

How Peanut Butter *(and other products)* Transformed Livelihoods, Conservation and Health in the Luangwa Valley, Zambia





Community Markets for Conservation (COMACO Ltd.)

66,995 farmer members

Sales in 2012-13FY: \$2.71 million



A brand promise of delivering healthy, pesticide-free food products derived from farmers who feed themselves, take care of their soils, and stop poaching.



Organizational elements:



Lead farmers: 1,139

Bulking centres: 259

Community trading depots: 58

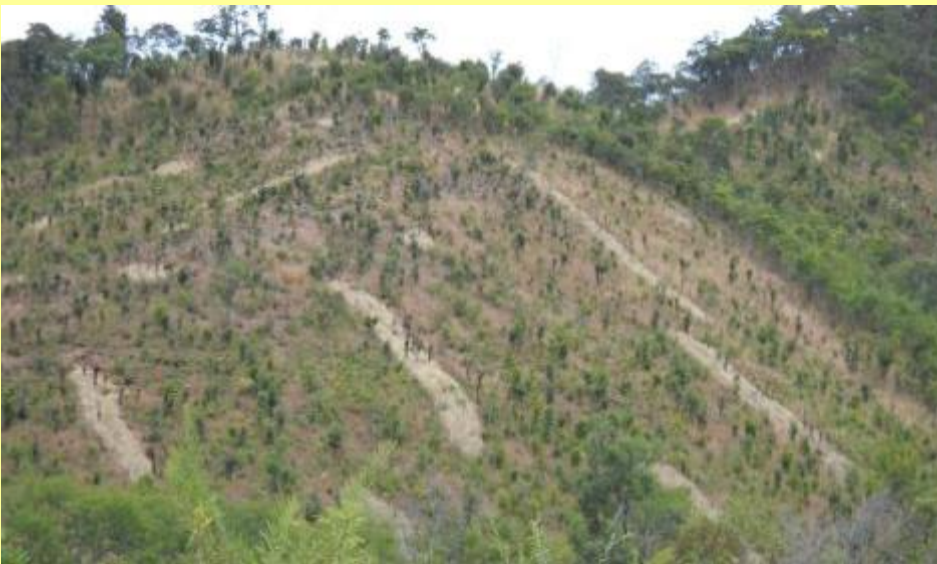
Farmer Support Centers: 7

Manufacturing hubs: 4

Sales and distribution centres: 2

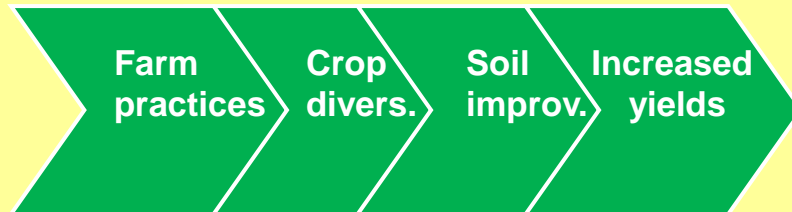


Land use Practices and Environmental Threats



The transformation process...

Small-scale farmer



Transaction
at local
depots

Business



Conservation incentives



COMACO Farming: The **Wrong** Approach



- **Non-food crop farming**
- **Mono-culture approach with dependence on fertilizers and pesticides**
- **Long fallow period**



- **Ridge-farming, high labour**
- **More prone to drought**
- **Low yield without fertilizer**
- **Poor understanding of soils**

COMACO Farming: The **Right** Approach



- Low tillage, water conservation
- Crop rotation with legumes using agroforestry
- Mulching
- Composting
- No-burning



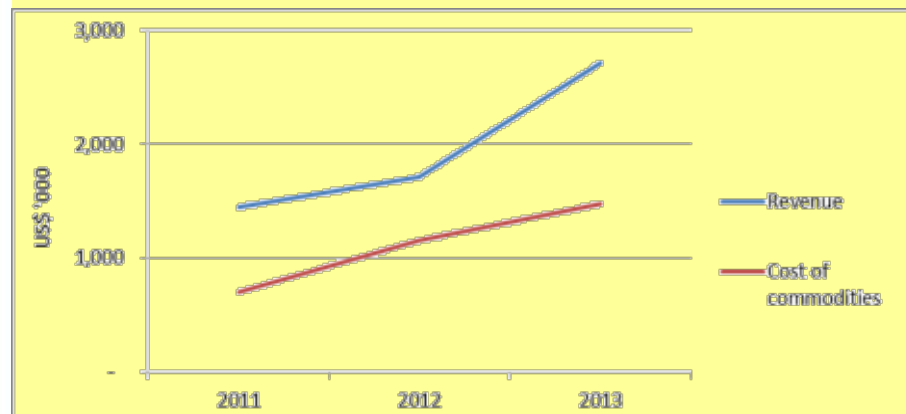
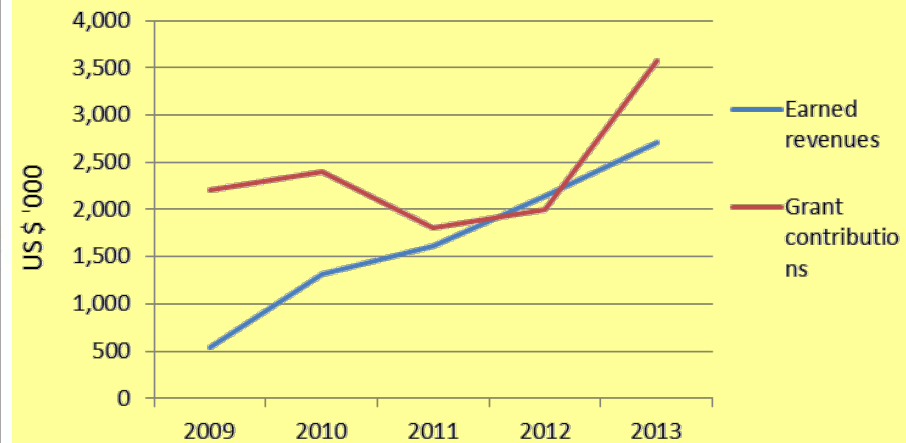
The business behind the transformation process



COMACO Bulking Stations for 2012/2013 Buying Season



Cost to service a farmer: \$30-35/yr



Fire Detection: Vegetation Change in COMACO (Chikomeni) and Non COMACO Area (Chinunda)

Legend

Vegetation Cover Change 2005-2011

- Black: Background
- Red: Decreased
- Green: Increased
- White: Unchanged

Chikomeni

Chinunda Area

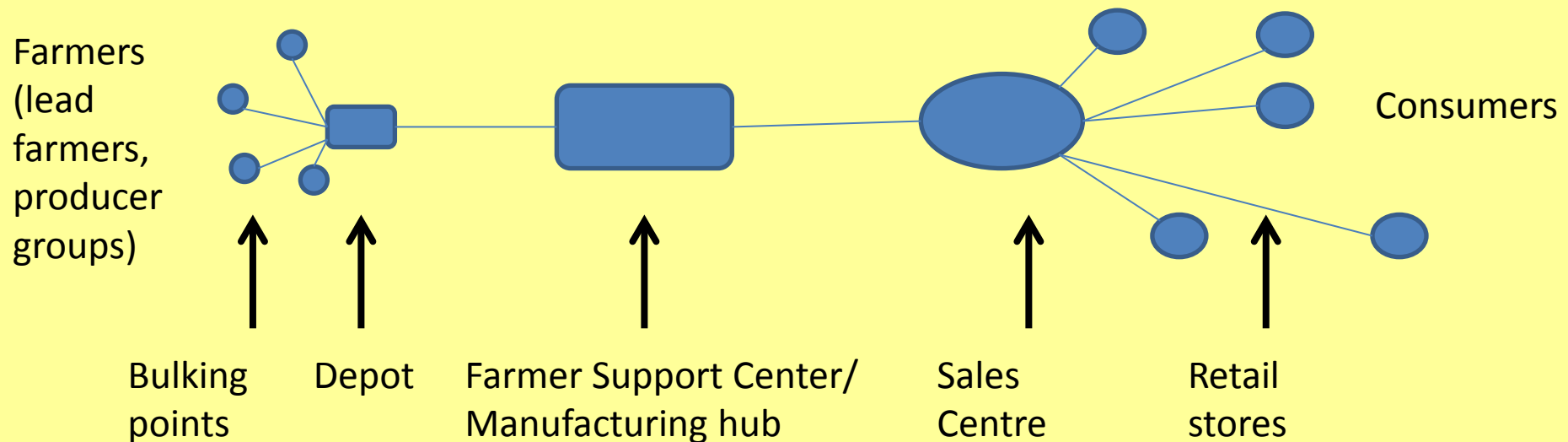
Data Source: MODIS Fire data, MODIS NDVI Data, all data from <http://gfc.umsa.umd.edu/data/mv/>

Map Produced by Data and Research Search, COMACO, 2012



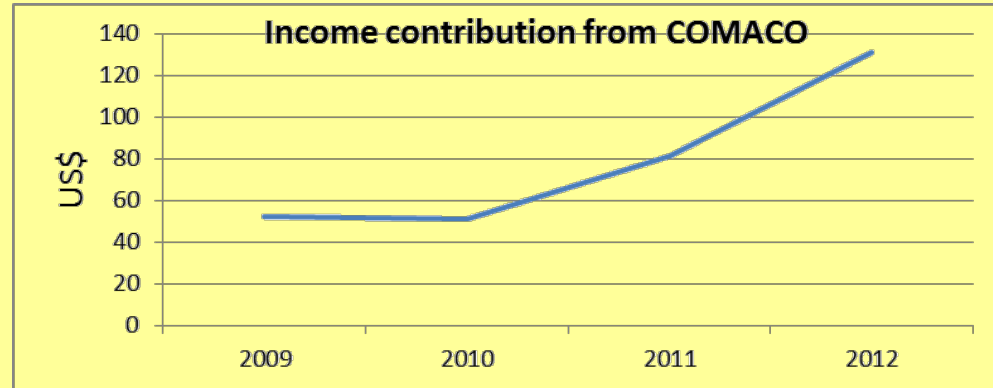
“Broad-stroke” livelihood impact

- Food insecurity led to hunger and poverty.
- 50% of children in Eastern Province are underweight
- Zambia’s fertility rate is 6.2 children per family with low contraceptive use
- Health outposts are often 12 kilometers from the community
- Need to link health, food security, markets with conservation



“Broad-stroke” livelihood impact


- **Increased food-crop yields (30-40%)**
- **Increased income and income source**



- **crop diversification**
- **65% adoption of sustainable agriculture practices**
- **group knowledge sharing,**
- **increased leadership activity by women,**
- **increased family stability**

Added social impact from the COMACO approach


Health and Family Planning
Types of birth control which are FREE!



1. Rhythm Method

- No cost!
- Works **ONLY** if both partners **AGREE!**
- Does not prevent STDs
- Must have very regular cycle of 28 days
- Must use calendar **EVERY MONTH**

First day of menstrual cycle:




☺ days which are OK to have sex (it's ok to have sex while menstruating! Just wash after!)

✗ days to abstain or use protection, or have sex **WITHOUT** penetration of vagina

2. Sponge Method

- Little cost!
- Does **NOT** work every time, but can be used when no other method is available



Wet a small piece of sponge with one of these liquids:

- 2 tablespoons vinegar in 1 cup clean water
- 1 teaspoon lemon juice in 1 cup clean water
- 1 spoon of salt in 4 spoons clean water

Push the wet sponge deep into your vagina before having sex. You can put it in up to 1 hour before. Leave the sponge in at least 6 hours after having sex. Then take it out. If you have trouble getting it out, next time tie a ribbon or piece of string to it that you can pull. The sponge can be washed and used again, many times. Keep it in a clean place. You can make up the liquid in advance and keep both sponge and liquid in a bottle.

Better Life Books: covers tops of agriculture, off-farm income activities, nutrition, family health, family planning

Distributed to over 3000 producer groups

Hoe Conservation Farming: land preparation and fertilizing with compost



Equipment Needed: Chaka hoe, weeding hoe, fertilizer cups, Teren rope, 90cm row sticks, pags.



Residues: Don't burn. Erosion is reduced and run-off is reduced so rainwater is held in field.



Termites: Harvest residues and add organic matter to soil.



Chaka Hoe: Blade must be at right angle to shaft and firm. Learn how to fit blade and swing hoe properly.



Digging Basins: 50cms across row between centres of basins, 70cms between centres in the row



Depth & Length: 20cms deep to break pans. 30cms long (foot length) to accommodate different crop seeds. Width of Chaka blade.



Lead farmers direct the use and training from these books

Supplemented by radio broadcasts

Fueling social impact with partners (Balance Project and Flex Fund)



- Lead farmers (Adult Peer Educators) have become agents for local clinics to distribute family planning products
- MOU with Ministry of Health for COMACO to be agents of local clinics for FP products
- Thousands of women now understand their reproductive health and many are able to avoid pregnancies
- 1000's of condoms and 100's of pills distributed to current users. Hundreds of referrals for new users.
- 2.5 year program and cost \$90,000



Other partners

General Mills: R&D for new products, food safety, supply chain, production design, etc.

Cornell University: R&D for new products, food safety, village chickens research, social surveys

USAID and Royal Norwegian Embassy: Compliance standards, M&E support

Cquest: Carbon market development



Summary - What have we learned?

- It starts with loving the farmer (stop vilifying the poacher!)
- Focus on food security and soils
- Value-added markets, as opposed to commodity markets, will probably drive the COMACO approach
- Consumers can be integrated into the solution with the right marketing and with good products
- Small farmers can be our best conservation allies
- COMACO structure provides important avenues for on-going social improvement

Summary - What have we learned?

- **Science and technology are available through partners who see opportunistic synergies with COMACO**
- **Needs a corporate governance structure accountable to a business plan and the Brand Promise**
- **COMACO is a robust, holistic model that reduces donor costs over time**
- **It requires donor support for a least 10 years with a commitment of \$10-15 million**
- **Conservation results are largely a zero-cost by-product, enhanced with compliance related, added incentives**

Challenges

- Sustainability requires scale, introduces risks and increased costs and complexities
- Commitment to a supply chain originating from small farmers, often in remote places
- Requires highly talented, motivated professionals to lead it and manage it – can be hard to find such people
- Complex approach that is cross-cutting and requires broad understanding of different disciplines

Challenges

- **There will be disasters, need to have a strong team to weather through**
- **Difficult to find investors and not easy to sustain growth with a model that is not purely for profit**
- **There is urgency to grow the model because environmental clock is ticking, investors tend to think purely business and risk avoidance**
- **We need more social capital in the market to help finance enterprises like COMACO**

