



**Sweetpotato for Profit and Health Initiative (SPHI)**  
**Sweetpotato Seed System and crop management Community of Practice (SSS-CoP)**  
**Summary of online Discussion**

**TOPIC 17: How to increase purchase of sweet potato seed among individual farmers?**

**Lead discussant: Jean Claude Nshimiyimana, International Potato Center (CIP) - Rwanda**

**Introduction**

Getting new, disease-free sweetpotato planting material into the system to flush out diseased material at farmers' level is not easy. Farmers conserve their own seed or get it from other farmers or from local markets. They may also acquire seed as relief supplies from the government, non-governmental organizations (NGOs) or international agencies. Currently, farmer-multipliers are selling millions of sweetpotato cuttings, especially orange-fleshed varieties, to local governments, local and international NGOs which give them to their beneficiaries for free. The price per cutting varies depending on variety, season and type of buyer. Mostly, the price charged to individual farmers is far below what is paid by NGOs but still the quantity of vines purchased by individual farmers is very low in several countries. For example, in Rwanda NGOs buy vines at 8-15 Rwf/cutting (0.009-0.017USD), while individual farmers pay 3-5Rwf (0.0034- 0.0057 USD). In 2016, the percentage of vines purchased by individual farmers was 21% of the total vines sold. The percentage of vines bought by NGOs is increasing but going down for individual farmers. This scenario cuts across sub-Saharan Africa and is a challenge towards establishing sustainable seed systems. It was with this regard that the 17<sup>th</sup> online discussion of the Sweetpotato Seed Systems and Crop Management Community of Practice focused on purchase of seed among individual farmers. The discussion attracted 12responses which brought out four key issues:

- a) Economics – dynamics around return on investment
- b) Role of free vine distribution
- c) Farmer-appreciation of benefits of quality seed
- d) Social dynamics around sweetpotato seed acquisition

**Return on investment**

Benefits accrued from increased root production arising from use of quality seed was mentioned as a key driver of the system. According to Jan Kreuzer, a farmer will at least want to see 20% or more return on his investment to bother buying vines. Jude Njoku added that the demand for roots will always drive the demand for vines among root producers. Therefore, efforts should be made

to create effective market outlays for roots so that root producers will take root production as business and subsequently purchase of quality vines will improve. These should include value addition innovations that absorb the potential yields from farmers' fields. Srinivasulu Rajendran echoed this saying that market integration improves the efficiency of the market provided there is a symmetric information flow across value chain. This can be strengthened by introducing demand pull and push strategies along the seed and root value chains. This has worked in Kenya, Rwanda and Mozambique and can be scaled to other countries.

It is also good to note that quality vines are expensive in some countries and farmers resort to recycling vines after the first purchase of quality. Moses Sila noted that even when farmers are willing to buy quality vines the window to sell is small, often 1-2 months following the onset of rains. Thereafter, the value of vines decline owing to increased availability. Efforts should therefore be made to reduce the cost of production of quality vines through innovative methods. This includes understanding production decisions at the farm level at the onset of rains to be able to determine production cost (or possible cost reduction strategies) versus selling price of vines. Promotion and awareness campaigns can then follow. Presently, there are different innovations adopted by the Sweetpotato Action for Security and Health in Africa phase 2 project to reduce cost of pre-basic and this will trickle down to reducing the cost of quality declared planting material at the community level.

### **Role of free vine distribution**

Free vine distribution by some projects was mentioned as compromising the strive to establish a sustainable seed system. Hillary Mireka wondered why one project should distribute vines for free while there are concerted efforts to create sustainable business for decentralized vine multipliers. He noted that most projects are quick to get results at the expense of sustainability of the seed system. This sentiment was supported by Jude Njoku who noted that the willingness to purchase will continue to be low if free vine distribution continues which will likely discourage DVMs. However, Ted Carey pointed out that the NGO market is a bonanza and something seed system actors should live with and make sure that the benefits of it accrue to seed producers who can continue to exist through a diversified customer base.

### **Appreciation of the benefits of quality seed**

The other question to ask ourselves is whether farmers appreciate the benefits of quality planting material. Hillary Mireka noted that adoption of new technologies takes time and farmers should be given time to see the benefits of quality seed. Demonstration plots to show yield and quality differences between recycled and cleaned seed can help convince farmers to adopt quality seed. According to Ted it is the responsibility of seed producers to demonstrate the value of clean planting material because they are the ones buying pre-basic seed and selling their products to farmers and NGOs. Jude added that demonstrating that vine replenishment at regular basis can double or triple yield at the farmers level will encourage the purchase of quality vines on a

sustainable basis. However, it is important to understand and accept that most farmers will not buy all their seed every year. So, we should work to encourage a flush-through system where clean material is fed in every year. DVMs/seed companies should always be the source of this material, coming from pre-basic suppliers. They too may be flushing through.

It was noted that adoption of standard protocols for seed certification and registration of quality vine producers with effective legislation will encourage regulation of seed business and commercialization. This can also aid in tracking the various generations/classes of seed and associated quality therefore contributing to evidence on actual degeneration. Craig Yencho suggested that NGOs should also be engaged on quality aspects to ensure distribution of quality seed among all actors. Margaret McEwan suggested engaging the procurement sections of large NGOs, and the donors that support them, to put some value on “free” distributions; and link them to quality seed producers. She noted that often when “emergency” distributions are being planned – huge tenders are put out and “seed” turns into any vines from root fields; and so pests/diseases are distributed, and the clean seed system is undermined. Registering seed producers and implementing seed inspection protocols can help overcome this. However, registration of seed producers and seed inspections is dependent on development of relevant policies and regulations. Different countries in Africa are at different stages of developing and implementing seed standards for sweetpotato. Margaret shared the status as follows:

- **Uganda:** Awaiting official gazetting. Some adjustments made to standards for isolation distance and varietal purity.
- **Malawi:** In PM’s office.
- **Nigeria:** The Director General of National Seed Council (NASC) has given approval of the procedures. Planning of stakeholders meeting is in progress (List of relevant stakeholders comprising of NGOs, Public and private sectors currently being compiled). Continued planning with NASC for stakeholders’ workshop for adoption of standard protocol for seed certification in Nigeria (proposed 2<sup>nd</sup> week of November 2018).
- **Mozambique:** Approved in Bolletin da Republica June 2018.
- **Rwanda:** RBS have approved. Ref. 23. RSB/TC 032, Seeds and Planting Materials) on RS 275-5: 2017).
- **Kenya:** Seeds and Plant Varieties (Seeds) Regulations, (revision 2016).
- **Tanzania:** Seeds Act Cap 308. The Seeds (Amendment) Regulation 2017. Seed Regulations, 2007.
- **Ghana:** JS published QDPM document; but VPC seed standards do not get officially gazetted.
- **Burkina Faso:** Started meetings with regulatory bodies.
- **Zambia:** The Plant Variety and Seeds Act 9laws, volume XIV, Cap 236. The Plant Variety and Seeds Regulations, 2018.

The challenge now is to build capacity for roll out of inspections; ensure that they are cost effective (i.e. optimal point between cost of regulation and benefit to farmers when they buy quality seed) and learn from experience which parameters in the standards may be too stringent, and adjust – e.g. isolation distances, and rotation requirements; to avoid unintended consequences.

### **Social dynamics around sweetpotato seed acquisition**

It is also important to look at farmers’ willingness to pay for quality sweetpotato vines from a socio-cultural context. In most communities sweetpotato is seen as a ‘social crop’ whose seed is acquired from neighbours, relatives or friends without monetary transactions. The ‘free’ exchange is not actually free since it is one way of enhancing social cohesion. Moses Sila noted that in many communities sweetpotato is seen as a woman’s crop and women have shared vines for free as well as production knowledge over time. Therefore, a shift to commercialization will benefit from understanding factors that keep such a system in place. For example, subsistence farmers in Lake Zone Tanzania plant early maturing varieties so that they can ensure their food security during the crucial months before the main food crops are ready for harvest. they also grow late maturing varieties so that they can harvest on piece-meal basis during the dry season. Without understanding these contexts or alternatively changing the context it will be difficult to introduce sale of vines.

### **Conclusion**

Increasing cash-based seed transactions requires an appreciation of the ‘value’ added on the quality seed. However, this should be linked to root markets which also vary between orange-fleshed and white/yellow-fleshed varieties. Whereas white/yellow-fleshed varieties have a ready market for fresh roots, OFSP varieties are struggling due to low dry matter content. Increasing uptake of OFSP roots requires diversified utilization and value-addition. Adoption of quality seed for both WFSP and OFSP also requires sustained efforts in awareness creation including use of demonstration plots (quality seed vs farmer-sourced seed) at community levels. Those who distribute seed for free also need to educate their beneficiaries about the benefits of quality seed. Both biophysical and socioeconomic factors associated with sweetpotato should be considered when promoting purchase of quality seed.

### **Summary on the respondents:**

<b>Duration</b>	<b>No. of contributions</b>	<b>No. of unique respondents</b>	<b>No. and type of institutions</b>	<b>Number of countries</b>
29/8/2018 – 15/9/2018	12	11 (10 male and 1 female)	NARIs: 2 CIP: 8 Universities: 1	7 (Ghana, Kenya, Nigeria, Peru, Rwanda, Tanzania and USA)

### **Contributors**

1. Craig Yencho
2. Jan Kreuze

3. Lembris Laizer
4. Moses Sila
5. Srinivasulu Rajendran
6. Hillary Mireka
7. Margaret McEwan
8. Jude Njoku
9. Ted Carey
10. Kiriimi Sindi
11. Kwame Ogero

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