

ENSURING THE SUSTAINABLE AVAILABILITY OF AFFORDABLE QUALITY SEEDS AND PLANTING MATERIALS IN UGANDA

A Review of Uganda's Draft National Seed Policy



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List of Abbreviations

ACODE	Advocates Coalition for Development and Environment
CAADP	Compact on Africa Agriculture Development Programme
CGIAR	Consultative Group on International Agricultural Research
COMESA	Common Market for Eastern and Southern Africa
CSOs	Civil Society Organisations
DSIP	Development Strategy and Investment Plan
EAC	East African Community
ISSD	Integrated Seed Sector Development
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
NARO	National Agriculture Research Organisation
NEPAD	New Partnership for Africa's Development
NDP	National Development Plan
NSCS	National Seed Certification Services
SADC	Southern African Development Community
UNADA	Uganda National Agro-Input Dealers Association
UNFFE	Uganda National Farmers' Federation
USTA	Uganda Seed Trade Association

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Executive Summary

The availability and use of quality seeds and planting materials in Uganda remains very low. The use of quality seeds is estimated at just between 10-15 per cent. This is in spite of the fact that the use of quality seeds and planting materials is key in increasing agricultural production and productivity. Explanations for the low availability and low use of quality seeds and planting materials in Uganda include: insufficient breeder and basic seed classes for many varieties; insufficient field supervision and inspection services leading to lack of quality control along the entire seed value chain; and limited capacities in the seed industry especially in the area of research & innovation, and infrastructure for seed production and conditioning. Other reasons include: the lack of seed data to project national seed demand for national planning and forecasting of various seed types that farmers need; high cost of quality seeds; limited farmer awareness; inefficient and ineffective institutional setup and absence of a seed policy.

This paper analyses the potential of Uganda's draft national seed policy (May 2014), and the adequacy of the major seed legislation and institutional framework in ensuring the sustainable availability and accessibility of affordable quality seed and planting materials. The study is largely based on desk review of the draft national seed policy and other relevant legal and policy instruments, supplemented by a few informal interviews with stakeholders in Uganda's seed industry.

Although the draft national seed policy contains some good provisions, in its current form, it cannot guarantee the sustainable availability of adequate and affordable quality seed and planting materials. First, many objectives, strategies and guiding principles proposed therein are either vague and/or too general. Objectives of a robust policy framework should be specific, measurable, achievable, realistic and time bound.

Second, the draft national seed policy does not adequately address critical issues for ensuring the sustainable availability of adequate and affordable quality seed and planting materials. Among such important issues include: the failure to address the seed demand constraints; the lack of any convincing measures to ensure seed self-sufficiency; absence of policy measures to strengthen the national gene bank; the failure to provide for an effective emergency seed relief mechanism in cases of disaster; and the failure to effectively guarantee the farmers' right to seed. Despite its immense role in ensuring sustainable availability of affordable seed, the draft national seed policy also fails to adequately recognise the role of the informal seed system. Subsequently, there are hardly any serious measures provided for its strengthening as most emphasis is placed on the formal seed system.

As far as Uganda's major seed legislation is concerned, except for a few issues like the requirement that all seed offered for sale must be labelled and sealed, and the weak penalties provided for in cases of persons found guilty of breaking the law, the Seeds and Plant Act 2006 is generally a good law which if effectively implemented, can go a long way in ensuring the sustainable availability of affordable quality seed. The biggest challenge is that to-date, eight years since it came into force, the Seeds and Plants Act is not fully operational. The Seeds and Plant Regulations meant to fully operationalize the Act have never been passed and gazetted. The development, adoption and operationalization of these regulations must be fast-tracked.

With respect to Uganda's seed institutional framework, there are many negative developments. First, a number of the institutions established by the Seeds and Plants Act 2006 like the National Seed Tribunal and the National Seed Board have never been operationalized. Second, the existing/operational public seed institutions are faced with the challenge of poor coordination with minimal intra and inter-institutional collaboration. Third, Uganda's major public sector seed institutions are poorly funded and inadequately staffed to be able to properly exercise their mandate. Fourth, some of these institutions suffer from conflict of interest in the performance of their duties. A final notable issue with Uganda's public sector seed establishments is that the composition of some of them is not representative of key seed sector stakeholders such as smallholder farmers and Civil Society Organisations (CSOs). If Uganda is to make significant progress in achieving the sustainable availability of affordable quality seed and planting materials, these challenges must be addressed soonest.

In terms of improving Uganda's draft national seed policy, the following major recommendations are important:

- The national seed policy should clearly state its scope. In particular, the policy should state whether or not it applies to seeds of all crops and plants grown in Uganda. To the extent that it is a national seed policy, it should apply to seeds of all crops and plants although seeds of particular crops may be given priority in terms of support.
- The goal of the seed policy should be revisited and improved to focus on the nature of the seed system that Uganda aspires for to achieve the broader goals of food security, improved livelihoods and increased farm and export earnings. It is proposed that the goal of Uganda's national seed policy should be to establish an integrated, well-co-ordinated and efficient national seed system that ensures the sustainable availability and use of affordable quality seeds and planting materials.
- The draft national seed policy should provide measures to support the informal seed system under a co-existence recognized model. These

measures should include provision of extension services, support to participatory strategies for on-farm management of plant genetic resources maintained by farmers, and support to germplasm conservation through establishing and strengthening of community gene banks and provision of quality assurance facilities.

- The national seed policy should also provide measures to strengthen the national gene bank. These measures should include infrastructural development, provision of relevant facilities, and resources to recruit the required number of qualified staff. Connectedly, Government through the national seed policy should establish and maintain regional seed banks. The regional seed banks can be established and maintained in partnership with the private sector.
- To promote the sustainable availability of seed and seed self-sufficiency, the national seed policy ought to provide some measures to promote local seed companies/businesses. These measures can include training in business and marketing skills, building the capacity of local seed companies to produce quality seeds and planting materials, and providing breeder and basic seed at more favourable terms.
- To ensure affordability of quality seed and planting materials, Government should limit taxes on seed production and multiplication activities and should provide incentives to boost village seed schemes.
- To promote efficiency, the national seed policy should have a monitoring and evaluation framework that sets clear targets against timelines.
- To improve the efficiency of Uganda's major public seed institutions, the following recommendations are made:
 - The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) should fast-track the operationalization of the National Seed Tribunal and the National Seed Board which are already established by the Seeds and Plant Act 2006.
 - MAAIF should urgently fill the existing vacancies in the National Seed Certification Services (NSCS) by recruiting the required number of inspectors and seed analysts. This is key in ensuring that seeds produced in this country are of acceptable quality.
 - MAAIF in particular and Government in general should allocate adequate funds to the NSCS to enable it effectively carry out its mandate. Financing of the NSCS can further be improved by allowing it to retain and use its internally generated revenue.
 - The Department of Crop Inspection and Certification should enter into

a public-private partnership with organised farmer groups and CSOs to produce quality seeds and planting materials for key food security crops where the private sector is not interested. This will make quality seeds and planting materials of various food crops more available and easily affordable and accessible in the different parts of the country.

- The composition of the National Seed Board should be revisited to include at least a representative of civil society and at least two farmers. The composition of the National Variety Release Committee should also be revisited to include at least two farmers.

1. INTRODUCTION

Seeds and planting materials are undoubtedly one of the most essential inputs in any agricultural production system. Agriculture is one of the most important sectors in Uganda's economy. In addition to providing food for majority of the people in Uganda, the agriculture sector employs over 70 per cent of Uganda's working population, contributes over 20 per cent to the country's GDP and accounts for over 45 per cent of Uganda's export earnings.¹ The agriculture sector also provides the inputs used in most of Uganda's industries; majority of which are agro-based.² Without the use of quality seeds, Uganda's agriculture sector cannot reach its full potential in contributing to national economic growth and development.

Although there are no verifiable statistics about seed supply and demand in Uganda,³ anecdotal evidence suggests insufficiency of affordable quality seeds and planting materials to meet farmers' needs. Resultantly, the use of quality seeds in Uganda is very low, estimated at just between 10-15 per cent.⁴ A lot of seed in Uganda is of low quality. Fake seed on the Uganda market is

Benefits of Using Quality Seeds and Planting Materials

1. They are genetically pure (true to type).
2. The good quality seed has high return per unit area
3. Less infestation of land with weed seed/other crop seeds.
4. Less disease and insect problem.
5. Minimization of seed/seedling rate i.e., fast and uniform emergence of seedling.
6. They are vigorous,
7. They adapt to extreme climatic condition and cropping system of the location.
8. The quality seed respond well to the applied fertilizers and nutrients.
9. Uniform in plant population and maturity.
10. Crops raised with quality seed are aesthetically pleasing.
11. Good seed prolongs life of a variety.
12. Yield prediction is very easy.
13. Handling in post-harvest operation will be easy.
14. Preparations of finished products are also better.
15. High produce value and their marketability

Source: Agriquest. Available at <http://agriquest.info/index.php/seed>. Accessed on 15/10/2014

1 Republic of Uganda (2010). Agriculture Sector Development Strategy and Investment Plan 2010/11-2014/15. Ministry of Agriculture, Animal Industry and Fisheries, Entebbe, p.16

2 *Ibid.*

3 Ssebuliba R (2010). Baseline Survey of the Seed Sector in Uganda, in Relation to Regional Harmonization of Seed Legislation. A Report Prepared for the African Seed Trade Association, p.11

4 *Ibid.*

estimated at about 40 per cent.⁵ Low quality seed in Uganda is largely attributed to insufficient field supervision and inspection services in seed production, processing and testing; low investment in seed research & innovation; and limited skills. All this partly explains the persistent low agricultural production and productivity which continues to stifle the potential of the agriculture sector's contribution to Uganda's development goals including food security, job creation and poverty reduction and increased incomes.

While many factors could explain the undesirable state of affairs in Uganda's seed industry, if the country had a robust seed policy, legal and institutional framework, the situation would be better. Indeed, there are calls from many actors to have a holistic review of Uganda's current legal, policy and institutional framework to identify weaknesses and propose recommendations for developing a robust seed sub-sector that will ensure the sustainable availability and accessibility of quality seed and planting materials in Uganda.⁶

Many of the studies that have been carried out on Uganda's seed sub-sector attribute the challenges facing the sub-sector to the absence of a seed policy framework to guide the development of the sub-sector. Following the formulation of the draft national seed policy, said to be in advanced stages of completion, it is important to examine the proposals made therein. Uganda's seed legal and institutional framework is also often criticised as being incapable of guaranteeing sustainable availability, affordability, and accessibility of quality seeds and planting materials without stating the exact loopholes/gaps. It is from this brief background that this study was undertaken. The study reviews Uganda's draft national seed policy (May 2014), examines the major seed legislation and the major public sector seed establishments.⁷

The study has four major objectives:

- (a) To analyze the potential of Uganda's draft national seed policy in ensuring the sustainable availability and accessibility of affordable quality seed and planting materials;
- (b) To analyze the adequacy of Uganda's major seed legislation in ensuring the sustainable availability and accessibility of affordable quality seed and

5 Barnett C et al (2011). Barnett, C et al (2011). Country Case Studies on the Pass Value Chain Strategy/ Approach and its Impact/ Effect on Smallholder Farmer Yields in Africa: East Africa Synthesis Report (Kenya, Uganda and Tanzania). Alliance for Green Revolution in Africa, p.30.

6 See for instance, Uganda Seed Industry (undated), Strategy for sustainable availability of quality seed and planting materials in Uganda: A Critical Review. Paper on file at ACODE. Efforts to get the draft strategy for sustainable availability of quality seed and planting materials in Uganda from MAAIF were futile.

7 The May 2014 draft national seed policy was submitted to the Top Policy Management Committee (TPMC) of MAAIF for consideration and approval but was referred back for further consultations and review.

planting materials;

(c) To analyze Uganda's major public sector seed establishments and the major challenges they face in ensuring the sustainable availability and accessibility of affordable quality seed and planting materials;

(d) To propose policy, legal, institutional and other measures that can be adopted to ensure the sustainable availability and accessibility of affordable quality seed and planting materials in Uganda.

2. METHODOLOGY AND PAPER OUTLINE

This study was largely based on desk review of the draft national seed policy (May 2014), the Seeds and Plant Act 2006 and other relevant policy instruments, Government reports and studies that have been done on Uganda's seed sub-sector. Among the other policy instruments reviewed include Uganda Vision 2040,⁸ the National Development Plan (NDP) 2010/11-2014/15;⁹ the Agriculture Sector Development Strategy and Investment Plan (DSIP) 2010/11- 2014/15;¹⁰ the proposed plan to operationalize the non-ATAAS component DSIP (Nov 2012); and the National Agriculture Policy.¹¹

The desk review was supplemented by informal interviews with a few stakeholders in Uganda's seed sub-sector including Government officials, representatives of civil society organisations working on issues of seeds and planting materials, persons from the private sector. Desk review and the informal interviews were done in August - October 2014.

This paper is organised in seven sections. Section 1 is the introduction. Section 2 summarises the methodology used in conducting the study. Section 3 analyses the potential of the draft national seed policy in guaranteeing the sustainable availability and accessibility of affordable quality seeds and planting materials. In section 4, we analyse the adequacy of Uganda's major legislation (i.e., the Seeds and Plant Act 2006) in guaranteeing the sustainable availability and accessibility of affordable quality seeds and planting materials. Section 5 examines Uganda's major public sector seed institutions in terms of their potential to guarantee the sustainable availability and accessibility of affordable quality seeds and planting materials and the major challenges they

8 The Republic of Uganda. Uganda Vision 2040. Ministry of Finance, Planning and Economic Development, Kampala.

9 The Republic of Uganda (2010). National Development Plan 2010/11 – 2014/15. Ministry of Finance, Planning and Economic Development, Kampala.

10 The Republic of Uganda (2010). Agriculture Sector Development Strategy and Investment Plan 2010/11- 2014/15. Ministry of Agriculture, Animal Industry and Fisheries.

11 The Republic of Uganda (2014), National Agriculture Policy. Ministry of Agriculture, Animal Industry and Fisheries.

face in executing their mandate. The recommendations of this study are the subject of Section 6. Section 7 concludes the paper.

3. UGANDA'S DRAFT NATIONAL SEED POLICY

Uganda is in the final stages of adopting a stand-alone national seed policy to guide the growth and development of the seed sub-sector in the country. This section examines the potential of the provisions in the draft national seed policy (May 2014) in guaranteeing the sustainable availability and accessibility of adequate and affordable quality seeds and planting materials in Uganda. Before analysing the draft national seed policy, it is important to contextualise the national policy environment in which it was developed and is to be understood. This broad national policy context mainly derives from Uganda Vision 2040, the NDP and the DSIP.

Uganda Vision 2040 clearly states Uganda's Vision as "[A] transformed Ugandan society from a peasant to a modern and prosperous country within 30 years".¹² The NDP 2010/11-2014/15 is the first national development plan specifically developed towards achieving Uganda Vision 2040. The theme for the NDP 2010/11-2014/15 is "Growth, Employment and Socio-Economic Transformation for Prosperity".¹³ Uganda Vision 2040 and the NDP both recognize the agriculture sector as key in achieving Uganda's Vision. The NDP specifically recognizes agriculture as a primary growth sector with great potential to significantly increase its contribution to economic growth, development and poverty reduction.¹⁴ It rightly identifies high cost and limited availability of improved farm inputs like fertilisers and quality seed as one of the major constraints to the performance of the agriculture sector.¹⁵ To support and promote the growth of the agriculture sector, the NDP sets out to pursue four major objectives key among them is to enhance agricultural production and productivity.¹⁶ Among the strategies listed for enhancing agricultural production and productivity is the need to improve access to high quality inputs, planting and stocking material.¹⁷

DSIP 2010/11-2014/15 was developed and adopted as the major implementation framework for achieving the NDP objectives and strategies in the agriculture sector and as Uganda's strategy for implementing the Compact on Africa Agriculture Development Programme (CAADP).¹⁸ Under CAADP,

12 *Supra*, note 8, p.4.

13 *Supra*, note 9, para 117, Section 3.2.

14 *Ibid*, para 241.

15 *Ibid*, Section 5.1.2

16 *Ibid*, para 258, Section 5.1.3.

17 *Ibid*, p.87

18 CAADP is an initiative of the New Partnership for Africa's Development (NEPAD) under the

Uganda committed to the principle of agriculture-led growth; to achieve a 6 per cent average annual growth rate for the agriculture sector; and to increase the share of the national budget allocated to the agriculture sector to 10 per cent.

DSIP sets out the vision of Uganda's agriculture sector as "A Competitive, Profitable and Sustainable Agricultural Sector" and the mission as to "*Transform subsistence farming to commercial agriculture*".¹⁹ To realize its vision and mission, it sets out to pursue two sector development objectives and four specific objectives. Among the specific objectives is to sustainably enhance the factor productivity in crops, livestock, and fisheries and to develop favourable legal, policy and institutional frameworks that facilitate private sector expansion and increased profitability along the entire value chain.²⁰ Under each of these objectives are investment programmes that spell out the actual measures to be undertaken. The draft national seed policy clearly states that it is aimed at complementing the DSIP particularly Programme 1 which focuses on enhancing production and productivity through provision of improved seed and planting materials, among others, and Programme 3 that focuses on improving the enabling environment.

3.1. The Goal, Vision, Mission and Guiding Principles

According to the draft national seed policy (May 2014), the overall goal of national seed policy is to "significantly contribute to the efficacy of other agricultural inputs and increase both agricultural productivity and production for improved food security and livelihoods, increase export earnings and farm incomes." The Vision is stated as "A statutory regulated, competitive, profitable and sustainable, market-led seed industry inclusive of large and smallholder farmers". The Mission is "To ensure the availability of adequate high quality, disease resistant, drought tolerant and safety seed in an enabling policy environment and market led delivery systems."

The draft policy provides nine (9) guiding principles. These are: ensuring a private sector-led seed sector;²¹ guaranteeing the protection of plant breeders' rights; promoting private seed companies' access to breeder seed; securing farmers' right to save, use, exchange, share or sell farm produce of all protected varieties; and facilitating the transformation of the informal seed sector into a viable commercial seed sector. The other guiding principles include production, processing and distribution of high quality seed to meet national seed requirements; establishing Uganda as a seed hub for the East

African Union.

19 *Supra*, note 10, p.51.

20 *Ibid*.

21 Where government's role would be to provide enabling environment and where the production of foundation seed, commercial seed growing, processing, packaging and marketing would be the responsibility of the private sector.

African Community (EAC), Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC) regional blocs; encouraging modernisation by seed companies in seed production, processing, conditioning and storage infrastructure; monitoring, regulation and control of genetically modified seeds; and harmonisation of Uganda's seed laws and policies with regional and international conventions.

Before proceeding to analyse the policy objectives and strategies, a number of observations can be made at this point about the goal and guiding principles of the draft national seed policy.

First, the goal of the draft national seed policy stated above is not clear and is problematic. The first part of the goal is stated as “To significantly contribute to the efficacy of *other agricultural inputs*”.²² The major goal of a robust national seed policy cannot be about other agricultural inputs. Rather, it should be about the nature and kind of the national seed system the country aspires for to achieve the higher national goals and objectives which are clearly stated in the second part of the goal. The first part of the goal therefore makes the intentions of the national seed policy inherently problematic and unclear.

Second, the mission statement lists the kinds of attributes of seed that form the major focus of draft national seed policy i.e., “...high quality, disease resistant, drought tolerant and safety seed...”. Despite appearing more than eight times, the draft national seed policy does not define “high quality seed”. The policy has to define what constitutes “high quality seed”. This should include high germination capacity, high vigour under different field conditions, disease and insect free seed, high adaptability etc and in doing so, it is important to recognise that farmer produced seed can also be of ‘high quality’. It is also questionable why the mission statement leaves out a number of attributes that many farmers in Uganda consider important in seeds/crops including seeds of local land races and traditional varieties which are more adapted to the local conditions and seeds of crops whose cultivation don't require use of inorganic inputs. To the extent that the draft national seed policy aims to address the needs of Ugandan farmers, these attributes of seed also need to be brought on board. Otherwise, justification has to be made why the mission statement focuses on those stated therein and leaves out others.

Third, many of what are stated as guiding principles pass for policy objectives due to the narrative style and the provision of strategies and measures for their achievement. Two examples will suffice to illustrate this point. Principle 6 is stated as “Production, processing and distribution of high quality seed to meet national seed requirements and to establish Uganda as a seed hub for EAC, COMESA and SADC regional blocs.” Under this principle, the draft seed

22 Emphasis added.

policy provides a number of mechanisms through which quality assurance would be achieved. These include establishing within MAAIF effective seed inspection and certification services; accreditation of public and private seed testing laboratories compliant with national and international seed testing standards; the training of seed inspectors, seed growers, processors and merchants on quality seed production and storage; and ensuring adherence to established standards for utilization of products of biotechnology, such as genetically modified seeds. Principle 5 is stated as “Transformation of the informal seed sector into a viable commercial seed sector”. To achieve this “principle” (which actually stands out as, one of the major objectives of the draft national seed policy), multiple supportive strategies are provided including promoting and building the capacity of local seed businesses and village seed schemes; linking seed research and plant breeding programs with the informal sector and putting in place quality certain control mechanisms.

The core issues with principles 5 and 6 reproduced above, amongst others, is that guiding principles in policy documents must appear as succinct statement to provide overall policy direction. Guiding principles in a policy document are not meant to be implemented and are not expected to have implementation strategies. They are meant to guide the different actors in interpreting and implementing the policy provisions to ensure that they achieve the intended policy goal. The confusion of guiding principles and policy objectives casts doubt about the potential of the draft policy instrument to ensure sustainable availability of adequate and affordable high quality seed.

Fourth, there are a number of guiding principles that the draft seed policy leaves out which are critical for a country like Uganda to have. For instance, given the interlinked relationship between issues surrounding seed, food security and national security, one of the most important guiding principles one would expect to find in Uganda's seed policy is self-sufficiency in seed. For purposes of ensuring sustainable food security and guaranteeing national security, Government should aim at ensuring seed self-sufficiency.

3.2. Scope, Objectives and Strategies

The first key observation to make under this section is that the draft national seed policy does not define its scope. Although it defines the term “seeds”,²³ it is not clear whether it applies to seeds of all crops and plants. In terms of improvement, the draft national seed policy should explicitly state its scope. The scope should be clear to the readers and users of the proposed policy.

In terms of objectives, the draft national seed policy sets out five key objectives i.e., (1) To sustainably conserve Uganda's environment and biodiversity, breed

23 See (MAAIF). Draft national seed policy (May 2014), section 2.1.2.

and protect national plant genetic resources from destruction by natural and human activities including protecting the genetic resources from being used by non-Ugandan entities without the required authorisation;

(2) To generate, multiply and market high yielding crop and pasture variety seeds with tolerance to biotic and abiotic stresses;

(3) To promote a modern and regionally competitive seed industry;

(4) To minimise effects of non-tariff barriers in Uganda's seed trade; and

(5) To create institutional framework to oversee the development of a regionally competitive seed industry.

A number of strategies are proposed to achieve each of the above stated objectives. The key question to ask here is: Can these objectives and strategies ensure the sustainable availability and accessibility of affordable quality seeds and planting materials in Uganda? Although the draft national seed policy has some good provisions, there are a number of issues that can be raised about the proposed policy objectives and strategies.

First, many of the proposed strategies are vague and/or too general to guarantee the sustainable availability of enough affordable quality seed. For example, under policy objective 2,²⁴ a number of strategies are proposed including “strengthening of existing seed certification system for locally produced and imported seed, in order to ensure availability of good quality seeds.” The question is: how is Government going to do this? Under the same policy objective, another strategy proposed is to “[p]romote the development and use of high yielding, disease resistant and drought tolerant varieties to...” How will government promote this? Although



Picture 1: Taken at Bioversity International's Seed Fair at Nakaseke, Luweero in 2013.

24 Policy objective 2 is stated as “To generate, multiply and market high yielding crop and pasture variety seeds with tolerance to biotic and abiotic stresses”

leaving room for further innovation is important, robust policies must be specific about the most important things that must be done to achieve a particular objective.

Second, the proposed policy objectives, strategies, mission statement and guiding principles are mainly focussed on addressing the seed supply constraints whilst the seed demand side constraints remain unaddressed. This is in spite of the fact that the low usage of high quality and certified seeds in Uganda is partly attributed to the high costs which majority of farmers cannot afford.²⁵ It is therefore important that in its mission, guiding principles, and objectives, the national seed policy should also address the demand side constraints - particularly the issue of affordability of seed and information about farmers' seed needs in terms of type, volume, and quality.

Third, despite the role that the informal seed system plays in ensuring the sustainable availability of affordable seed, there is no objective or any serious strategies to support it. Most emphasis is placed on the formal seed system.²⁶ The draft national seed policy recognises that the informal seed system meets 80 per cent of Uganda's national seed requirements and the formal system meets only 20 per cent. The draft policy document also recognises that the informal seed system is strategically positioned to conserve biodiversity of land races. Beyond conserving land races, the informal seed system also plays other important roles like maintaining crop diversity, providing seed adaptable to local conditions and needs, and providing a source of breeding material for the formal seed system. Seed from the informal seed system is affordable and the informal seed system reaches out and supplies many places where the formal system cannot reach. This notwithstanding, most, if not all of the objectives, strategies and guiding principles of the draft national seed policy are geared towards supporting the formal seed system. There are hardly any concrete strategies to support the informal seed system. The formal and informal seed systems should be seen as complementary and should all be supported for Uganda to achieve a robust seed system that can guarantee the sustainable availability and accessibility of affordable quality seed and planting materials.

The other major weakness of the draft national seed policy is the absence of specific strategies to ensure the continued availability of quality seed in cases of disasters affecting seed availability and access. This is a major

25 ISSD Uganda (2014). Baseline Survey on Access to Seeds and Planting Materials in Uganda. ISSD Programme in Uganda, Wageningen UR, Kampala.

26 The over-emphasis of the formal seed sector is perhaps epitomised in in one of the strategies under policy objective No.2 which is to "Promote farmers' acceptance and use of improved seed; and to guide the transformation of the informal dominated seed sector into a formal dominated seed sector, with the ultimate end of requiring all farmers to use only certified seed."

omission given the increasing number and nature of disasters in Uganda that affect seed availability and access by vulnerable communities. It is true that under policy objective No. 1, a provision exists for emergency seed supplies in cases of localized or national calamities. A critical analysis of objective No 1, however reveals that that strategy is misplaced. It presupposes that the objective of providing emergency seed in cases of calamities is “to conserve the environment and biodiversity, breed and protect national plant genetic resources from destruction by natural and human activities...” which is not true. The major objective of provision of emergency seed during and after disasters is to meet the needs of the affected communities/populations through restoring their productive capacity. Additionally, the draft national seed policy is silent about the salient aspects of the emergency seed supply mechanism.

The draft national seed policy is also lacking in terms of policy measures to strengthen the national gene bank. The importance of gene banks in ensuring the sustainable availability of affordable quality seed cannot be over-emphasised. Gene banks are very important in terms of preserving genetic diversity (in the form of seeds or cuttings), and, together with the associated knowledge, making it available for future use in research and plant breeding.²⁷ Gene banks are therefore a very important source of germplasm material for future breeders to use in their breeding activities.



Picture 2: Taken at Bioversity International’s Seed Fair at Nakaseke, Luweero in 2013.

Uganda’s national gene bank is facing a myriad of challenges that constrain its efforts in collecting, characterising, evaluating and

regeneration of the germplasm. According to the Head of the Uganda Plant Genetic Resources Centre who doubles as the Head of the National Gene Bank, the major challenges relate to human and financial resource constraints and limited infrastructure and facilities.²⁸ Because of these constraints, the gene

27 See “What is a gene bank? Available at <http://b4fa.org/biosciences-and-agriculture/plantbreeding/gene-bank/>. Accessed on 10/10/2014.

28 Informal interview with Dr. John Wasswa Mulumba, the Head of Uganda’s Plant Genetic Resources Centre.

bank has very few collections and most of it is not characterised. As a result, many breeders in Uganda get their breeding materials from the Consultative Group on International Agricultural Research (CGIAR) centres and not from the national gene bank. This is time-consuming, expensive, and unsustainable. Breeders in Uganda are also missing out on the most adaptable germplasm from local sources. In ensuring the sustainable availability of enough affordable quality seed, Uganda's national seed policy should therefore provide a specific objective and strategies to strengthen the national gene bank.

The final major loophole in the draft national seed policy is the manner in which it purports to protect the farmers' right to seed. In Uganda's context, one of the ways of ensuring seed self-sufficiency and the sustainable availability and accessibility of adequate and affordable seed is by protecting the farmers' right to seed. Although the draft seed policy provides for farmers' right to seed as one of the guiding principles, the manner in which it is stated is problematic. The farmers' right to seed is stated in the context of only protected varieties. The farmers' right to save, use, exchange, share and sell farm seed is stated in the context of only protected varieties. In light of the fact the draft national seed policy aims to ensure that in the long-run farmers use only seed from the formal seed system (most of which will likely be protected varieties), this is problematic. The farmers' right to seed as provided for in the draft seed policy is guaranteed only in the transitional period when farmers are supposed to graduate from the use of informal to formal seed system. In Uganda's context, to guarantee the sustainable availability and accessibility of affordable quality seed, the farmers' right to seed must be guaranteed at all times.

Also of concern is that the draft national seed policy erroneously assigns the Uganda Seed Trade Association (USTA) the role of taking up responsibility of seed data management. This is a function of NSCS. While USTA can manage seed data for its members, the NSCS has a mandate to aggregate and manage seed data from all seed producers in the country.

Given the weaknesses and other issues discussed in this section, it can justifiably be concluded that in its current form, Uganda's draft national seed policy (May 2014) cannot guarantee the sustainable availability and accessibility of affordable quality seeds and planting materials in Uganda.

4. UGANDA'S MAJOR SEED LEGISLATION

This section analyses the adequacy of Uganda's major seed legislation in ensuring the sustainable availability and accessibility of affordable quality seed. Uganda's seed legal and regulatory framework is comprised of a number of laws and regulations. These include the Seeds and Plant Act 2006 and the Plant Variety Protection Act 2014. There are also a number of draft seed-

related legal instruments including the draft Seeds and Plant Regulations 2011, the Plant Protection and Health Bill 2010, and the Biotechnology and Biosafety Bill 2013. This section focuses on the Seeds and Plant Act 2006; currently the major legislation governing the seed sub-sector in Uganda. The Seeds and Plant Act 2006 provides for the promotion, regulation and control of plant breeding and variety release, multiplication, conditioning, marketing, importing and quality assurance of seeds and other planting materials and for other related matters.²⁹

Under Part II, the Act establishes and provides for a number of institutional mechanisms for ensuring a robust seed sector in Uganda. These include the National Seed Board, the National Variety Committee, the National Seed Certification Services and the Seeds and Plant Tribunal as a dispute settlement mechanism. The composition, functions and effectiveness of these institutional mechanisms in ensuring the sustainable availability of affordable quality seed is discussed in section 4 of this paper. Suffice to state here that some of these mechanisms like the Seeds and Plants Tribunal established under section 27 of the Act have never been operationalized.

Part II further deals with issues of variety testing, release and registration; multiplication of seeds and licensing; and seed conditioner and conditioning. It also provides for seed marketing; seed testing and establishment of seed testing laboratories, labeling and certification services; and the appointment of inspectors and seed analysts.

Part III of the Seeds and Plant Act 2006 deals with offences and miscellaneous provisions. Among the miscellaneous provisions is Section 28 which gives the Minister responsible for agriculture the power to make regulations for the control of breeding, multiplication, certification of seed and generally for the better implementation of the provisions of the Act. In 2009, draft Seeds and Plant regulations were developed to guide the effective implementation and enforcement of the Act. Unfortunately, to date, they have never been passed and operationalized.

Some analysts like Joughin castigate the Seeds and Plant Act 2006 as being too restrictive for instance when under section 9 (1) it requires that all imported and domestic varieties must undergo testing in variety performance trials for at least two growing seasons before their release.³⁰ Except in cases where a variety has been tested in a country with similar ecological settings/zones and where there is sufficient data from previous testing, the two season requirement is important in ensuring quality.

A problematic provision in the Seeds and Plant Act 2006 is section 12 (1)

29 See the Long Title.

30 See For instance, Joughin James (2013), *The Political Economy of Seed Reform in Uganda*, p.23

which requires all seed offered for sale to be properly labeled and sealed in accordance with the specifications to be set out in the regulations. This requirement has serious implications for ensuring the sustainable availability and accessibility of affordable seed to the poor smallholder farmers. As Joughin observes, Section 12 (1) of the Seeds and Plant Act resultantly makes it illegal for farmers to sell seeds to their neighbours.³¹ There is thus need to revisit this provision to restrict it to the sale of seeds from the formal seed system.

Also, the penalties provided for in cases of persons found guilty of committing various offences under the Seeds and Plant Act 2006 are not strong enough to deter people from committing those crimes and ensuring availability of quality seed on the market. For instance, under sections 19 (1) and 27, any person who sells prescribed seed for sowing that does not conform to the standards of germination and purity prescribed for that seed commits an offence. The penalty prescribed for that offence is a fine not exceeding ninety six currency points or imprisonment for a term not exceeding four years or both.³²

In summary, except for a few provisions, the Seeds and Plant Act 2006 is generally a good law which if effectively implemented, can go a long way in ensuring the sustainable availability and accessibility of quality seed. The delay to pass the draft Seeds and Plant regulations is undermining the effective implementation of this otherwise good law.

5. UGANDA'S MAJOR PUBLIC SECTOR SEED ESTABLISHMENTS

Uganda's seed institutional framework is comprised of many public and private sector institutions and actors. This section is however concerned with analyzing the major public sector establishments/offices concerned with issues of seeds and planting materials. These are: the National Seed Board, the National Seed Certification Services (NSCS) and the National Variety Release Committee. These are analysed with respect to their ability to guarantee the sustainable availability and accessibility of affordable quality seed and planting materials in Uganda. The analysis focuses on the composition of these establishments, their functions and operations.

5.1 The National Seed Board

The National Seed Board is established under Section 3 of the Seeds and Plant Act 2006. It comprises nine members appointed by the Minister

31 *Ibid.*

32 A currency point is the equivalent of twenty thousand Uganda shillings.

responsible for agriculture and three ex-officio members. The members include Director of Crop Resources (who is chair), a representative of NARO, a representative of faculties of forest and nature conservation of universities in Uganda, a representative of faculties of agriculture of universities in Uganda, a representative of farmers, a representative of seed growers, a representative of seed merchants, a representative of the private seed breeders and a representative from the agriculture extension service.³³ The Ex-Officio members are: the commissioner of forestry in the Ministry responsible for forestry; the commissioner for crop protection in the Ministry of Agriculture; and a representative of the Solicitor General.³⁴

It is notable that the board does not have any representation from civil society organizations working on seed issues. Given the work, experience and knowledge that many CSOs working on seed issues have, it would add value for the Board to have representation from civil society organizations working on seed issues. Also, given that most of the seed sector activities should aim at meeting the seed needs and interests of farmers, the farmers' voice in the National Seed Board should be enhanced. This can be done by increasing their representation from one person to at least three.

The major functions of the National Seed Board are advisory and regulatory in nature. They include advising the Minister responsible for agriculture on seed policy issues, regulations and standards; establishing a system of implementing seed policies through technical committees; reviewing the national seed supply; coordinating and monitoring the public and private seed sub-sector in order to achieve the national seed industry objectives; and giving advice to plant breeding organizations on the market and farmers' requirements.³⁵

On the whole, the functions of the National Seed Board highlighted above were well thought through and if effectively executed, can go a long way in ensuring the sustainable availability and accessibility of affordable quality seed. The biggest challenge is that to-date, eight years after the Seeds and Plant Act came into force, the Board has never been constituted to carry out its function. This could partly explain why Uganda is making minimal progress in terms of ensuring the sustainable availability and accessibility of affordable quality seeds and planting materials.

5.2 The National Seed Certification Services

The National Seed Certification Services (NSCS) falls under the department of Crop Inspection and Certification. It is the major Government unit responsible

33 See the Seeds and Plants Act 2006, Section 3 (2) a.

34 *Ibid*, Section 3 (2) b.

35 *Ibid*, Section 3 (4).

for all matters governing seeds in Uganda including ensuring that seed produced and sold in Uganda is of good quality.³⁶ It is responsible for the design, establishment and enforcement of certification standards, methods and procedures.³⁷

The major specific mandate of the NSCS include reviewing, adjusting, maintaining and enforcing seed standards; advising the National Seed Board of modifications to seed standards and providing the Board with information on any technical aspects affecting seed quality; providing training to persons responsible for the implementation of the Seeds and Plant Act 2006; and licensing of all seed merchants, seed conditioners and seed dealers.³⁸ Other functions include receiving and testing of all new varieties intended for release and multiplication; establishing standards for variety performance trials and distinctness, uniformity and stability trials; accreditation and licensing, field inspection, seed sampling and laboratory seed testing; carrying out field inspection, testing, labelling, sealing and eventual certification; making recommendations for degazetting of obsolete varieties; and determining the varieties to be released or rejected.³⁹

From its functions summarized above, it is apparent that the NSCS is key in ensuring the sustainable availability of affordable quality seeds and planting materials in Uganda. Its mandate notwithstanding, the NSCS is operating under very difficult circumstances that greatly affect its efficiency. It is inadequately staffed and is not well facilitated to effectively exercise its mandate.⁴⁰ Currently, the NSCS has a staffing shortfall of 70 per cent for inspectors.⁴¹ As a result, many seed fields planted for certification are not inspected despite making it to the market. Also, due to lack of qualified staff and resources, the NSCS delegated the vital function of testing of new varieties to NARO. Foreign and private sector seed companies complain about NARO's conflict of interest in testing new varieties since it is also engaged in developing new varieties. The NSCS does not also have a registrar's office for handling gazetted varieties. The end result is the proliferation of poor quality seed and planting materials on the market. The national seed testing laboratory is also inadequately staffed with only one seed sampler who also doubles as the seed analyst and is expected to sample and analyse seed samples from seed fields all over the country.⁴² In these circumstances, one cannot expect the NSCS to effectively

36 *Ibid*, Section 8 (1).

37 *Ibid*, Section 8 (2)

38 *Ibid*.

39 *Ibid*.

40 Ignatio & Mubangizi (2014). Capacity Building Plan for the National Seed Certification Services. A report produced for the USAID/Uganda Feed the Future Enabling Environment for Agriculture Activity. p.21.

41 *Ibid*.

42 Informal interview with a Commissioner in the Directorate of Crop Resources.

deliver on the recommended standards for seed inspection, seed sampling and testing.

In addition, only one motor vehicle is available for inspection of seed crop fields, factories and market regulation, making it difficult for the NSCS to provide these services in the whole country.⁴³ The only national seed testing laboratory has a non-functional cold room making it difficult to preserve official reference samples⁴⁴ for varieties that have been released. Worse still, the national seed testing laboratory does not have water installed in the laboratory and runs out of consumables quite often.⁴⁵ It also lacks accredited staffing and quality management systems. This is why Uganda's national seed testing laboratory is not yet accredited to the International Seed Testing Association.⁴⁶ Accreditation to the International Seed Testing Association is important for enabling seed testing results from one country to be accepted in other member countries. It is important that the national seed testing laboratory is suitably resourced to fulfil its mandate if it is to contribute to ensuring the sustainable availability of affordable quality seed and planting materials through accelerating the time that quality seed takes to get onto the market.

As a coping mechanism to the inadequate staffing and facilitation of NSCS, the current practice with seed inspection and sampling is that seed producers facilitate (provide transport and per-diem) inspectors and the sampler from the NSCS to undertake their duties.⁴⁷ This poses a conflict of interest especially in situations where inspectors and the seed analysts ideally need to reject seed fields and seed that do not comply with the recommended quality standards. This increases chances of marketing poor quality seed which undermines efforts geared towards sustainable availability of affordable quality seed and planting materials. Previous studies have suggested establishment of an accreditation center within NSCS to train stakeholders at a fee for eventual accreditation in order to carry out field crop inspection, seed sampling, laboratory testing and labelling.⁴⁸

5.3 The National Variety Release Committee

The other key public seed institutional mechanism established by the Seeds and

43 Ignatio & Mubangizi, *supra*, note 40.

44 Each breeder is required to leave a reference sample with NSCS at the time the variety is released.

45 Ignatio & Mubangizi (2014), *supra* note 40, p.24.

46 *Ibid.*

47 Informal interviews with persons in the seed companies and other key players in the seed sector.

48 Ignatio & Mubangizi (2014), *supra*, note 40.

Plant Act 2006 is the National Variety Release Committee.⁴⁹ This Committee consists of a pathologist, three breeders, a seed technologist, a socio-economist, an agronomist, a representative of the commodity association, an agricultural extension worker, an entomologist, a weed scientist and a forest breeder.⁵⁰ Farmers are not represented on the National Variety Release Committee and yet they play a key role in providing plant genetic materials for breeding new varieties, jointly testing field performance of new varieties together with breeders and are also clients of public breeding programmes. It is therefore important that membership of the National Variety Release Committee is revisited to include farmers. The functions of the National Variety Release Committee include: approving new varieties; approving the release of new varieties and entry into the seed multiplication programme, and reviewing and maintaining the National Variety List.⁵¹

In summary, at least on paper, Uganda has the necessary institutions that can work towards ensuring the sustainable availability and accessibility of affordable quality seed and planting materials. The major challenge is that some of these institutions like the National Seed Board and the Seed Tribunal have never been operationalized. Yet those that are operational like the NSCS face a number of challenges that greatly constrain their ability to effectively deliver on their mandates. The challenges include inadequate funding, under staffing, lack of facilities and in some cases conflict of interest. The composition of some of these establishments is also not representative of key seed sector stakeholders such as smallholder farmers and CSOs. If Uganda is to make significant progress in achieving sustainable availability and accessibility of affordable quality seed and planting materials, these challenges must be addressed soonest.

6. RECOMMENDATIONS

To improve the potential of Uganda's draft national seed policy in terms of ensuring the sustainable availability and accessibility of affordable quality seed and planting materials, the following recommendations are proposed:

First, there is need for the national seed policy to clearly state its scope. In particular, the policy should state whether or not it applies to seeds of all crops and plants grown in Uganda. To the extent that it is a national seed policy, it should apply to seeds of all crops and plants although seeds of particular crops may be given priority in terms of support.

The goal of the draft national seed policy should also be revisited and improved

49 See Seeds and Plant Act 2006, Section 6 (1).

50 *Ibid*, Section 6 (2).

51 *Ibid*, Section 7(1).

to focus on the nature of the seed system that Uganda aspires for to achieve the broader goals of food security, improved livelihoods and increased farm and export earnings. It is proposed that the goal of Uganda's national seed policy should be to establish a well co-ordinated and efficient national seed system that ensures the sustainable availability and use of affordable quality seeds and planting materials.

The draft national seed policy should provide measures to make quality seed affordable and accessible. One of the major reasons why farmers continue to use low quality seed is because quality seed is very expensive yet there are no strategies in the draft seed policy to ensure that quality seed is affordable. The mission of the draft national seed policy should be revisited to include the need to make quality seed affordable and accessible. Affordability and accessibility should also be included among the guiding principles of the national seed policy and there must be a specific objective with concrete strategies and measures aimed at ensuring affordability and accessibility of quality seed. One of the policy measures that Government can adopt to ensure accessibility and affordability of quality seed is to provide incentives for establishing village seed schemes, or producer area cooperatives. Government should also provide an enabling environment that limits as much as possible or removes unnecessary local taxation on seed production & multiplication activities, and seed conditioning equipment. Providing low interest loans from development financing for medium to long term investment in seed research & innovation would also be important to promote affordability of quality seed in Uganda.

There is also need for the draft national seed policy to provide measures to support the informal seed system. The informal seed system which largely operates in form of farmer saved seed, on-farm seed multiplication and farmer exchange and sell of seed meets over 80 per cent of Uganda's seed requirements and farmers' needs. Notwithstanding Government policy direction of transforming the informal seed system to formal seed system, the former system is expected to continue playing significant roles in ensuring sustainable availability and accessibility of affordable seed to farmers in many years to come. Indeed, given Uganda's socio - economic context, it is unlikely that the informal seed system will ever be totally formalized. As it supports the formal seed system, the national seed policy should also support and promote the positive attributes of the informal seed system. The informal seed system can be supported in a number of ways including the provision of required extension services, support to germplasm conservation including establishment and strengthening of community gene banks, support to quality assurance facilities and support to participatory strategies for on-farm management of plant genetic resources maintained by farmers through participatory plant breeding.

To ensure the sustainable availability of affordable quality seed and planting materials, the national seed policy should provide for measures to strengthen the national gene bank and establish regional seed banks. The regional seed banks will be important for stocking specified quantities of seed of required crops/varieties that can be used as a fall-back position in cases of acute shortage or calamities. The regional seed banks can be established and maintained in partnership with the Private Sector. The measures should include infrastructural development, the provision of cold storage and pest control facilities and the recruitment of sufficient qualified staff. The national and regional gene banks should also be financially well facilitated to collect, characterize, evaluate, multiply and regenerate germplasm.

To ensure the continuous availability of and access to quality seeds during and immediately after disasters, the national seed policy should establish a robust emergency seed relief mechanism. The draft national seed policy should have a stand-alone objective with clear strategies on provision of emergency seed relief in cases of disasters and calamities. Among the strategies that other countries have taken in this respect and which Uganda can consider, include establishing seed buffer stock arrangements in partnership with the private sector; conducting a seed system security assessment that provides analysis on the national seed system and specific data collection in vulnerable regions of the country; the establishment of early warning systems to determine as quickly as possible when actions are needed; and taking appropriate actions to secure the stability of seed production even in situations of crisis e.g., by strategic deployment of irrigation facilities for part of the basic seed production.

Given the importance of seed to agricultural production and Uganda's economic growth and development, and its direct link to food and national security, it is important that the national seed policy also aims to ensure national seed self-sufficiency. Seed self-sufficiency should therefore form part and parcel of the guiding principles of the national seed policy and there should be a specific objective and strategies for achieving it. The strategies should include support of local seed companies. This support can be in form of accessing cheaper investment financing, training in business and marketing skills, capacity building in production of quality seeds and provision of breeder and basic seed on favourable terms.

In terms of improving the efficiency of Uganda's major public sector seed institutions, the following recommendations are important.

MAAIF should fast-track the operationalization of the National Seed Tribunal and the National Seed Board which are already established by the Seeds and Plant Act 2006.

MAAIF should also urgently fill the existing vacancies in the NSCS by recruiting the required number of inspectors and seed analysts. This is key if Uganda is to ensure that seeds and planting materials produced in this country are of acceptable quality.

MAAIF in particular and Government in general should allocate adequate funds to the NSCS to enable it to effectively carry out its mandate. Financing of the NSCS can further be improved by allowing it to retain and use its internally generated revenue. The issue of a semi autonomous agency as highlighted in the DSIP would attract a budget vote of its own and also attract grants from development partners.

The Department of Crop Inspection and Certification should enter into a public-private partnership with other government institutions and organised farmer groups to produce quality seeds and planting materials for key food security and agricultural crops where the private sector is not interested. This will make quality seeds and planting materials affordable, available and more accessible in the different parts of the country.

The composition of the National Seed Board should be revisited to include at least a representative of CSOs and at least two farmers. The composition of the National Variety Release Committee should also be revisited to include at least two farmers.

7. CONCLUSION

The major objective of this study was to examine the potential of Uganda's draft national seed policy, major seed legislation and the key public sector seed establishments in as far as ensuring the sustainable availability and accessibility of affordable quality seed and planting materials is concerned.

Overall, with the exception of Uganda's major seed legislation, the findings indicate serious loopholes, gaps and challenges in the draft national seed policy and the public sector seed establishments that need to be urgently addressed. The major issue with the Seeds and Plant Act 2006 (which is Uganda's major seed legislation) is the lack of relevant regulations and guidelines to ensure its effective implementation.

Based on the findings, the study has made several recommendations which if adopted and effectively implemented can go a long way in ensuring the sustainable availability and accessibility of affordable quality seed and planting materials in Uganda. In addition to the recommended proposals to improve the draft national seed policy and the seed legislation, Government should enable the designated public sector seed institutions to carry out their

mandate more efficiently, effectively and in time through human capacity development, seed infrastructure development and adequate public funding arrangements.

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