

A model for promoting a versatile crop that has remained minor: the case of soybean in Kenya



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Agronomy: Soybean intercropped with maize



Community Training on soybean processing



Soybean marketing



Soybean grains and processed products

Take Away Message

Benefits of soybean

Livelihoods: Important food, feed, oil and cash crop.

Soil fertility: Fixes 40-120 kg N from atmosphere.

Savings: On farmer investment in mineral fertilizers.

Nutrition and health: Has 40% protein, 20% oil, no cholesterol, and omega 3 fatty acids that reduces the risk of chronic diseases (e.g. HIV).

Contributions to MDGs

The project contributes to:

- Eradication of extreme poverty and hunger (**Goal 1**)
- Empowerment of women (**Goal 3**)
- Improvement of child nutrition (**Goal 4**)
- Improvement of cleanliness, sanitation, health, mothers nutrition (**Goal 5**)
- Improvement of health and nutrition, increase in income and reduction in susceptibility to HIV (**Goal 6**)

Successes in sub-Saharan Africa

The Nigeria case:

- Doubling of yields from 340 kg ha⁻¹ to 740 kg ha⁻¹.
- 170% increase in production.
- 228% increase in number of farmers cultivating soybean.
- 150% increase in soybean products available for sales and consumption.
- 900% increase in soybean processing companies.

The Zimbabwe case:

- From 55 participating smallholder farmers in 1996 to 50,000 in 2006.
- Wide spread processing and consumption of soymilk, soy yogurt, and other soy products.
- Use of SoyCow (soymilk making machine) by groups of small farmers to generate incomes at cottage industry level

Reasons for the successes

A combination of methods including: collective action • processing and development of cottage industries • value addition • product branding • marketing • information exchange • good agronomy • community involvement • trade and credit facilities •

Failures in sub-Saharan Africa

Failures in Kenya in the past were contributed to by lack of awareness on processing, utilization, low yield, lack of market, weak policy support, and low prices.

Learning from the past: a reflection of soybean failure in Kenya

There is need for understanding the reasons for:

- Successes in Nigeria and Zimbabwe
- Failure of earlier soybean development in Kenya

Using the understanding to:

- Create a model 'three-tier-approach' for sustainable soybean promotion in Kenya, supported by a Strategic Alliance of Stakeholders and extensive training, capacity building and awareness creation.

Objective

Maximize the use and benefits of soybean through improved agronomy, marketing, processing, value addition, nutrition, training, outreach and income generation in Kenya.

Materials and Methods

The use of a three tier approach for soybean market development supported by three pillars: strategic alliance of all stakeholders, extensive training and capacity building, and awareness creation on all the benefits of soybean at all levels.

The three-tier-approach

This model is about intervening at household level, community level, and linking soybean producers with large-scale feed and food industries that use soybean for manufacturing but presently import large quantities of soybean used for manufacturing.

The first tier focuses on the household-level production and aims at training household members on ways of processing and consuming soybean.

The second tier focuses on the community level. Surpluses of soybean production at household-level are absorbed here and processed into: soymilk, yogurt, soy bread, cakes, biscuits, etc. This prevents produce glut at household-level that could become

a disincentive to further production, capable of stalling the whole process.

The third tier, also known as industrial level soybean market development involves linking farmers to large-scale feed and food processing companies and industries for import substitution and to clear the market at prices determined in the Strategic Alliance meetings for different product qualities.

Pillars for the three tier approach

Strategic alliance

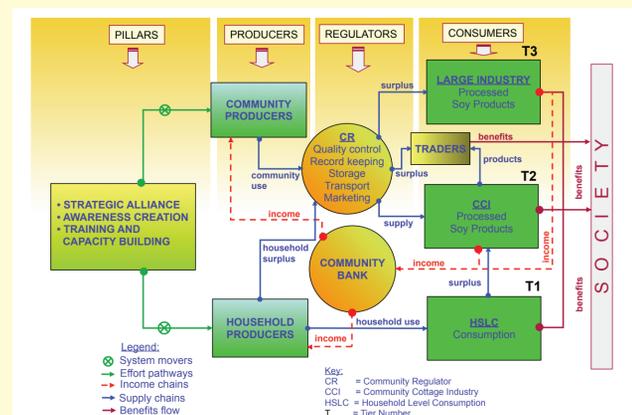
Members of the alliance include: input dealers • researchers • credit providers • information organizers and disseminators • NGOs • social workers • government ministries • community banks • quality controllers • large scale and cottage industries • processors and traders.

Awareness creation

This is with respect to agronomy, post harvest activities, marketing, nutrition, health, competitiveness, profitability, natural resource management and cost savings.

Capacity building and training

This is carried out to ensure the sustainability of the concept and approaches in all the tiers.



Diagrammatic representation of the three tier approach

Results so far

- The model has increased the confidence of Kenyan farmers to produce soybean (over 4000 individual farmers)
- Thousands of farmers' groups (over 300 farmer networks) and individual farmers are presently benefiting from this approach and are beginning to take advantage of all the benefits (food, feed, oil, cash crop, soil fertility improvements, etc.) of soybean
- The organization of stakeholders in a strategic alliance to strengthen the model is yielding numerous benefits (e.g., increase in income, availability of credit for farm inputs, availability of farm inputs, assurance of market at

mutually agreed prices, ready availability of market information, public-private partnership)

- Interest of large-scale feed/food processing companies rekindled (e.g. BIDCO, NUTRO, SOYAFRIC, FARMERS CHOICE)
- 572 farmer/patient groups trained on food fortification, incorporation, stand-alone-ready-to-eat products, nutrition, hygiene and sanitation, and business management
- 4 to 14 times increase in net returns from value addition (soy milk production)
- Employment generation

Key Next Steps

1. Scale out/up to all east and central Africa region
2. Increase participation of micro-finance agencies
3. Increase the involvement of the youth



Acknowledgement: This project was funded by the Rockefeller Foundation, Nairobi, Kenya

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