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# Research on Vegetable Seed Systems for Smallholders: Impact Market Pathways & Future Perspectives

**Dr. Victor Afari-Sefa**

**AVRDC – The World Vegetable Center**

**Email:<[victor.afari-sefa@worldveg.org](mailto:victor.afari-sefa@worldveg.org)>**

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# Overview: Types of Vegetable Seed Systems

- **Public seed sector: inefficient in operations (1970s & 80s)**
  - Less market oriented
  - Less access to remote areas
  - High volume, low value crops (?)
- **Private seed sector: selective of business**
  - Profit maximization motive
  - High value / cash crops, low volume
  - Hybrid seeds (mostly, imported & not locally adapted)
  - Challenges with seed adulteration
  - **Small farmers: flexibility and diversity**
  - Diverse agro-ecology, many varieties
  - Small quantity, relevant quality
  - Place/time of delivery, less cost



# Overview of Smallholder Vegetable Seed VCs

- **Informal sector:** Comprises a multitude of individual private farmers who select and save their own seed or exchange seed with others through:
  - exchanges between farmers,
  - community sharing systems
  - and local markets
- **Semi-formal sector:** farmer recognized community seed producers and seed sellers from various actors of the value chain (i.e., traders, NGOs, CBOs etc.). Typical examples are: **QDS and ISSD**.
- **Research has shown** that the semi-formal/informal seed systems combined on average account for **between 60-90% of seed supplies in SSA** depending on the type of crop and other factors (e.g., Rohrbach et al, 2003; McQuire & Sperling, 2016).

# Overview of Smallholder Vegetable Seed VCs

- Yet vegetable seed can be an important entry point for delivering a range of advances related to smallholder livelihoods
  - Promoting productivity: better access to more productive, yield-enhancing traits.
  - Increased income from seed production (formal & semi-formal sectors)
  - Enhanced nutrition (nutrient dense varieties), and
  - Enhance system resilience (climate variation, stress-tolerant varieties or clusters of diverse varieties are promoted as 'good practice')
- Varied and often opposing philosophies shape seed sector development and much depends on what actors see as the starting point (McQuire & Sperling, 2016).
- As per the recently released **2016 Access to Seeds Index Report**, there is a **prudent need** for private seed companies to meet needs of diverse smallholder market segments: **Focus on smallholder centric business models** (<http://www.accesstoseeds.org/the-index/>).

# Overview of Smallholder Seed VCs

- While investments by organizations such as **World Bank & AGRA/PASS**, have primarily focused on strengthening the formal sector (i.e., **promotion of private commercial seed and formal sector input companies**), research shows that the degree to which the semi-formal and informal sector in SSA still remains the core for seed acquisition.
- In contrast, select NGOs and donors (**e.g., GTZ 2000**) have signaled the need to support more locally-driven/community initiatives and particularly those that organize around what are called FLSEs.
- Farmers, in practice, often engage in actions to smooth the divides between the formal and informal/semi-formal sectors spheres of seed sector development agencies by:
  - **accessing seed for different crops from distinct channels**
  - **Farmers involved in PVS sit on variety release committees, or access improved varieties through local trader networks**

# Why FLSEs are still attractive to Smallholders?

- **Contribute to addressing notable gaps in seed supply and distribution systems locally given:**
  - Technically well equipped
  - Well organized to cater for regionally specific varietal preferences
  - Market-driven and innovative (small size packs that are affordable to farmers)
  - Autonomous in their seed business
  - Decentralization of seed distribution, smaller packs
  - Possibilities for establishing linkages to formal institutions to enhance seed quality



# Noted Challenges Encountered by Formal Seed Sector

- Challenges encountered in the **spatial, time, information and value gaps** in seed systems.
- Still a large quantity of SSA seed demand (trade) **filled-in by imports** of seeds **not adapted** to specific agro-ecologies in region.
- **Challenges of harmonization of national and regional seed laws** and varietal releases that sometimes make it more attractive for private companies to focus on import and resale of seed.
- Challenges with **adulteration of seed** in the formal sector that tend to frustrate both farmers and private seed companies.
- Challenges encountered by farmers in **nursery management**, esp. pest and disease control further accentuate problems of seed management.



# Challenges encountered by FLSEs that can be complemented by formal sector

- Difficulties encountered by some FLSEs (e.g., QDS farmers to access viable markets. *Lack of differentiation / branding of small seed packs*
- Lack of enabling seed policy and regulatory environment is critical for the successful uptake and sustainability of FLSEs
- Continuous technical backstopping of FLSEs through capacity building, especially for contracted farmers is necessary to ensure efficiency and high profitability for smallholders
- Lack of strong collaborative links between actors, private seed companies and other seed sector stakeholders





# Conclusions

1. FLSEs, focusing mainly on OPVs should be seen as complementary to formal systems for specific crops and/or meet spatial distribution challenges of the latter.
2. For some crops and under agro-ecologies, consider investments and capacity building in community-based or private sector led healthy-seedling production against specific soil borne diseases e.g., grafted tomato seedlings to control bacteria wilt.
3. Targeted interventions aimed at rendering formal/semi-formal seed sector more smallholder-responsive and for scaling up positive impacts are required e.g., *inclusive business models*.
4. No “one-size fits” system”. Critical is that approach / blend of approach(es) should be demand driven for specific contexts

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