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## How to tackle the challenges for seed system changes?

### *Minutes of high level multi-stakeholder workshop on Seed Systems Development Addis Ababa, May 17, 2019*

An international multi-stakeholder workshop on Seed Systems Development was held at ILRI Addis Ababa campus, Ethiopia on Friday 17, 2019. The workshop was organized by CGIAR, the government of the Netherlands, USAID, ISSD-Africa, NWO-WOTRO, Food & Business Knowledge Platform and AgriProFocus, subsequent to the CGIAR systems council meeting and an internal meeting on Seed Systems Development with research teams. The objective of the workshop was to create interest among key international and regional agri-food sector actors and investors to collaborate in further enabling and scaling genetic improvement and propagation materials (seeds). The workshop gathered around 90 local and international experts to explore how to jointly tackle major bottlenecks at systematic level in the functioning of seed systems.

### **Opening remarks**

The opening remarks were given by André Zandstra (CGIAR, Director Funder and External Engagement), Robert Bertram (USAID, Team Leader, International Research and Biotechnology) and H.E. Ms. Aynalem Nigussie (Ethiopia, State Minister for Agricultural Inputs and Marketing).

André Zandstra started sharing key issues discussed at the CGIAR System Council meeting, which had taken place on two days preceding this workshop: how to deliver impact, which are the partnerships required, how to engage the private sector. The CGIAR's 2019 research programme focuses on the cooperation among private organizations, the public sector and other stakeholders to better understand the bottlenecks in the seed system and identify solutions to improve its functionality. "The way we implement partnerships is critically important." He highlighted it is crucial we work together, support innovations, encourage learning and experience sharing, and build capacities of stakeholders at different levels. "There is a gap in terms of delivery: getting innovations into the hands of those needing them most."



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Robert Bertram noted that as part of the collaboration with CGIAR, USAID mainly supports climate smart agriculture innovations, policies, and public and private partnerships. The goal is to improve the livelihoods and nutrition of farmers by strengthening the cooperation between researchers and farmers, and more generally across institutions from all levels. Researchers need to work in a demand-driven way, based on an understanding what farmers need. USAID supports the ambition of this workshop, as currently, “even the best innovation is severely hampered by a lack of a system that brings it to the hands of farmers.” A critical aspect of creating success is using new ways of measuring and tracking progress, for example through DNA fingerprinting.

H.E. Ms Aynalem highlighted the fact that agriculture being the mainstay of the Ethiopian economy, there is a need to work on improving the efficiency of Ethiopia’s seed system in order to raise agricultural productivity. This includes creating a market driven seed system, improving human and structural capacities, strengthening and improving seed sector policies - which is in process -, and improving the utilization of research findings to introduce improved varieties at the right price, quality, quantity and time. She emphasized the need to work on strengthening the formal seed system to support the informal system that is currently dominating the agriculture system, as ‘vulnerable groups need to benefit’. H.E. Ms Aynalem concluded by passing her expectation that the workshop will come up with specific forward looking recommendations that will contribute to the existing efforts in the seed sector.

## Keynote presentations

The opening speech was followed by three presentations on:

- **A value chain of innovation towards delivery. How to tackle the challenges for seed system change.** By *Philippe Ellul (CGIAR, Senior officer)*  
 CGIAR is modernizing its portfolio of Research Programmes (CRP’s) to make sure these deliver the right variety to the farmers. Collaborative efforts across CGIAR research centers and platforms are intensified, which put the knowledge of various centers together, such as for example in Policies, Institutions and Markets (PIM). Some CRP’s are more directly involved in seed sector development than others (e.g. maize, grain legumes and dryland cereals, rice, roots, tubers and bananas, wheat). The value chain of innovation towards delivery, as shown in slide 8 of the presentation, indicates where the gap is in getting improved seeds to the farmers: seed systems development isn’t really part of the portfolio of CGIAR. It may be questioned whether CGIAR has these skills in its programmes: to work with the farmers you need multidisciplinary scientists. And globally you need to integrate the CRPs. This where the Seed Systems Development research call in the context of the CGIAR-NL partnership has a clear added value. [Please download the presentation here \(PDF\).](#)
- **More choice – better access. Seeds2B programme.** By *Ian Barker (Syngenta Foundation for Sustainable Agriculture. Head Agricultural Partnerships)*  
 Syngenta Foundation contributes to developing the seed sector in African countries, in collaboration with seed enterprises in these countries. For some crops farmers use, the private sector can deliver the improved seeds, while for some other – often subsistence - crops is it difficult to get private sector on board. A PPP approach is required for progress for less commercial crops. Companies can introduce new varieties, they negotiate with the public breeders to take a seed to the market, realizing high levels of investment may be required. Gradually the market for seeds can be built, on condition that there is an appropriate and consistent seed regulatory environment. An interesting experience was when reaching the tipping point for potatoes in Kenya: “If we can prove the viability of a business model of a new variety for a crop in a country, other companies will follow.” And he concludes “We remain committed to work with CGIAR, NARS and other colleagues to share and co-develop best practice in seed technology-transfer.” [Please download the presentation here \(PDF\).](#)



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- **Guiding Seed Sector Transformation in Ethiopia.** By Mohammed Hassena – *Integrated Seed Sector Development (ISSD)-Ethiopia, Deputy Manager*

Ethiopia has seen an increase in the production of seed in the past decade, but seed value chain development lagged behind. Since 2017, seed sector actors have collaborated in a national seed advisory group to the Ministry of Agriculture and Natural Resources to explore strategic options for transforming the Ethiopian seed sector. Building on multi-stakeholder processes at regional and federal level, and engaging the Ministry effectively at strategic moments in time, the advisory group developed a vision and pathways for seed sector transformation. Moreover, the group supported finalization of the draft seed policy and drafted amendments to the 2013 seed proclamation (early 2019). Lessons from this process are: embrace systemic change, manage adaptively, and invest in social capital. “Sector transformation is a long game, so be willing to make long term commitments.” [Please download the presentation here \(PDF\).](#)

A few remarks from participants followed, which stressed the need for incentives ‘to get big companies on the ground in our countries’ and the importance of looking at the local level. Needs of particular crops and of particular regions are differentiated, and research needs to be aware of that and make sure there is local stakeholder engagement. “Lots of farms are small. For them the seed delivery system is very important. Taking seeds to farmers is important. We have reached thousands of farmers that have improved the yield. It is a matter of working together.”

### Seed Systems Development - Research projects poster viewing session

This session focused on presenting the summary of the kick-off meeting of nine [SSD-Research projects](#), which took place just before this public workshop and included a structured poster viewing session. The participants were given an opportunity to select two presentations to attend.

#### SSD-Research projects

1. [Integrated vegetable seed systems development in ethnic minority communities in northern Vietnam for enhanced nutrition and income security](#)
2. [Promoting stress tolerant varieties at scale: Interlinking the private seed sector and insurance advisory service in Kenya](#)
3. [Accelerating aquaculture development in Ghana through sustainable Nile Tilapia seed production and dissemination](#)
4. [Enabling agribusiness development for scaling quality cassava seed systems for control of major viral diseases in Rwanda and Burundi](#)
5. [Policy and regulatory reform options for seed market development: Expanding the empirical evidence base in Uganda](#)
6. [Feed and forage seed business models to support further professionalization of the dairy sector in Kenya and Uganda](#)
7. [Women in business; chicken seed dissemination in Ethiopia and Tanzania](#)
8. [Upscaling improved groundnut varieties through integrated seed systems for improving income and nutrition in dryland of Ghana and Mali](#)
9. [Cocoa Target: using citizen science to improve climatic and agro-ecological targeting of varietal recommendations and accelerating planting material access for cocoa farmers in Ghana](#)

Three other initiatives also shared their experiences on posters:

10. [Assessing of seed marketing innovations in five study woredas of Tigray region](#)
11. [Citizen science approach for digitally-supported, scalable on-farm testing](#)
12. [CGIAR Gender Platform: Gender dynamics in seed system](#)



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## Interactive panel debate

Panelists: Michel Evéquoz (Swiss Agency for Development and Cooperation), Alessandra Galiè (ILRI Kenya), David Spielman (IFPRI/PIM, Washington), Selamawit Firdissa (BENEFIT, Ethiopia), Mohammed Hassena (ISSD Ethiopia), Shemelis Getachew (GAWT International Business PLC, Ethiopia)

A panel debate on “Institutional arrangements for realizing the potential of improved varieties” was organized in such a way that statements were presented by the facilitators and the participants were asked to state their agreement or disagreement and provide arguments. The workshop participants and the six expert panelists representing different sectors debated over the following three statements.

### **1. Public investment in variety uptake needs to be higher than public investment in breeding programmes.**

Points from participants in favor of this statement:

- There are already a large number of varieties on the shelf. These are public goods. The promotion and distribution of these varieties should be considered as a priority;
- Even though it differs from country to country, in countries like Ethiopia, there is a need to focus on the farmers’ demand for seed of improved varieties, and the urgent need to align investment with this existing need; and
- Even if development of new varieties is very important, right now, verification of varieties is more of a concern and should be a priority public investment should focus on.

Points raised by participants who disagreed included:

- Because of the changing climate and issues such as newly emerging diseases and pests, more attention and investment should be given to developing varieties for climate smart agriculture; and
- Breeding needs long-term commitment. The investment in breeding research is already limited; the involvement of government is necessary to meet the growing demand for new varieties.

Other participants said it would be good to know the financial data, before drawing conclusions; while also monitoring the quality and effectiveness of any investment, including whether these respond effectively to gender differences. It will differ from country to country how much is already invested in either breeding or variety uptake, and different funders and stakeholders can have different roles. The general recommendation based on this discussion is to invest in both breeding and in variety uptake, but do so in an interconnected way, considering also the context of the country.

### **2. Farmers will benefit more from investment in financial products to access quality seed than from additional efforts in breeding.**

Points from participants who agreed with the statement:

- Investment in financial products encourages farmers to get credit to buy quality inputs;
- (Innovative) Financial products are especially beneficial to women farmers who are more disadvantaged in accessing credit than men;
- Crop insurance is more important for farmers to adopt and reduce risk of using new agricultural inputs including seeds;
- It is important to develop financial products for de-risking SMEs in the seed value chain;
- Big companies are interested in this kind of investment and solutions; and
- Access to finance in general is a big challenge.

Points from participants who disagreed with the statement:

- Using innovative strategies like introducing small seed packages for smallholder farmers does not need additional financial products.



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In conclusion, it is important to make sure financial products are available to farmers, but the selection of products should be based on what is best for each user (group); for some, it may be credits, for others savings. SMEs will have their particular needs. The seed sector should make use of promising examples of new financial products (including savings) that are available.

### **3. Varieties from public breeding programmes should be multiplied under exclusive user right agreements with private seed companies.**

Points from participants who agreed with the statement:

- Private companies play a key role in making varieties available to farmers; they are reducing the financial burden of public breeding programmes.
- For a number of specific crops exclusive licensing is important to encourage private companies to take up the varieties in their portfolio for seed production, giving them a competitive advantage in the seed market;
- Intellectual Property Rights (IPR) frameworks include exception clauses that may be applied to make sure poor farmers' access to seeds is not compromised.

Points from participants who disagreed with the statement:

- Private companies are not interested in multiplying seeds of subsistence crops; this means that these type of agreements wouldn't necessarily help improving access to seeds for crops that are key for household food and nutrition security;
- Women often use the informal system. If you work only through the formal system, you may risk to exclude them;
- Currently, community seed systems are playing an integral role in supplying quality seed for farmers, thus multiplication should not be limited to private seed companies. There may be a risk that community based seed systems cannot compete with these protected varieties.

In conclusion, intellectual property issues are very contentious. As a community working on improving the potential for improved varieties, we need to distinguish between various types of value chains. For crops with commercial potential, exclusive user right agreements may support quality seeds to become available to farmers. In subsistence value chains, introducing exclusivity needs to be handled with care.

### **Concluding remarks**

*Melle Leenstra (Netherlands Ministry of Foreign Affairs):* "As the Netherlands, we are thankful and proud of being part of a vibrant community that tries to foster farmers' access to the seeds that the system delivers. Normally, CGIAR funding partners are quite far away from what it is about; this workshop covers exactly that. The discussions shows that it is about both the formal and informal sector and about a wide range of different varieties. Farmers function at their best, if they can make the entrepreneurial decisions for themselves. The research projects funded through this NL-CGIAR collaboration are examples of what can be done to boost joint impact: these are partnerships between researchers, from Africa, Asia, and the Netherlands, and their other partners, which foster knowledge exchange, joint engagement and permanent dialogue. Together we try to make sure that the research is relevant for the women and men who are working to feed themselves and the nation."



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## Field Excursion

In the afternoon, the participants visited Debre Zeit Agricultural Research Center (DZARC). They met with the DZARC Director who explained the role of the Center and with the pulse breeder who explained how the Center works with seed producer cooperatives and private companies to increase the production of pulse crops seed. A representative of Amuari High Yield Varieties and Agricultural product PLC presented how his company is able to produce seed of pulses with a profit. Participants also visited the DZARC laboratory and demonstration and testing fields.

Overall, the workshop was relevant to deepen understanding of the complexities of the seed sector, show examples of what has worked in practice, create synergy and over all strengthen collaboration among major stakeholders.