

Sustainable Sweetpotato Early Generation Seed: a conceptual framework to assess technical, financial and institutional innovations

Margaret A. McEwan*, Srinivasulu Rajendran.
CIP-SSA, P.O. Box 25171-00603, Nairobi, Kenya.
*Corresponding author, email: M.McEwan@cigar.org



Introduction

In many sub-Saharan African countries, public sector institutions have been mandated to generate income from their research activities. National Agricultural Research Institutes (NARIs) and private sector players in 11 countries launched business plans for early generation sweetpotato seed production in 2015-2016. The business plans include: cost structure and financial analyses to determine potential profitability; technical innovations; and marketing strategies. Technical innovations have increased multiplication rates and reduced production costs of early generation seed. Institutional innovations include stakeholder meetings to improve coordination, across the seed system. Financial innovations include establishment of revolving funds whereby income from sale of seed is used to fund future production. Thus, the successful implementation of the business plans relies both on interactions between socio-technical components, and institutional changes in the seed system. New methods are required to assess these interactions.

Conceptual Framework

A conceptual framework and institutionalization assessment tool developed by PROLINOVA¹ have been adapted. The original framework proposed three sub-systems which are required to support institutionalization of a new approach. These are: political, financial and administrative, and socio-cultural sub-systems. An additional, technical sub-system was included in the conceptual framework. A matrix was prepared with questions to assess the extent of implementation under each sub-system (Fig 1). Responses to the questions are allocated scores against four levels of institutionalization. The institutionalization assessment tool will be implemented by multi-disciplinary NARI teams during cross-country learning visits, at different stages in the implementation of the business plans.

Assessment questions	Institutionalisation level 1	Institutionalisation level 2	Institutionalisation level 3	Institutionalisation level 4
Pillar 1: Institutionalisation of business plan and revolving fund in the policy, decision making, influence and motivation within the organisation				
To what extent does the organisational policy support a business orientation and revolving fund approach?	Policy does not support use of BP/RF approach at all	Oral statements in support of using BP/RF approach but not written in policy documents	Policy implicitly promotes use of BP/RF approach	Use of BP/RF approach is well articulated in policy documents
Pillar 2: Institutionalization of business plan and revolving fund in the administration and financial structures of the organization				
To what extent are the activities of the BP/RF included in the work plan of the institution?	No reference to use of BP/RF in institutional planning documents	Institutional planning documents refer to BP/RF but no implementation	Use of BP/RF is planned with limited implementation.	Use of BP/RF is explicitly planned with detailed strategies and procedures and implemented
Pillar 3: Institutionalization of business plan and revolving fund into the culture of the organization and values of the staff				
To what extent is there institutional and team ownership of the BP/RF?	Use of BP/RF is discouraged as not in line with strategy of organisation	Use of BP/RF is neither encouraged nor discouraged; it is seen as a separate project implemented by a few people with separate external funding	Supervisors encourage use of BP/RF but do not follow up actual implementation	Supervisors encourage staff to use BP and make efforts to ring fence staff time and the RF for PBS production only
Pillar 4: Institutionalization of business plan and revolving fund into technical production activities within the organization				
To what extent does the organization have sufficient skilled staff (TC, s/h skills, production scheduling, marketing & sales, procurement, financial)?	Skilled staff in BP/RF brought in from other organizations as needed	Capacity in some areas required for BP/RF but little practical experience	Capacity in all 6 areas of skills required for BP/RF, but limited practical experience	Capacity in all 6 areas of skills required. All staff members have good knowledge and practical skills to apply BP/RF and are doing it well.

Fig 1: Selected questions and scoring from each pillar in the institutionalization assessment tool

Potential results & analysis from using the framework

Fig 2. Example of type of results from assessment of institutionalization of business plan



Fig 2. shows an example of the type of results that could be obtained from using the institutionalization assessment tool. In this example NARI-B has strong policy support for the business plan compared to NARI-D. However NARI-B is weakest on administrative and financial structures, indicating that policy is not followed through to implementation. With the exception of NARI-D, all the institutions are strong in the technical production of pre-basic seed. This reflects the comparative advantage of the NARIs on the technical side. NARI-A has a strong score on organizational culture, which indicates strong ownership for the business plan. The tool can be implemented with different teams within the NARI, e.g. scientists, administrative & finance, senior management to gain a range of insights into the institutionalization process. Cross team reflection will ensure a deeper analysis to identify key bottlenecks to institutionalization of the business plans, how to address these.

Discussion

The conceptual framework and institutionalization assessment tool will contribute to understanding:

- the level of capacities in place for sustainable production of sweetpotato pre-basic seed production
- the factors which may influence institutional change and system wide capacities needed to support NARIs take up a business orientation
- participatory peer-to-peer use of the tool will promote multi-disciplinary team work and cross-country learning



References:
Birke, F. M., et al. (2016). Assessing the institutionalization of participatory innovation development: a tool. Prolinnova Working Paper No.37. PROLINNOVA. Amsterdam, Netherlands.