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Call to action: Priorities and partnerships for a robust, inclusive, sustainable and resilient seed sector in South Sudan

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South Sudan Seed Hub

This brief is the outcome of the first South Sudan Seed Hub event organised by the University of Juba, at their campus 8-12 September 2022, in collaboration with the Ministry of Agriculture and Food Security in South Sudan (MAFS), the Directorate of Agricultural Research (DAR), the Food and Nutrition Security Resilience Programme (FNS-REPRO) of the Food and Agriculture Organization of the United Nations (FAO), Wageningen University & Research (WUR), and Integrated Seed Sector Development Africa (ISSD-Africa).

The South Sudan Seed Hub is in essence a multi-stakeholder partnership that brings together seed actors and stakeholders dedicated to building a robust, inclusive, sustainable and resilient seed sector in South Sudan. The Hub provides a neutral and independent platform for information sharing, capturing good practice, joint learning, and the development of policy briefs.

One of the objectives of the Seed Hub is to reflect on the current performance of the seed sector in South Sudan, identify the challenges faced, and explore and advise on opportunities to address those challenges.

Analysis of South Sudan's Seed Sector

The dialogue facilitated through the Seed Hub was grounded in a contextual analysis of South Sudan's seed sector, aimed at identifying pathways to building seed sector resilience.

The contextual analysis was made possible through a collaboration of the Feed the Future Global Supporting Seed Systems for Development Activity (S34D) and the FNS-REPRO programme. The report will soon be available at <https://www.crs.org/our-work-overseas/program-areas/agriculture/feed-future>.

The study was aimed at providing guidance to the government, humanitarian and development agencies

and the private sector, to strengthen the resilience of seed systems, so that even in fragile contexts the systems can provide farmers with access to quality seed of appropriate varieties in a timely and affordable manner. The study proposed models for the (re-)establishment of robust seed systems, able to adapt and transform to withstand the shocks and stressors that characterise South Sudan

The study report characterised the three clusters of seed systems that co-exist: that is, the informal seed system (farm-saved seed, social seed networks, and local grain markets); the intermediary seed system (community-based seed production schemes and seed relief); and the formal seed system (the public seed system and private seed companies).

Call to action: ten pathways for South Sudan's seed sector transformation

In the Seed Hub event the ten pathways were shared with, discussed, and endorsed by key seed sector stakeholders including representatives from government, national and international research institutes, educational organisations, development and humanitarian actors (in particular FAO), NGOs, seed companies, civil society, policy makers, and donors.

Subsequently the pathways were further discussed in small multi-stakeholder groups, elaborating on the following aspects:

- Achievements after 5 years – *Where do we want to go?*
- Achievements after 2 years – *What are the low hanging fruits?*
- Key priority actions – *What needs to be done first?*
- Policy recommendations – *Which policy issues to solve to make it happen?*
- Key stakeholders to involve – *Who should take this up?*

Taken together, the ten pathways form the call to action for transforming the seed sector in South Sudan.

Below, these aspects are elaborated for each of the ten pathways.

Pathway 1: Developing a National Seed Policy and seed regulatory framework

Achievements after 5 years:

- National Seed Policy approved and adopted
- Seed laws and regulations approved and implemented
- Appropriate bodies established for enforcement

Achievements after 2 years:

- In the absence of approved seed policy, law and regulations, relevant standard operating procedures (SOPs) developed and disseminated
- National Seed Policy draft finalised

Key priority actions:

- Establish a technical working group on this topic under the Seed Hub
- Implement a wider consultation on seed policy, law, and regulation
- Develop and disseminate SOPs

Policy recommendations:

- Borrow from the harmonised regional policy framework
- Undertake consultations among different stakeholders
- Establish an independent seed authority

Key stakeholders to involve:

Government institutions/departments (MAFS, Ministries of Trade/Commerce, Finance, Standards, etc); the private sector such as the Seed Traders Association of South Sudan (STASS); academia and research; civil society; farmers; development partners and UN agencies.

Pathway 2: Strengthening seed sector coordination, digital inclusion and partnerships

Achievements after 5 years:

- Structure for seed sector coordination at national, state and county levels established
- Increased public budget allocated towards seed sector coordination, digital inclusion and partnerships
- Partnerships with neighbouring countries strengthened

Achievements after 2 years:

- Stakeholders' mapping implemented, supporting collaboration and alignment of activities
- Existing best practices in the seed sector documented
- Local stakeholders, including NGOs, seed experts, farmers included in setting the agenda for seed sector development
- Pro-active leadership for engagement of seed sector stakeholders established

Key priority actions:

- Organise Seed Hub events at national and state levels, to establish and nurture seed sector partnerships
- Develop a digital seed portal to document and disseminate seed sector-related information and activities

- Advocate and lobby for an enabling seed sector environment, increased funding and investment, and capacity building to professionalise the seed sector

Policy recommendations:

- Develop provisional policy notes to guide seed sector coordination
- Incorporate partnership, coordination and digital inclusion in the National Seed Policy
- Government to support the University of Juba to take the lead in Seed Hub events supporting improved collaboration and alignment of activities
- Government to ensure that all seed sector stakeholders will be aware of the new National Seed Policy

Key stakeholders to involve:

Government (MAFS, SMAFE), academia (public universities), research institutes/stations, CGIAR centres, the private sector (STASS), NGOs, farmers' organisations (cooperatives, associations, unions), UN agencies (FAO, WFP), development partners

Pathway 3: Supporting the transition from seed relief to seed sector development

Achievements after 5 years:

- Distribution of relief seeds only implemented in emergency situations
- Local, financially viable seed production supported and developed (reducing the need for seed imports)
- Market potential (demand and supply) for locally produced seeds developed
- Decentralised seed producer registration system in place
- Decentralised seed certification system in place for certified (seed companies) and quality declared seed (community-based seed schemes)

Achievements after 2 years:

- Joint and timely seed security assessments implemented to inform seed availability and seed quality
- Awareness created on need for resources being able to conduct timely
- Do no harm principles for seed emergency distributions respected and applied by respective agencies
- Seed voucher system promoted for improved access to seed of locally adapted varieties
- Support increased to local, financially viable seed production initiatives that respond to local seed demand Seed intervention assessment and crop monitoring tools reviewed and harmonised

Key priority actions:

- Increase efforts to link market-based humanitarian seed interventions with local seed production initiatives
- Include transitions away from relief seed programming as a policy priority Strengthen informal seed systems in responding to seed demand
- Develop a rural agro-dealer network

Policy recommendations:

- Develop policy strategy for transitioning from relief to development
- Elaborate the seed classes and their certification guidelines
- Implement timely, evidence based joint assessment and monitoring tools for seed interventions in emergencies

Key stakeholders to involve:

MAFS, DAR, UN agencies, I/NGOs, donors, farmer organisations, academia

Pathway 4: Strengthening farmer-based seed systems

Achievements after 5 years:

- Seed production and marketing cooperatives established in response to local demand
- Associations of seed producers/cooperatives established at various cluster levels (states, national)
- A system to register and regulate local seed producers established
- Community seed banks established to promote seed access to maintain or improve local crop diversity
- Varietal promotion and demand-side support by government and NGOs to encourage farmers to purchase locally produced quality seed and adopt appropriate new varieties

Achievements after 2 years:

- Professional capacity of local seed producers developed, with a focus on seed production as a business
- Seed producers introduced to marketable varieties through field exposure and various information sharing tools
- Capacity of seed producers on quality seed production and management practices developed
- Seed producers organised into cooperatives for production and marketing of quality seed to farmers
- Seed producers linked to services and inputs, including foundation seed

Key priority actions:

- Mobilise stakeholders to engage in supporting local seed production to meet local demand

- Mobilise seed producer groups to develop into commercially viable local seed businesses
- Promote uptake of locally produced seed within the community (e.g. through radio talk shows, market days, seed fairs/exhibitions, infotainment)

Policy recommendations:

- Ensure farmers' access to information on new varieties
- Ensure access to decentralised seed quality assurance services
- Organise for recognising different seed classes in the National Seed Policy
- Address regulation of seed trade in the National Seed Policy
- Streamline seed relief to ensure a market-based approach
- Facilitate access to finance through financial institutes and Seed Savings and Credit Cooperatives (SACCOs)

Key stakeholders to involve:

Government (MAFS, Bureau of Standards, etc.), farmers, NGOs, seed companies, financial institutions, tertiary institutions (e.g. University of Juba), development partners

Pathway 5: Supporting the development of the private seed sector

Achievements after 5 years:

- Innovative competition-based financial incentive mechanisms developed to support professionalisation of private seed companies
- Capacity of the Seed Traders Association of South Sudan (STASS) strengthened to represent interests of the private seed sector
- Seed companies able to get credit for short term operations and longer-term investments through the Agricultural Bank of South Sudan
- Private seed companies have their own seed storage facilities guaranteeing quality of seed
- Develop village agro dealer networks for last mile delivery of quality seed
- Private led extension systems that support the dissemination of technologies and marketing of quality seeds

Achievements after 2 years:

- Guidelines for innovative competition-based financial mechanisms for private seed companies developed
- Early generation seed available of new released varieties allowing seed companies to produce certified seed
- Seed certification fee standardised for all seed producers

- Curriculum developed for training of private seed companies on key issues related to seed business management, by University of Juba and Yei CTC
- Private seed companies started clear branding of their own seed

Key priority actions:

- Engage with development partners for development of innovative finance mechanisms to seed companies
- Research to increase production volumes of quality foundation seed of new varieties for seed companies to produce certified seed
- Support the development of an effective and efficient seed certification system with standardised fees for all seed producers

Policy recommendations:

- Look into opportunities for the government to create a more enabling and transparent environment for promoting seed business
- Development partners and UN Agencies prioritising the development of a vibrant private seed sector that meets farmers' demand for seed Establish an agricultural insurance policy to decrease investment risks in private seed business

Key stakeholders to involve:

STASS, seed companies, financial institutions, South Sudan Agricultural Producers Union (SSAPU), Government (MAFS), NGOs, donors, farmers, universities and colleges, UN agencies

Pathway 6: Establishing a decentralised seed quality assurance system

Achievements after 5 years:

- National and zonal seed quality assurance capacity developed
- National Seed Policy approved and operationalised, supporting an effective decentralised seed quality assurance system

Achievements after 2 years:

- Draft 2012 National Seed Policy reviewed and validated, reflecting the need of a functional seed quality assurance system
- Seed quality control guidelines established for all seed categories
- Existing laboratory in Juba upgraded to function as a national seed testing laboratory
- Establishment of 13 mini-laboratories initiated, enhancing state level seed testing capacities
- Relevant staff at Bureau of Standards recruited and capacitated, including seed analysts, inspectors, technicians

Key priority actions:

- Organise meeting with MAFS and all relevant stakeholders to validate recommendations to establish a technical working group on seed quality assurance
- Build technical and infrastructural capacity to implement the recommendations

Policy recommendations:

- Review and validate the National Seed Policy with regards to seed quality assurance, involving comprehensive stakeholders' consultations, led by a competent independent body
- Ensure that the National Seed Policy provides for a decentralised system of seed quality assurance

Key stakeholders to involve:

MAFS, NBS, Ministry of Environment & Forestry, the private sector, NGOs, farmers & farmers' associations, seed traders' associations, academia, UN agencies

Pathway 7: Establishing a national gene bank linked to community seed banks

Achievements after 5 years:

- National gene bank established, with links to community seed banks National gene bank linked with regional and international gene banks
- National Seed Policy supporting genetic resources conservation and use
- Well capacitated technical staff managing the national gene bank
- Access to and collection of germplasm from outside the country facilitated

Achievements after 2 years:

- Location for the national gene bank identified within the Directorate of Agricultural Research (DAR)
- Basic facility with equipment for germplasm storage established
- Gene bank management staff hired
- Guidelines for operationalisation of the national gene bank and community seed banks established and endorsed
- In-country collection and ex situ conservation of germplasm started
- The identification of sources of potentially interesting germplasm at CGIAR centres in neighbouring countries started
- South Sudan focal point for the International Treaty on Plant Genetic Resources for Food and Agriculture (IT-PGRFA) formalised

Key priority actions:

- Mobilise financial and human resources
- Establish the national gene bank

- Collect, characterise, evaluate and use germplasm

Policy recommendations:

- Appoint a government institution responsible for the national gene bank
- Appoint a focal point for the IT-PGRFA
- Harmonise with and domesticate regional and international PGR related policies

Key stakeholders to involve:

Government (MAFS-DAR, SSNBS), CGIAR centres, NGOs, farmer organisations, the private sector, academia, development partners

Pathway 8: Strengthening crop breeding and access to new varieties

Achievements after 5 years:

- National Seed Policy and Seed Bill finalised, in line with Common Market for Eastern and Southern Africa (COMESA) seed trade regulations
- Functional national gene bank established, linked with community seed banks
- National Agriculture Research (NARS) established and financed, with centres in different agro-ecologies
- Funding solicited for the development of breeding programmes
- Capacity of plant breeders developed on different crop categories
- DAR and University of Juba linked with regional, international and CGIAR centres for technical and material support
- Participatory Plant Breeding (PPB) and Participatory Variety Selection (PVS) promoted for increased adoption and popularisation of new varieties

Achievements after 2 years:

- Access to advanced germplasm for breeding from CGIAR centres ensured
- Potential finished varieties from regional NARS for adaptation trials and recommendation obtained
- Capacity of the National Varietal Release Committee (NVRC) strengthened for reviewing and upgrading the variety release guidelines
- Guidelines for the release and registration of varieties developed
- National Variety Catalogue published

Key priority actions:

- Upgrade DAR into a full-fledged national agricultural research organisation
- Support the Seed Hub to convene regional research institutes meeting to solicit technical and material support to establish and strengthen National Research Institute for South Sudan

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- Solicit funds for capacity building (human resources, infrastructure and logistics)

Policy recommendations:

- Enact the Plant Breeding Bill
- Support private seed companies to develop their own varieties
- Develop policy and bill on Access and Benefit Sharing of Plant Genetic Resources (PGR)
- Develop policy to support upgrading DAR into a full-fledged national agricultural research organisation

Key stakeholders to involve:

MAFS, research institutes, academia (national and international), private seed companies, NGOs, development partners, UN organisations

Pathway 9: Establishing public-private partnerships in foundation seed production

Achievements after 5 years:

- DAR operationalised, taking up national EGS production and supply
- Different business models in place, financed with the involvement of private seed companies for the production of EGS
- Replicas for the zonal and sub-zonal research stations across agro-ecological zones (such as Palatoka in the greenbelt zone) developed, streamlining access to EGS
- Certification and traceability system for EGS developed and implemented (digital/capacities)

Achievements after 2 years:

- Functional business models for early generation seed (EGS) developed, catering the demand of seed companies and farmer-led seed production (production and value addition)
- EGS accessibility framework for all important crops in South Sudan developed
- Guidelines for EGS quality assurance system developed and operationalised
- Collaboration with NARS in neighbouring countries for access to EGS initiated and formalised

Key priority actions:

- Mobilise resources to boost EGS production and supply; prioritise recently released varieties in South Sudan
- Develop guidelines for quality EGS production, quality assurance and packaging
- Build capacity in EGS production, demand forecasting, quality assurance and packaging (technical and infrastructure) (seed companies, the Directorate of Research, academic institutions, farmers)

- Conduct detailed EGS accessibility study for South Sudan

Policy recommendations:

- Formalise EGS operational framework
- Disseminate and enforce EGS guidelines
- Harmonise with regional and international laws on EGS access

Key stakeholders to involve:

Government (MAFS, Directorate of Research), academic institutions, donors, I/NGO's, STASS, farmers, UN agencies

Pathway 10: Capacity building of key government departments and public institutes

Achievements after 5 years:

- Agricultural research and seed system organisation reviewed
- Autonomous seed authority established
- Semi-autonomous research organisation established
- Infrastructure for seed sector research well established
- At least one research station for each agro-ecological zone in South Sudan established
- Partnerships for research with regional and international organisations established

Achievements after 2 years:

- Rehabilitation of research stations (Yambio, Yei, Polataka, Halima and Renk) initiated
- Human resources of key government departments and public institutes mobilised and their capacity developed
- Priority areas for research programmes identified
- Government budget for agricultural research committed
- Government budget for research and training of universities committed
- Training and education in areas of crop improvement and seed sector development provided by University of Juba (PhD, MSc, BSc, Diploma and short courses)
- Training manuals for seed production at CTC developed and reviewed

Key priority actions:

- Mobilise resources
- Rehabilitate and renovate research stations
- Review and update crop research and seed-related training and education curricula
- Start discussion on the establishment of an autonomous seed authority and a semi-autonomous research organisation

Policy recommendations:

- Establish a semi-autonomous research organisation to be enacted through ministerial order
- Establish an autonomous seed authority
- Seek for alternative sources for funding of research

Key stakeholders to involve:

Mainline government ministries, research institutes, academia, universities and educational institutes, CGIAR centres (ICRISAT, CIAT, CIMMYT), the private sector, UN agencies

Conclusions

The ten pathways provide a road map and the concrete actions required for the transformation of South Sudan's seed sector into a robust, inclusive, sustainable, and resilient seed sector, including vibrant seed business development in South Sudan.

Seed sector development must be relevant to the current context of smallholder farmers across South Sudan, and at the same time envision a seed sector fitting a more stable and peaceful South Sudan in, hopefully, the near future.

The call to action, although ambitious, sets realistic and cost-effective achievements after two and five years by identifying priority actions and policy recommendations key to the development of South Sudan's seed sector.

This call to action forms a crucial foundation to improve significantly on South Sudan's seed sector performance and ultimately its food systems outcomes, in particular food security and food diversification for healthier diets.

Participating organisations

The following organisations have contributed to and endorsed the call to action: the Ministry of Agriculture and Food Security in South Sudan (MAFS), the Directorate of Agricultural Research (DAR), and the South Sudan Bureau of Standards; the University of Juba, Western Equatoria University, and Wageningen University & Research (in particular its Centre for Development Innovation); the Food and Agricultural Organization of the United Nations (FAO) and the United Nations World Food Programme (WFP); the Association of Volunteers in International Service (AVSI), Cordaid, the International Fertilizer Development Center (IFDC), Mercy Corps, World Concern, World Vision International (WVI), and Resilience through Agriculture in South Sudan (USAID); Afrogenics, East West Seed Knowledge Foundation, Premium Agro Consult, Pro Seed, Seed Grow, the Seed Traders Association of South Sudan (STASS), and the South Sudan Agricultural Producer's Union; the Feed the Future Global Supporting Seed Systems for Development Activity (S34D); the Embassy of the Kingdom of the Netherlands in South Sudan; and the EU Technical Assistance Programme.

Regional presentation: Agricultural Research Corporation Sudan; Al Fashir University, Sudan; the National Agricultural Research Organisation (NARO), Uganda; ISSD Uganda; ISSD Ethiopia; and Mercy Corps.

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