



Convening Report:
**Multiple Pathways for Promoting the
Commercial and Sustainable Production and
Delivery of Early Generation Seed
for Food Crops in Sub-Saharan Africa**

Organized 23 March 2015, London, United Kingdom

by

Bill & Melinda Gates Foundation and
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The report has been compiled by Karin Lion and Walter de Boef, Bill & Melinda Gates Foundation, and Mark Huisenga and David Atwood, USAID.

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The meeting was facilitated by Brendan Hickling, Rob Angell, Hally Ingram, Claire Mellier-Wilson, and Niamh Carey, Hickling & Associates, UK.

This report is based on discussions during the convening, organized 23 March 2015, London, United Kingdom, which was held following the release of a study on early generation seed that was commissioned by the United States Agency for International Development (USAID) and the Bill & Melinda Gates Foundation (BMGF) and carried out by Monitor-Deloitte, in part under a sub-award through the USAID AfricaLEAD project implemented by Development Alternatives, Inc. The summary report of the study can be accessed through the following [link](#). The findings and conclusions contained within do not necessarily reflect positions or policies of BMGF nor USAID.

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Acronyms

ACTESA	Alliance for Commodity Trade in Eastern and Southern Africa
AFSTA	Africa Seed Trade Association
AGRA	Alliance for Green Revolution in Africa
AGRF	African Green Revolution Forum
BMGF	Bill & Melinda Gates Foundation, USA
CAADP	Comprehensive Africa Agriculture Development Program
CGIAR	Consultative Group for International Agricultural Research
CIAT	International Center for Tropical Agriculture
CIMMYT	International Center for Maize and Wheat Improvement
CIP	International Potato Center
DfID	Department for International Development, UK
DTMASS	Drought Tolerant Maize in Africa Seed Scaling
EGS	Early Generation Seed
FAO	Food and Agriculture Organization of the United Nations
GiZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HGBF	Howard G. Buffett Foundation
IFC	International Finance Corporation (part of World Bank Group)
ISSD	Integrated Seed Sector Development Program (implemented by CDI/Wageningen UR in collaboration with partners in various countries)
KIT	Royal Tropical Institute, the Netherlands
NARS	National Agricultural Research Systems
NGO	Non-Governmental Organizations
PPVFRA	Protection of Plant Varieties and Farmers Rights Authority, India
ReNAPRI	Regional Network of Agricultural Policy Institutes
RTB	Root and Tuber Crops, and Bananas
SFSA	Syngenta Foundation for Sustainable Agriculture
SSA	Sub-Saharan Africa
SSTP	Scaling Seed and Technologies Partnership
USAID	United States Agency for International Development
Wageningen UR	Wageningen University and Research centre, the Netherlands

Executive Summary

This report summarizes the outcomes of a convening on overcoming Africa's early generation seed problems. The convening was sponsored by the Bill and Melinda Gates Foundation (BMGF) and United States Agency for International Development (USAID) and took place on March 23, 2015. This report should be read in conjunction with the slide report entitled, *Early Generation Seed Study*¹. The production and delivery of early generation (breeder and foundation) seed continues to be one of the major bottlenecks hampering the functioning of seed value chains of major food crops in Sub-Saharan Africa (SSA). In order to double agricultural productivity in ten years, and thereby achieve the target enunciated by all of Africa's Heads of State in 2014 in the Malabo Declaration, governments must take action to manage the bottleneck of early generation seed availability for food crops.

Specific circumstances, crop types, and seed production costs and requirements introduce a wide variation and complexity into solving the problem of the supply of early generation seed (EGS) and getting quality seed of improved varieties available to smallholder farmers in SSA. Despite numerous technical studies of seed systems, no study has looked in-depth into business models by conducting a financial analysis, particularly exploring distinct modalities for public-private partnerships responding to a range of country and crop circumstances, and subsequently identifying effective pathways to promote the commercial and sustainable supply of EGS. The BMGF and USAID commissioned a study by Monitor-Deloitte that built on earlier work to offer a range of more business and market-oriented solutions to governments and private sector, according to varying circumstances, crop types, and countries. The convening was then held to review the study with a number of key stakeholders.

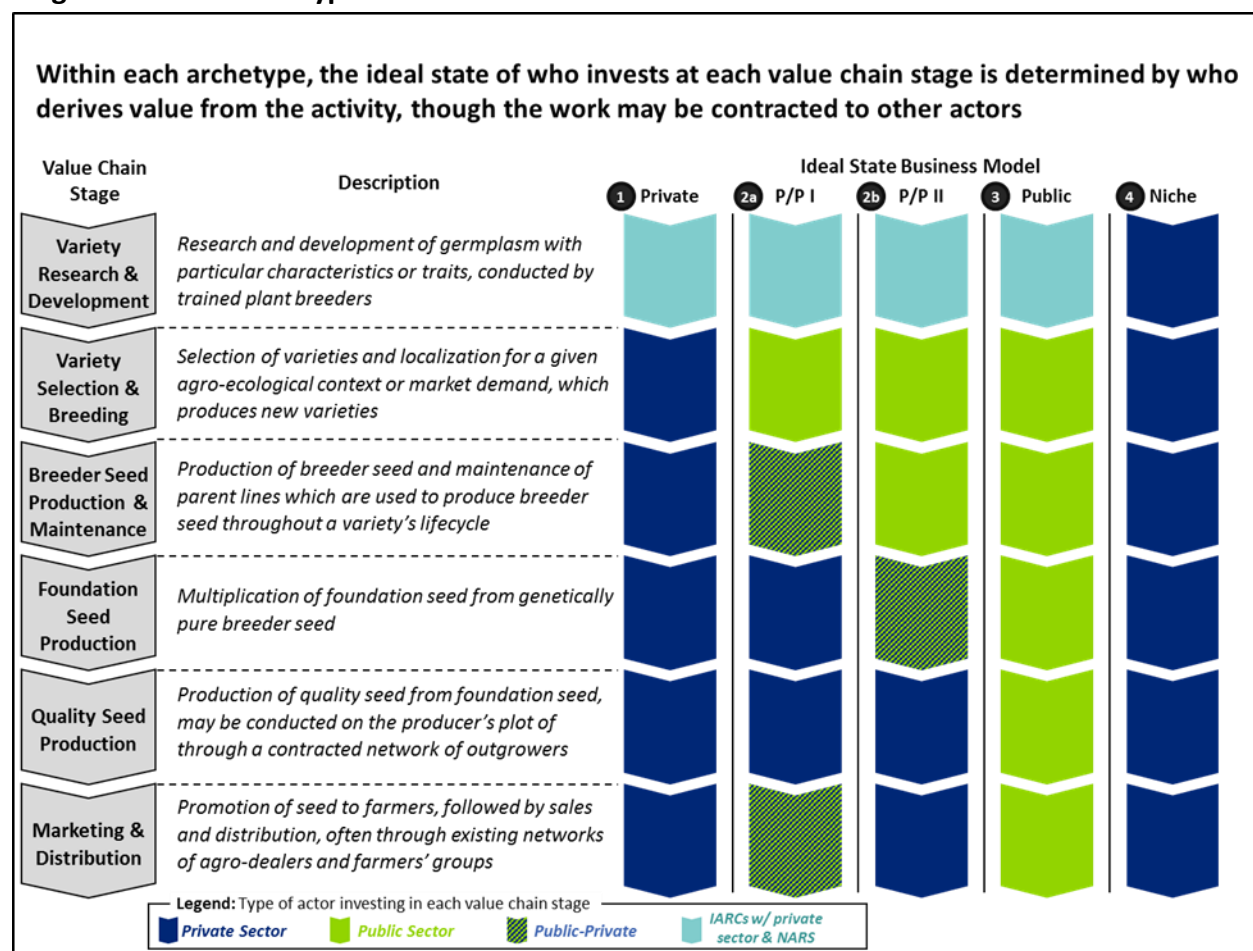
The purpose of the convening was to mobilize insights and support for addressing the key systemic bottleneck in the seed sector of EGS production and delivery in SSA with major donor organizations, as well as engaging other development partners and inter-governmental organizations with resources or expertise in strengthening seed systems relevant to smallholder farmers. This convening report outlines the discussions and conclusions from the convening, including an outline of the general consultative process of which the convening is part, general reactions to the EGS study, identification of implications of the study's recommendations, and specific actions to be taken forward by key stakeholders.

Many key insights emerged when discussing the study elaborated by Monitor-Deloitte. Critical is that participants endorsed and vetted in strategic terms the conceptual approach taken in the

¹ Bill & Melinda Gates Foundation and USAID, 2015. Early Generation Seed Study, a report compiled by Monitor-Deloitte and commissioned by BMGF and USAID. BMGF, Seattle WA, and USAID, Washington DC. Access [here](#).

study (as visualized in the figure below), as well as the findings, which articulated diverse business models for structuring responsibilities among public and private stakeholders in the production and delivery of EGS of food crops in SSA.

Overview of actors responsible for specific activities within seed value chains within an idea stage of market archetypes²



Participants raised the importance of understanding demand as the key driver of who invests in what and who implements what, given the high demand side risks associated with many of crops covered. It is also important to differentiate between who finances versus who operationalizes when discussing roles of public and private stakeholder, as way to promote and shape a diversity of public-private partnerships required to promote EGS production and delivery for food crops. Herewith the discussion referred to the larger debate on specific purposes of public expenditure in agriculture. Furthermore, the discussion highlighted that when referring to 'private' in the seed

² Source: Bill & Melinda Gates Foundation and USAID, 2015. Early Generation Seed Study, a report compiled by Monitor-Deloitte and commissioned by BMGF and USAID. BMGF, Seattle WA, and USAID, Washington DC

sector, it should be considered in its most inclusive definition, i.e. including small and medium size seed companies, farmer-led organizations, individual entrepreneurs, and even commercially-operating divisions within public organizations.

The discussions were partially structured along the following groups of the food crops: (i) hybrid maize, (ii) major cereals (including maize seed of open pollinated varieties), (iii) small grains (including sorghum and millets), (iv) legumes, and (v) root and tuber crops, and bananas. The outcomes of these discussions elaborated the context necessary to promote the commercial and sustainable functioning of EGS supply systems. Each group of participants discussed options to address general and specific bottlenecks of EGS production and delivery, as well as required business models and implications on enabling environments. A clear understanding emerged among the participants that, with the exception of hybrid maize, for all other food security crops, systemic bottlenecks for EGS supply are most associated with the interface between public and private stakeholders, as well as the requirement for the development of modalities for public financing of commercially produced and delivered EGS.

Case studies were shared at the convening on legumes seed value chains in Western Canada and major cereal and legumes seed value chains in India. The case studies elaborated potential implications for SSA regarding farmers as private sector, the importance of agronomy, and the role of public organizations (such as universities) in assuming specific responsibilities for commercial and sustainable EGS supply of food crops for which, due to the reproduction system of the crops, the private sector has a limited commercial interest to cover the full seed value chain. The insights from both countries inspired the discussion on the public-private interface and the attempt to translate this to conditions in SSA.

At the conclusion of the convening, participants were split up into their affinity groups (private sector, donors, development partners, and R&D/technology partners) to determine what actions each affinity group could accomplish together and what each individual organization could take forward to support the increase of EGS systems relevant to smallholder farmers in SSA. The private sector committed to produce more EGS themselves, provide training and support to smaller EGS seed producers and companies, advocate for improved policy and regulatory frameworks, and champion the need to scale up EGS. The donor organizations committed to commission country baselines, incorporate EGS considerations when funding other investments like breeding programs, scale up training programs for EGS stakeholders, advocate conducive policy frameworks to support EGS systems, and elevate the discussion to EGS public private partnerships in regard to CAADP. Development partners committed to advocate for policy change and awareness of the need for increased EGS supply, invest in EGS production models, train and develop capacity of national stakeholders, document lessons and experiences with EGS

supply, and help to articulate and quantify demand for EGS. Lastly, R&D/technology partners committed to work more closely with farmers, research factors affecting demand as well as how to forecast demand, facilitate the multiplication of foundation, and advocate for policy change.

The follow up to the convening will include a process of country level analysis and national consultations, in collaboration with responsible governments, relevant public organizations, local private sector, NGOs, and other stakeholders in several African countries that express interest. These consultations will rely especially upon seed sector policy or consultation platforms already existing in those countries, as appropriate. These could include some of the five countries that have been profiled in the study (Tanzania, Ethiopia, Nigeria, Ghana, and Zambia), as well as others. Building upon expressions of interest shared by the participants in the convening, their involvement in those structured dialogues will be sought by BMGF, USAID, and their national partners. The dialogue will allow for deepened engagement and action across all five countries in support of their unique needs for the breeder and foundation seed that is essential to improve food security.

1. Background on the Study and Convening on Early Generation Seed

Several systemic problems exist within the seed sector that hamper the production and marketing of quality seed and planting materials of improved varieties of major food crops of SSA. The production and delivery of early generation seed (EGS)³ continues to be one of the major bottlenecks hampering the functioning of seed value chains. Although commercial models exist for promoting the production and delivery of EGS of maize hybrid varieties, different models are required to reach scale and sustainability for the production and delivery of EGS of improved varieties for crops less attractive to the private seed sector such as rice, various legumes, sorghum and millets, and root and tuber crops. BMGF and USAID are exploring ways to encourage the development and promotion of appropriate models for strengthening and enhancing the production and delivery of EGS of improved varieties for a diversity of food crops in SSA. The current report shares the outcome of a multi-stakeholder convening organized by both organizations in March 23rd in London.

Improvements in performance of African seed sectors is essential to get farmers the seeds of improved varieties that they need to increase their productivity and income. Such seed sector improvements are also essential to achieve the goal of the Malabo Declaration on Accelerated Agricultural Growth and Transformation to double Africa's agricultural productivity in a decade. With the aim to increase agricultural productivity among SSA smallholder farmers, the United States Agency for International Development, Bill & Melinda Gates Foundation, and many other development organizations make structural investments in crop improvement of major food crops. Despite significant investments over the past decades, if smallholder farmers do not obtain access to and use the quality seed and planting materials of those improved varieties, these investments will never result in realized productivity. Addressing the major bottlenecks in early generation seed availability is a key part of meeting that challenge.

This report should be read in conjunction with the slide report entitled, *Early Generation Seed Study*, and especially with slides 7 and 9. The report outlines the commitment by USAID and BMGF to tackle the challenge of increasing EGS production and delivery for certain food crops, and provides the impetus for both a study on the topic as well as the follow-on convening. The purpose and outcomes of the convening are elaborated in detail, highlighting specific implications of the study and appropriate recommendations for each crop group to increase the supply of EGS and improve its delivery to benefit smallholder farmers. The report ends with the participants' future commitments to support the shared EGS agenda, and articulates the next

³ The term 'Early Generation Seed' (EGS) is used as a common term that includes both breeders' and foundation seed, or, using other terminology, pre-basic and basic seed. The term 'Seed' is used as a common reference that also includes planting material for vegetatively-propagated crops.

steps in the USAID and BMGF partnership to address this systemic bottleneck that hampers seed sector development.

2. Convening within the USAID-BMGF partnership

A. USAID-BMGF Partnership

In a Memorandum of Understanding signed on March 24th, 2015, USAID and BMGF expressed their common interest in sustainably increasing productivity and reducing hunger and poverty for sub-Saharan and South Asian smallholder farmers, with a particular focus on women smallholders. The Memorandum outlines six priority areas for collaboration in agricultural development. Among the six areas, two are relevant for addressing bottlenecks in the seed sector: (1) *scaling proven technologies and practices* through enhancing the systems and value chains that can sustainably deliver these technologies (in this case quality seed of improved varieties) to smallholder farmers, including joint efforts to support the relevant policies, markets, and private sector with a farmer-centered perspective; and (2) *strengthening institutions and systems*, specifically: formal and informal seed systems, including addressing systemic bottlenecks, implementing complementary solutions, including identifying, assessing and supporting key institutions and systems linkages (such as those relevant to production and delivery of EGS), and promoting strong policy enabling environments for smallholder farmers.

USAID, BMGF, and other partners are engaged in many investments in crop improvement and the seed sector. The intention of this partnership is to foster innovations dealing with systemic bottlenecks that hamper seed sector development, promote variety deployment, and enhance access to and use by SSA smallholder farmers of quality seed of improved varieties for food crops.

B. Technical Convening on Seed and Fertilizer Policy in Africa

In December 2014, BMGF and USAID co-sponsored with other development partners an expert convening in Addis Ababa, Ethiopia, to identify practical policy changes and steps to make seed and fertilizer more widely and quickly available to Africa's farmers. The purpose of the meeting (whose conveners were the Africa Seed Trade Association (AFSTA) and the Regional Network of Agricultural Policy Institutes (ReNAPRI) of Eastern and Southern Africa) was to develop recommendations to feed into the African Union's Year of Agriculture and the deliberations leading to the Malabo Declaration in July 2014. While not focused explicitly on the problems of early generation seed, the convening nevertheless made a number of recommendations to the African Union Commission, which are relevant to tackling the bottlenecks of early generation seed, in particular regarding greater public financing of seed-related public goods, clarity of private sector roles in the regulatory and policy environment, clarity in licensing costs and mechanisms, appropriate public-private sector division of labor in seed production, accelerating the pace of variety release, eliminating costly barriers to cross-border seed trade among African

countries, and putting in place more effective and lower cost quality assurance mechanisms involving public and private sector as appropriate.

C. AGRF-Seminar on Key Bottlenecks in the Seed Sector

At the African Green Revolution Forum (AGRF), 2014, BMGF and USAID organized together with the Alliance for a Green Revolution in Africa (AGRA) a seminar addressing key challenges in the seed sector. Participants were key stakeholders representing both public and private sector in various sub-Saharan countries. The seminar addressed two priority areas that hamper the development of the sector across the continent.⁴ The first topic was increasing EGS production and delivery; the second topic was facilitating a gradual change from seed quality control to seed quality management.

In relation to EGS production and delivery, the following priority interventions were identified during the AGRF seminar:

- Contracting larger seed companies to produce foundation seed for sale to smaller companies
- Establishing and supporting seed companies that produce solely foundation seed within countries or at the regional level
- Developing the capacity of small- and medium-sized seed companies to produce their own foundation seed
- Formulate and/or review national and regional policies to liberalize foundation seed production

D. EGS-Study

Endorsed by the outcomes of the seminar and Forum, USAID and BMGF agreed to jointly commission a study on EGS production and delivery. Monitor-Deloitte conducted a study with the aim to develop a useful tool to assess the topic of EGS for donors, governments, and other stakeholders designing and pursuing future interventions in this space. The study was conducted in consultation with local government officials, local seed experts, and African and international seed companies in the period December 2013-January 2014. Monitor-Deloitte developed a generalizable conceptual approach that enables policy makers and donors to tailor their policies and interventions to the needs of specific crops based on market conditions, which are referred to as market archetypes. The archetypes are determined by (a) marginal economic value of quality seed of improved varieties and (b) the level of demand for varieties or crops grown with quality seed of improved varieties (Figures 1 and 2).

⁴ AGRA, 2014. Creating an Enabling Environment for Growing Private Sector Seed Development and Delivery in Africa. Report of Stakeholders Consultations during the Fourth African Green Revolution Forum (AGRF), 1-4 September 2014, Addis Ababa. AGRA, Nairobi. Access report [here](#).

Figure 1. Common economic framework to analyze the economics of EGS ⁵

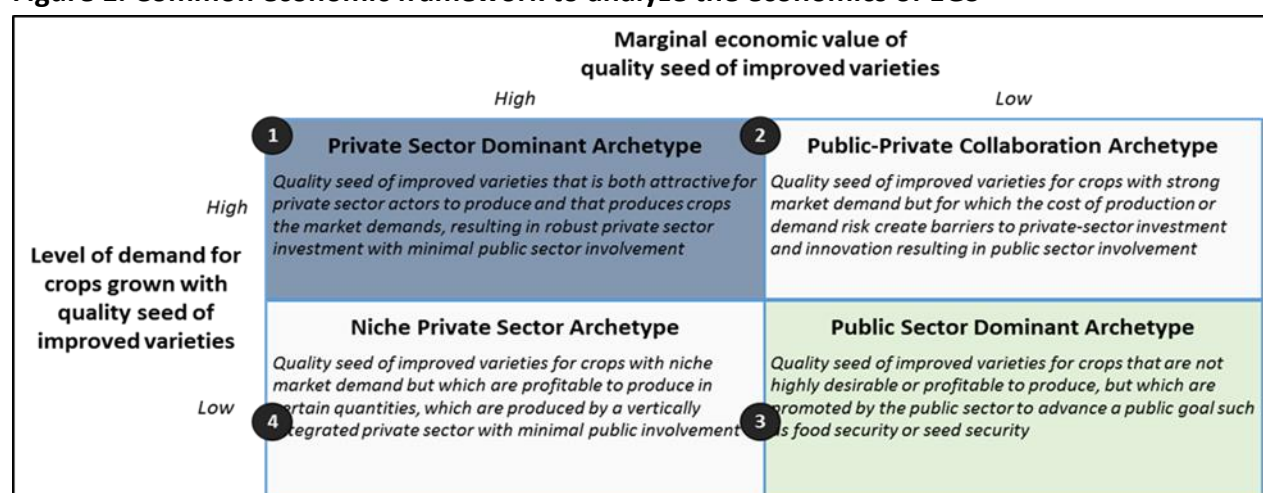
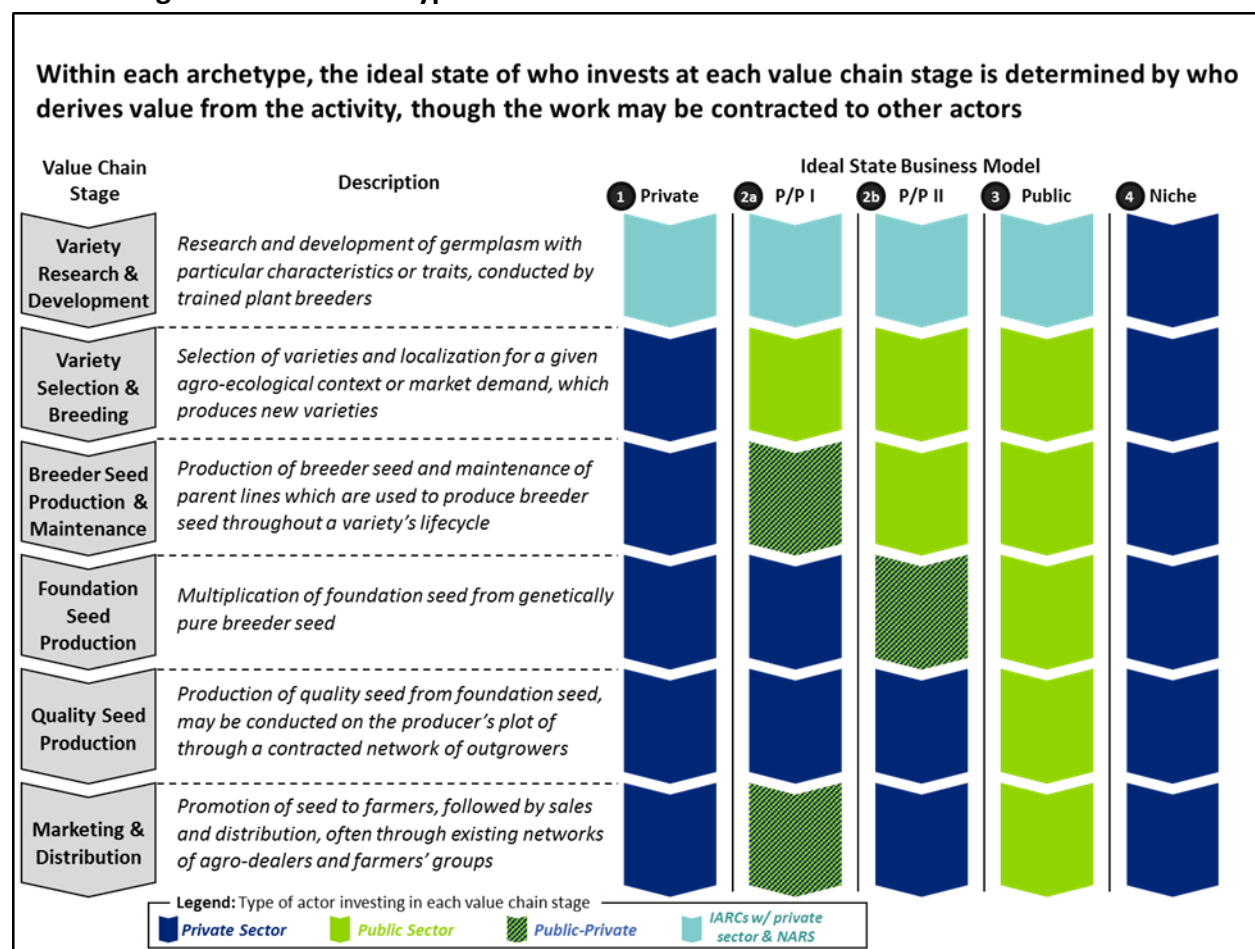


Figure 2. Overview of actors responsible for specific activities within seed value chains within an idea stage of market archetypes ³



⁵ Source: Bill & Melinda Gates Foundation and USAID, 2015. Early Generation Seed Study, a report compiled by Monitor-Deloitte and commissioned by BMGF and USAID. BMGF, Seattle WA, and USAID, Washington DC. Access report [here](#).

The study recognizes, however, that several other factors contribute to a well-functioning seed sector. These include, but are not limited to: policy environment; value chain capacity and resources; quality assurance mechanisms; and enabling environment. Based on a set of representative countries (Ethiopia, Ghana, Nigeria, Tanzania and Zambia) and crops (maize, rice, sorghum, cowpea, common beans, cassava and sweet potato), the study provides examples of potential business models that could scale the production and delivery of EGS in a commercially sustainable manner. In the case where the public sector still should play a role, the study outlines opportunities for public-private collaboration and increased efficiencies in the sector. Finally, the study concludes by providing generalizable principles and recommendations to help guide key stakeholders as they pursue policies, investments, and interventions.

E. Technical Review of the EGS-Study

Over twenty external technical experts provided critical feedback on a draft version of the report of the EGS study. The reviewers included representatives from IFDC, AGRA-PASS, DAI, FAO, CIAT, CIP, IFPRI, ICRISAT, ASARECA, CORAF, ISSD Ethiopia, private seed companies, and universities. These experts were asked to review this draft study and comment on the accuracy of the information and the validity of the conclusions to ensure that the recommendations were grounded in fact.⁶ A key outcome of the external technical review is that in general the reviewers supported the conceptual approach as developed by Monitor-Deloitte, which resulted in a technical endorsement. Reviewers did however provided detailed and nuanced inputs in particular relating to specific crop and/or country details, which were incorporated in the final version of the report.⁷ The version of the summary deck can be accessed through the link included in the footnote.

⁶ A summary of reviewer comments is captured in the following document: Lion, K.D., 2015. Synthesis Report of the Technical Review of the Early Generation Seed Study, Bill and Melinda Gates Foundation, Seattle WA. Access report [here](#).

⁷ Bill & Melinda Gates Foundation and USAID, 2015. Early Generation Seed Study, a report compiled by Monitor-Deloitte and commissioned by BMGF and USAID. BMGF, Seattle, WA, and USAID, Washington DC Access [here](#).

F. EGS-Convening

A next step in the USAID/BMGF partnership addressing bottlenecks in the seed sector was the organization of a convening that sought to share, discuss, and vet the results of this study, and identify key implications and follow-up actions.

Purpose

- To share, discuss, and vet the results of the EGS study
- To recognize and assess specific implications for the role of public and private sector stakeholders for specific crop groups,⁸ relevant market archetypes, and associated business models for EGS production and delivery
- To identify specific implications in terms of public expenditure for specific crop groups, market archetypes, and associated business models for EGS production and delivery
- To identify specific implications for development organizations and programs
- To seek expressions of interest to mainstream the implications of the study into participants' programs and activities
- To seek expressions of interest from participants to take part or assume responsibilities in country-level and/or regional dialogue and action to focus on mobilizing donor support for the seed sector with an emphasis on addressing major bottlenecks that hamper production and delivery of EGS of food crops in SSA, as well as engaging other development partners, inter-governmental organizations and private sector with resources or expertise to contribute to strengthening seed systems relevant to smallholder farmers in SSA

Targeted Deliverables

- The current report provides the strategic vetting of the EGS study, including its implications for public and private sector roles in EGS production and delivery, public expenditure, and potential contributions by development organizations and programs
- An increased awareness and understanding among key donors, development organizations, and stakeholders in the seed sector of the study and its implications at various levels including expressions of interest to mainstream the outcomes of the study
- Inputs to an action plan for follow-up country-level analysis and dialogue and action to foster further use for shaping strategic investments in the seed sector within the five pilot countries and beyond

⁸ Crop groups are defined in terms of their seed system, which is defined by their reproduction system (sexually or vegetatively propagated), the use of hybrid varieties, and structure of the seed value chain. The use of crop groups at the convening allowed for more focused analysis and discussion on bottlenecks and solutions for systemic bottlenecks in seed sector development such as EGS supply.

Participants

Many of the individuals participating in the technical review, as well as other stakeholders, were invited to a one-day convening in London to discuss the implications of the study and think through practical actions to address this key bottleneck in the seed sector. The participants included representatives of the following stakeholder groups (see annex 1):

- Key donor organizations active in the seed sector in SSA
- Continental and regional economic communities
- A variation of private seed companies
- Development organizations and international agricultural research centers playing active roles in strengthening the seed sector in SSA
- Resource persons operating in public-private partnerships in the seed sector

G. Follow-up Actions

BMGF and USAID aim to further engage in sharing and entering into an action-oriented dialogue on the results of the EGS study during a series of structured national analysis and dialogues in various countries in SSA. The aim is to identify a clear action agenda to address this major challenge, as well as to develop a catalytic pathway to address other structural problems hampering smallholder farmers having access to and using quality seed of improved varieties of food crops. Based on the outcomes of these national dialogues, both BMGF and USAID will explore together national public and private sector partners as well as key development partners active in the seed sector in SSA, and will explore follow-up interventions, either embedding within existing programs, stand-alone investments targeting EGS, and/or more comprehensive investments targeting various systemic bottlenecks as mentioned in the USAID-BMGF Memorandum of Understanding.

3. Outcomes of the Convening

A. General Comments on the Study

Participants were given the opportunity to comment on the overall conceptual approach of the EGS study, and share key insights. Many acknowledged that the approach captures well the different roles of the public and private sector within EGS systems, as both funders and implementers, as well as the general trends among different crops in dissimilar countries. It is the first time that EGS production has been modeled for these crops. For donors, the study frames the investment options well, although there was discussion whether donor funds should be included in the future ‘ideal state’ as described in the Monitor-Deloitte report. Participants indicated that the report does not articulate well the importance of political will and priorities and how policies shape the public/private sphere in each country. In addition, although the

business and profitability challenges are well described, the institutional challenges of promoting public-private partnerships are not as well developed.

Though it was acknowledged that the study provides a “generalized conceptual approach,” the importance of context was raised by many of the participants. For instance, one crop could fall into multiple archetypes depending on the country context. The failure is often one of policy and regulations, and the complications with their implementation, which, again, are country-specific. Other EGS challenges result from market and government failures, logistical constraints, communication, or technology breakdowns, etc. The complex problem of insufficient supply of quality EGS results from a different set of issues for different crops in dissimilar countries, so context is very relevant. Furthermore, the study captures a moment in time, but crops and their market conditions are dynamic, and, thus, this dynamism needs to be considered when applying the framework. Despite the idiosyncrasies of each situation, EGS continues to be a significant challenge to scaling new varieties across the region.

Many participants highlighted the need to broaden the definition of private sector, so that it captures all types of organizations within the sector that operate at different scales. In addition to the large seed companies that are typically associated with private industry, there are many other stakeholders who are privately producing and marketing seed, including smaller seed companies, as well as community- and farmer-led organizations. For the different crops, the definition of ‘private sector’ should encompass all those organizations that profit from their involvement in EGS production, as each may have a role to play in a public-private partnership. Furthermore, public organizations, if operating in a more commercial and entrepreneurial manner, may contribute to such private-public partnerships.

There were many discussions on the proposed roles of both public and private stakeholders and an important point was raised that the roles need to be differentiated by who is responsible for the financing of the value chain stage, and who is responsible for the execution of the stage. The study proposes that the stakeholder who funds each value chain stage is determined by who derives value from the activity, but the consensus was that deriving value and funding are two very different functions. For instance, a role like breeding and variety selection may be publicly financed, but privately executed.

Understanding the demand for certified seed within formal seed systems and quality seed within informal seed systems before proposing solutions was raised as a key missing element within the study. Its depiction of the seed value chain does not include the demand for certified and quality seed, and, thus, it is incomplete as that demand should drive the distinct production and delivery of EGS for diverse seed systems. Understanding how much is being demanded, as well as who

the demand is coming from, are important elements to complete the study. A baseline would help to collect this information, as well as data on the current state of affairs such as how much EGS is currently being produced by private and public stakeholders. To appropriately formulate a vision for an 'ideal state' of EGS by crop, it is important to comprehend, in detail, the current state for each seed system/crop/country combination. Additionally, the study does not specify a timeline for reaching that ideal state.

B. Implications of the Study for Specific Crop Groups

Hybrid Maize

Participants were asked to comment on the implications of the conceptual approach for increasing the supply of early generation seed for hybrid maize. The ideal state for hybrid maize, as presented in the study, is a private sector-dominated market with minimal public sector involvement where seed is highly profitable and demand is high and stable. Private sector stakeholders produce EGS and distribute it through commercial markets, often in the context of a well-developed, mature enabling environment.

There was general agreement that the approach can help inform the development, implementation and sensitization of appropriate policy and regulations. Again, though, the point that context is vital emerged in the discussions, regarding, for instance, the size of companies, in-country policies, seed demand, etc. The size of the company is important because the limitation of land will hinder small companies from being able to produce EGS on isolated fields, and because seed companies are often self-financed. These issues raised a question whether small companies can play a role in this market.

Participants questioned how minimal the role of government is, and should be, as proposed in the ideal state for hybrid maize EGS. Government still has an important role to play in creating an enabling policy environment. Government policy must support the private sector investment in EGS for hybrid maize in areas where there is strong demand because the private sector could play a lead role in sustainability as long as government can provide safety nets if and when needed. This is particularly relevant in the area of intellectual property rights for publicly-bred hybrid maize, where government would need to manage such rights carefully in order to incentivize private sectors and maximize the benefits of public sector investment. For privately-bred hybrid maize, the only policy issue pertains to allowing the transfer of material across borders. Governments can also help to understand demand, promote varieties (e.g., disease resistant), regulate production standards, and facilitate reaching marginalized farmers who do not have access to or cannot afford what the private sector is offering.

All participants agreed that to reach the ideal state, capacity building is needed at all levels, as well as a transparent process regarding the private-public interface. Currently, for publicly-bred varieties, confusion exists around which actors have access to what material in what quantities. This situation acts as a disincentive for the private sector to partner with public institutions and incentivizes rent-seeking behavior. As such this problem hampers the production and supply of new publicly-bred improved maize varieties to farmers.

Major Cereals

Participants were asked to comment on the implications of the conceptual approach for increasing the supply of early generation seed for the major cereals, including rice, wheat, and open pollinated varieties (OPVs) of maize. The ideal state for these major cereals, as presented in the study, is similar to legumes and roots, tubers, and bananas (RTBs), where demand is generally reliable, but EGS production is limited due to high effort or technology intensity, risk of over- or under-production, or generally low margin. This necessitates public sector involvement to mitigate risk.

Participants agreed that the most important implication of the study for these crops is understanding the very high demand side risks. The recyclability of seed for these crops makes it difficult to estimate demand, although it is possible to do. Information aggregation and a strong public role in parent line maintenance can help stabilize demand, and if this can happen, the private sector will engage. Key information for seed companies to have includes planned government and NGO seed purchases by variety, (anonymous) data on private companies' production, and national or regional seed catalogs on varietal traits, parent lines, availability, etc. For major cereal crops, storage costs may be the decisive break-even factor for survival and the costs of maintaining parental material are particularly high.

Overall, though, these cereals are low margin crops and it is the public sector's responsibility to develop a strategy to ensure sustainable supply of EGS. There is an inherent tension with these crops for private companies because their competitive advantage is in keeping information secret, but information on OPV maize, for instance, needs to be made public so that EGS of these varieties can be affordably produced. If government or seed companies over-produce, they risk having to store expensive inventory; if they under-produce, they risk losing market share. The public sector can give purchase or exclusivity guarantees to the private sector for going into OPV, and, even then, it is likely only small-scale enterprises will be interested and not the larger seed companies. In the end, though, context will always determine which crops are in demand by the market, and, thus, strategies need to adapt to context.

Small Grains

Participants were asked to comment on the implications of the conceptual approach for increasing the supply of early generation seed for small grains that include sorghum, millets, teff, fonio, and quinoa. The ideal state for small grains, as presented in the study, is a public-sector dominated market wherein public stakeholders produce EGS and distribute it under subsidized arrangements to advance public goals such as food or seed security.

Participants suggested that public money is the driving force behind the production of EGS for small grains, and that there will never be an increase in EGS production without public funds. Private companies will not finance EGS supply given the current lack of profitability of these crops, although there is potential for sorghum and millets to move from food security crops to more marketable crops, as has been the case with quinoa and teff.

The way public money is spent is instrumental to its having an effect on EGS supply for these crops. Public funds are most oftentimes focused on the major cereals (maize, rice and wheat) because those are the crops being consumed by the urban middle class. Therefore, there is a need to assess trade-offs between funding one crop versus another. This may result in a re-focus of public funds on the small grain crops. If funds are redirected to small grains, there should be capacity development of small grains breeders to breed more and better varieties, including those with traits for drought resistance. Furthermore, as an alternative to fertilizer subsidy programs, governments can channel funds into seed subsidy programs in order to get these varieties into the hands of farmers who would not otherwise be reached by any private sector stakeholder.

Governments could also consider performance-based contracts for the private sector to produce EGS, as the government does not necessarily have to be both the funder and implementer of EGS production. Local, small private sector entities, like farmer-led organizations and local seed businesses, could be well positioned to take on these contracts, as they may be more willing to take on lower margin crops due to their lower operational costs when compared, for example, with public seed companies.

Legumes

Participants were asked to comment on the implications of the conceptual approach for increasing the supply of early generation seed for legumes. The ideal state for legumes, as presented in the study, is one in which there is a strong market demand, but the costs and complexity of production create barriers to private sector investment and innovation, necessitating public sector involvement to mitigate risk.

The immediate reaction from participants was the difficulty in generalizing about legumes, as there are large differences in the profitability and marketability between legume crops. For this reason, having a portfolio of multiple legume crops, such as beans, lentils, and soy, can help spread the risk, although with the trade-off of increased complexity. This risk emanates mostly from uncertainty about demand because farmers can continue to save and reuse their seed even though they should refresh their stock every three years. Because many farmers do not know this, any intervention will have to include education and training on seed refreshment.

Currently, most EGS is produced by the public sector, but there is potential to move to private entities, as long as the definition of private is broadened to include entrepreneurs, small and medium-sized seed companies, farmer groups, etc. If the demand is there, private entities will enter into the space, and the public sector has a role to play in incentivizing the private sector because it will take time to amass revenue from these crops due to low multiplication rates and a slow bulking processes. Public sector can support with awareness raising, market creation, finance, coordination, and risk management. For example, the public sector can implement seed buy back schemes. On the regulatory/policy side, there is a need for different, less costly approaches to quality assurance in addition to certification, like quality declared seed.

Root and Tuber Crops, and Bananas

Participants were asked to comment on the implications of the conceptual approach for increasing the supply of early generation seed for RTBs. The ideal state for RTBs, as presented in the study, is very similar to legumes, where demand is high, but at times unreliable to forecast, thus necessitating public sector involvement to mitigate the high demand risk and high cost of capital.

The group spent less time on bananas, which they believe straddle private and public/private markets, and more on cassava and sweet potato, which are both dominated by public sector investment, with some private investment, and have potential for more of the operational aspects to move toward private/public partnerships. For cassava and sweet potato, it is essential to understand demand as there is a risk of irregular demand for planting material of these crops. It was agreed that maintenance of breeder seed should be done by the public sector, but there need to be checks to ensure effectiveness. There also needs to be more advocacy for RTBs to encourage governments to prioritize investments for these crops.

Overall, there is great potential for private-public partnerships, especially with cassava and sweet potato, with the right institutional strengthening (and/or reform) of both private and public players, as well as the most appropriate quality assurance mechanisms in place.

C. Key Recommendations by Crop Group

Structure of discussion

Participants were asked to comment on the study's recommendations and identify the key steps that need to be taken and by whom at the appropriate national, regional, and global levels. In addition, the participants were asked to illustrate a road map, wherein the steps were plotted against a timeline of immediate action, 18 months, and beyond.

Because of the limited resources available to both public and private sector stakeholders, strategic and financial trade-offs must be made to prioritize increasing the supply and improving the distribution of early generation seed. The study made many recommendations that were geared toward governments and donors. Private sector was purposefully omitted from the recommendations, as it was assumed that private sector stakeholders will engage where they can make a profit. Fundamental to the study is that many of these crops are not prioritized by government nor private players and that the tradeoffs between public investment in producing EGS for one crop versus another have not been made explicit. Thus, advocacy is an essential first step to raise the profile of these crops and make these tradeoffs explicit. One limitation of the recommendations, and in making these tradeoff assessments, is that the status quo was not quantified in the study and so it is difficult to know exactly what financial tradeoffs need to happen.

Hybrid Maize

The participants identified their vision of success in five years, with the following goals:

- Hybrid maize production doubled
- This equates to 250,000 tons of hybrid seed. The gap between current production and this figure is 130,000 tons.
- This requires 40,000 hectares, which translates into 1000 tons of foundation seed.
- This figure includes an expansion of the varieties available through EGS.
- The following stages of the hybrid maize value chain must all be scaled up to accomplish this: line maintenance, breeder seed production, parent seed forecasting, bulking inbred lines, parent seed production, and quality certification or control.

The group put together the following roadmap:

Timeline	Action	Who
Now to 18 months	Increase resources such as loans/working capital, training, equipment, and information at a national level	
	Increase infrastructure such as irrigation systems and cold storage	
	Identify the best hybrid varieties	

	Establish a system of honest brokers	Enable the existing stakeholders to do more and better through the actions
18 months and beyond	Farmer awareness building	
	Forecasting certified production	
	More foundation seed production	
	Honest broker allocation of production contracts (government, donors, and private sector should all be given the chance to provide an 'Honest Brokering' service)	

The discussions clarified that the roadmap pertains to publicly-bred hybrids, not privately-bred, and that the group estimated about 80% of the work would be implemented by existing companies. The role of government and policy was raised, which is an important consideration because in some countries, like Ghana, private entities are not allowed to produce foundation seed. Therefore, depending on the country context, policy reform would be a necessary first step before implementation of the above recommendations.

Major Cereals

The participants put together the following roadmap:

Timeline	Action	Who
Now – 18 months	<u>Information</u> : government aggregating data on demands (helping seeds companies to plan for how much to produce) and publication of seed catalogues Parent line maintenance – assess various approaches being tried in different countries	International centres, governments
	<u>Policy implications</u> : Allowing the private sector to supply EGS. Defining private sector friendly environment.	Government led (involving all stakeholders)
	Varietal exclusivity needs to be encouraged	Government (policy), Companies need to do the marketing
	Quality assurance with regards to foundation seed (inspection and production need to be separated); South African model used as an example	Government
	Stimulate the demand for EGS by looking at the informal supply of seeds (production) and the distribution (networks)	Donors could fund this
Beyond	Buyers participation in the seeds market	Buyers
	Anti-counterfeiting measures	Government legal system to change the law
	Participatory breeding	International and national centres
	Training the out-growers in agronomy	Donors, companies, international centres

Much of what was suggested by this group depends heavily on government will. Progress will be limited if political will is limited, and, therefore, information is key to inform decision making so

that government and research priorities can shift in line with market shifts. The line between where public sector ends and private begins can also be unclear with these crops, and can be mitigated through effective use of public-private partnerships and policy.

Small Grains

The participants put together the following roadmap:

Timeline	Action	Who
Now	Assess the current government programs for small grains in a given country, including where funds are being prioritized, the baseline of capacity, and the gap between breeder seed and area of land available for that crop	Donor funded, implemented by consultants, regional organizations, centers of excellence
	Conduct studies on ROI of investing in EGS vs fertilizer subsidies and advocate for change	AGRA, African Union
	Identify non-traditional users for small grains, e.g. mixing with wheat in bread	Development partners
18 months	Set up a peer review system from country to country to monitor progress	CAADP
	Develop a template for performance based private sector contracts	Consultants, SFSA
	Adjust the national agricultural investment programs away from crops not needing public support	CAADP
	Set a target of e.g. 50% of land cultivated with these crops with quality varieties and advocate for subsidy programs	Centers of excellence for each small grain crop
Beyond	Marketing and promotion of a range of varieties of EGS	NGOs, public extension
	Public sector initiate contracts to private sector breeders	Governments
	Train farmers to produce seeds (e.g. foundation) as cooperatives – seed chain empowerment	Development partners, public extension
	Foster collaboration regionally to get economies of scale (i.e. sharing varieties)	Regional organizations

The roadmap was generally well-received by the other participants, although there was the observation that the roadmap implies a lot political will, as well as donor funds, and concern over sustainability was voiced. Some said the roadmap was not aspirational enough, and that lessons could be gleaned from India, where there are 10 million hectares of land farmed by sorghum and millet hybrids that are for consumption (as opposed to the brewery industry).

Legumes

The participants put together the following roadmap:

Timeline	Action	Who
Now	More private sector investment	Private sector
	More and prioritized government collaboration with private sector on R&D	Private sector and government
	Public sector to contract/produce EGS for new varieties	NARS
18 months	Demand creation	Public sector
	Availability of technological packages (seeds/varieties and agronomy at farmer levels)	Private sector
	Identify pilot projects (local or crop specific)	All
	Demonstration plots with stakeholders as a dialogue	Public and private
	Financing for seed multiplication by private sector	Public
	Agronomic research - seed company and end user/farmer	Public and private
Beyond	Develop value chain and market-led breeding	Public and private
	Engage traders	Public and private
	Dialogue seed value chain stakeholders for specific crops and agree who takes up which responsibility and prioritize	Public and private
	License popular varieties (non-exclusive) to seed companies	Public

The key messages of the road map are that government needs to work more and earlier with the private sector through contracts in both production and quality control, demand must be built and strengthened through demonstrations and new strategies like information sharing, and agronomic research and education on best practices for agronomic inputs should be part of any EGS strategy. Given that EGS for legumes is relatively more expensive than other crops, it is worth strategizing over how to achieve economies of scale through EGS production through, for example, cross border trade. Policy issues also must not be ignored, as legume consumption is steadily decreasing in SSA. How these issues affect the functioning of the seed sector and EGS production need to be taken into account.

Root and Tuber Crops, and Bananas

Rather than putting together a roadmap, the participants identified specific actions that need to occur within certain key areas in order for EGS supply to increase for RTBs:

Key Area	Action
Public/private models	Need a better understanding of what public/private models there are, e.g. private tissue culture, contract nurseries and incubators for nurseries and others, engaging a plurality of stakeholders
Demand and promotion	<ul style="list-style-type: none">• Need to better understand the farmer/industrial demand for varieties (seasonal) and demand for planting materials (informal), in both formal and informal markets• It is important not to distort informal markets through the use of campaigns• Information and Communication Technology could be used to monitor demand• Pilot a system and then monitor demand across the value chain• Need to speed up the release of varieties, promote them, use 'shop windows'
Government/public	<ul style="list-style-type: none">• Civil society to advocate to make topic a government priority• Structure for maintaining breeder seed by national programs can be strengthened with performance based incentives• Use food security and biodiversity as a way to make it priority for government• Public does not just include government, also academic institutions and others• Support institutions in breeding, maintaining, and financial management
Quality assurance	<ul style="list-style-type: none">• Appropriate protocols need to be implemented• Staffing and training of public and private certification officers• Decentralisation of quality assurance
Other areas	<ul style="list-style-type: none">• Focus on agronomy and crop management to speed up return to investment• Look at experiences in China re: sweet potato• Maximise use of technology• Use power of networking for exchange of technology, material, & management

Funding for cassava and sweet potato will likely remain with the public sector, but operationally, stages along the value chain could be taken up by public-private partnerships. Much of what is described above is happening in bits and pieces, and so it is the responsibility of all stakeholders to tighten up the collaboration and scale up through the various networks.

D. Affinity Group Commitments

Structure of the discussion

Participants were asked to break into their affinity groups (private sector, donors, development partners, and R&D/technology partners) to determine what actions each affinity group together could accomplish and what each individual organization could take forward to support the increase of EGS in seed systems relevant to smallholder farmers in SSA.

Private Sector Group

The following participants joined this group: ACTESA, Agri Experience, NASECO, Quality Seed, SEEDCO, and Syngenta.

	ACTION	WHO CAN DO IT
1.	Production of EGS	Seedco, Syngenta, QualitySeed, NASECO
2.	Provide training for small seed producers	Seedco, Syngenta, QualitySeed, NASECO, Agri Experience
3.	Input to coordination and planning of identifying EGS needs and narrowing down to best model (trade associations)	Agri Experience
4.	Provide physical infrastructure e.g. lab processing on behalf of small EGS producers	Seedco, NASECO
5.	Champion within our own organizations the need for scaling up EGS	Syngenta, QualitySeed, NASECO
6.	Promote the creation of legislative and regulatory frameworks for the country	Seedco, Syngenta, ACTESA, Agri Experience
7.	Play an active role in Quality Assurance standards and self-regulation	Seedco, Syngenta, Agri Experience
8.	Act as brokers for EGS production and sales	ACTESA, Agri Experience
9.	Help to create a transparent process for the sector to get access to EGS (take a proactive role)	Syngenta, ACTESA, NASECO, Agri Experience
10.	Train private sector growers	Seedco, Syngenta, QualitySeed, NASECO, Agri Experience

Donor group

The following participants joined this group: BMGF, DfiD, HGBF, USAID, World Bank.

	ACTION	WHO CAN DO IT
1.	Commission country baselines - who/how much/where, etc. – and use studies to co-create an advocacy plan implemented by development partners	All as group
2.	Relate EGS to broader food security issues	All as group
3.	Incorporate considerations for EGS in funding for breeding programs	All as group
4.	Scale up training for breeders (PhDs, etc.) and technicians and infrastructure for EGS	All as group
5.	Support appropriate government policy via funding support and scale up	All as group
6.	Focus on particular countries and carry out the same study within the specific context of individual countries and crops	All as group
7.	Bring this discussion to CAADP and African Union, especially urgency of solving EGS problem in order to achieve Malabo targets	All as group
8.	Assess what is needed to double production in 10 years as part of country programs	World Bank
9.	Engage in dialogues with governments to advocate for more investment in EGS for crops with limited commercial value	USAID

	ACTION	WHO CAN DO IT
10.	Engage in conversations with development partners to move this forward, such as studies at national level – and land in a number of countries with AGRA and other development partners for ‘national landing and dialogue’	BMGF, USAID and HGBF
11.	Work with CIMMYT through the private sector, to build and transfer capacity to produce maize EGS of varieties not currently covered (DTMAS)	USAID
12.	Conduct seed inspector trainings in East and Southern Africa to ensure harmonization and pull for EGS	USAID

Development Partner's group

The following participants joined this group: AGRA, GiZ, KIT, SFSA and Wageningen UR.

	ACTION	WHO CAN DO IT
1.	Advocacy to governments to fund breeding, putting EGS on national seed agendas, pushing change in regulations	AGRA/ISSD
2.	Awareness - on different EGS approaches needed for different seed systems/SVCs with policy makers, seed producers, and other stakeholders, demand creation	AGRA/ISSD
3.	Invest in EGS models... Invest in new/improved EGS models (project grants) (AGRA)....create space for private sector involvement in foundation seed production (example of a model)	AGRA/ISSD
4.	Training and capacity building - Capacity building for different EGS groups, focus more training on EGS, capacity building in maintenance breeding (technical, universities, private sector)	AGRA
5.	Document (good/bad) experiences in accessing EGS for private sector seed partners	SFSA, ISSD
6.	Facilitate discussions (with all stakeholders) – on roles and responsibilities	ISSD
7.	Support accreditation/quality assurance	AGRA
8.	Investment in key stakeholders with funds	AGRA, SFSA
9.	Market Intelligence – help to articulate and quantify demand for EGS required by private seed companies	SFSA

This group also articulated the need for a working group on EGS, which would include government (ISSD Africa, SSTP) and a representative group from the convening; it could tap into existing working groups, with one outstanding question being whether this would be at a regional or national level.

R&D/Technology Partners group

The following participants joined this group: CIP, CIAT, FAO, Univ of Saskatchewan, and PPVFRA.

	ACTION	WHO CAN DO IT
1.	Facilitate the development of small scale seeds enterprises	CGIAR (develop resource manual) ISSD (develop capacity of local seed businesses)
2.	Seeds value chain empowerment (involve farmer groups in seeds production)	FAO (technical guidelines) ISSD (involve farmers in foundation seed production)
3.	Empower farmers in EGS (millets). Capacity building in EGS production for farmers	NARS/CGIAR (develop manual/technical guidelines, skills, knowledge enhancement)
4.	Research into factors affecting demand (quantities/varieties) and understand the demand itself (forecasting)	CGIAR/NARS (demonstrations and adoption studies)
5.	Evaluate the efficiency of the different stakeholders (seeds chain integration)	CGIAR (Develop tools, actual evaluation)
6.	Identify potential regions for seed production. Fast-track the multiplication/simplify the regulatory environment	ISSD (multi-stakeholder programs, facilitation) CGIAR (site identification, supply nucleus seeds)
7.	Help and facilitate appropriate policy making (evidence based policy making)	FAO (stakeholder consultations) ISSD (evidence-based policy development)

Bert Vandeberg and B.R. Hanchinal offered to support the process by providing advice and capacity development, where possible, and all organizations agreed to continue conducting seed systems assessments in the various countries in which they work.

4. Conclusions and Next Steps

The convening brought together development partners, private sector, intergovernmental organizations, and donors to discuss the bottlenecks to increasing the supply of EGS in seed systems relevant to smallholder farmers in SSA. Conclusions from a BMGF and USAID-funded study were used to jumpstart the dialogue and push the discussion toward actionable solutions with regard to specific groups of food crops that include hybrid maize, major cereals, small grains, legumes, root and tuber crops, and bananas. The general conclusion of the convening was that solutions to the systemic bottleneck of EGS supply need to be sought in diverse modalities suggested by the models associated with the archetypes. To encourage more public-private partnerships, 'private' needs to be defined in an inclusive and pluralistic manner to include multinational seed companies, locally operating small- and medium-sized seed companies, cooperatives of smallholder seed producers, and commercially operating public units engaged with specific responsibilities in the seed sector.

Understanding tradeoffs between who funds and who operationalizes activities in the seed value chain for the production and delivery of EGS is an important differentiation to make. The response to that question very much depends on context, as was elaborated in the business models and associated economic analyses conducted in the EGS study by Monitor-Deloitte. Context also determines demand, which is of utmost importance when considering EGS production in a commercial and sustainable manner. With the exception of hybrid maize, the high demand risks and/or high seed production costs of the food crops included in the study require creative solutions to manage demand risk and to drive down costs. These solutions need to be developed in SSA, even though they do exist in other continents. These include buy back schemes from the government, gap financing for private entities, economies of scale across borders, alternate production and delivery systems for EGS that link with quality assurance mechanisms like quality declared seed production and marketing, and even delivery of EGS to informal commercial seed systems. Demand stabilization will only be possible if farmers see value in what they plant, which is why agronomic training must be incorporated in any intervention.

Advocacy (and policy change) will play a key role in transforming EGS supply for certain crops. Despite progress towards increasing African government financing commitments to the agricultural sector (through CAADP and now Malabo commitments), the percentage of that agriculture public expenditure that covers EGS supply continues to be marginal. A dialogue is needed – in the context of agriculture public expenditure -- on the high payoffs to public expenditure to solve EGS bottlenecks in certain crops. This dialogue would center on the need to reprioritize specific actions related to financing certain components of seed value chains of food security crops, such as support to the increased production and distribution of early generation seed. Trade-offs must be made between publicly funding production of EGS for crops such as hybrid maize, for instance, which could be done wholly by the private sector, and publicly funding EGS for crops that can improve household food security and for which private sector investment in EGS is unlikely.

Though we are far from the ideal states elaborated in the study and discussed during the convening, there is a business case to be made to engage in and catalyze innovation in the development of public-private partnerships that help address some of the key bottlenecks of EGS supply. This case needs to be articulated much stronger, and organizations present during the convening shared their strong commitment to engage in such innovations. Many actions described above are already happening in individual projects, but they are not institutionalized because they are neither being coordinated well nor scaled up nor reaching sustainability.

To ground the discussions more within a country context and start engagement towards practical action, the next phase of the partnership of USAID and BMGF will be to engage and catalyze the

organizations of national seed consultation processes, by building on country level analysis of specific crops using the framework in the EGS study, and in strong partnership with responsible government agencies including Ministries of Agriculture in our partner countries, and with relevant public organizations in the seed sector, local private sector, NGOs, and other stakeholders. The target is to start those discussions in some or all of the five African countries profiled in the study (Ethiopia, Ghana, Nigeria, Tanzania, and Zambia), depending on government and stakeholder interest, as well as other interested countries. This country level application of the EGS analytical tool and ensuing dialogue will allow for deepened engagement and action across the five and other countries in support of their unique needs for the breeder and foundation seed. This will be essential to increase smallholders' access to quality seed of improved varieties and thereby increase agricultural productivity for improving food security and contribute to the reduction of poverty among smallholder families in sub-Saharan Africa.

Annex 1: Participant List

The list is structured in alphabetical order of the organizations:

Organization	First name	Family name	Country
ACTESA	John	Mukuka	Zambia
AGRA	George	Bigirwa	Kenya
AGRA	Joe	Devries	Kenya
AGRA/SSTP	Richard	Jones	Kenya
Agri-Experience	Aline	O'Connor	Kenya
BMGF	Tony	Cavalieri	USA
BMGF	Walter	De Boef	USA
BMGF	Karin	Lion	USA
CIAT	Jean Claude	Rubyogo	Kenya
CIP	Stephen	Walsh	Kenya
Consultant	Kedera	Chagama	Kenya
DfID	Andrew	Clayton	UK
FAO	Samuel	Kugbei	Italy
GiZ	Alberto	Camacho	Germany
HGBF	Ann	Kelly	USA
IFC	Augustine	Sangson Langyintuo	Kenya
KIT	Willem	Heemskerk	Netherlands
NASECO	Nicolai	Rodeyns	Uganda
PPVRFA	B.R.	Hanchinal	India
Quality Seed	John	MacRobert	Zimbabwe
SEEDCO	Morgan	Nzwere	Zimbabwe
SFSA	Ian	Barker	Switzerland
Syngenta	Kinyua	M'Mbijewe	Kenya
Unv of Saskatchewan	Bert	Vanderberg	Canada
USAID	Charlee	Doom	Kenya
USAID	David	Atwood	USA
USAID	Mark	Huisenga	USA
USAID	Patricia	Rwasoka-Masanganise	South Africa
Wageningen UR	Marja	Thijssen	Netherlands
World Bank	Martien	Van Nieuwkoop	USA

Annex 2: EGS Convening Program

Multiple Pathways for Promoting the Commercial and Sustainable Production and Delivery of Early Generation Seed of Food Crops in Sub-Saharan Africa

23 March 2015, London, UK

Time	Name of Session
8h30	Welcome and Introductions Mark Huisenga & Walter de Boef Purpose of Study and Convening <ul style="list-style-type: none">• Presentation and guided discussion (Mark and Walter) Presentation and Review/ Comments on the Study <ul style="list-style-type: none">• Presentation by Pradeep Prabhala & Jessica Weddle (Monitor-Deloitte)• Comments and questions In-depth Review and Discussion of Study in relation to Specific Crop Groups <ul style="list-style-type: none">• Guided discussion on crops with hybrid varieties, with emphasis on maize
10h30	Coffee/tea break
11h00	In-depth Review and Discussion on Study in relation to Specific Crop Groups (break-out session followed by plenary feedback session) <ul style="list-style-type: none">• Break-out session: Major Cereals (non-hybrid crops); Small Grains, Legumes, Vegetatively propagated crops• Plenary feedback session Case studies from India and Canada <ul style="list-style-type: none">• Case study from India (Dr Hanchinal)• Case study from West Canada (Bert VanderBerg)
13h00	Lunch
14h00	Discussion of Overall Recommendations: Observations and Implications <ul style="list-style-type: none">• Brief presentation recommendations by Pradeep Prabhala & Jessica Weddle• Break-out session: observations and implications of the specific recommendations• Plenary feedback session
15h30	Next steps and possible individual or joint follow on actions and commitments <ul style="list-style-type: none">• Plenary session: Views from BMGF/USAID moving forward first internally, and secondly within countries (Walter de Boef & David Atwood)• Coffee break• Break-out session: Follow up by stakeholders and expression of interest in joining and contributing in specific national processes• Plenary feedback: Inventory of recommendations and follow up by stakeholders, but also within five the countries (David Atwood & Walter de Boef)
17h20-17h30	Conclusion (Mark Huisenga & Walter de Boef)