

## **Enabling and Scaling Genetic Improvement and Propagation materials of Crops, Livestock and Fish**

### **Report of multi-stakeholder consultation meeting**

*October-November 2017, The Hague*

#### **Introduction**

Improving the extent to which quality propagation materials (crops: varieties & seed<sup>1</sup>, livestock: breeds & animal seed stock<sup>2</sup>) contribute to smallholder farmers' food and income security, is one of the key priorities of the strategic partnership between the Netherlands and the CGIAR. A research call is proposed that contributes to ensuring that improved seed and animal seed stock are available and accessible for smallholder farmers sooner and at a larger scale than in current practice, through more efficient and sustainable seed and animal seed stock value chains anchored in a supportive enabling environment.

On October 12, 2017, a consultation meeting took place in the Hague, with participants from the private and the public sector, civil society and academia, including the CGIAR, with expertise and experience in the domain of seed and animal seed stock systems. For those key stakeholders who could not be present on October 12, a webinar (teleconference) took place on November 3. Participants of the meeting and the webinar were invited to help further define the scope of the research call, such as the priority research questions, the regional/country scope, and the design of the call. This was meant as input for the theory of change for this research call, and was expected to enhance the impact of the NL-CGIAR strategic partnership.

The meeting consisted of plenary presentations with information on the preliminary scope of the call and on the formal conditions. Thereafter participants worked in three groups that formulated key challenges and urgent knowledge questions, of which two concentrated on seeds of crops and the other on the domain of animal propagation materials.

#### **Participants**

The 33 participants were from Dutch universities (6), private sector (4), civil society organizations (5), public institutions (2), network/sector organizations (3), CGIAR CRPs (10) and also included a few individual consultants. The CGIAR representatives were from CRPs (RICE, RTB, A4NH, PIM) and cross-CGIAR programmes: the Genetic Resources Policy Initiative, the Excellence in Breeding Platform and the Gender Platform. In addition, 7 representatives of the NL-CGIAR working group were present, among whom the facilitators of the event (Ministries of Economic and Foreign Affairs, NWO-WOTRO, Food & Business Knowledge Platform).

The 5 webinar participants represented CGIAR Livestock, the Fish, and the (not yet approved) DCGL CRPs, the Ministry of Agriculture and the private sector.

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<sup>1</sup> "Seed" includes botanical seeds and also other planting materials for crops, such as tubers and cuttings

<sup>2</sup> "Animal seed stock" stands for young animals of any livestock and fish seed/fingerlings that can be brought into a farm, including quality semen.

## Challenges and Knowledge questions identified by participants in group work, and briefly discussed later on in plenary

Many **challenges** appeared to be common across crops and livestock/fish:

- Getting improved “seed” from breeders to smallholder farmers is a challenge.
- There is a highly differentiated demand. Present “seed” value chains may not be diverse enough for the needs of smallholder farmers.
- The business case for enterprises in seed systems is not always there or clear.
- “Seed” value chains are well developed in OECD countries but not or a lot less developed in LMICs.
- IP issues in “seed” value chains are complicated. IP versus public goods – economic incentives are needed for working with public goods. Business models for food crops.
- Much good genetic material is on the shelf, but the challenge is to get this to the farmers; starting with the need to scale up the distribution of early generation seed.
- An important limitation for this is found in the institutional conditions; these are fragmented and not conducive: quality assurance mechanisms are not functional, public system misses drivers for efficiency, and there are bottlenecks for public-private partnership.
- An important challenge is also at the level of the farmers/users of seed: their needs vary (gender, poorest of the poor) and factors like hidden hunger (need for veggies) are still under-addressed.

*(Particular challenges identified by the ‘animal’ group)*

- Business case for animal breeding and animal seed stock value chains for smallholders not yet specified.
- Integration of animal seed stock delivery systems into the value chains of the food system is needed.
- Business knowhow for animal seed stock value chains for smallholder farmers needs to be scaled across the value chains.



Also among the key **knowledge questions** highlighted there were many similarities between crops and livestock/fish:

- Farmer capacity building, what triggers adoption?
- How can the business case for seed value chains for low (subsistence/food) value crops and livestock species be strengthened?
- How can policies be optimized and become more widely adapted?
- How can breeding and “seed” value chains for smallholder farmers be strengthened, including the performance of intermediates (early generation seed producers, hatcheries)?
- How does the continuum of formal-informal ‘seed’ value chains work and how can it be optimized?
- How can research uptake in this field be improved?

*(Specific questions around animal seed stock systems)*

- What are the requirements for breeds for smallholder farmers? This may include resilience to climate change, breeds that thrive on alternative feeds (since maize and soybean are getting too expensive),



as well as responding to the (local) market demands for the meat, milk, eggs and fish produced by smallholder farmers.

- Better understanding of smallholder animal seed stock value chains, including the role of women, linkages between informal ↔ formal markets, linkages between the value chains of e.g. feed and 'seed'.
- What type of capacity building is needed to better scale know-how around animal seed stock value chains, including feedback loops? This may require capacity building of all actors: smallholders, multipliers/hatcheries (including participatory breeding), agro dealers & agro-vets, breeders, regulators, health inspection, et al.

*(Specific questions around crop seed systems)*

- How to mobilise farmers' use of improved seeds: what triggers the actual adoption, i.e. the change to improved varieties or better seeds? Need for a differentiated analysis of seed system locally and regionally/nationally.
- What strategies can be used to increase the demand for seed, what business models can work for low-value seed chains? Can we learn by looking cross low-value crops, or would a pilot e.g. on dry beans generate valuable knowledge? How to strengthen value chains in view of a smoother flow of products within these chains? How could all stakeholders within the chain be more proactively involved, including SMEs?
- There has been much research on identification of germplasm that resists/tolerates biotic and abiotic stress, but much more needs to be done. Same for the topic of seed quality: here especially the lack of in-country and regional expertise is a point of concern.
- How to stimulate effective governmental and private systems and structures? How to address overly complex regulation? How to operationalise decentralised seed quality assurance mechanisms?
- How can policy interventions overcome the political-social bottlenecks? How can we enhance policy development, implementation and reforms?
- How to make farmers and consumers part of the research and part of the business, both in the formal and informal sector? What are possible modalities of linking research and practice?



### Further remarks by participants

Livestock/fish and crops are often part of the same farm, and influence each other, including the 'seed' value chains, that are relevant to both - e.g. fodder crops. The research call should have focus: on the challenge on how to get best quality seed to smallholders. Cross-projects learning for the research projects under this Call could (also) use existing networks such as ISSD and the CGIAR Excellence in breeding platform.



### Geographical Scope

Based on overlap between the focus countries of the CGIAR and the priority countries for the Ministries of Economic Affairs and Foreign Affairs, a total of 12 countries in Sub Saharan Africa and Asia is being proposed as the geographical scope for the call. No need was expressed by the participants to add to this list or to remove countries from the proposed scope.

### Webinar

The webinar supported the relevance of the call and the knowledge questions suggested on October 12. Particular interest was drawn to harnessing private sector interest in development of the seed sector in LMICs.

### Additional comments and next steps

Meeting and webinar participants were invited to send additional suggestions to the Food & Business Knowledge Platform (F&BKP) Office team. These will be taken into account in the further development of the scope of the Research Call by the F&BKP and NWO-WOTRO. The scope will be discussed by the NL-CGIAR working group of the Ministries of Economic Affairs and Foreign Affairs and submitted for approval to the program committee of NWO-WOTRO.

The reader of this short summary should refer to [www.knowledge4food.net](http://www.knowledge4food.net) or the NWO-WOTRO website for further updates on the Call.