

## One Acre Fund Field Visit Notes

Two Focusing Philanthropy team members, Jason and Larry, visited the One Acre Fund headquarters and selected program sites in and around Bungoma in western Kenya, on June 24-26, 2015. We had a follow-up meeting to discuss the country rollout practices and status on July 2 at the OAF Nairobi office.

Program visit highlights:

### Stop 1: One Acre Fund's Kakamega crop research station

- 13 acre site with many small testing fields
- One of several such research stations where seeds, fertilizers, and various planting methods are tested prior to being piloted on actual farmholder properties
- Kakamega focuses on testing different combinations of maize varieties, fertilizer mixes, and lime to find the optimal combination for OAF's farmers in the area
- Also testing different "intercrop" plantings (planting in the spaces between rows of maize), with an emphasis on beans, to increase total yields from farmer acreage while diversifying their diets and hedging market dependence on maize
- Also saw test beds for "top-up" crops, including onions, kale (collards), carrots, millet
- OAF's interest in other crops besides maize is as a hedge against maize blight and as a way to diversify farm family diet. Intercropping is also the most efficient way to increase crop yield per acre of farm land.
- We discussed the research methodology and the detailed but easily understood instructions given to researchers to assure research fidelity and efficacy. Instructions were on a OAF staff person's tablet (which we looked at) but were also obviously well understood by several other research station staff and participating farmers
- Research conducted at Kakamega is the first step in the process of developing new farming techniques that are ultimately rolled out to all OAF farmers in the area. The three stages in introducing a change or augmentation of the program are (i) tests at a research station, (ii) provisional roll-out to a sample of farmers, and (iii) widespread roll-out
- We visited the farm of a OAF farmer participating in tests of intercrop

alternatives. He and his family were fully aware of (and were applying) the research protocols. They expressed strong commitment to the tests and to OAF in general.

- Other research stations are focused on trees (intended to provide a source of lumber to farmers), cattle/poultry (for purposes of diversifying farmer diets and providing additional source of income), and other maize/intercrop tests.
- Farmer meeting of research participants held while we were at the research station. ~15-20 farmers in attendance. Most seemed highly engaged

#### Stop 2: Farmer meetings near Bungoma

- Observed parts of two farmer meetings led by Field Officers held on location on farm properties of program participants. One was a standard meeting of four groups (average 10 farmers per group); the other was a group participating in a test of the all-electronic payment system (see below).
- Primary focus at both meetings was the status of collections of farmer repayments as the September payment deadline approaches and in light of the shift to an all-electronic payment system. The second of the two meetings included interviews with some farmers about their experience with the new mobile phone based payment system conducted by a member of the OAF product innovation team. She followed a pre-established written, interview protocol and was subsequently drawn out regarding her observations and recommendations by her boss who also joined the visit to this trial district meeting. The interview and debrief each showed skill and likely effectiveness. The process highlights the methods by which OAF obtains feedback from its farmer participants that is used to make program improvements.

#### Stop 3: Headquarters Offices in Bungoma

- Walking tour of the offices in two compounds and an office building provided an overview of the operations and general sense of the culture of the staff. Conditions were crowded but clean and seemingly efficient. Personnel who described the roles of different departments were knowledgeable.
- ~280 HQ personnel spread across several buildings/compounds. OAF is now building a new compound in Kakemega to which all HQ staff offices will be relocated, with a substantial number of personnel also living on site.

#### Stop 4: OAF Regional Warehouse

- Visited one of six warehouses where inputs (seeds, fertilizer, etc.) are received after purchase by OAF and stored for later delivery to program participants.
- Estimated size ~2,000 sq. meters
- Tour conducted by head of all warehouse and delivery operations
- Primary products warehoused include::
  - Maize seed
  - Fertilizer
  - Maize storage bags
  - Drying sheets
  - Kale seeds
  - Non-agricultural products (e.g. solar lights, cookers)
  - Motorcycles
- Ag inventory now in the warehouse is the surplus/buffer left over from last planting season distributions. Magnitude of the “left-over” inventory is a function of the inability to precisely forecast farmer demand and the need for an incremental cushion so any broken bags, etc. are replaced before delivery to farmers (thereby assuring perception of high quality service/product). At other times of the season, such as prior to planting, warehouse is used to stockpile inputs that are purchased in bulk quantities or off-peak times at advantageous prices and terms.
- Internal inventory audits conducted weekly, independent audits conducted quarterly, of which the first such was 12/31/14
- All work in the warehouse is done by hand, including receipt and stacking of heavy bags of seed and fertilizer (stacked ~15 feet high when warehouse is full).
- Deliveries are by contracted trucking services with annual bids to select contractors. Selection process includes two site visits to each contractor to confirm adequacy of fleet.
- Warehouse security includes cameras, alarms, contract guard, and presence of rented warehouse within a government compound of ag-related warehouses

Farmer comments about the OAF relationship/program included the following positives. We did not hear negative feedback from any farmers we interacted

with, likely also reflecting OAF's strong effort to keep "Farmers First," to listen to the "voice of the farmer" both informally and formally, and to relate to the farmers as customers rather than charitable recipients.

- Farmers like the shorter distance to travel to obtain farm inputs (seed and fertilizer) from OAF than previously and the certainty that promised inputs will be delivered on time.
- The new mobile phone based payment system, called “M-Pesa”, is popular because the farmer is confident that payments will be properly applied (no risk of theft) and acknowledged (via text).
- Participating farmers are a key source of recruitment of other farmers.
- All farmers with whom we interacted spoke of the higher level of food security and diversity and most spoke about the broader income they can generate.

Institutional updates include the following:

- Kenya operations
  - 136,000 farmers versus goal of 145,000
  - 85% of country costs covered by country (farmer) revenue
  - 813 field officers (“FOs”) averaging 167 farmers/FO
- Tanzania operations
  - 14,000 farmers
  - Field officers averaging ~81 farmers/FO
- Country rollouts
  - Likely next expansion candidate is Zambia, with Myanmar, Cameroon, Ivory Coast and Birkin Faso candidates thereafter. (Michael Hudson provided a complete overview of the country expansion practices, goals and status, along with country-specific updates on Tanzania, Malawi and Uganda. The update was supported by a dozen Power Point slides which are not summarized here but which we have in our files.)
- Finance
  - Currency risk
    - Seed & fertilizer bought in US dollars as is working capital borrowing
    - Farmer repayments in local currency. Farmer repayments approximately equal local operating expenses paid in local

currency, which provides a natural hedge against currency value fluctuations (when measured in USD terms, currency losses realized on farmer repayments are offset by efficiency gains in operating expenses when local currency loses value, and vice versa).

- Audit
  - First independent audit of inventory (farm inputs, non-ag products, etc.) done at year-end 2014 by PKF, one of largest East African firms. PKF audits now conducted quarterly. Internal equipment audits performed weekly.
- Wherever mobile payments technology exists, OAF is shifting mobile payment schemes for all farmer payments, following extended field trials. This eliminates all cash handling vis a vis farmers by FOs and other OAF personnel. In Kenya, OAF is using the ubiquitous M-Pesa payment system that is part of the offerings of the country's major mobile phone provider Safaricom. Because payment collection is a large draw on FO time, the introduction of mobile payment systems dramatically improve the FO's ability to service larger farmer groups, reducing overhead expenses and allowing OAF to scale its operations faster in locations where mobile payment systems exist.
- Losses from theft and spoilage now ~ 0.5%; employees are held personally responsible for "inventory shrinkage" in areas for which they have responsibility.
- Working capital
  - Peak w/c is ~\$8,000,000 in 2015 with highest needs in late July to early August. Given rapid expansion of OAF programs into new areas, the w/c need is expected to grow materially over the next 5 years. OAF is currently working to secure access to a reliable w/c financing facility to support forecasted growth.
  - Average cost of capital is ~6%
  - Current lenders include (maximum capacity under line):
    - New Island Capital \$1.2mm
    - MCE Capital \$1mm growing to \$4mm
    - KIVA \$1.5mm
    - Calvert Foundation \$1mm
- Discussions with potential lenders

- Skoll
- IFC (International Finance Corp) of World Bank
- OPIC
- Other risks
  - Previous drought insurance now broadened to be yield insurance; written by Cingent and re-insured by ER
    - As OAF is involved in sale of products to farmers, tax authorities periodically consider whether OAF should be treated as a tax-exempt entity
    - OAF's 60 expatriate employees in Kenya are among the country's largest such numbers. Part of the reason for the high number is that experienced Kenyan managers are in such demand that they command higher wages than OAF can afford, making equally experienced ex-pat employees less expensive in certain positions.

#### Key personnel met

- Anna Sosdian, Corporate Operations Manager +254 701 964 637
- Randy Coutts Global Payments Manager (or Global Finance Manager) +254 701 009 752, [randy.coutts@oneacrefund.org](mailto:randy.coutts@oneacrefund.org)
- Francesco Valente, Program Manager (Scale Innovations) +254 0706 368 522, [Francesco.valente@oneacrefund.org](mailto:Francesco.valente@oneacrefund.org)
- Kalie Gold (head of M&E)
- Andrew Wanyonyi (runs warehouses and distribution)
- Arnold Chenge (either the scale or product innovations group) accompanied us at most of our meetings
- Michael Hudson, Director of New Country Expansion, +254 (0)716 340 194, [Michael.hudson@oneacrefund.org](mailto:Michael.hudson@oneacrefund.org)

#### Photographs



At the Kakamega research station, various tests are conducted with a goal of optimizing crop yields.



At Kakamega, a fertilizer is tested on a particular strain of maize seed on one maize plot (right). An identical control plot (left) does not use the fertilizer. At harvest, the yields of the two plots will be compared to determine the efficacy of the fertilizer. A similar process is repeated for many types of tests.



Intercrop planting a key area of focus for OAF as it attempts to maximize crop productivity. Here beans are planted among rows of maize.





The results from the research station are tested in the field on actual farmer plots whose owners agree to participate in the testing process. Field agents use tablet-based software to measure test plots and control plots, and submit harvest data for analysis. Accuracy is ensured by a very precise measurement protocol described in detail to the field agent through the tablet application.



An OAF field agent weighs the harvest from a test plot and records it for analysis. This process is repeated on thousands of farmer test plots before conclusions about farming methods formed. Those conclusions will result in wide scale rollout of product innovations to all farmers in the following season.



A farmer in Bungoma shows us around his fields and describes the favorable experience he's had with OAF. This farmer assigns great value to the quality and delivery reliability of OAF inputs.





OAF manages a large warehouse in Bungoma where inputs are stored for delivery during the growing season. Prior to the season this warehouse will be stacked half way to the ceiling. The delivery of inputs to farmers is a major logistical challenge that OAF has necessarily mastered as part of its commitment to scalability.



Field agents interview farmers to discuss relevant issues relating to OAF program effectiveness. Here a farmer is interviewed about the M-Pesa repayment program. He describes some challenges he's experienced in trying to reach support representatives (long hold times, etc.). This information will be used to improve OAF's systems prior to full blown rollout of the M-Pesa payments program to all farmers.



Regular farmer meetings a routine part of the OAF program. Farmers discuss repayment progress and are taught best farming practices relating to this time in the harvest season.