

Table 1. Achievements and agreements on the ASARECA project in harmonizing seed policies and regulation in East Africa

Issues	Before ASARECA seed project	Results and agreements of the project	Implications of agreements and decisions to the seed sector	Status	Implementation	
					Institutions remarks	Other responsible
1. Variety evaluation, release and registration						
a. Entering the national performance trials (NPTs)	Breeders in the three countries entered materials for evaluation at national level before official approval for listing in the seed certification schedule and commercial seed producers at different stages of the variety development cycle, at advanced yield trials for Tanzania, and at national performance trials for Kenya	For both locally produced and introduced varieties, applicant will enter materials intended for release for at least one main season. These will regionally be known as variety performance trials (VPTs). Sufficient data from previous stages (advanced yield trial) will be needed.	Seed companies can do advanced multilocal testing in relevant ecological zones anywhere in East Africa and follow up entering them in VPTs. This will attract more seed companies to the region because of expanded market.	Procedural	National certifying authorities (NCAs)	Implementation is immediate.
b. Variety testing procedures for release	Different in each country.	Variety testing procedures to be standardized.	This will facilitate reciprocal regional recognition of variety testing data.	Procedural	NCAs	Standards for some crops were not completed and will be done by a selected working group.
c. number of seasons for release of varieties after they enter VPTs	In all countries the number was 3 seasons; for Tanzania and Kenya this means 3 years.	One-season performance testing for both local and foreign varieties is combined with sufficient data on previous testing from similar agro-ecological zones.	The time for new varieties to be available to the farmer has been reduced from 3 years to 1 year, implying more readily available new planting material.	Procedural	NCAs	Implementation is immediate.
d. On-farm trials	The emphasis varied across countries, being 'mandatory' for Uganda, 'required' for variety release in Tanzania, and 'optional' for Kenya.	On-farm trials recommended but should be done concurrently with VPT so that trials do not claim extra time on release of varieties.	This consensus is quite positive because when on-farm trials were done independently, it implied at least 1 year more of delay in availability of varieties. The current consensus ensures more rapid availability of varieties, by at least one year.	Procedural	NCAs	On-farm trials may also help provide information to farmers about performance before formal release.
e. Private seed companies and breeders participating in national evaluation trials with NCA supervision for	The practice varied across the three countries from non-existent in Uganda to 'in the process of being considered' in Kenya. In Tanzania it was already in practice.	Certifying agency will bear the overall responsibility but can accredit suitable institutions, companies or seed trade association, or individuals to carry out VPTs.	Increased acceptance of private sector role in seed evaluation and release. Because public research institutions are usually underfunded, the accreditation will help	Procedural	NCAs and Ministry of Agriculture	Under this agreement universities and related institutions can participate and increase the number involved in seed production.

release purpose			reduce the funding burden and expedite the process of availability.			
f. Variety release committees	These committees varied in number, function, composition of membership, and frequency of meetings across the three countries.	Agreed that the certifying agency with some technical assistance from the applicant, the national seed trade association and an extension specialist will monitor and consider NPT/VPT results for consideration by the National Variety Release Committee (NVRC), which is the only committee. Composition of members to the NVRC is also standardized across the countries.	Speed up the release of varieties. Reduce cost of meetings. Increase transparency in participation. Form more technical committees. Increase participation of private sector. All these factors will make the committee more effective.	Procedural	NCA and Ministry of Agriculture	This will help harmonize approaches to deliberations on new varieties.
g. Common variety list for the region	This did not exist.	It was agreed to establish a regional variety list/catalogue. Protocols were defined. This will provide information on available new varieties in the region.	Increased availability of information of new varieties.	Procedural	NCA and Ministry of Agriculture	Content and organization of the catalogue were also discussed.
<b>2. Seed collection</b>						
a. Compulsory and voluntary certification	Differences existed in crops multiplied under voluntary and compulsory certification. This to a large extent disadvantaged farmers in seed availability.	The workshops agreed on which crops will be under compulsory and which under voluntary certification: <i>Compulsory</i> —hybrid maize, open-pollinated maize, sweet corn, common dry bean, snap bean, sorghum, wheat, rice, sunflower, irish potato and any other crop approved by regional certifying agencies; <i>voluntary</i> — tomato, carrot, cassava, pigeon pea, cowpea, similar crops.	Commonalities on what crops are in which category will hasten seed movement and availability across borders. Doubts about seed in the voluntary class in one country and compulsory class in another are removed.	Procedural and legal	NCA and Ministry of Agriculture	Countries are still in favour of both compulsory and voluntary certification.
b. Field and laboratory standards	These were different in the three countries, making acceptance by outsiders and regional trade difficult.	The workshop harmonized field and laboratory standards for hybrid maize, sweet corn, open-pollinated maize, common bean, snap bean, rice, wheat.	Having rules defined increases transparency, reduces the time seed will take from one point to the next and helps increase the number of entrants into the seed industry, resulting in increased seed availability.	Procedural and legal	NCA and Ministry of Agriculture	The proposed working group will set standards for the crops whose standards were not set.
c. Seed class	Seed classes were different in all countries, causing considerable	Four seed classes were accepted across the three countries—breeders, basic,	The reduction from 8 to 4 seed classes helped make the seed language	Procedural	NCA	Standard seed had 4 different names, which caused confusion as

	confusion in germplasm exchange and trade in seed.	certified (first and second generations) and standard. The workshops agreed on laboratory standards for each seed class for 10 crops under compulsory certification.	common and easy. This will facilitate faster movement of seed for processing and for trading and will improve seed availability across the countries.			seed moved across borders.
d. Accreditation to certify seed	Only Kenya and Tanzania had a provision for accreditation of certification to institutions and seed companies.	The workshop agreed on accrediting institutions, seed companies and individuals to carry out seed certification on behalf of national certifying agencies. The accreditation procedures were also agreed upon.	This will lead to more efficient use of human resources available in the seed sector. It will also accelerate the process of certification, making seed available faster than otherwise.	Procedural	NCA's	—
f. Interagency certification	This did not exist.	The three countries agreed to establish an interagency certification scheme. This will facilitate movement of bulk seed across borders for final processing and certification by the cooperating certification agency.	This will allow seed companies in the three countries to move freely across borders, make use of countries in production of seed and move it in bulk across boundaries for further processing. In effect it will result in more efficient use of land and human resources and facilitate increased availability of seed to farmers.	Procedural and legal	NCA's	The protocols for interagency certification were established as well as documentation necessary for bulk transfer of seed for interagency accreditation.
g. informal seed sector	The three countries had different credibility, ratings, confidence, and understanding of role of the informal seed sector.	This informal seed sector was accepted as an integral part of the wide seed sector. It has a big role in ensuring seed availability and seed choice to farmers. It was agreed it should continue to be assisted by the formal sector so that it can eventually graduate into the formal.	The built-in confidence of the role of the informal seed sector will spur availability of clean seed material to farmers.	Procedural	NCA's, Ministry of Agriculture, NGOs	The working group in collaboration with ASARECA and other partners will design strategies to assist this sector.
<b>3. Phytosanitary issues</b>						
a. Basis for issuing permits	Kenya and Uganda are still using the outdated 7th Non-Legal Draft of the Plant Protection Order of 1972 proposed by the East African Technical Committee.	It was agreed to use the revised FAO pest risk analysis (PRA) procedures currently in use in Tanzania.	Seed flow across borders will be faster, increasing availability of seed, which would otherwise have been restricted on non-scientific grounds.	Procedural	NCA's and phytosanitary institutions	A provision will be made for periodic updating of restricted and non-restricted pests.
b. Membership in the International Plant Protection Convention (IPPC)	Only Kenya is signatory to IPPC.	Tanzania and Uganda agreed to pursue membership in IPPC.	This will increase adoption of international practices in plant protection.	Procedural	NCA's and phytosanitary institutions	Harmonization will easily be achieved since Tanzania and Uganda already follow

						IPPC guidelines.
c. Quarantine pests	At the beginning of the project there were 33 quarantine pests within EAC for 10 selected crops.	Use of CABI database reduced the quarantine pests to 3 for seed of 10 selected crops.	Faster seed flow, more seed material flows, more seed choices to farmers.	Procedural	NCA and phytosanitary institutions	The working group will proceed to verify the remaining 3 quarantine pests.
d. Common list of mid-to high-risk quarantine pests in East Africa	A common list did not exist. Each country had its own.	A common list was established based on scientific evidence.	Faster seed flows and more seed choices.	Procedural	NCA and phytosanitary institutions	—
e. Pest information system in East Africa	Initially, it was voluntary and erratic—not systematized.	Workshops established a minimum pest information system based on literature, capacity in information systems, training, compulsory notification of outbreaks, and establishment and publication of pest status in the region.	Cost-effectiveness achieved in regional operations will avoid duplication of efforts across the region	Procedural	NCA and phytosanitary institutions	—
f. Minimum facilities at high-risk entry points	Country facilities varied.	The workshop agreed to establish minimum facilities at high-risk entry points.	Increased confidence and trust among scientists and the broader seed sector in the seed material traded. They will have the confidence that the seed material has been subjected to acceptable minimum checks. This will facilitate faster inflow and outflow of seeds, resulting in increased seed trade.	Procedural	NCA and phytosanitary institutions	—
g. Public awareness of phytosanitary issues	Countries used different methods.	The workshop agreed to use pamphlets, leaflets, posters, and farmer training along the borders, sensitize customs and immigration officers, and make in-flight announcements.	This will minimize policing, pest entry and spread within the region.	Procedural	NCA and phytosanitary institutions	—
h. Mandates and powers of phytosanitary inspectors	There are differences in mandates for staff overseeing the same issues across the borders.	The delegates agreed to empower entry and post entry staff to inspect and quarantine.	Harmonized functions and powers will increase efficiency in the movement of seed. They will also help traders know what to expect as they cross borders.	Procedural	NCA and phytosanitary institutions	The workshop agreed that efforts should be made to gradually place staff with similar qualifications at these points in the three countries.
<b>4. Seed import and export documentation and procedures</b>						
a. import and export documents	The number, type and source of the documentation were different in all three countries.	Delegates agreed to standardize import and export documentation and procedures that will require plant import permit, quality certificate from source, quality certificate and customs clearance	Standardized procedures will increase the rate of seed movement, saving considerable time.	Procedural	NCA, plant health and quarantine institutions	Although the process will be implemented immediately, it will take a while because forms will have to be reconstituted and offices reorganized.

v. Import tariffs and procedures	The East African countries differed in the type of tariffs, rates, and in the type of crops seeds tariffed.	Delegates agreed to go for a uniform tariff system and procedures in accordance with the EAC Treaty article 75:1(b) and 1(c).	Uniformity in procedures will facilitate faster movement of seed across borders.	Legal	Ministries of Agriculture, Trade and Finance	Import and export procedures and requirements have become trade barriers. In some cases, the procedures are lengthy and the requirements are difficult to meet, making seed movement arduous.
5. Plant variety protection (PVP)						
a. Plant variety protection	Kenya has legislation on PVP. Tanzania and Uganda do not although steps towards it are in place in both countries. However, TRIPS (Trade-Related Intellectual Property Rights), to which all the three countries are signatories, requires that each country establish a PVP system by 2005.	The delegates agreed on a number of issues in PVP. 1) Establish national PVP laws to promote crop improvement by both private and public breeders and institutions. 2) Each country should develop a suitable system of PVP based on cross-referencing of international and regional PVP model law. 3) Establish a regional plant breeders' rights committee to work under EAC. 4) Establish PVP issues under the EAC's Intellectual Property Rights office. 5) Recognize and provide for essentially derived varieties concept in the national PVP laws.	Establishing PVP laws will promote crop improvement by both private and public breeders and institutions because of the built-in reward system.	The implementation of 1., 2. and 5. is legal, of 3. and 4. is procedural.	NCAs, Ministries of Agriculture, Trade and Finance	The NCAs and the Ministry of Agriculture will handle the procedural issues. Legal issues are to be handled by the Ministry of Agriculture in collaboration with the legal instruments in and outside the ministry. The working group to be established will steer the process.