Who we are, what we do and opportunities to collaborate with ICRISAT

Dr. Ian Barker, 31st March 2017
Who & how

- Non-profit Swiss foundation
- Core funding from Syngenta
- Independent organization
- Always works in partnerships
- 75 staff worldwide
- Over 30 years’ experience
- Focuses on «pre-commercial» smallholders
- Focuses on scalable innovations
- Catalyst and incubator
- Hands-on involvement & partnership grants, not classical donations
What & where

Mission
To create value for smallholders in developing countries

Two key topics
1. Raising yields
2. Linking farmers to markets

Key intervention areas
• Insurance & finance
• Farmer Support Services
• ICT
• Seeds

Current main partnerships East & West Africa, South & South-East Asia
Partnerships that deliver

SFSA brokers partnerships that tackle specific issues

We work with (for example)

• CGIAR
• NARS
• Universities
• NGOs
• Government institutions
• Private companies from numerous sectors
• Investors and Legal Advisors
• Climate change finance organizations
• And, of course, smallholders!

In areas such as
• R&D, breeding, technology transfer, new product development, sourcing, training, finance, business planning, policy development, typically in public-private partnerships
Intervention area – insurance & finance

The example of ACRE (developed by SFSA)

- **Smallholders’ problem:** carry high risk & can’t access credit – reluctant to invest
- **SFSA** develops affordable insurance solutions and credit/savings schemes
- **Smallholder benefits:** reduced risk, willing to invest more in crops (raise yield & income)

www.acreafrica.com
Intervention area – insurance & finance

The example of ACRE (developed by SFSA) – replanting guarantee

1. At the start of the season, farmer purchases insured bag of seeds

2. Farmer opens bag and finds insurance card inside

3. Farmer texts unique code

4. SMS provides farm location and enables satellite imagery monitoring for that location

5. Germination fails after 21 days without rain

6. Farmer receives compensation via Mobile Money

7. Farmers can replant & harvest the same season

www.acreafrica.com
ACRE’s replanting guarantee – geo-referenced map

www.acreafrica.com
Intervention area – Farmer Support Services

- **Smallholders’ problems**: lack of access to modern farming knowledge, technologies and commercial markets. At the same time, companies sourcing from smallholders struggle with the offered quality and quantity of the produce.

- **SFSA** develops farmer aggregation models, service-hubs, provides training, brokers off-taker relationships and links value chain partners to sustainably improve productivity and quality of smallholders’ produce.

- **Smallholder benefits**: improved access to agricultural information, advisory services on modern crop production systems and marketing, stronger market position, increased incomes.
Intervention area – Farmer Support Services

The example of SFSA’s Farmer Hubs

MODEL

SMALLHOLDER FARMERS

Inputs 

Outs

FARMERS HUB (FRANCHISEES)

Inputs 

Outs

CATEGORY SERVICES

Agri Inputs (Seeds & Seedlings)

Farm Tools & Carrying Service

Agri. Info & Advisory Service

Access to Finance (Agri. Soft Loan)

Output Markets & Logistics

SFB (FRANCHISOR)

1. Governance & Bylaws
2. Management & Operations
3. Communication & Promotion
4. Market & Demand Creation
5. Training & Capacity Building
6. Information & Technology Platform
Mechanization Centers (CEMA) in Senegal
The example of SFSA’s Farmforce

**Smallholders’ problem:** off-takers are reluctant to buy from smallholders

**SFSA** developed Farmforce, a cloud-based software platform that makes off-takers’ work easier; increases smallholders’ access to commercial markets by:

- Improving transparency, compliance and traceability
- Reducing risks for the off-takers and farmers
- Helping farmers become more productive

www.farmforce.com
Intervention area – Seed systems ("Seeds2B")

The example of SFSA’s Seeds2B program

- **Smallholders’ problem**: lack of access to quality seeds (yields stay low)
- **SFSA** invests in breeding of neglected crops, technology transfer models for public to private, support local seed production through building markets, investigate adjacent technologies
- **Smallholder benefits**: raise yields, improve income, diversify
Kickstarting seeds markets to close the yield gap

Local seed companies involved in bulking, marketing and delivering improved seed

We work in areas of market or institutional failure, responding to requests for assistance and encouraging the private sector to invest (more crops, more marginal markets)

No need for SFSA: strong private interest

Current SFSA investments: pre-commercial market segment, several years away from private interest

Minimal private interest (no current involvement by SFSA): as seed sectors develop, many crops expected to become more commercial
Seeds2B – four partnership domains to end market failure

Introduce new varieties

Provide financial assistance

Build the market for seeds

Integrate new seed technology

Private local medium-sized seed companies

Enabling partners
Enabling partners

Private local medium-sized seed companies

Introduce new varieties

Build the market for seeds

Provide financial assistance

Integrate new seed technology

Mtanga Farms

Seeds2B – Four partnership domains to end market failure
## Menu of services

- Linking breeders with new seed channels in emerging markets
- Either we work with seed companies on a 1-1 basis, or work at the policy level

<table>
<thead>
<tr>
<th>Matching varieties with local demand &amp; emerging business cases</th>
<th>Conducting local adaptation and marketing trials</th>
<th>Linking breeders to seed companies (B2B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtaining marketing consent and assistance with registration (national/regional)</td>
<td>Developing equitable licensing agreements between breeders &amp; local seed producers</td>
<td>Providing technical support for pilot seed production</td>
</tr>
<tr>
<td>Helping acquire the necessary additional capital to market locally produced seeds</td>
<td>Providing maintenance, technical support, M&amp;E and overall building the market for supplying seeds to smallholders</td>
<td>Analyzing and testing seeds policy</td>
</tr>
</tbody>
</table>
Seeds2B product advancement

Legend: Active SFSA projects

- **R&D**
- **Variety benchmarking/identifying candidates (trialing)**
- **Product advancement (production, commercialization and sale)**

Red framed boxes elaborated in subsequent slides

- **Wheat 2.0**
  - 2014-17 R&D

- **Tropical potato**

- **Potatoes**
  - Mali, Senegal 2016-19
  - Kenya, Indonesia 2015-18
  - Mali, Senegal 2016-19

- **Soybean**
  - East Africa 2014-17

- **Sorghum**
  - Mali 2015-19

- **Beans**
  - East Africa 2014-17

- **Maize**
  - India 2014-17

- **Potatoes**
  - Indonesia

- **Cassava**
  - + seed treatment
  - Mali 2015-19

- **Vegetables**
  - West Africa, ASEAN 2012-onwards

Ownership

- **R&D**
  - 0-3 Concept
  - 4 Prototype
  - 5 Line fixed

PLC Stage

- **Crop Marketing**
  - 6.1 Screening & registration
  - 6.2 Screening, Large Scale
  - 7 Introduction
  - 8 Growth
  - 9 Maturity
  - 10 Decline
  - 11.1 Phase out
  - 11.2 Out of assortment
Pipeline of promising varieties (1/4)

Potato – *Unica*

Breeder – CIP

- Heat tolerant potato for Kenya and the tropics
- Smallholder return: 825 USD/ha

(Smallholder return calculated by SFSA’s *Seeds Impact Model*)
Pipeline of promising varieties (2/4)

AAA maize – *TA5084*

Breeder – *CIMMYT / Syngenta*

- High seed yield (low COGs), three-way drought tolerant hybrid
- State release in Gujarat, Rajasthan, MP Kharif 2017
- Smallholder return: 188 USD/ha
Pipeline of promising varieties (3/4)

Tef – *RIL181*

Breeder – EIAR/ University of Bern (SFSA-funded)

- Semi-dwarf high-yielding tef
Pipeline of promising varieties (4/4)

Soybean: **Dina**

Breeder: **MRI Syngenta** (Zambia)

- Tropically adapted / high yielding / early
- Yielding 4.2 t/ha under Kenyan conditions
- Smallholder return: 428 USD/ha
Where are we now? Dashboard (2013-2016)

263'302 smallholder farmers buying new seeds in 2016

$ 32'477'480 increase in gross margin for smallholders (cumulative)

$ 6'973'476 worth of Seeds2B-introduced cumulative seed sales

86'640 tons of additional food produced (cumulative)

Excludes subsidized seed distribution projects (Rwanda / Burundi)
Seeds Policy and royalty returns

Comesa harmonization:

Van: - ACTESA [mailto:
Verzonden: donderdag 24 november 2016 7:27
Aan:
CC:
Onderwerp: RE: VCU and DUS results

Dear

As soon as we confirm payment, it will take 21 days to register your variety on the COMESA Variety catalogue. You can already start planning your seed production of your varieties using COMESA standards in any of the COMESA member states for marketing next year.

Best regards,

We can open the bottle of champagne. As it looks now by the end of the year we have the first three varieties, registered on the COMESA Variety catalogue. It took some time and energy to go through the procedures but finally we succeeded. Now we know the whole procedure it will be more easy next time.

Thanks again and best regards,

First royalty payment KALRO/Kisima Licensing agreement:
2017-2019 Seeds Expansion Plan and opportunities to collaborate with ICRISAT

Machine harvestable chickpea may hold and develop Myanmar into world #4 producer position
Targeting and prioritizing by country (an excerpt from the Myanmar analysis)

<table>
<thead>
<tr>
<th>Crop</th>
<th>Estimated sown area, 2015 (acres)</th>
<th>Av. sowing rate kg/acre</th>
<th>Estimated farmer seed demand /yr (kg)</th>
<th>Est. % commercial seed *</th>
<th>Estimated % Domestic, Imported Supply</th>
<th>Seed Import Suppliers</th>
<th>Estimated Seed Market 2015</th>
<th>Market Direction</th>
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<tbody>
<tr>
<td>Rice</td>
<td>17,722,355</td>
<td>40</td>
<td>708,894,200</td>
<td>&lt; 10%</td>
<td>&lt; 1%</td>
<td>99% Domestic, 1% Imported</td>
<td>China, India</td>
<td>$4.26 $0.30</td>
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<tr>
<td>Maize</td>
<td>1,134,308</td>
<td>5</td>
<td>5,671,540</td>
<td>&gt; 95%</td>
<td>&gt; 95%</td>
<td>60% Imported</td>
<td>Thailand, China, Vietnam</td>
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<tr>
<td>Black gram</td>
<td>2,712,047</td>
<td>10.22</td>
<td>27,717,120</td>
<td>&lt; 5%</td>
<td>0%</td>
<td>100% Domestic</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Mung bean</td>
<td>2,899,154</td>
<td>10.22</td>
<td>29,629,354</td>
<td>&lt; 5%</td>
<td>0%</td>
<td>99% Domestic, 1% Imported</td>
<td>Thailand</td>
<td>-</td>
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<tr>
<td>Pigeon pea</td>
<td>1,529,283</td>
<td>8.18</td>
<td>12,509,535</td>
<td>&lt; 5%</td>
<td>&lt; 1%</td>
<td>100% Domestic</td>
<td>-</td>
<td>$1.09 $1.09 $1.09</td>
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<td>Chickpea</td>
<td>934,198</td>
<td>25</td>
<td>23,354,950</td>
<td>&lt; 5%</td>
<td>0%</td>
<td>100% Domestic</td>
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<td>Cowpea</td>
<td>357,924</td>
<td>10</td>
<td>3,579,240</td>
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<td>100% Domestic</td>
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<td>Sesame</td>
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<td>6.1</td>
<td>23,819,85</td>
<td>&lt; 5%</td>
<td>0%</td>
<td>100%</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

New seed production priorities carried out by crop and country for 7 countries. E.g. for Myanmar, rice, mungbean and chickpea identified.

* Total Value (USD) includes value of farmer-saved seed.
## Expansion projects (tons of seed)

<table>
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<tr>
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<td>240.0</td>
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<td>997.0</td>
<td>1'096.7</td>
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<td>Potato</td>
<td>577.6</td>
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<td>620.0</td>
<td>165.0</td>
<td>898.2</td>
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<td>0.0</td>
<td>12.0</td>
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</tbody>
</table>
Visit of the National Seed Committee inspecting sorghum DUS & VCU registration trials (following ECOWAS protocols) / Groundnut trials and savings-led seed supply in Mali, October 2016
Where will we be? Dashboard 2021

1’344’524
smallholder farmers buying new seeds every year

$ 540’976’471
increase in gross margin for smallholders (cumulative)*

$ 54’872’446
worth of Seeds2B-introduced new seed sales (cumulative)

436,450
tons of additional food produced (cumulative)

Excludes subsidized seed schemes

* Figure needs triangulating with other studies before reporting externally
THANK YOU

www.syngentafoundation.org