



# Overview of business plans for Sweetpotato Early Generation Seed & Institutionalization Framework



**Sweetpotato** Action for  
Security and **Health** in Africa

**S. Rajendran & M. McEwan**

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# Structure of Presentation



## Part 1

- WHAT, WHY & HOW - BUSINESS PLAN

## Part 2

- Why do we need business plans for Sweetpotato Early Generation Seed (EGS) - Justification, Background of the business plan, Key financial findings and Challenges

## Part 3

- WHY & HOW: REAL TIME COST DATA COLLECTION in seed supply chain of pre-basic and basic sweetpotato seed delivery system?

## Part 4

- Current status and way forward

# BUSINESS PLAN

## WHAT

- Management tool for the NARIs & potential investors to make decisions on their investment
- The **business model** - an objective document that aims to present a thorough analysis of an enterprise's concept, so as to evaluate the viability of the concept.
- The **business plan**- more elaborate document that comprises all the information, calculations, and analyses that demonstrate the business' viability.

## WHY

- To plan a new venture or expand the business in future.
- To understand the market situation.
- To determine which strategies to adopt, when.

## HOW

- Financial analysis - investment required; expenses, revenue, return on investment - to keep business operational
- Marketing projections - forecasting demand
- Promotion & marketing strategies

# Ingredients of a BUSINESS PLAN



Why do we need business plans for sweetpotato Early Generation Seed (EGS)?



# Justification of the study



- Sweetpotato is a major food crop in eastern and southern Africa
- Poor yield: lack of timely availability and access to quality seed is a contributory factor.
- NARIs have the mandate for early generation seed production but unreliable funding streams to achieve their mandate.
- Many NARIs are shifting towards a business orientation to compensate for reductions in government spending.

## BUSINESS PLAN



**TO HAVE VIABLE EGS ENTERPRISES WHICH MEET RECURRENT COSTS**

# Background



- NARIs in 11 SSA countries are expanding their pre-basic sweetpotato seed production.
- 10 institutions have started to implement their business plans; of which six institutions earned revenue from the sale of seed, to start their revolving funds.
- A cross country synthesis was prepared - lessons & challenges in developing business plans
- SWOT analysis conducted to identify strategies for exploiting opportunities, and for mitigating weaknesses to reduce vulnerability to threats in the business environment.



# Financial Analysis



- ▶ Preliminary study period: Sept 2015-Jan 2016
- ▶ Products: pre-basic and basic seed
- ▶ Cost structure: tissue culture and screenhouse for pre-basic seed; open field for basic seed.
- ▶ Type of costs: variable costs, materials and consumables and fixed costs
  - Financial tools: NPV, IRR, Gross Margin
  - Key financial findings & challenges

# Gross Margin Analysis

- Gross margin is a measure of the **return after deducting variable** (or operational) costs.
- Net margins are the returns **after deducting total costs** (variable and the appropriate fixed costs).

# Gross margin analysis on production of pre-basic seed

# Pre basic seed

Institution	Gross margin (%)	Net margin (%)
DARS	-	-
IIAM	-	-
KEPHIS	-11%	-24%
NACRRI	-10%	-16%
RAB	-	-
SARI	-	-
SRI**	79%	52%
TARI	37%	17%
ZARI	37%	30%

# Gross margin analysis on production of basic seed

# Basic seed

Institution	Gross margin (%)	Net margin (%)
DARS*	74%	74%
IIAM	74%	49%
KEPHIS	-	-
RAB	33%	17%
SARI	60%	56%
SRI	-	-
TARI	-	-
ZARI	44%	43%

# Business Strategies

## Positive side

## Negative side

### Strengths

- Monopoly
- Mandatory
- Resource availability

### Weaknesses

- Low efficiency resource use – high cost of micro-propagation – TC
- Low motivation – Low labour productivity

### Opportunities

- Growing market
- Existence of decentralized multipliers (DVMs) with access to better infrastructure (net tunnels)

### Threats

- Culture of not buying vines by subsistence farmers
- High perishability and bulkiness of the product
- Unpredictable demand from farmers



**SO Strategies: Pursue opportunities that are a good fit to the NARI's strengths**

- Brand the product
- Engage in promotion campaigns
- Harness synergies with other crops
  - potential economies of scale

**ST Strategies: Identify ways that an institution can use its strengths to reduce vulnerability to threats**

- Stakeholder meetings – seed demand
- Explore use of appropriate ICT platforms
- Collaborate with partners to raise awareness.

**WO Strategies: Overcome weaknesses to be able to pursue opportunities**

- Cost reduction through innovative approaches.
- Optimal resource use efficiency

**WT Strategies: Establish a defensive plan to prevent the institution's weakness from making it highly susceptible to external threats**

- Explore mechanisms for revolving fund

# 10 Key Messages

# Key Messages



1. There is a market for early generation *sweetpotato seed*, which is currently not met
2. A business orientation is both *necessary and possible* for NARIs
3. The *business* is either one or a combination of two products: *pre-basic and basic seed*
4. NARIs should estimate and coordinate *seed supply requirements*
5. It is critical to *understand actual and potential customers*
6. *Pricing* strategy required

7. NARIs should optimize their business environment - they often have a monopoly and comparative advantage in expertise
8. The future market for pre-basic seed might be competitive as seed laws will be liberalized
9. To maximize profits, it is necessary to reduce costs and minimize inefficient production practices. Tissue culture production is expensive.
10. Public Private Partnership (PPP) opportunities

# Pricing Strategy

# Why should we use a real time cost data collection method?



- Address challenges identified in first round of business plans
- Recall method for cost data collection: **lack of accuracy**
- **Key assumptions were not specified/clear**

# Early Generation Seed Supply Chain

Inputs



Activities

Stage 0

- Cleaned & Indexed materials

(No. of lines)

Stage 1

- In vitro Rapid Multiplication

(No. of plantlets)

Stage 2

- Hardening Materials

(No. of cutting)

Stage 3

- Pre-basic - Screen house Multiplication

(No. of cuttings)

Stage 4

- Basic materials - Basic multipliers
- (No. of cuttings)

Output



# Steps involved in real-time data collection at each stage in the seed supply chain

Cross-checking at each step



Step 1

- Identifying team members



Step 2

- Identifying ongoing activities and mapping crop calendar
- Identifying potential targets
- Planning for stakeholder meeting to record actual demand



Step 3

- Describe planned activities
- Identifying responsible person
- Identifying mode of procurement



Step 4

- Identifying share of sweetpotato for that particular activities, assumptions
- Tracking activity status



Step 5

- Organizing files



Step 6

- Pilot data collection based on ongoing activity or assumption



Step 7

- Cross-checking Team members log sheet within team members



Step 8

- Entering data into Dropbox
- Cross-checked by Agri. Economist



# Framework for institutionalization

# Why do we need to monitor the institutionalization of the business plans?



- The business plans are a new tool to encourage a “business orientation” in the NARIs
- Sustainability of new approaches - requirement for institutional framework suggested by Birke et al., 2016
- Adapted Four pillars\* - 1. Political (Policy/Institutional), 2. Technical 3. Administrative and Financial and 4. Socio-cultural aspects required to establish a strong institutional framework for running a business.

# Four pillars of the framework



1. The **political (Policy/Institutional) subsystem** of an organization refers to how decisions are being made, how power is structured, the role of the management *vis-à-vis* the staff, how conflicts are settled.
2. The **technical sub-system**: refers to producing quality materials cost effectively
3. The **administrative and financial sub-system**: refers to the operational part of an organization: planning, forming teams, departments, staffing, budgeting and to business strategies for marketing;

# Four pillars of the framework



4. *The sociocultural subsystem* refers to the organizational culture: the norms and values that staff members adhere to and that influence their behavior (e.g., shift in mind set to business orientated EGS production). Past practices and decision-making processes as well as rewards and incentives shape an existing organizational culture.

Note: \* Overlapping categories; and still testing framework.

	Political (instit/policy)	Technical	Administrative/financial	Socio-cultural
<b>Requirement</b>	<ol style="list-style-type: none"> <li>1. Support from senior management;</li> <li>2. Key staff members contribution</li> <li>3. Senior management accountable</li> <li>4. Business plan reflected in institution policy &amp; annual planning tools;</li> <li>5. Local government buy-in.</li> </ol>	<ol style="list-style-type: none"> <li>1. Improve multiplication rates</li> <li>2. Reduce costs</li> <li>3. Quality Assurance</li> <li>4. Monitoring production &amp; Cost structure</li> <li>5. Seed demand estimates</li> </ol>	<ol style="list-style-type: none"> <li>1. Annual budget for pre-basic seed production</li> <li>2. Disbursement schedule for sweetpotato seed production</li> <li>3. % of recurring production costs must be met by revolving fund</li> <li>4. Promotion &amp; marketing strategies in the business plan</li> </ol>	<ol style="list-style-type: none"> <li>1. Ownership</li> <li>2. Motivation</li> <li>3. Team-work</li> </ol>
<b>Actions</b>	<ol style="list-style-type: none"> <li>1. Briefing conducted for senior research management;</li> <li>2. senior management agree on action plan;</li> <li>3. Team provides regular updates</li> <li>4. Biannual review of progress by senior management</li> <li>5. Feedback from local government.</li> </ol>	<ol style="list-style-type: none"> <li>1. Test methods for increasing multiplication rates;</li> <li>2. Optimise screen house production &amp; minimise tissue culture (TC) requirement</li> <li>3. Implement internal quality assurance procedures</li> <li>4. Monitor production of TC and pre-basic seed production through regular meetings</li> <li>5. Organize stakeholder meeting to measure actual demand</li> </ol>	<ol style="list-style-type: none"> <li>1. Institution agreement on guidelines for management of revolving fund (or sub-ledger for sweetpotato).</li> <li>2. Agree on regular meetings to review budget and disbursements</li> <li>3. Agreement on targeted % of production costs which needs to be met by revolving fund.</li> <li>4. Branding of product/s; demos; field days; show events etc.</li> </ol>	<ol style="list-style-type: none"> <li>1. Business plan presented &amp; reviewed at biannual stakeholder coordination meetings</li> <li>2. Annual training for key staffs; non-financial incentives</li> <li>3. Celebrate milestones</li> <li>4. IPR?</li> </ol>

Thank You!