

# Review of Community Seed Production Practices in Africa

## Part 2: Lessons Learnt and Future Perspective

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### Summary

Within the context of the case studies presented, there are clear lessons learned and the second section of the review (Part 2) draws out those lessons in looking at seed and variety, description of community seed production, the support role of public, private, and civil society actors, the role of subsidies and technical support, farm level impact, and sustainability. A general theme running through all of these case studies is improving farmers' access to quality seed of desired varieties. Topics include varietal identification, seed production, seed quality, seed policy, and seed marketing. The main conclusions are: Community seed production is necessary to improve formal and farmer seed system links; community seed production objectives should be explicit and include coherent activities for closing out, transitioning into commercial entities, or linking with publicly funded programs; community seed production is more effective when there is strong collaboration between the public sector, the commercial sector, and civil society/NGOs; The lack of standard ex-ante seed system diagnostics, including economic analysis to justify the scale and scope of interventions, significantly limits the capacity of donors and seed practitioners to make rational investments and intervention design decisions.

## 1. Key results from the review of community seed production practices in Africa

### 1.1. Seed and Variety

*"Don't judge each day by the harvest you reap but by the seeds that you plant."*

Robert Louis Stevenson<sup>3</sup>

The identification of varieties for promotion and production and the management of seed varied considerably across the five case studies, reflecting the context and crop, but some clear lessons emerge. Across the case studies, the focus was on facilitating farmer access to improved, higher yielding, shorter duration varieties and key activities included variety identification and seed multiplication. There was little reference or discussion in any of the case studies on variety maintenance, selection, or handling of local varieties. At the micro-level, none of these community seed production case studies described an explicit process for identifying varieties promoted or valuing the benefits of new and improved varieties at farm level. At the macro-level, none of these case studies followed an explicit process to understand and describe the role of variety and seed quality for key crops, to identify the main seed system constraints and opportunities in terms of variety (trait) and seed quality.

The Uganda case study of common bean involved two bean varieties (K132 and K131) that were released in the same year that the farmer seed enterprise (FSE) began production with the same varieties. These varieties were identified for production because they had similar characteristics to a widely grown and marketable variety (K20) but with higher on station yields. Farmers were given the choice of multiplying local land races but preferred K132 and K131 due to better yield performance

of K132 versus K131. FSE fields were not inspected but health testing was conducted to assess pathogen infection levels and germination. FSE recorded germination rates were 20% higher and had lower pathogen infection compared to other commercial sources but the project did not compare germination rates or pathogen levels to bean seed from farmers.

The Tanzania case study of improved pearl millet (Okoa) and sorghum (Pato and Macia) describes an explicit focus to increase farmer access to improved varieties in semi-arid areas. The varieties were developed by ICRISAT and were officially released by the national program. Key attributes of all varieties was shorter duration and higher yield. One variety – Macia – proved vulnerable to birds and ultimately had very low rate of adoption. A quality control measure – field isolation – was promoted. While seed producers were confused on recommended field isolation distances and there was high variability in application, post project surveys of seed producers showed a change in seed production standards.

The Sudan case study involved the promotion of early maturing/drought tolerant varieties of sorghum, millet, groundnut and sesame in a conflict-prone area on the northern edge of the savannah belt of central-western Sudan, but did not specify the varieties. A lack of seed availability was identified as the main constraint for all crops, including early maturing/drought tolerant varieties. The study did not discuss disease issues or post-harvest handling of seed. Seed producers were trained on quality standards and the project supported inspection but no information was provided on the quality of seed produced versus that of other non-project sources or that of farmers. Varieties promoted were identified by the agricultural research station under the Ministry of Agriculture.

The Ethiopia case study involved a variety of crops and the focus was to improve farmer access to both improved and local land races and increase diversity in a remote semi-arid region. Varieties were identified with national research institutes and more than 200 varieties of cereals (wheat, maize, sorghum, teff, barley), 60 varieties of pulses (common bean, lentil, cow pea, chickpea), 30 varieties of vegetable crops (potato and onion) and more than 40 varieties of oil seeds (sesame, groundnut, sunflower) were reportedly established in multiplication and demonstration plots across nine seed cooperatives. The study does not present information on the process of setting standards for the seed cooperative growers but notes that a large number of seed producer fields were rejected due to quality.

The Kenya case study involved promoting a seed supply network of pigeonpea, groundnut, and chickpea varieties with desirable market traits. Varieties were identified by ICRISAT and the national research organization. Two qualities of seed were marketed, one considered ‘first generation’ and a second called ‘grain’, which was described as 2–3 generation.

## 1.2. Description of Community Seed Producer (CSP)

*“A proper community, we should remember also, is a commonwealth: a place, a resource, an economy.”*

Wendell Berry<sup>3</sup>

The five case studies took different approaches to community seed production. This reflects the operating environment, socio-political systems and norms, cropping systems, and aim of the study protagonists. CSP was employed differently as a function of the situation.

Institutional and economic sustainability of CSP groups was a key consideration in the Uganda study. The community seed producers were called ‘farmer seed enterprises’, they were groups of 10–12 women, the sites were identified based on anticipated demand for the seed promoted by the intervention, and minimal equipment was provided and on a cost share basis.

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<sup>3</sup> Poet, cultural critic, social activist, and farmer, 1934 – present.

CSP in Tanzania followed three models: 'lead farmers', 'farmer groups', and 'primary school gardens', each model reflecting desired outcomes of different donors. The church funded model was based on farmer groups at village level, one bilateral funded model focused on raising public sector capacities and targeted lead farmers for seed production, and a second bilateral funded model targeted school gardens. Government attempted to mandate the sourcing of Foundation seed at fixed prices. This was impossible to enforce (Foundation seed was priced at a multiple of five to certified seed and in some cases at a multiple of fifty to the local price of grain) and this led to a large variance in the prices for starter seed as reported by farmer groups, lead farmers, and schools.

CSP in the Sudan case study was organized through 'village agricultural committees' that were the focus of seed provision and training from extension staff and seed inspectors from the Ministry of Agriculture on agronomy, production, storage, and seed quality. Village agricultural committees were expected to identify lead farmers for seed production, distribute seed to other farmers through a repayment system, and keep records.

CSP in the Ethiopia case study was organized by 'cooperative community based seed enterprise', membership ranged from 40–300 across nine cooperatives, with a median of 68. The communal farms size ranged from 2.5 ha to more than 15 ha, with a median of 5 ha. These cooperatives were furnished with seed, irrigation equipment, seed cleaning equipment, seed stores, as well as training from local government extension agents. Successful cooperatives were characterized by strong collaboration with public sector actors (research, local agriculture and development offices, national trade organization). This reflects the presence of strong cooperatives in Ethiopia.

CSP in Kenya was organized by 'producer market groups' that linked farmer groups with certified and commercial seed and with buyers of high value legumes. The groups were highly dispersed, operating across four districts and comprising more than 17,000 farmers, of which 65% were women. The community seed production efforts in Kenya promoted knowledge and access to new varieties through a value chain approach aimed at marketing seed and legumes by raising collaboration between producer groups, early generation seed producers, research partners, and buyers.

### 1.3. Support Role of Public, Private, Civil Society

*"...the solution requires the creative complementarities of public–private cooperation that...[and] must include ... not-for-profit sector (foundations, NGOs, civil society). This pathway can develop and deliver solutions to large numbers of small farmers [...]"*

Marco Ferroni<sup>4</sup>

The role of public, private, and civil society actors' support varied across each of the five case studies. However, all three actors – public, private and civil society – played essential roles in all of the case studies and the roles and interdependency between these actors depended on the context. The public sector, with external funding and donor influence on program design, was a driver in Tanzania, Sudan, and Ethiopia. This reflects the crops targeted and the seed constraint addressed but more importantly reflects the socio-political environment and status of civil society organizations that are non-governmental and able to function outside of the political sphere.

The private sector, with linkages made by international research partners and with national research partners' support, was a driver in the Ugandan and Kenyan case studies. This reflects the express aims of the protagonist to take a market-focused approach but also reflects a pre-existing market friendly or market-neutral environment where significant state engagement is not a pre-requisite.

Civil society actors – community based organizations, non-governmental organizations, village and church based groups – played an important role in organizing farmer aggregation and promoting linkages with public and private sector in all five case studies. This role changed considerably in each of the five case studies: in Sudan an international NGO was the project holder and a village agricultural committee, with significant state oversight, was the turn-key organization producing seed; in Ethiopia community cooperatives were the focal point of seed production but with

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significant state oversight; in Tanzania farmer groups backed by a church-based NGO operated with significant latitude in comparison to similar programs run through state organizations; in Uganda farmer groups comprised almost exclusively of women operated with a large degree of freedom and with limited state intervention; in Kenya two international NGOs were the project holders with hundreds of farmer producer groups.

The role of national and international research organizations was prominent in all case studies but their specific contribution, Sudan and Ethiopia for example, was not always evident. In Kenya and Uganda, the international and national research role was in program design, identification of variety, and technical backstopping and training. For Tanzania, Sudan, and Ethiopia, national research was significant in identifying varieties for community seed producers where technical backstopping and training community seed producers was provided almost exclusively by state extension. This reflects the socio-political context of these countries.

#### **1.4. Key Areas of Support – Identification of Seed and Variety, Technical Support in Production & Marketing, Credit and Capital**

*“Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for.”*

Peter Drucker<sup>5</sup>

The overall focus across the case studies reflected the objective of increasing the production of quality seed of improved varieties. This included support for inputs, training in seed production and seed quality control. The focus on supply was not matched with support for seed enterprise development and marketing. Marketing appeared more successful in vertically integrated schemes with few large buyers. While in many of the cases variety was the driver, in others it was seed.

In Uganda the key support provided was access to variety, training on seed production and post-harvest handling. There was limited to no support provided on marketing seed but community seed producers were identified in Eastern Uganda where demand for bean seed, and the new varieties, was considered strong. There was minimal capital/financial support as equipment provided was on a cost share basis and was relatively cheap.

In Tanzania key support provided was access to variety and training on seed production. The varieties promoted that fared well with farmers were released at least four years before the community seed producers in the case study began multiplying them and so had at least some track record of being appreciated by farmers. Minimal technical support was provided on marketing despite an expectation for sales to recapture costs that was implicit in the project design of all three models of community seed production. Seed sales was a major challenge and undermined the incentives of community seed producers, particularly the lead farmers who had higher input costs and were initially prevented from selling outside of their community. Where seed producers groups reported successfully selling seed, it was due to a large brokered sale, between the church organization supporting farmer groups and FAO, or where there was a high market demand and strong promotion, for example schools in Singida. Capital/credit was not provided besides buy back schemes for Foundation seed and this proved problematic.

In Sudan key support provided was access to seed. It is not clear from this case study if variety was critical but seed availability was a constraint in the project area. Training of seed producers in production and seed quality was referenced but not on marketing. A seed credit (pay back scheme) did not function well and was cited as a challenge. People affiliated with the community seed production reported not understanding how the buy-back scheme was supposed to work. Seed sales to organized buyers (NGO/government) was noted as a sign of success for one producer. The provision of capital and/or equipment and storage facilities for community seed producers was not noted in this case study.

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<sup>5</sup> Management consultant, author, and founder of modern management theory, 1909-2005.

In Ethiopia key support provided was access to seed. It is not clear to what extent variety was critical but a significant number of varieties for different crops were made available through the community seed producers. Seed availability, due primarily to chronic drought and secondly to the relative isolation of the geo-zone of the community seed producers, was noted as a big constraint in the project area. Training to seed producers in production and seed quality was referenced but not on marketing. Capital for equipment and storage was provided to all community seed producers but the pay back terms and issues of sustainability were not discussed.

In Kenya key support provided was access to variety, training on agronomy and seed production, and the facilitation of linkages between seed producers, seed consumers, public sector service providers, and output markets. No capital for equipment or storage was provided to any community seed producers. Challenges meeting contract terms was cited among producer groups.

In several of these case studies, key areas of support to community seed producers did not correlate clearly with what farmers would benefit, or potentially pay for, as a result of the services rendered by community seed producers. The primary customers of many of the services and support provided to community seed producers were not farmers, or even community seed producers, but parties gaining short-term benefits from a more vertically integrated seed supply chain.

The classic example is of seed agencies (Sudan, Ethiopia, Kenya, Tanzania) establishing certification schemes for community seed producers and then struggling to enforce by decree (Tanzania, Kenya, Ethiopia) as opposed to by farmer willingness to pay. One could conclude that farmers either did not value the certified seed or that the benefits of certified seed were not effectively communicated.

In the Tanzania case study where there was strong documentation on pricing, the vast majority of community seed producers did not pay the Foundation seed price, all community seed producers struggled to sell to farmers, and there was no evidence that those community seed producers who did pay for and/or source foundation seed had no easier time selling their seed than community seed producers who did not pay for and/or source Foundation seed.

### **1.5. Subsidies - Source Seed, Production Inputs, Conditioning and Marketing - Linking Producer and Farmer**

*“When we give a subsidy, the benefits to the public ought to exceed the benefits to the [subsidy recipient].... When it doesn't, that's our definition of corporate [and government] welfare.”*

John Kasich<sup>6</sup>

Significant subsidies for infrastructure, inputs, training and quality control existed in all case studies. However, there was widely varying value and transparency in these subsidies.

In Uganda the total value of subsidy provided to the community seed producer was very small, an explicit aim from the design. Start-up seed (sourced from the Ugandan bean program) and equipment (threshing rack, sorter, and plastic sheet for drying) were provided on a cost share basis to all of the community seed producers. Payback performance of the groups was not noted but ¾ of earnings were held by the group, presumably to pay off inputs costs. Subsidies to seed conditioning were only related to training. There was no equipment and capital support for storage. Marketing was covered in training but farmer groups noted the need for more support on promotion and making linkages to sell seed.

For the Tanzania CSPs, the value of subsidies is difficult to assess but was limited to sourcing seed and training for producers. The Tanzanian seed agency attempted to set seed prices for Foundation seed at five times the suggested price for certified seed sold by community seed producers, with a result that Foundation seed sourcing and pricing was erratic. An assessment of seed sales across all three community seed production models in the same season indicated that a fraction of seed produced was sold whereas no sales of seed was reported by 1/3 of lead farmers, 1/4 of schools,

<sup>6</sup> American politician. 1952 – present.

and 1/6 of farmer groups. Despite the fact that the national seed regulation in Tanzania forbade the sale of unpackaged and untreated seed outside the village of production, all three community seed producer models reported selling seed outside the village of production which was unpackaged and untreated. In most years, most of the seed produced in Tanzania under all three community seed production models was not sold, and was instead given away. Yet, none of these models reported having a plan or guidelines for allocating seed for free or at a deeply discounted price to vulnerable or cash strapped household and the intervention zones were noted for their high levels of poverty and farmer vulnerability to drought, which the varieties promoted were intended to address.

In Sudan, the value of subsidies is difficult to assess but seems to have been limited to training and source seed for CSPs that was provided under a seed pay back/seed loan repayment scheme. To the extent that repayment was a key strategy to achieve CSP targets of reaching 65,000 HH in Sudan, it fell short for all crops except for millet. Interestingly, millet reported seed loan repayment rate of 29% which may indicate that millet source seed was repeatedly provided to community seed producers in order for the CSPs in Sudan to have served the 92,000 HH they reported reaching with millet. Conversely, groundnut repayment rates were reported at 78% yet slightly less than 30,000 HH were reached with groundnut by the CSPs, which likely indicates a low level of starter material in the first season of this three year effort and much slower multiplication rate of groundnut compared to millet. CSPs in the Sudan case study received training on conditioning and seed storage but there is no reference to any equipment or subsidies related to storage. There is no mention of seed marketing training for the Sudan CSPs although the study references that some CSPs sold seed back to the project, to individual farmers, and to formal seed companies.

For the Ethiopian CSPs, subsidies were very high and included source seed, irrigation equipment, seed cleaners, scales, packaging machines, and generators. The total value of subsidy to each CSP is not stated but based on equipment provided it is estimated to be at least USD 5000. CSPs were expected to provide land, labor, and construction materials for simple storage facilities. While seed was provided for free to CSPs, it was to be paid back into a revolving fund. Seed production at CSPs was done on a contractual basis but no details were provided on the terms of supply contracts, the buyers, or the profitability of CSPs. While training curriculum of CSPs was robust on production and certification there was no reference to marketing or cost accounting despite the relatively large subsidies involved and the stated focus on supply contracts. Based on several references in this case study to the importance of linkages with state actors as driving the success of CSPs, it is assumed that the CSP seed was marketed to state channels.

In the Kenyan case study, the total value of subsidies is difficult to gauge but would appear limited given the orientation of a value chain approach and the aim to promote sustainable seed sales. Small starter packs of improved seed of quality legume varieties of pigeonpea, groundnut and chickpea varieties were sold to farmers in the CSP area but in order to bulk seed, the first identified producer groups in Kenya were initially provided source seed by the state parastatal on a contract basis with the expectation that they would sell product that met set standards to either legume buyers or back to the state parastatal if the seed was of high enough quality. Moreover, these producer groups were expected to be an emerging source of demand from the state parastatal as their initial seed declined in productivity. The scheme did not function as hoped. Many farmer groups did not hold up to their contracts and sold into spot grain markets while other farmer groups self-sourced over multiple seasons as opposed to buying again from the parastatal. Within the seed supply chain it was very difficult to track and uphold quality standards due to high transaction costs associated with large number of farmers, small size land holdings, many farmers new to working with quality standards, and competition with local food markets.

## **1.6. CSP Impact at Farmer and System Level**

In all case studies, significant numbers of farmers were able to access quality seed from the CSPs. This increased overall varietal diversity and accelerated the adoption of new varieties.

In Uganda the three CSPs produced less than four metric tons of two varieties of improved bean varieties and sold them at a modest premium to the crop price in grain markets. The CSPs were provided with limited training on production, pest and disease management, and post-harvest handling as well as linkages with research. Two of the three CSP groups continued selling bean seed four years after the project ended.

In Tanzania these three CSP models played a role in greatly increasing the spread of improved millet and sorghum varieties in central Tanzania. An ICRISAT adoption study in 2001 estimated that in the mid-1990s approximately 5% of total sorghum and millet was allocated to improved varieties. The 2001 study indicated that more than 2/3 of farmers surveyed in Dodoma and more than 1/3 in Singida were planting improved sorghum variety Pato whereas pearl millet variety Okoa was grown by more than 1/4 of surveyed farmers in both Dodoma and Singida. So, in spite of the fact that only a fraction of the seed promoted by the models was sold by producers the evidence from the ICRISAT adoption study suggests that varieties were ultimately well diffused. Community seed producers in the Tanzania case study cited significant changes in seed production practices: field isolation, more careful site selection, harvesting when completely dry, drying on elevated structures, use of fertilizer. In 2001, TOSCA announced a new quality declared seed standard for pearl millet and sorghum with isolation distance of 100 m, where under the time of the CSP case study recommended isolation distances for certification was 300 m for pearl millet and 200 m for sorghum, which would suggest learning from the Tanzania case study in terms of the impracticability of large isolation distances for community-based seed producers.

In Sudan, the farm level impact was to help many communities have access to seed locally instead of sourcing at a great distance where they may have little recourse if there are issues related to germination or not being true to type. In addition, this would strengthen links within the supply chain from research to extension to seed inspection services to CSPs and ultimately farmers.

In Ethiopia the CSP model improved seed security in isolated chronically drought-affected communities through increasing the availability of seed. Actual numbers of farmers served are not indicated in the case study but based on the median CSP of 5 ha, we estimate 1,000 farmers were served annually per CSP. The biggest impact in Ethiopia is diversity as 414 varieties were demonstrated and/or multiplied among the CSPs.

In Kenya, more than 17,000 farmers were supplied with legume seed of improved varieties over a period of two years, which induced a 'spill-over effect'. The project trained more than 50% of participating farmers who demonstrated good crop husbandry practices, value addition, group management and marketing. Farmers trained in seed production were contracted by a seed company to produce seed commercially. Most importantly, farmers were able to collectively market their produce at competitive prices.

### **1.7. Sustainability – CSP financial analysis, economic analysis of CSP impact**

*“But now sustainability is such a political category that it’s getting more and more difficult to think about it in a serious way. Sustainability has become an ornament.”*

Rem Koolhaas<sup>7</sup>

Defining sustainability as socio-economic justification for the intervention and the extent to which actors supported by the intervention continue to function, the results are mixed across the case studies. There is a lack of financial information (project cost of interventions and financial returns to seed producers) and economic information (social cost and benefits of interventions) to assess the socio-economic value of any of these case studies. This does not suggest all were not successes but rather the extent, value, and impact of that success is not clear.

<sup>7</sup> Architect and design theorist, 1944 – present.

In Uganda these CSPs were functioning a few years after the project ended and the relatively small size of the start-up support associated with these CSPs in Uganda suggests that this sort of intervention could be easily replicable where there is a window of opportunity for CSPs between incipient demand for available varieties with desirable traits and farmers achieving high enough rates of adoption in the CSP region to lower demand.

In Tanzania it is not clear if any of the CSPs (school, farmer led, farmer group) continued to operate after project support from the main protagonists (ICRISAT, Ministry of Agriculture, Council of Churches) ceased. Fixed pricing for Foundation and Certified seed and a monopoly on Foundation seed provision was problematic in all CSP models in Tanzania and should not be pursued in other CSP efforts.

In the Sudan CSP case study, the seed pay back/seed loan repayment scheme appears to be the biggest impediment to this model functioning adequately over even a short time frame. Buy back schemes are a bad idea, their administration is costly and inefficient. While they do provide rent seeking opportunities for their administrators, there are more effective and efficient means to improve farmer access to seed and to increase seed availability.

Successful functioning of the Ethiopian CSP case study model seems contingent upon strong financial and technical support to the community cooperatives on the input and production side and much more explicit emphasis on seed sales and managing the balance sheets of the cooperatives. This model involves a relative high degree of subsidies and is by far the most public sector and project dependent of any of the CSPs. For these community cooperative models to break even financially and to make sound seed production investments, a significant percentage of seed produced (approximating total annual production costs for the cooperative) will need to be committed for purchase a year in advance by state agencies or development projects.

The Kenyan CSP case study achieved impact and scale in terms of increasing the availability of and improving farmer access to improved legume seed. However, a key stated objective was to create a demand driven seed supply chain from breeder seed to seed maintenance at producer group level to commercial seed supply for both provision of new varieties and for re-supplying producer groups when productivity lagged of existing varieties. The model had challenges on the demand and supply side. There was not effective demand to drive commercial seed supply as many producer groups self-sourced from the first year as they had enough seed. There was not effective supply to out-growers as many producer groups that were contracted as seed out-growers did not sell back to the project but sold into food markets.

## **2. Recommendations and Conclusions**

### **2.1. Standard Frameworks to Conduct Ex-Ante Description and Diagnosis**

There needs to be an explicit baseline assessment of the target seed system to inform the decision to first invest in CSPs and then to establish clear objectives. This framework should embrace the concept of 'integrated seed system development' and balance inclusiveness with long-term sustainability. The ex-ante assessment will determine why, where and which crops warrant an investment. Baseline analysis will lead to a seed system diagnosis and a decision-making guide that should be based on simple rules, to induce action without unnecessarily limiting options, and a checklist aimed at setting performance boundaries while leaving ample scope for flexibility. Seed system practitioners are reminded that most operating environments that justify a CSP investment are not stable and that as an environment's dynamism increases, flexibility grows in importance and simple rules become imperative.

### **2.2. Economic Value Attributable to Seed**

Estimating the economic gains attributable to a new variety and to seed and varieties that have disease incidence and are physiologically healthy will help to prioritize the potential seed system

investments (crops, varieties, seed quality, agronomy) and help to identify and justify the magnitude of the investment opportunity for the private sector, public sector, and/or development entities. There is confusion over the respective potential of new varieties, existing varieties, and of quality seed on yields. The starting point is a simple cost-benefit model aimed at farmers to evaluate the productivity gains from different seed interventions in order to prioritize interventions and to explicitly estimate the total value of the productivity gap. This will also inform price, i.e., – what a farmer might be willing to pay. In unstable environments, the productivity targets should be aimed at modest increases to pre-shock yields.

### **2.3. Identify what pieces can be commercial and what pieces need subsidy**

Once the scope of the opportunity is valued and priority areas of investment are identified, the potential role of private, public, and civil society or NGO entities needs to be considered. Where farmers are easily convinced that the varieties are superior to their current varieties or that purchased seed is of higher quality and results in higher yields than own saved seed, a focus on supporting private sector seed actors is fully warranted. For crops and varieties where there is a potential for commercial opportunities, CSPs should be closely linked to the private sector as out-growers. Where there is no or low potential for commercial opportunity, CSPs should be closely linked to the public sector. Where there are commercial opportunities, development actors should focus on promoting an enabling environment for nascent private sector entities but be cognizant of the tendency for elite capture.<sup>8</sup> Developmental support aimed at promoting an enabling private sector may include: direct support to the private entity to improve their business and/or seed production and quality capacity; and/or direct support to the public sector so that they can provide public goods (seed, quality control) to the private entity; and/or direct support to the consumer to raise demand through advertising, increasing access to demos, and couponing.

### **2.4. What Parts of CSP Most Needs Incentive Schemes for non-commercial purposes?**

How can subsidies be used effectively when the objective is developmental and not commercial? Subsidies for developmental CSPs need to be targeted, explicit and of short duration. Continued support from the public sector is essential for the efficiency and viability of CSPs, more so with developmental CSPs which by nature provide public sector goods. Subsidies for developmental CSPs should be focused on training related to seed production, seed quality, and CSP management, and access to Foundation seed and of new varieties. Development entities are short-term catalysts to support the creation, management, and capacity of CSPs – to include training and especially linkage – but have no long-term role. Support to the public seed sector for development needs to be sustained.

### **2.5. Where does the CSP hinder growth and hurt consumers?**

CSPs hinder growth and hurt consumers when they compete with or create an impediment to the establishment of a private seed company which is likely to deliver seed and related products more efficiently and more sustainably than the CSP. Unfortunately, much of the dialogue around private sector actors in seed systems is focused not on efficiency or the benefit accrued to consumers, but whether a private sector actor could potentially function in a given environment. Contrary to the current orthodoxy, private sector entities should not be cherry picked for investment where the public sector can deliver seed more efficiently and effectively and at lower risk to the consumer. The tendency for CSPs is to be subsidized too long, after the point at which varieties and productivity enhancing technologies have reached a tipping point in the target zone and their further adoption is no longer dependent on raising the availability of these technologies. CSP investments should be predicated on a clearly defined strategy that estimates the time frame for exiting the target zone.

<sup>8</sup> Examples would be where a spouse, uncle, or friend of a project officer or project administrator starts a seed business due to preferential information and preferential access to subsidized capital (low or no interest loan), subsidized asset (equipment or land partially or fully paid for by project), and/or guaranteed output market for seed produced (percentage of production sold back to the project).

## 2.6. Conclusions

- Community seed production is necessary to improve formal and farmer seed system links.
- Subsidies for the establishment of commercially linked CSPs need to be targeted, explicit and of short duration.
- Community seed production objectives should be explicit and include coherent activities for closing out, transitioning into commercial entities, or linking with publicly funded programs.
- Community seed production is more effective when there is strong collaboration between the public sector, the commercial sector, and civil society /NGOs.
- The lack of standard ex-ante seed system diagnostics, including economic analysis to justify the scale and scope of interventions, significantly limits the capacity of donors and seed practitioners to make rational investments and intervention design decisions.