500	MK 95,000
Bricks	3000	MK 15	MK 45,000
Labor			MK 350,000
Total			**MK 3,684,250**

Table 2

Profit/Loss Model for Chickens (Layers)

(Does not include costs for chicken coop structures)
(See Table 3 for comparable model regarding broilers)

Revenue, Layers

# Layers		1000
% productive		80%
Productive layers		800
Eggs per productive layer		232
Eggs per year		185,600
Price/egg (MK)		MK 70
Egg revenue per year (MK)		MK 12,992,000
Exchange rate, MK/$		725 MK/$
$ value eggs per year	**$**	**17,920**

Sale of exhausted layers

% still alive at end of year	70%
# available for sale	700
Price per exhausted layer	MK 2,500
Layer revenue per year (MK)	MK 1,750,000
Exchange rate, MK/$	725 MK/$

$ value layers per year	**$**	**2,414**
Total revenue, eggs + layers ($)	**$**	**20,334**

Costs, Layers

Acquisition cost per chick (MK)	MK 500
# Layers	1,000
Acquisition cost for stock (MK)	MK 500,000
Feed, Starter, Kg	4,313 kg
Cost per Kg	445 MK/kg
Feed, Starter cost (MK)	MK 1,919,285
Feed, Finisher	24,312 kg
Cost per Kg*	MK 445
Feed, Finisher cost (MK)	MK 10,818,707
Veterinarian	MK 175,000
Packaging for eggs	MK 257,778
Total Costs, Layers	MK 13,670,769
Exchange rate, MK/$	725
Total cost layers per year ($)	**$ 18,856**
Projected profit, Layers per year ($)	**$1,478**

* 1.5 lb/week*(454grams/lb)/(7 days/week) x 365 days x 1000 chickens

Table 3

Profit/Loss Model for Chickens (Broilers)

Revenue, Broilers

# Broilers	1,000
Survivors	80%
Broilers available for sale	800
Price per broiler (MK)	3000
Broiler revenue per 8 weeks (MK)	MK 2,400,000
8 week intervals per year	6.5
Broiler revenue per year (MK)	MK 15,600,000
Exchange rate, MK/$	725 MK/$
Total revenue, broilers per year ($)	**$ 21,517**

Costs, Broilers

Acquisition cost per chick (MK)	MK 320
# Broilers	1,000
Acquisition cost for stock (MK)	MK 320,000

Eight week cycles per year		6.5
Total cost of acquisition per year		MK 2,080,000
Feed, Starter Kg*		8,125 kg
Feed, Starter Cost per Kg		445 MK/kg
Feed, Starter cost		MK 3,615,625
Feed, Finisher Kg		18,428 kg
Feed, Finisher Cost per Kg		445 MK/kg
Feed, Finisher cost		MK 8,200,238
Veterinarian		MK 175,000
Broilers cost per year (MK)		MK 14,070,863
Exchange rate, MK/$		725 MK/$
Total costs, broilers per year ($)	**$**	**19,408**
Projected profit broilers per year ($	**$**	**2,109**
(= Total Revenue - Total Cost)		