



The Republic of Uganda

**MINISTRY OF AGRICULTURE, ANIMAL
INDUSTRY AND FISHERIES**

NATIONAL SEED POLICY

October 2018

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INDUSTRY AND FISHERIES

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FOREWORD

I am delighted to present the National Seed Policy that provides a framework for enhancing the performance of the seed sub-sector in Uganda.

Seed is a reproducible resource and a key input of agricultural production. It links conservation, cultivation, production, consumption and trade to commercialisation of agriculture – an aspiration of the National Agriculture Policy (2013).

The Vision of the policy is “**A competitive, profitable and sustainable seed sub-sector where farmers and all seed users have access to affordable quality seed**”. The policy goal is to guide, promote, develop and regulate the seed sub-sector in order to ensure availability and access to safe and high-quality seed to all stakeholders for increased food and nutrition security, household income, wealth creation and export earnings. In order to realise its goal, the policy elaborates priority interventions to address challenges in the seed sub-sector and exploit opportunities for improved performance. It contributes towards agricultural productivity, increased trade, household incomes and overall socio-economic transformation.

To realise the transition from subsistence to a market-oriented production and guarantee food and nutrition security for the population, it is necessary to ensure improved access to affordable high-quality seed and other agricultural inputs. Uganda therefore, needs a competitive, vibrant and pluralistic seed sub-sector that will enhance agricultural productivity of food and cash crops to support the growing population and extend her economic base.

The National Seed Policy was developed through a consultative and participatory process that solicited key stakeholders’ input from government institutions, seed companies, civil society, NGOs, academia, farmers, international research institutions and development partners among others. We are particularly grateful to USAID Feed the Future Uganda Enabling Environment for Agricultural Activity (EEA) and Integrated Seed Sector Development Program (ISSD) for the financial and technical support.

The Ministry of Agriculture, Animal Industry and Fisheries calls on all partners to complement our efforts for successful implementation of this Policy in order to make the seed sub-sector contribute to improved household food and nutrition security, and incomes as well as national economic growth and development.



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MINISTER OF AGRICULTURE, ANIMAL INDUSTRY AND FISHERIES

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ACRONYMS & ABBREVIATION

ARIPO	African Regional Intellectual Property Organization
BMAU	Budget Monitoring and Accountability Unit
CGIAR	Consultative Group on International Agricultural Research
COMESA	Common Market for Eastern, Central and Southern Africa
DCIC	Department of Crop Inspection and Certification
EAC	East African Community
GAPR	Government Annual Performance Report
IGG	Inspector General of Government
IPPC	International Plant Protection Convention
ISTA	International Seed Testing Association
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
M&E	Monitoring and Evaluation
MDAs	Ministries, Departments and Agencies
MIS	Management Information System
MoFPED	Ministry of Finance, Planning and Economic Development
MT	Metric Tons
NAADS	National Agricultural Advisory Services
NAES	National Agricultural Extension Services
NAP	National Agriculture Policy
NARO	National Agricultural Research Organization
NARS	National Agricultural Research System
NDP	National Development Plan
NDR	National Development Report
NEMA	National Environment Management Authority
NFA	National Forest Authority
NGO	Non-Governmental Organization
NPA	National Planning Authority
NPPO	National Plant Protection Organisation
NSA	National Seed Authority
NSB	National Seed Board
NSCS	National Seed Certification Services
NSP	National Seed Policy
NSS	National Seed System

OAG	Office of the Auditor General
OECD	Organization for Economic Cooperation and Development
PVP	Plant Variety Protection
QDS	Quality Declared Seed
QSGA	Quality Seed Growers Associations
SADC	Southern Africa Development Community
SSIIMS	Seed Sector Integrated Information Management System
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
UBOS	Uganda Bureau of Statistics
UNBS	Uganda National Bureau of Standards
UNCST	Uganda National Council for Science and Technology
UPHIA	Uganda Plant Health and Inspection Agency
USIIS	Uganda Seed Sector Integrated Information Management System
UWA	Uganda Wild Life Authority
WTO	World Trade Organization
ZARDI	Zonal Agricultural Research and Development Institute

GLOSSARY

Basic seed:	Seed produced by a multiplication unit that is one or two generations after pre-basic seed but will be multiplied one more time to produce seed that will be sold to farmers.
Certified Seed:	the progeny of basic-seed produced according to the standards prescribed for the crop being certified.
Conditioning:	The process of drying, cleaning, and sometimes treating seed to remove foreign matter, increase storage life, and maximize germination rates.
Farmer Saved:	Seed selected from the previous crop season and saved for plant in the following season.
Formal Seed System:	The chain of activities involving research and development, multiplication, processing, quality control and certification.
Informal Seed System:	The chain of seed production and marketing involving farmers who save seed from harvest to planting, occasionally selling or exchanging seed with other farmers, but without any mechanical processing, testing, or labeling (as opposed to the formal system).
Local Variety:	A variety that has been developed and grown by farmers and is without any formal plant breeding – also called a traditional variety or land race.
Pluralistic:	Encompassing all stakeholders in the spirit of equity and fairness
Pre-Basic Seed:	Seed that is produced by a breeding unit in small quantities for multiplication to reach the desired volumes for sale to farmers

Quality Declared:	Seed produced by a registered seed producer (individual or a group of farmers) from basic-seed and conforms to the minimum standards for variety purity and germination.
Seed:	Propagative material, plants and parts of plants intended for propagation and multiplication of a variety.
Seed Systems:	Inter-connected institutions involved in developing new varieties, producing, testing, certifying, and marketing seed. Also called the seed sub-sector.

1. BACKGROUND

1.1 Agriculture and the National Economy

Agriculture is the mainstay of Uganda's economy, contributing 46% of the total export earnings and a large share of raw materials for industry. It employs about 65% of the total population. About three quarters of agricultural households derive their livelihoods from subsistence rain-fed agriculture. The focus of the National Agriculture Policy (2013) is to transform this to commercial agriculture- where high quality seed and other agricultural inputs are critical.

The agricultural sector performance is hampered by a number of challenges, including: low level of commercialization; poor linkages between research and farmers; low use of fertilizers; limited use of irrigation; land fragmentation; low levels of value addition; high cost of financing; lack of agricultural support machinery; prevalence of pests and diseases; as well as poor transport mechanisms which affect distribution of inputs and farm produce.

The National Seed Policy will contribute to addressing some of the above challenges and ensure, increased production, availability, accessibility and affordability of quality seed and associated technologies to increase agricultural productivity.

1.2 National Policy Framework

The Vision 2040 launched in 2010, envisages a transformed Ugandan society from a peasant to a modern and prosperous country. The goal is to change the country from a predominantly low income to a competitive upper middle income country within the next 25 years. The Vision 2040 is being implemented under six (6) National Development Plans (NDPs) and the second National Development Plan (NDP II) 2015/16-2019/20 is currently being implemented under the theme: strengthening Uganda's competitiveness for sustainable wealth creation, employment and inclusive growth.

Under the NDP II, five priority areas have been identified as the core drivers of Uganda's development with the highest multiplication effect on the economy – the first of which is agriculture. This is in recognition that agriculture plays a cardinal role in employment creation, poverty reduction and production of raw materials – which is a key contribution to industrialisation and economic transformation.

In 2013, the Ministry of Agriculture Animal Industry and Fisheries developed a National Agricultural Policy (NAP) which is being implemented through a series of supportive policies – one of which will be this National Seed Policy.

1.3 Sector Policy Framework

The agriculture sector vision, as stated in NAP is “a competitive, profitable and sustainable agricultural sector” that will be realised by transforming the sector from subsistence to commercial agriculture. The transformation will aim to ensure food and nutrition security, create employment opportunities and increase household income along the entire commodity value chains of production, processing and marketing. NAP 2013 provides the framework in which the development of the seed sub-sector will be anchored. Under the NAP objective of increasing incomes of farming households from crops, livestock, fisheries and all other agriculture related activities there, are four strategies on which the seed sub-sector development can be directly linked. These are:

- i. Generating, demonstrating and disseminating appropriate, safe, and cost-effective agricultural technologies and research services to enhance production and increase quality of produce through access to high quality agricultural technology, agribusiness and advisory services for all categories of farmers;
- ii. Promoting the growth of a vibrant private sector-led agricultural input supply system that is responsive to farmer and sector needs;
- iii. Strengthening the certification and regulatory system to guarantee the quality of agriculture inputs at all levels; and
- iv. Developing and implementing a policy and regulatory framework for biotechnology in agriculture.

The National Seed Policy will directly contribute to these NAP strategies. It will also contribute to the realisation of the agricultural outcomes envisaged in Vision 2040 and NDP II.

1.4 Regional and Global context

Uganda is party to regional and international agreements and protocols relating to the seed sub-sector covering trade, regulation and development. These agreements and protocols are intended to enhance seed trade; harmonise standards and regulations to ease movement of seeds and plant materials; establish a robust database on seed market for traceability of imports and exports as well as local

production and utilisation. The relevant agreements and protocols include; the Common Agricultural Policy and Agreements on Harmonization of Seed Policies and Regulations in East Africa; COMESA seed trade harmonization regulations (2015); African Regional Intellectual Property Organization (ARIPO), WTO-Trade-Related Aspects of Intellectual Property Rights (TRIPS); International Plant Protection Convention (IPPC); Organization for Economic Cooperation and Development (OECD); and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). In addition, Uganda is in the process of seeking accreditation to International Seed Testing Association (ISTA).

1.5 The Seed Sub-Sector

Uganda has favourable conditions for seed production with two main cropping seasons, diverse agro-ecological zones; cropping system and arable land that support production of diverse food crops and forages (covering agriculture, horticulture, floriculture, and forestry) as well as abundant water sources from lakes, rivers and wetlands. This endowment provides an opportunity to increase seed production to meet current gaps in seed demand and creates a strong opportunity for cross border trade and access to regional markets. The Uganda seed sub-sector is characterised by co-existing formal and informal systems.

1.5.1 The Formal Seed System

The formal system has evolved from a public to private sector-led, to create a reliable seed supply system for farmers. This was enhanced further by government policies of privatisation, liberalisation and divestiture. This system is responsible for production of certified seed of registered varieties through structured systems of variety development, release, multiplication, processing, marketing, distribution, quality control and certification. It also includes seed imports and exports for domestic and regional seed markets. Major players in the formal system are public institutions (government, international and national research); the private sector including, seed companies, farmers and farmer organizations; NGOs; and development partners. All are linked together under a National Seed System (NSS).

A seed sub-sector analysis in 2015 revealed that the formal system contributes 10-15% of the estimated national certified seed requirements. There are over 35 registered seed companies producing an estimated 18,000 MT of seed, of which about 70% is maize seed. The National Seed Certification Services (NSCS) is mandated to regulate the formal seed system - from variety listing through to final seed certification - but inadequate capacity (human and financial resources) has

hampered its ability to sufficiently monitor field production and seed conditioning for quality control. The formal seed system needs to be strengthened to enhance its production capacity and competitiveness in the local, regional and international seed markets.

1.5.2 Informal Seed System

On the other hand, about 85% of seed planted is obtained from informal sources, mainly farm-saved seed; local markets; and social networks. Because of this the seed that farmers use for their farming is of questionable quality. In an effort to modernize agriculture, government realizes the need to significantly increase the quantity of quality seeds available to farmers. One of the ways for achieving this will be to transform the informal sector into a commercially viable system through an intermediate system producing quality seed of mainly non-hybrid crops at the community level that meets the minimum standards of variety purity and germination. This requires adaptation to technology, innovations and institutional capacity building.

1.5.3 Seed classes

Uganda recognizes pre-basic, basic and certified seed classes in accordance with the OECD seed classification system. In addition, Quality Declared Seed (QDS) has been introduced to reduce the use of home-saved seeds as a transition into the formal seed system for the major food and cash crops. While Government has made strides to establish legal and regulatory framework for the seed sub-sector, there is no comprehensive framework for the seed sub-sector management and development. This policy is aimed at filling the gaps.

1.6 Legal Framework for the Seed Sub Sector

As a regulated industry, the seed sector requires relevant laws and regulations to ensure compliance, orderly development and fairness among seed sub-sector stakeholders and protection of farmers. Government will, therefore, review, develop and enforce appropriate laws, regulations and protocols that are relevant to the seed sub-sector.

1.6.1 Seed and Plant Act and Regulations

In 2006, the Seed and Plant Act was enacted. It provides for the promotion, regulation and control of variety release, multiplication, conditioning, marketing, importing and quality assurance of seeds and planting materials. Given the pluralistic seed system provided under this policy, government will review the

existing legislation and regulations to ensure all the systems are covered with relevant and effective regulatory instruments.

1.6.2 Plant Variety Protection Act (2014)

The Plant Variety Protection (PVP) Act 2014 provides for the promotion of development of new plant varieties and their protection as means of enhancing breeders' innovations and rewards through granting of plant breeders rights and other related matters.

1.7 Problem Elaboration

Currently, 68% of Uganda's farming households are engaged in subsistence rain-fed agriculture that rely largely on home-saved seed of low quality which results in low productivity and production. Farmers' reliance on home saved seed is caused by insufficient availability of affordable high quality seed and lack of trust in the certified seed available in the market. Certified seed contributes only about 15% of seed requirement. Due to the inability of seed companies to supply required quantities of certified seed and the limited capacity in the regulatory system, an estimated 30-40% of seed traded in the market is counterfeit.

On the supply side there is also inadequate infrastructure for seed production, multiplication, conditioning, storage, marketing and distribution including appropriate means of transportation. Moreover, the seed production system currently depends on low input characterized by low use of fertilizer, rain-fed production and use of rudimentary hand tools which cannot lead to efficient production of large volumes of quality seed. Due to limited use of improved seed, the current farm level crop yields are far below potential. For instance, yields of beans – a major food crop ranges between 300-500kg per acre per season compared to a potential of up to 900kg per acre per season. Maize yields are below 2,000kg per hectare compared to 7,000kg per hectare per season for hybrid maize. Rice is currently on average at a yield level of less than 1,000kg per hectare compared to an expected potential of 3,000-4,000kg per hectare per season.

Another problem of the seed sub-sector is that stakeholders have limited access to vital information and knowledge about where to access quality seed of which variety and actual seed demand. This is further exacerbated by weak linkages between research and extension. These challenges have therefore limited farmers' access to quality seed. Unless decisively addressed, the current status-quo will hinder Uganda from meeting her development goals of transforming subsistence agriculture to a commercial sector.

1.8 Justification of the Seed Policy

A transition from subsistence to a market-oriented agricultural production, and a food secure population, can only result from intensified utilisation of arable land and adoption of high quality seed and other planting materials supplemented by other technological packages for all agro-ecological zones. Quality seed is the most renewable agricultural resource and one of the key determinants of farming success.

This Policy will address the problems expounded above to ensure that Uganda develops a vibrant seed sub-sector that will contribute to improved agricultural productivity to ensure food and nutrition security, increased household incomes and enhanced production of raw material for industrialisation. Additionally, the National Seed Policy will enable Uganda to exploit the huge opportunity in the regional and international seed market through an expanded, well-regulated and competitive seed sub-sector. Currently, the seed market within COMESA is worth US \$1.3billion. But the combined share of this market from COMESA member states is only 2%. Finally, the Policy will ensure that Uganda meets her international commitments while competing favourably in the regional and international seed market.

2. VISION, MISSION, GOALS AND GUIDING PRINCIPLES

2.1 Vision

A competitive, profitable and sustainable seed sub-sector where farmers and other seed users have access to affordable quality seed.

2.2 Mission

To create a well-regulated seed sector that ensures availability of and access to safe and high quality seed under a pluralistic seed system.

2.3 Goal

To guide, promote, develop and regulate the seed sub-sector in order to ensure availability, accessibility and affordability of safe and high quality seed to all stakeholders for increased food and nutrition security, household income, wealth creation and higher export earnings.

2.4 Policy Objectives

The policy objectives are:

- i. To strengthen research and development for the seed sector.
- ii. To strengthen capacity of the key players along the seed value chain to achieve an effective and efficient seed sector.
- iii. To strengthen the seed quality control system along the entire value chain.
- iv. To enhance knowledge and information management for the seed sector.

2.5 Guiding Principles

This policy shall be guided by principles derived from the country's experience and analysis of bottlenecks and opportunities within the existing seed sub-sector. These include:

Principle 1: Alignment

The policy will be implemented in line with Vision 2040, National Development Plan and the National Agriculture Policy (2013) and other related policy frameworks.

Principle 2: Private sector-led

In line with the government's privatisation policy, commercial activities of seed production, conditioning, marketing and distribution shall be the responsibility

of the private sector. The Government will provide an enabling environment to promote growth for all categories of private sector entities; including national and multi-national seed companies, small local enterprises and seed service providers while protecting all seed users.

Principle 3: Pluralistic

The policy will be implemented to serve all categories of stakeholders in the seed sub-sector. The provision of services will be carried out in a well-coordinated manner that ensures public, private and other non-state actors' involvement in the enhancement of the seed sub-sector in a way that does not preclude anyone who abides by this policy and related regulations.

Principle 4: Gender and Equity

Beneficiary targeting will be based on the principles of gender equity and fairness.

Principle 5: Financial Realism

To ensure sustainable availability of, access to, and affordability of high quality; entails seed produced in a cost-effective way using schemes with low transaction costs.

3. POLICY PRIORITY AREAS AND STRATEGIES

To achieve the goal of this Policy, this section elaborates the priority policy areas and strategies under each of the four objectives.

Objective 3.1 To strengthen research and development for the seed sector

Policy Area 3.1.1 Generate new commercial and food and nutrition security varieties

Policy Statement: Government will support the development of farmer and market preferred varieties for both commercial, food and nutrition security crops.

Strategies

- i. Support the public and private sector to develop and promote new commercial, food and nutrition security crop varieties;
- ii. Operationalise the Plant Variety Protection Act 2014;
- iii. Strengthen processes for new variety evaluation, release and registration to promote regional harmonisation;
- iv. Facilitate community-based seed producers to access basic seed of food crop varieties for multiplication;
- v. Enhance the cooperation with international crop development centres including the Consultative Group for International Agricultural Research (CGIAR) to access new varieties.

Priority Area 3.1.2 Sustainably utilise and protect Uganda's national plant genetic resources

Policy Statement: Government will ensure a viable and effective protection and exchange of germplasm for crop improvement.

Strategies

- i. Strengthen the mapping and creation of variety registers at national level and within communities;
- ii. Develop a new law to protect and preserve indigenous knowledge of local

- varieties and effectively protect community intellectual property rights;
- iii. Promote and build capacity of farmer and community groups including those led by women and youth to conserve crop varieties that have a high food security value;
 - iv. Enhance the development of community seed banks.

Objective 3.2 To strengthen capacity of the key players along the seed value chain to achieve an effective and efficient seed sub-sector

Priority Area 3.2.1 Multiply high quality seed under the formal seed system

Policy Statement: Government will create an enabling environment for seed companies to produce and supply sufficient quantities of high quality certified seed.

Strategies

- i. Create an opportunity for companies to access affordable credit for seed production and multiplication;
- ii. Support schemes that expand the infrastructure for seed production and conditioning;
- iii. Create a mechanism for seed demand articulation.

Priority Area 3.2.2 Enhance the production of quality seed within the informal system

Policy Statement: Government will strengthen the capacity for production of quality seed for crops that have low profit margins for seed companies.

Strategies

- i. Promote and build capacity of market-oriented farmers to produce, use and market quality seed with the focus on crops and varieties that have a high food security and nutritional value;
- ii. Strengthen participatory variety selection to enhance adoption of new improved varieties;
- iii. Promote improved affordable and gender friendly technologies to support seed multiplication and post-harvest handling.

Priority Area 3.2.3 Strengthen seed distribution and marketing to enhance commercialization of quality seed

Policy Statement: Government will promote an effective delivery mechanism for quality seeds to enhance uptake by smallholder farmers.

Strategies

- i. Support seed companies to market seed in appropriate and affordable packages to promote the use of certified seed by all farmers;
- ii. Support seed marketing outlets in remote areas by encouraging establishment of a network of seed stockists;
- iii. Establish systems for provision of seed buffer stocks including relief seed during emergency situations.

Priority Area 3.2.4 Enhance national competitiveness in regional and international seed trade to contribute to economic growth

Policy Statement: Government will ensure production of high quality seed for trade in regional and international markets.

Strategies

- i. Enhance the capacity of the Phytosanitary Services to issue relevant plant health certificates in line with regional and international standards;
- ii. Strengthen institutional coordination that ensures effective border control services and provide efficient facilities (laboratories, visual inspection kits, refrigerators) at principal border entry points;
- iii. Promote awareness on regionally harmonized seed trade standards.

Objective 3.3 To strengthen the seed quality control system along the value chain

Policy Area 3.3.1 Quality control along the formal seed value chain

Policy Statement: Government will ensure that quality and safe seed is available on the market in order to build customer confidence and satisfaction.

Strategies

- i. Strengthen and enforce seed certification (quality control, seed testing, labelling) for locally produced and imported seed;
- ii. Strengthen the quality management systems of seed companies and national seed laboratories;
- iii. Establish public private partnership for seed quality control;
- iv. Provide incentives that encourage all registered seed companies and other seed merchants to join seed associations for purposes of self-regulation to ensure seed quality; and
- v. Develop modalities for seed certification of horticultural crops, industrial crops, forestry and other plant species which have no variety maintenance.

Policy Area 3.3.2 Quality control for Quality Declared Seed

Policy Statement: Government will put in place appropriate seed quality standards and mechanisms for regulation, production and sale of Quality Declared Seed to reduce use of home saved seed and bridge the gap between formal and informal seed systems

Strategies

- i. Develop regulations and standards for Quality Declared Seed;
- ii. Establish a delegated and decentralised system that includes registration of community seed producers at zonal and/or district level for seed inspection;
- iii. Establish a seed traceability system; and
- iv. Provide for listing of traditional and participatory bred varieties.

Objective 3.4 To enhance knowledge and information management for the seed sector

Priority Area 3.4.1 Develop human resource for the seed sub-sector development

Policy Statement: Government will support the skilling of seed scientists and technicians and other actors in the seed value chain to manage the seed systems.

Strategies

- i. Support the development of seed science centres at tertiary institutions including universities for seed research, training and accreditation purposes;

- ii. Empower communities to appreciate and acquire seed knowledge and its relation to enterprise development;
- iii. Promote adult literacy and seed business skills training to enhance women participation in seed business.

Priority Area 3.4.2 Establish a Seed Sector Integrated Information Management System (SSIIMS)

Policy Statement: Government will put in place an integrated seed information management system as part of implementation of the policy.

Strategies

- i. Put in place a mechanism for regular actual seed demand determination;
- ii. Establish an MIS and web portal at NSCS to capture and share critical information relating to the seed sub-sector;.
- iii. Promote awareness on the different seed classes in Uganda using tools that effectively reach all actors.

4. CROSS-CUTTING ISSUES

Intellectual Property Rights

This policy will be implemented in tandem with other policies and laws that protect communities' intellectual property rights over their traditional varieties.

Environment and Natural Resource Protection and Conservation

This policy will be implemented in consistency with the Environment Management Act and cognizant of the need to preserve Uganda's heritage for current and future generations.

Gender and Development

Women and the youth play a pivotal role in the seed subsector; including; variety selection, multiplication, seed conditioning and seed marketing. This policy provides interventions to facilitate youth, women and other vulnerable groups to strategically intervene in enhancing availability of quality seed; and promoting gender-friendly technologies to support seed multiplication and post-harvest handling.

Climate Change

The impacts of climate change on agricultural production include erratic rainfall, frequent droughts, floods, higher temperatures and occurrence of more destructive pests and diseases. Crop improvement interventions envisaged under this policy will ensure better use of climate smart technologies to adapt and mitigate adverse effects of climate variability; thereby enhancing the resilience of the farming systems.

5. IMPLEMENTATION ARRANGEMENTS

Government will formulate a comprehensive strategy to transform the seed sub-sector into a competitive, profitable, equitable and sustainable sector. The seed policy shall be implemented through a sector wide approach that includes both the public and private stakeholders at both central and local governments. Emphasis shall be placed on creating functional linkages between MAAIF and its agencies, other MDA's and local governments to develop a sound and vibrant seed industry. Efficient and effective seed sub-sector institutions are critical for realising the vision, mission and objectives of the seed policy. To this end, government will strengthen and put in place appropriate organizations and institutions with strong mandates to ensure that they are adequately resourced to fulfil their roles and responsibilities as envisaged under this policy.

5.1 Public Institutions involved in the seed industry

Public institutional set up for the seed sub-sector is contained in the Seed and Plant Act (2006). However, the Seeds and Plant Act has not been fully implemented and some of the required structures are not fully operational. As part of implementation of the seed policy, Government will ensure full implementation of the Seed and Plant Act to allow the development of the seed sub-sector and propose amendments in line with stated policy directions. The roles of the key public sector institutions involved in the seed sub-sector are elaborated below.

5.1.1 *Ministry of Agriculture, Animal Industry and Fisheries:*

MAAIF is the government ministry responsible for agriculture and shall, in collaboration with other relevant agencies, be responsible for operationalization of the National Seed Policy (NSP) and enforcement of seed and plant related laws and regulations of the Seed Industry. The implementation of the National Seed Policy will initially be undertaken within existing institutional structure of the ministry.

The Directorate of Crop Resources will be responsible for the implementation of the National Seed Policy. To increase efficiency in seed certification and trade, the National Seed Certification Services (NSCS) will be transformed, in the medium term, into Uganda Plant Health and Inspectorate Agency (UPHIA) which will be responsible for all plant health – Phytosanitary Services; all seed regulatory services; and all agricultural and plant related chemical regulatory services, among others.

The National Seed Board (NSB) will advise the Minister on Seed Policy issues and supervise Seed Policy implementation through technical sub-committees. NSB overriding function is to provide regulatory mechanisms to the seed industry. Considering the broadened scope of the seed policy compared to the Seed and Plant Act, 2006, there shall be need to review the Act to align it with the Policy.

National Agricultural Research Systems (NARS):

National Agricultural Research System (NARS) is responsible for developing new seed technologies. The research and development agenda will be undertaken by both public and private institutions in a harmonised manner. NARS will continue to be the main suppliers of Early Generation Seed, but shall enter into strategic partnerships with registered seed companies to produce pre-basic and basic seed. NARS shall be the maintainer of varieties, and shall provide backstopping and technical advice to extension service and quality seed producers. In keeping with the principle of decentralization, Government will devolve seed inspection and certification services from MAAIF headquarters to zonal centres and districts and establish zonal laboratories at NARO's Zonal Agricultural Research and Development Institutes (ZARDIs) and other entities to provide basic services.

National Agricultural Extension Service (NAES):

The Directorate of Agricultural Extension Services (DAES) shall be responsible for the promotion and dissemination of technologies to the farming communities. DAES and NARO's decentralised structures will play an important role in the support to QDS producers, providing required accredited seed testing facilities and technical support in seed quality control. The Seed Policy provides for interventions that support farmer groups to register and produce QDS. In addition, mechanisms shall be put in place to encourage interested farmers to form Quality Seed Growers Associations (QSGAs), who will produce crop specific seed as demanded by surrounding communities. The QSGAs will lead the transitioning of the informal seed system towards a commercial orientation.

Uganda National Council of Science and Technology (UNCST):

The Uganda National Council for Science and Technology has, within its portfolio, the mandate to promote agricultural research innovations in the country. It also provides competitive grants for scientists willing to undertake seed research programs. Under the Seeds and Plants Act, UNCST is in charge of recommending procedures and protocols to deal with varieties developed through the use of biotechnology.

Universities and Other Institutes:

Universities and other institutions that train seed scientists and technologists will play an important role in variety development under the NARS framework and training of seed scientists and technicians.

Uganda National Bureau of Standards (UNBS):

The UNBS will work with various stakeholders to ensure that seed produced and supplied within the country, and seed obtained from outside the country as well as seed exported out of the country meets the national, regional and international standards including upholding those under the Sanitary and Phytosanitary Standards (SPS).

Uganda Bureau of Statistics (UBOS):

MAAIF will strengthen its collaboration with the Uganda Bureau of Statistics to establish, operationalize and effectively and efficiently collect, analyse and disseminate data on seed for use in planning and oversight of the national seed system.

National Environmental Management Authority (NEMA):

Government through the Ministry of Water and Environment as well as NEMA will ensure that mechanisms are in place to protect, and conserve the eco-system for sustainable land use for agriculture.

National Forest Authority (NFA):

Government will support NFA through the National Tree Seed Centre to broaden investments in enhancing tree seed production and quality assurance of tree species and varieties as a means to restore, develop and expand the forest cover and make forestry resources thrive for their multiple uses for the current and future generations.

Uganda Wildlife Authority (UWA):

MAAIF will work with the UWA to ensure the sustainability of the seed system that supports conservation and preservation of crop wild relatives, medicinal herbs and other plants beneficial to both animals and humans.

5.2 Private Sector Institutional Setup

The private seed sector plays a critical role in the seed sub-sector and shall continue to do so in promotion of technologies developed from various sources through commercial seed production, marketing and distribution. Most of the

commercial enterprises involved in the seed industry operate under national apex organisations at various levels of the seed value chain including production, marketing and distribution. Where they have capacity, and as provided for under the NARS Act, the private sector will also develop technologies/new varieties. Private seed associations at various segments of the value chain will ensure their members sign up to and adhere to a code of conduct for self-regulation.

5.3 Enforcement, Sanctions and Reward Mechanisms

The implementation of this Policy will require strict enforcement and sanctions to deter those involved in various malpractices including sale or supply of counterfeit seed. In addition, local governments will be supported to pass ordinances and by-laws with reward mechanisms to entities, groups or individuals that protect and conserve seed varieties on one hand; and punitive measures for entities, groups or individuals that contravene these laws on the other. This Policy will contribute to the operationalization of community intellectual property rights through relevant legislation so that rights-holders and conservationists are rewarded appropriately to incentivise quality seed production, distribution and use.

6. MONITORING AND EVALUATION FRAMEWORK

6.1 Routine Monitoring

The implementation of the policy will be monitored at various levels. The Ministry will track broad high level key performance indicators; the National Seed Board will coordinate, monitor the public and private seed sector in order to achieve the national seed industry objectives; while National Seed Certification Services will monitor the activities of the formal and informal seed systems.

To guide the monitoring and evaluation of the policy, indicators will be developed and agreed upon for each level. Periodically, stakeholders will be brought together to reflect on the implementation of the policy and provide input on improvements. Government through NSCS will put in place the Uganda Seed Sector Integrated Information Management System (USSIIMS) and web portal. This system will track performance right from the community level, to district and zonal levels and feed this information into the national repository hosted by Directorate of Crop Resources. The NSCS will work jointly with the Budget Monitoring and Accountability Unit (BMAU) of the Ministry of Finance Planning and Economic Development (MoFPED) as part of the routine sector monitoring.

6.2 Evaluation

To evaluate the effectiveness and impact of the various programmes and interventions under this policy, MAAIF working through the NSCS will conduct analytical work on district and national level performance and feed these results into the Annual Sector Performance Reports and the National Development Report (NDR). Progress of implementation will also be documented in the Government bi-annual and annual performance report (GAPR) under the Office of the Prime Minister. MAAIF will undertake period reviews of this policy including a baseline survey, scheduled policy reviews, mid-term and final evaluations.

6.3 Policy Review Cycles

As this policy is implemented through a seed strategy, issues that arise will be dealt with by revising the strategy which has a 5-year cycle. Major revision of the policy will take place every 10 years.

7. ACCOUNTABILITY AND FINANCING MECHANISMS

7.1 Accountability

This policy has put in place accountability mechanisms to ensure that all duty bearers are held to account on commitments.

At the district level, the office of Production and Marketing will be accountable for implementation of this policy and in close contact with sub-county coordination structures. As is the requirement, the implementation of this policy will undergo annual reviews of local government performance conducted by the Ministry of Local Government; other process will include: the community Barazas under the Office of the Prime Minister, work done under Inspectorate functions of government (IGG), Budget Monitoring and Accountability Unit (BMAU) and oversight by the Office of the Auditor General (OAG) that annually submits the National Audit Report to Parliament.

7.2 Financing Mechanisms

Government will ensure adequate and predictable funding for implementation of the Seed Policy. The sources of funds will include government appropriation from the national budget and internally generated resources such as registration and licensing fee, inspection fees, testing fees and fines. Other sources shall include private sector and development partners' contributions.

8. COMMUNICATION STRATEGY

In line with the National Communication Policy and Strategy (2014), concerted efforts will be made to ensure that this policy is explained to, and understood by, all stakeholders. To begin this process, MAAIF, will design a user-friendly popular version of this policy and translate it into local dialects to ease communication and enhanced awareness. National and district level staff will be tasked to popularise this policy as it is implemented and provide feedback through the M&E and supervision systems that will be established.

Efforts will be made to create awareness so that all seed classes are well understood by all stakeholders. This is particularly crucial in the context of the planned transformation of the informal seed system through the creation of seed schemes for villages and farmer's groups, participatory variety selection and local seed businesses with support from NGOs, NARO, and the extension service to produce quality seed. To this end, appropriate communication pathways will be used. This will include: Radio and Television (with emphasis on local FM radios and local TV stations); pull-outs from the national and local newspapers; bulletins and journals as well as discussions at community meetings, district and national level workshops.

In all these communication systems – a two-way system will be devised where on one hand, Government explains the aspirations of this policy while on the other hand, feedback from seed users is obtained. Results of these engagements will be communicated to contribute to efforts to build the capacity of both public and private organisations to ensure efficient and effective fulfilment of functions and mandates. International best practices, innovations and new developments will be communicated expeditiously to all stakeholders so that they become more responsive to farmers' needs and ensure competitiveness in domestic, regional and global seed markets.

9. CONCLUSION

The National Seed Policy aims at boosting the seed sub-sector in Uganda. It covers all seed systems to ensure the growth of the formal seed system while uplifting the informal system that is essentially based on farm-saved seed to progressively graduate it into a fully regulated and commercialised seed system.

The policy recognises different seed classes and quality assurance mechanisms needed to increase their availability and access. Through implementation of this policy, outstanding regulatory and institutional reforms will be carried out. At the same time, capacity of both public and private organisations will be enhanced to ensure efficient and effective fulfilment of their respective functions and mandates.

The policy will realize the elevation of public research to advance the necessary technological innovations to support the national seed system. Full implementation of this policy will result into a competitive, pluralistic, responsive and vibrant seed system in domestic, regional and international seed market.

As the policy actions are implemented, the seed sub-sector will make a significant contribution to transformation from subsistence to commercial agriculture, improved food and nutrition security, increased household income and enhanced export earnings.



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