

The Political Economy of Seed Reform in Uganda: Promoting a Regional Seed Trade Market

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Africa Trade Practice Working Paper Series
Number 3

January 2014



This work is funded by the Multi-Donor Trust Fund for Trade and Development supported by the governments of the United Kingdom, Sweden, the Netherlands and Switzerland. The views expressed in this paper reflect solely those of the authors and not necessarily the views of the funders, the World Bank Group or its Executive Directors.

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Acronyms and Abbreviations

AGRA	Alliance for a Green Revolution in Africa
ASARECA	Association for Strengthening Agricultural Research for Eastern and Central Africa
ASPSII	Agriculture Sector Programme Support, Phase II
ATAAS	Agricultural Technology and Agribusiness Advisory Services
AfDB	African Development Bank
APEP	Agricultural Productivity Enhancement Project
BFP	Budget Framework Paper
Bt	Bacillus thuringiensis
CAADP	Comprehensive Africa Agriculture Development Programme
CGIAR	Consultative Group on International Agricultural Research
CAADP	Comprehensive Africa Agriculture Development Programme
COMESA	Common Market for East and Southern Africa
DANIDA	Danish International Development Agency
DDA	Dairy Development Authority
DfID	Department for International Development (UK)
DSIP	Development Strategy and Investment Plan
DUS	distinctness, uniformity, stability
EAC	East African Community
EAAPP	East African Agricultural Productivity Project
ECA	Eastern and Central Africa
EPRC	Economic Policy Research Center
EU	European Union
FAO	Food and Agriculture Organization
FICA	Farm Inputs Care Centre (FICA) Ltd
GMO	genetically modified organism
HYV	high-yielding variety

IDEA	Investment in Developing Export Agriculture
IDP	internally displaced person
IFAD	International Fund for Agricultural Development
IFDC	International Fertilizer Development Center
IFPRI	International Food Policy Research Institute
ISSD	Integrated Seed Sector Development Programme
ISTA	International Seed Testing Association
MAAIF	Ministry of Agriculture, Animal Industry, and Fisheries
NAADS	National Agricultural Advisory Services
NARO	National Agricultural Research Organization
NEPAD	New Partnership for Africa's Development
NRM	National Resistance Movement
NDP	National Development Plan
NSCS	National Seed Certification Service
NGO	nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
OPV	open-pollinated variety
PASS	Program for Africa's Seed Systems
PMA	Plan for the Modernization of Agriculture
PFA	Prosperity for All (NRM strategy)
PVP	plant variety protection
SADC	Southern African Development Community
SPS	Sanitary and Phytosanitary
SSCG	Seed Subsector Coordination Group
SSSN	SADC Seed Security Network
SWG	Sector Working Group
UBOS	Uganda Bureau of Statistics
UNADA	Uganda National Agro-inputs Dealers' Association

UNDP	United Nations Development Programme
UNFFE	Uganda National Farmers Federation
UNHS	Uganda National Household Survey
UPOV	International Union for the Protection of New Varieties
USAID	United States Agency for International Development
USP	Uganda Seed Project
USTA	Uganda Seed Trade Association
VCU	value for cultivation and use
ZARDI	zonal agricultural research and development institute

Executive Summary

A critical element in achieving higher food production and realizing Uganda's regional export potential is the increased use by farmers of key inputs, in particular of improved seed. Quality seed is the foundation stone of agricultural growth and, therefore, in Uganda, of broader economic growth. However, despite the apparent awareness of this and despite substantial donor assistance over many years, only 10–15 percent of farmers use improved seed and many of the seed companies find it difficult to turn a profit. The fundamental question is why, after so much effort and support, is the seed industry still struggling?

This report provides a short summary of the recent history of the seed industry. Although the informal seed system still accounts for an estimated 85 percent of planted seed, the formal sector has been transformed in 20 years from control by a monopoly parastatal to competition among 23 registered companies, with at least 5 or 6 being serious players. Significantly, the relief seed industry that dominated and distorted the formal seed trade during the Northern Uganda conflict has withered away, leaving room for a sustainable, market-driven seed industry to develop. Fundamentally, however, the key institutions in the sector and the legal framework are not fit for purpose and are a significant drag on the industry.

This report sketches the roles and contribution of stakeholder organizations such as the Uganda Seed Trade Association, the Uganda National Farmers Federation, and the Uganda National Agro-Input Dealers Association. It outlines the support provided by major donors—the United States Agency for International Development (USAID), the Danish International Development Agency (Danida), the Alliance for a Green Revolution in Africa (AGRA), the Netherlands Embassy, the Food and Agriculture Organization (FAO), and the East Africa Community (EAC) Secretariat—over 15 years. After spelling out the issues in the sector, the report looks at the political economy literature for insights to help explain the near paralysis in the regulatory institutions. The dominant role of the National Resistance Movement (NRM) in decision making is described, as is the regime's use of inflationary patronage.

The purpose of this report is to tease out why the many excellent recommendations of the past have not been implemented and, in so doing, to chart a better course. However, this report does finish with a handful of key recommendations, many of them current for several years. These recommendations are examined in the context of two hypotheses, each lying within the broad finding that institutional dysfunction has for too long held back pressing and useful reforms:

- Hypothesis One: Political Benefits and Losses. Inflationary and often capricious patronage, along with a degree of unpredictability in donor support, has created a situation in which an efficient seed market cannot easily develop. The short-term political benefits of distributing agricultural inputs are clearly perceived to exceed the uncertain long-term efficiency gains that a competitive market would produce.
- Hypothesis Two: Economic Benefits and Losses. It seems that certain economic interests benefit from the status quo. Were the market to become more competitive, there would likely be a considerable shakeout of less competitive players. There is no evidence that private firms lobby against more efficient policies, but it could be that they recognize the benefits of the status quo and might campaign against reform if pressure for it mounted.

From the information available, this report concludes that the impediments to developing a more competitive market for seeds derive from the lack of political benefits for political elites and the risk

of economic losses for large farmers and domestic seed producers. A road map for change is envisaged with the following key milestones:

- (i) Build a constituency for reform through targeted meetings, workshops, and fora.
- (ii) Agree on and finalize the policy and legal framework.
- (iii) Pursue the benefits from regional trade and economic integration.
- (iv) Regenerate the institutions that can deliver action: the NSCS, the USTA, agro-dealer programs, and donor-supported fora.
- (v) Improve advocacy and press coverage.
- (vi) Undertake further investigative and supportive work.

1 Introduction

The Diagnostic Trade Integration Study for Uganda (World Bank 2006) and its recent update (World Bank 2012) confirm the country's substantial potential to expand production of food and to become a regional exporter of food staples. Exploiting this potential would bring substantial benefits to Uganda's farmers with consequent impacts on poverty and employment generation along the value chain. A critical element in achieving higher food production is greater access by farmers to key inputs and in particular to improved seed. Quality seed is the foundation stone of agricultural growth. However, despite the apparent awareness of this fact and substantial donor support over many years, only 10–15 percent of farmers use improved seed. The question is why, after so much effort and support, is the seed industry still struggling? This paper addresses this question through an analysis of the political economy of the seed industry. The study was undertaken within the context of the deepening integration taking place between the countries of the East Africa Community (EAC) and in the belief that a regional seed market could bring substantial benefits to farmers and other seed producers.

The seed industry has already been very well studied by the government of Uganda, donors, NGOs, private companies, farmers' groups, and others. At the time of writing, a new (and large) project was being developed to grapple with the industry's challenges. Many of its elements are similar to or the same as those of early initiatives. This study looks at why this should be so, why so few of the earlier recommendations were implemented, and what conditions might need to apply for a new round of support to succeed.

For each of the last 10 years, substantive studies on the seed industry have been published by the International Fertilizer Development Center (IFDC), Sasakawa Global 2000, and USAID's Investment in Developing Export Agriculture (IDEA) project (2003); USAID (Muhuku 2005); the FAO (Stenhouse and Muhuku 2006); the African Development Bank (AfDB) (Ferris and Ojok 2006); the Advocates Coalition for Development and Environment (ACODE) (2008a, 2008b); the Danish Seed Health Centre (Kabeere and Wulff 2008); Danida (Kiiza and Lwasa 2008); the European Union (EU) and the Common Market for Eastern and Southern Africa (COMESA) (Ssebuliba 2010); AGRA (2011a, 2011b); the Presidential Investors Roundtable (Republic of Uganda 2011); Bank of Uganda (Okot 2011); the MAAIF (2012a); ISSD (Mubangizi et al. 2012); Pelum and Misereor (2012); Trias Belgium (2012); the Association for Strengthening Agricultural Research for Eastern and Central Africa (ASARECA) (Waithaka et al. 2012); and Svensson, Yanagizawa-Drott, and Bold (2013). The reports tend to say much the same thing: The seed industry is characterized by a low rate of cultivar introduction, lack of access to credit, inadequate supply of basic seed, poor seed quality, uncertain farm-level profitability, inadequate regulation, lack of access to markets, absence of reliable data, weak institutions, insufficient storage, poor roads, and so on. The reports invariably recommend how to repair these problems. Rarely do they ask why earlier recommendations have not been acted upon.

This report was prepared on the basis of a short consultancy carried out from April to June 2013. The method involved absorbing the existing material and trying to find a clear way through it. Fifteen days were spent meeting with key informants in the industry, in the government, and among the donors, people with years of experience and invaluable insights into complex issues. The paper draws on a careful reading of policy documents, newspaper articles, and parliamentary records. All the cited reports have been useful and many of them excellent. The paper also draws on the author's experience of several years in the agriculture sector in Uganda, including more than three years as the economic adviser to the Permanent Secretary and the Planning Department in the Ministry of Agriculture, Animal Industry, and Fisheries (MAAIF).

Many people helped with views, narratives, and support. The author would like to note that Warwick Thomson, Martin Fowler, Clive Drew, Josephine Okot, Barak Hoffman, and Mette Kjær gave especially generously of their time and their memories of events. Any mistakes or errors of interpretation are, of course, the author's own.

2 Overview of the Seeds Sector

2.1 Agriculture and the Challenge of Economic Growth

Agriculture is the bedrock of the Ugandan economy. It contributes up to 21 percent of gross domestic product. It accounts for 48 percent of exports, provides a large proportion of the raw materials for industry, and employs 73 percent of the population aged 10 years and older (UBOS 2008). Furthermore, the sector is the key to poverty reduction. Benin (2009) demonstrated that if the 2.7 percent rate of agriculture growth achieved in 2005/06 was maintained, then by 2015, there would be a reduction in poverty to just below the Millennium Development Goal target of 27 percent. However, if a 6 percent annual growth could be achieved, the poverty level would fall much farther, to about 19 percent, with the absolute number of poor people declining from 8.45 million to 7.25 million.

2.2 Significance of the Seeds Subsector: Seeds as Foundation Stone

Uganda's population stood at 27.2 million in 2006, and the National Planning Authority's Vision 2035 predicts that it will almost double, to 56 million, in less than 30 years. It is also projected that Africa is likely to be hit hard by the impacts of global warming. Collier, Conway and Venables (2008) suggest that, in eastern Africa, average rainfall is likely to increase (by 15% or more) but that there will also be droughts with greater frequency and intensity. In 2006, the World Bank's Country Economic Memorandum was unequivocal: continued reliance on extending agriculture as a source of growth was called "environmentally disastrous."

Put simply, there is no room to expand the cultivated area. There must be an improvement in land and labor productivity, most urgently in yields. However, yields per unit area of most crops have been more or less constant for some years. Yields of cereals did increase (by 34 percent) between 1996 and 1999 but flattened thereafter (World Bank 2010), although caution must be exercised regarding the quality of the data.

Evidence from research trials indicates that average yields are well below their attainable potential: between less than 10 percent for maize and some 40 percent for bananas. A major factor is the lack of good-quality, higher-yielding, more vigorous, drought-resistant, and disease-free seeds and planting material. The MAAIF (2012b) recognizes that "seeds and planting materials are the most important determinant of agricultural production potential." However, usage of quality seed is very low. Ferris and Laker-Ojok (2006) estimate that 90 percent of crops are produced using home-saved seed and vegetatively propagated planting materials.¹ The questions posed in agricultural planning circles, and in most reports therefrom, are how can the quality of available planting

¹ Kiiza and Lwasa (2008) claim the proportion of farmers using certified seed grew from 35.5 percent in 2005 to 52 percent in 2007. This seems very high but takes no account of how much certified seed each farmer uses and what proportion it is of all planting material used. Judging by the low sales of certified seeds, it seems likely that many farmers use a small proportion of certified seed on a single crop such as maize or vegetables. Later reports (AGRA 2011a; Mubangizi et al. 2012) repeat the 10–15 percent figure. The reality is that, despite many studies and reports and support to the NSCS, no one has authoritative data.

material be improved, how can adoption rates be increased, and what can the government reasonably do to assist?

2.3 Structure of the Sector

Several reports offer clear, thorough, and succinct summaries of the sector and its history (Mubangizi et al. 2012; Okot 2011; MAAIF 2012a). Ferris and Ojok (2006) describe the early postliberalization years in considerable detail, and MAAIF (2012a) gives a full picture of the situation now.

There are three components of the market:

- (i) The informal seed system accounts for an estimated 87 percent of planted seed² (MAAIF 2012a). It consists of three elements: (i) farmers saving seed for own use (no trade involved); (ii) farmers exchanging seed with neighbors; and (iii) farmers and farmers' groups growing seed (improved or otherwise) for sale through informal channels, including local markets, nongovernmental organizations (NGOs), seed fairs, and development projects.

The informal seed sector plays a key role in multiplying planting material for vegetatively propagated crops (such as solanum potatoes, cassava, sweet potatoes, bananas, and various tropical fruit trees) and seed of self-pollinated crops, for which it is easy to maintain genetic purity (such as millet, beans, barley, groundnuts pigeon peas, cowpeas, green gram, sesame, wheat, and rice).

There are a number of reasons (Louwaars and de Boef 2012) farmers still use farm-saved seed, including (i) inadequate access to appropriate seed markets; (ii) limited access to financial resources or credit to buy or produce seed; (iii) lack of interest or capacity in the research system to develop genotypes that are adapted to the small farmer production environment. However, enterprising farmers in the informal sector can “graduate” into the formal system by expanding production, establishing a brand name, and marketing seed.

- (ii) The formal seed industry derives from the initiation of the public seed industry in 1968 under the Ministry for Agriculture and Cooperatives, the intention then being “to disseminate new varieties of staple crops from agricultural research to farmers” (Muhuku 2005). The initiative had two components, seed production and quality assurance. Major rehabilitations occurred in 1983 (with the Uganda Seed Project [USP] on the basis of a grant from the European Union [EU]), in 1989 (with a grant from Gesellschaft für Technische Zusammenarbeit) and again in 1993, with a loan from the AfDB for the Uganda Seed Industry Rationalization Project, which aimed to achieve an “efficient and self-sustaining seed industry” and move towards the privatization of the USP.

Liberalization of the sector was more or less complete by 1992 but, perhaps because of low demand, private sector seed companies were slow to enter the market. Muhuku (2005) suggests that only with the advent of USAID's IDEA project (1995–2004) did the number of farmers producing cereals on a commercial basis began to grow and did it

² Uganda's major food crops are maize, bananas, beans, soybeans, groundnuts, sesame, sunflower, sorghum, finger millet, upland and lowland rice, sweet potatoes, solanum potatoes, cassava, and horticultural crops. All are commercial crops, and some, such as maize, beans, sesame, and sorghum, are exported to regional markets. Rice and wheat are imported but much greater domestic production is possible. The traditional export crops are coffee, cotton, tea, sugarcane, cocoa, and tobacco.

became possible for local seed companies to develop and introduce varieties. At this time the government finally passed regulations to operationalize the seed statute and create the National Seed Board—which has never sat.

In 1999, the USP was converted into a public limited liability company, Uganda Seeds Ltd., but because of the long delays, had already lost its market share and rapidly collapsed.³ By 2000, three private companies dominated the market—Harvest Farm Seeds, Farm Inputs Care Centre (FICA), and Nalweyo Seed Company (NASECO)—but, quite rapidly, more companies appeared (Victoria Seeds, East African Seed Company, Mt. Elgon Seed Company, and others). Multinationals also began to show an interest (Pioneer, Cargill, Monsanto, Pannar).⁴ By 2012, 23 seed companies were licensed and operating (annex 1).

- (iii) Relief seed: Two decades of civil strife in Uganda displaced over 90 percent of the population of some northern districts into camps for internally displaced people (IDPs), where 1.5 million of them became the destination for huge amounts of institutionally procured seed. During much of this time, more than half of all (formal) seed traded in the country was purchased and distributed to these camps by the government, NGOs, and relief programs.⁵ The situation proved lucrative for entrepreneurs who could deliver seed quickly; the pressure was always on speed rather than quality, with several long-term negative impacts. In hindsight, it is clear how the situation distorted farmers' seed procurement strategies, undermined local seed and grain market functioning, and compromised the development of more commercial seed supply systems.

Essentially, the direct buyer-seller relationship necessary between farmers and seed stockists never developed, and there was little or no “pull” factor to improve the product. This institutional procurement was typically done with very short lead times and at prices often at the top of the range. This meant the nascent industry could rarely plan effectively. There was widespread use of grain as seed, as the seed industry suppliers all scrambled for their slice of this poorly regulated, highly politicized pie. The relief business had the excuse that the situation demanded urgency and did not allow time for quality assurance of any given seed, but the result was that a market-driven seed industry struggled to find its feet. By the end of 2010, all 243 camps had been decommissioned. The government's emergency assistance strategy reverted to a recovery and development model, although the impact of the strategy still echoes in attitudes to seed as an input, as well as to its regulation.

Industry insiders estimate that total current demand for seed is about 35,000 tonnes. Total sales are estimated at just over 12,000 tonnes (MAAIF 2012a), of which maize seed accounts for some 60 percent by volume (see annex 2⁶). The MAAIF estimates the total value of seed sales at some \$25 million. However, by its own account, these estimates are provisional until the Department of

³ Some in the industry allege that, to this day, civil servants involved in this process and still working in the MAAIF hold grudges against those in the private sector who broke free and went to work for the emerging companies.

⁴ In fact, probably because of the uncertain regulatory environment, the multinationals have all proved reluctant to make any substantial investment.

⁵ Personal communication, Danida staff officer.

⁶ Note how there is a final row in this table, sourced from MAAIF 2012a, dutifully showing sales by the parastatal Uganda Seeds Ltd, even though there have not been any such sales for 10 years—an indication of nostalgia for the old days, perhaps.

Crop Protection develops a system to collect and report better data from the organizations involved.⁷

2.4 The Seed Industry

Of the 23 companies currently registered, 5 or 6 are serious players with production and storage facilities, another 4 or 5 are “emerging,” and the rest mostly operate ad hoc, with variable product quality (and no supervision). During peak demand, the established companies may produce about 30–35 percent of the seeds that farmers demand. When there are real shortages, the incentives for quick movers to do a one-off sale increase substantially. This is not a good basis for sustainable market relationships as there are clear incentives for unscrupulous behavior, supply of substandard seeds, and counterfeiting.

Seed companies are supplied by hundreds of contract seed growers around the country (making inspection difficult and expensive). Through training and capital and operating loans, these contract growers have become an important part of the industry. They are organized in associations. The more long-term the vision of the seed company, the better established and more coherent seems the relationship between the company and seed growers.

By and large, the private companies concentrate their investments where there is profitability: in producing and marketing seeds for hybrids of maize and sunflower, for open-pollinated varieties (OPVs) of maize, and for beans, soybean, and sorghum as well as in importing seeds (for hybrid maize and exotic vegetables), fertilizer, and other farm inputs. They also export seeds produced locally and re-export some of the imported vegetable seeds, crop protection products, and farm tools.

Counterfeiting of “fake seed”⁸ is much reported, with stories of counterfeit labels and bags, interceptions and adulteration of shipments, and the quick filling of sudden “stock-outs.” Several in the industry suggest that this is well organized and that some in the trade must be aware of the source, even that it may be coming from some of the more respectable companies. There are virtually no data. However, a research project by Svensson, Yanagizawa-Drott, and Bold (2013) will cast new light on counterfeiting. The authors have conducted a trial, planting purported hybrid high-yielding variety (HYV) maize seeds bought in the market and comparing them with authentic HYV maize bought from Naseco. About 30 percent of the purchased samples were deemed counterfeit. Despite the small scale, the data provide strong evidence suggestive of widespread counterfeiting.⁹ Why no data have been collected on counterfeiting before and why the regulatory authorities are so relaxed about it are both questions that form part of the background to this report.

⁷ This is where donors could assist. Is it possible to derive better estimates of the demand for seed? Where does seed go to and come from? How much of the total area is planted to maize and how much of this is given to F1 hybrids, open-pollinated varieties (OPVs), and “traditional” (recycled) seed? Do most farmers try to use some new maize seed every two to three years, or have the varieties been recycled for much longer?

⁸ “Fake seed” is maize grain that has been colored to look like treated hybrid seed. The phenomenon may be driven by the fact that low-income farmers cannot purchase seeds in large quantities, so bags get broken down and repacked in smaller volumes, even sometimes loose. This creates opportunities for adulteration. The problem seems more common in areas closer to Kenya.

⁹ The authors now intend to expand the pilot project, first to assess whether profitable adoption of hybrid seeds is conditional on the quality of the seeds in the market place and then to explore whether manipulation of quality is done primarily by retailers or by wholesalers.

2.5 Key Institutions in the Seed Sector

This section describes briefly those institutions in the sector whose actions affect the functioning and performance of the seed industry.

2.5.1 Private sector

(i) Uganda Seed Trade Association

The Uganda Seed Trade Association (USTA) is a membership association formed “to coordinate and oversee the development of the seed industry and to enhance the availability of quality assured seed for the entire farming community locally, regionally and internationally.” With 18 ordinary members and 4 associate members, it covers most of the seed companies registered. Its capacity to lobby and participate goes up and down, usually according to the level of engagement of its donor of the moment.

The problem is the nature of the model. The USTA’s services are fairly minimal. Public spiritedness is probably the main reason bigger firms pay the subscription of U Sh 2 million a year. About half of all member firms do not pay. The operation can be sustained only with donor support: currently from AGRA, USAID, the Eastern Africa Agricultural Productivity Project (EAAPP), and probably the Integrated Seed Sector Development Program (ISSD).

Despite criticizing the MAAIF and the regulatory processes privately, the USTA is reluctant to take a bigger role. Discussions have been held on how the USTA could establish a code of conduct and lead with its own labeling scheme but the association is cautious.

(ii) The Uganda National Agro-Input Dealers Association

The Uganda National Agro-Input Dealers Association (UNADA) is “the national apex organization for all agro-input dealers.” It has the same sustainability problems as the USTA, indeed as all membership-based bodies in the sector. Despite having 1,300 members (including 48 “member suppliers”) and 93 branches, only 10 member suppliers and 200 of the smaller ones had paid the U Sh 300,000 annual subscription at the time of writing. The USTA has 15 staff members and gets support from Danida, AGRA, USAID, and the EU.

(iii) Uganda National Farmers Federation

The Uganda National Farmers Federation (UNFFE) struggles to promote favorable policies and strengthen farmer organizations for increased farmer empowerment. It has the same sustainability problems as the USTA and UNADA.

2.5.2 Regulatory and supervisory authorities

(i) The Ministry of Agriculture, Animal Industry, and Fisheries

The MAAIF consists of the ministry headquarters and seven semi-autonomous agencies.¹⁰ MAAIF HQ comprises two commodity-based directorates (Animal Resources and Crop Resources), each with three departments; two stand-alone departments (Planning, and Finance and Administration); and three other specialist units. A core functional analysis in 2001 made clear the dysfunctional

¹⁰ The National Agricultural Advisory Services (NAADS) is sometimes described as “autonomous” because it was established by an Act of Parliament, has its own budget line, can retain revenue, and has a board. Similar agencies without boards are described as “semi-autonomous.”

nature of the ministry and proposed a new structure. It has not been implemented, largely because of resistance within the ministry. The result is that a structure which was judged inappropriately configured in 2002 is still in place now.¹¹

(ii) *The Crop Protection Department*

Under the Directorate of Crop Resources, the Crop Protection Department is in charge of all matters related to plant health. It manages the Phytosanitary and Quarantine Service and the National Seed Certification Service (NSCS). It is also the lead agency within the MAAIF to advise on regulatory decisions governing genetically modified organisms (GMOs) through the Uganda National Council of Science and Technology. The department is underfunded and chronically weak. It claims that staff need training in all areas of their responsibility, even though most have attended numerous (donor-funded) training courses already.

(iii) *The National Seed Certification Service*

The NSCS was established by the Agricultural Seed and Plant Statute, 1994, although it did not become operational until 2001. It is mandated to play a key role in seed quality assurance including licensure of seed dealers, field crop inspection, sampling and laboratory testing, official certification, and the sealing of seed bags. It is also responsible for testing varieties for distinctiveness, uniformity, and stability (DUS) and for value for cultivation and use (VCU). The NSCS develops rules and regulations for the seed industry and is supposed to monitor and ensure compliance.

The NSCS has received years of support but has never managed to undertake even a fraction of its mandate. For at least 10 years, there have been regular calls to make the NSCS semi-autonomous (Ferris and Ojok 2006), following the precedent for cotton, coffee, and dairy certifiers, and even the NAADS. Semi-autonomy for the NSCS is now MAAIF policy under the DSIP (World Bank 2010), and NSCS management say they support this change. But nothing has happened. Others have called for the NSCS to delegate tasks to local government or to accredit the USTA or private companies to inspect seed fields and test seed. The NSCS is clearly reluctant to make such changes.

Various hypotheses are put forward as the driver of the NSCS' foot-dragging. They often concern the various sources of rent (import licenses; payments for lax inspection or not inspecting at all; refusal to inspect without "facilitation" by the client; seed companies paying for certification, and so on) although nothing is on record about such actions. But why does the NSCS license companies that cannot produce decent seed? And why does it not inspect them? Why does it look the other way when it knows companies are not following best practices, when it knows companies are handling low-quality product, and when it knows fakes are present in the market? The NSCS has a complement of eight staff members and complains about lack of resources.

¹¹ The MAAIF structure dates to the 1998 postconstitutional restructuring. In a bid to further improve the structure, and in light of changes arising from the establishment of the PMA framework, a core functional analysis was undertaken in 2001. It made clear the suboptimal nature of the ministry and proposed a new structure. That was not implemented, largely because of lack of consensus within the MAAIF. Further efforts were made and a number of studies undertaken to try to forge a way forward. In 2009, two reports were submitted to the Ministry of Public Service, and, following wide consultations with MAAIF stakeholders and regard for previous efforts, the work developed a modified four-directorate structure with two new directorates (Fisheries Resources; Policy, Planning, and Support Services). The proposals were presented at a workshop on February 4, 2010, and the MAAIF top management team and development partners approved the proposed macro-structure. However, it has moved no farther along the road to implementation.

(iv) *The National Agricultural Research Organization*

The national research program is the main source of new crop varieties. It is run by the NARO, which was established in 1993 by Parliament to coordinate public agricultural research and development activities in all aspects of crops, fisheries, forestry, and livestock. NARO is responsible for the production of both breeder and foundation seed, because the products are considered a public good.

(v) *The Parliamentary Committee on Agriculture*

Acting on behalf of Parliament, the agricultural committee is responsible for the review and approval of sector policies and strategies. Its membership changes a lot, which means its capacity to handle its brief on the complex issues of seeds is quite limited.

2.5.3 Donor engagement

(i) *The Sector Working Group*

A key institution in the seed (and other agricultural) subsectors is the Sector Working Group (SWG), composed of MAAIF departmental heads and representatives from civil society organizations, donors, private sector players, and other interested parties, including farmers and smallholders. The SWG is supposed to evaluate MAAIF investments in line with sector priorities, review the annual agriculture Budget Framework Paper (BFP), and identify policy issues for consideration and action by the MAAIF's top policy management team.

The SWG has substantial opportunities to prioritize issues and exert pressure for appropriate allocations, but it does not do so—partly out of uncertainty about the level of pressure it could bring and partly out of the confusion caused by the often unplanned and ad hoc way its meetings are convened and operate (which especially deters private sector representatives and small farmers' groups). Several observers attest, however, that SWG meetings are something of an open door and that determined proponents of a particular position could go a long way with a well-presented argument.

(ii) *The Seed Sub-Sector Co-ordination Group*

Presumably superseding the Seed Forum,¹² the Seed Subsector Coordination Group (SSCG) was recently established by the MAAIF, as called for under the DSIP, which specifies “commodity platform(s) with membership drawn from actors along the value chain.” The SSCG receives support from USAID and the World Bank. At the time of writing, it was preparing to hold its second

¹² Started by the USTA, during an earlier period of activity, as a specific lobbying area for the industry and as a “mechanism to bring together all stakeholders for joint planning,” the Seed Forum was apparently hijacked by the MAAIF. In this guise, there was not a lot interest from the industry and any momentum dissipated.

meeting. As a proactive forum for developing consensus on actions for the industry, it has much potential and needs encouragement.¹³

2.6 The Legal Framework

The guiding legislation for the seed industry has evolved years into a bewildering patchwork of imperfect and incomplete acts, bills, and policies, much of it containing elements of the dirigiste past. Under the Uganda Seed Industry Rationalization Project, the government passed the Agricultural Plant and Seeds Statute of 1994. This was the basis for the National Seed Industry Authority, the variety release system, the NSCS, and the testing laboratory at the Kawanda Research Institute. The APSS was superseded by the Seeds and Plant Act 2006, which clarified the roles of the Variety Release Committee and the NSCS, and established the National Seed Board to advise the minister responsible for agriculture. The 2006 Act has a number of defects. It is unnecessarily restrictive. It also requires all new varieties (imported or locally developed) to be tested for two seasons before release. Many companies sell new varieties of vegetables and forage crops that have not been tested and are not registered (as is legitimately done in many other countries).

The Seed Board has never met. Apparently, members have been nominated but the Cabinet has yet to approve them. Its composition seems weighted towards the public sector.

A *National Agricultural Seed Policy* was developed with stakeholders' participation but has not been approved. The ministry admits (MAAIF 2012a) that there are major inconsistencies in the draft. For example, chapter 3 suggests that private seed companies will take all their varieties from public research. With NARO in the state that it is, this restriction will never be a basis for a modern seed industry. Seed companies will want to source most new varieties from foreign breeding and foreign partner companies as well as from NARO. MAAIF (2012a) calls for the policy to be changed to allow foreign sourcing. The absence of a Seed Policy (and consequently of a reliable database, market information, and national plans to guide the private sector in developing production and making investment decisions) is a deterrent to private companies.¹⁴

The Draft Seeds and Plant Act Regulations 2011 have not passed the Cabinet either. If anything, they erect more barriers to private companies trying to bring in new varieties, enter the market, and export seeds. Some of the proposed controls would block cultivar introduction, with consequences for farmers, consumers, and processors and for agricultural production in general.

¹³ The first meeting was held at the World Bank office on May 9, 2013, with representatives from the World Bank, the FAO, USAID, Danida, the IFAD, Wageningen University/ISSD-Uganda, and IFC (Nairobi), with World Bank staff in Washington attending by videoconference. The objective was to share what is being undertaken in the seed subsector and to improve coordination between donors and the government in the seed subsector. The participants agreed to liaise with regional players and institutions. Ideally, the SSCG needs to include all relevant private and public sector stakeholders but remain industry focused, with industry leadership, free from political interventions (otherwise the industry will not contribute usefully or even attend) but with government encouragement and backing. It needs to open dialogue about seed issues, covering constraints and opportunities. Ideally, it needs to be able to make plans and suggest policy recommendations, and these should be prioritized with notions of costs and returns for different investment paths. "Industry platforms" in the coffee and cotton industries, and maybe in maize, offer some lessons from which to learn. Farmer representatives need to be actively encouraged to participate.

¹⁴ As this report was being prepared, an advertisement appeared in *New Vision* (May 2013) for a consultant to help prepare a national seed policy. The work was to be funded under the EAAPP, financed by the World Bank. Neither the SWG nor the SSCG knew anything about it, and nothing more was heard until some stakeholders received an invitation from the EAAPP to a workshop in August "for the National Seed Policy." As this report was being finalized, neither the NSCS nor NARO nor the World Bank thought to inform the consultant (or any of the respondents that he spoke to) about it. To add to the puzzle, the "National Seed Policy" document that was presented does not address the outstanding issues raised in the most recent relevant government document, the Framework Implementation Plan for Seeds and Planting Materials.

That said, although the sector is probably better off without some of these regulations, the absence of a regulatory framework has permitted the growth of the counterfeit trade. At the moment, when perpetrators are apprehended they cannot be prosecuted easily because of the lack of any capacity to effect punitive measures.

The Plant Protection and Health Bill 2010 was tabled in 2004 by the minister of the MAAIF.¹⁵ The bill covers phytosanitary issues, seed health analysis, disease and pest surveillance, quarantine issues, and the movement of seed and planting materials for mainly import and export purposes. It is still with Parliament.

The Plant Variety Protection Bill 2011, in draft for several years, is supposed to be “aimed at granting plant breeders’ rights over their innovations, and attracting investment in the seed industry” (Mubangizi et al. 2012). It is thus supposed to stimulate industry growth by facilitating the provision of high-quality seeds and planting materials to farmers. It is still with Parliament. Failure to enact it is deterring investment in research.

The Biotechnology and Biosafety Bill 2010 aims to regulate and control the application of biotechnology products (including transborder movement of germplasm), ensure value for money, and improve biosafety for people and the environment. The bill is still before Parliament. The National Biotechnology and Biosafety Policy was approved and adopted by Uganda’s Cabinet in April 2008.

Guidelines on importation and exportation of seeds.¹⁶ These guidelines are similar to controls proposed in the draft Seeds and Plant Regulations 2011. Again, according to MAAIF (2012a), the proposed controls “go beyond what is necessary to protect Uganda (phytosanitary controls), interfering with what are normal business activities for seed companies around the world.”

So the questions are, how has the situation become so complex and what can be done to fix it? A paper by Keyser (2013) makes it clear that the situation is not dissimilar to that in many other countries. The issues are very complex, analysis is difficult and formulating clear, simple, policy is almost beyond the in-country capacity.

In most of Sub-Saharan Africa, it is understood that farmers need reliable and affordable access to quality seed. However, many countries want to over-control the industry. This tendency produces multiple obstacles to an effective seed industry:

- Very complex variety release requirements
- Restrictions on multiplying and bulking seed by private companies
- Unnecessarily strict rules on seed certification, including lengthy, expensive, and time-consuming inspections
- Complex and also lengthy and expensive phytosanitary controls

A common argument in favor of strong seed regulations, and one used by the NSCS, is that governments have a responsibility to ensure that inputs sold to farmers are appropriate for local

¹⁵ ALL Africa, February 3, 2004.

¹⁶ From an undated NSCS document.

conditions and meet certain standards for germination and yield performance—this, in the context of a certain mistrust of the seed-testing and seed-certifying capacity of neighboring countries. Arguments that serious seed companies trade on their reputation and already have a strong incentive to ensure that their products are good performers and appropriate to customers’ needs gain little traction (and the performance of some of the companies in Uganda hardly helps). Yet, the proposition that farmers are regularly swindled by seed counterfeiters and that government regulators might be better employed attending to *this* problem, through routine market surveillance, seems not to carry much weight either.

Keyser argues that simpler, more business-friendly policy would assist the seed industry (seed companies and farmers) and discusses lessons from other countries:

- In the United States, seed policy is based on “truth in labeling”: companies are trusted to sell the seeds they claim they have, and inspection and certification is done by an independent agency.
- In South Africa, there is automatic registration of varieties after one season of DUS tests. Companies can introduce the varieties they wish, the market being the arbiter.
- In the EU, varieties registered in specific countries can be registered without domestic trials.
- Some countries use the FAO’s Quality Declared System , where inspection is required on only 10 percent of seed plots.
- In most of Sub-Saharan Africa, where the major initiatives are multicountry efforts to negotiate “harmonization,” Keyser argues that African leaders have opted for one of the most technically demanding approaches to the problem. Even now, he argues, it would be better to pursue a path of (i) unilaterally moving to relax variety registration requirements (as South Africa, Bangladesh, and Turkey did); or (ii) accepting another country’s variety list (as Romania did). Either would be a much easier and more expedient way to improve farmers’ access to new types of seed for individual countries. The opaqueness of the situation in much of Sub-Saharan Africa, Keyser argues, reduces the willingness of private companies to engage in a market (especially a small one as in Uganda). This can have a major impact on the time farmers must wait to access new and improved technologies (and on agricultural production generally).

In an earlier paper (2012), Keyser provides detail about the Southern African Development Community’s (SADC) draft regulatory system for seed. The SADC has established regional standards for seed, but the system is not mandatory and does not seek to expand access to external markets by adopting Western requirements. The SADC system has lessons for the EAC (and Uganda) in that it includes principles of mutual recognition whereby any seed variety approved in two SADC members is freely tradable throughout the region.

2.7 The Growing EAC Context

The time is right for Uganda to press its several advantages as an exporter of seeds. Arable land suitable for seed production is available. Northern Uganda and the Masindi area are both very fertile and suitable for a wide range of grain crops. The Masindi area has two reliable rainfall seasons in a year, allowing rapid seed multiplication. Uganda is a major producer of beans, pigeon peas and other legumes, and cassava, and it hosts the regional Centre of Excellence for cassava (EAAPP). It has high-yielding and early-maturing maize hybrids and OPVs suitable for the low to

middle altitudes of East Africa, and sales are rising.¹⁷ Regional markets are strong and growing for food crops, commodities, and seed. Some seed exporting is taking place, with FICA doing business in Tanzania and others selling maize into Kenya, the common feature being good practices along the value chain, notably careful postharvest handling. Others are selling rice and oilseeds into Kenya.

Uganda also has much to gain from being able to import seeds more easily, although the domestic industry is nervous about the Kenyans. The Kenya Seed Company is registered and does some business in Uganda, as are East African Seed and Simlaw Seeds. However, as shown in section 2.6, the domestic regulatory environment, and the obstacles to repairing it, are a major barrier to progress on these fronts. Some in the industry hope to side-step domestic impediments by trying to realize benefits from regional trade, with the share of Ugandan exports in the EAC rising from an average of 3 percent before 2000 to 14 percent in 2007 (World Bank 2012). In terms of the Africa-wide regional integration agenda, furthermore, the EAC is well advanced, having launched its common market in 2010 and approved an EAC Food Security Action Plan for 2011–2012.¹⁸ New data from the Uganda Revenue Authority shows that regional markets are breeding grounds for a new type of exporter, with typically smaller-scale and, most important, more diversified export portfolios than traditional commodity exporters. Thus, regional markets can be a key to nurturing new exporters.

What is needed now is an EAC-wide reform strategy that involves cooperating with the EAC partners to improve the regional regulatory environment and deliver knock-on effects at home. World Bank (2012) spells out how Uganda should work with the EAC Secretariat to strengthen the EAC non-tariff barrier monitoring mechanisms by identifying barriers, working with EAC partners towards mutual recognition of conformity-assessment procedures, and strengthening capabilities in testing and verification under the Sanitary and Phytosanitary (SPS) standards—and involving private labs in the process.

Some in the seed industry argue that contrary to the upbeat assessment on regional integration issues, there may have been a decrease in interest, caused partly by the uncertainty created by the chaotic legal situation and partly by disappointment about the very slow pace of the EAC harmonization processes.¹⁹ Alternatives to harmonization as a key plank of the strategy are discussed in section 2.6, but it is worth recording the advances that have been made. A regional survey of key informants in August 2009 (Waithaka et al. 2012: 12-p13) suggests that

¹⁷ There are many anecdotes of visible and impressive field trials and farmers using better field practices. More hybrids are available (but not enough). Seed companies are working on new varieties (but not enough). “Unquestionably,” said one company interviewee, “the number of farmers wanting good seed is growing.”

¹⁸ The EAC established a Customs Union in 2005 and a fully fledged union with zero internal tariffs in 2010. The EAC is usually said to be fast-tracking its economic integration process and hoping to reach eventual monetary union one day. However, as the EAC marks the second anniversary of the Common Market Protocol, the Citizen Daily reported that experts blame member states for indifference in the implementation of key aspects of regional integration. One major setback, the experts further argue, has been the partner states’ failure to honor their obligations to review their domestic legislation and ensure compliance with the protocol. This has largely been caused by unfounded fears of job losses, undermining local economic competitiveness, surrendering key assets like land and hosting criminals and other wanted persons. (reported on TradeMark East Africa website).

¹⁹ It seemed at one point (Ferris and Ojok 2006), that it would soon be possible to sell the same variety in the three East African countries, thus creating access to a larger market. The Kenya Seed Company had a huge share in the Kapchorwa seed market because its agro-ecological conditions were similar to those in Kitale. The Pannar Seed Company had released several maize hybrids which it was selling through EASCo and Harvest. Monsanto teamed up with FICA for the production of DeKalb hybrids, two for the local market and a third for regional marketing to Kenya, Tanzania, and Malawi. It seemed Monsanto’s decision to do its production for Eastern Africa in Uganda would bring a new dimension to the competitive seed environment. Monsanto has since withdrawn from active engagement, probably because of the small size of the market.

“considerable progress has been made to harmonize seed policies within the ECA [Eastern and Central Africa] region.” The length of the variety release period has been reduced from three or more years to only two seasons. Waithaka et al. (2012) also report that

- Seed certification procedures now meet the standards of the Organisation for Economic Co-operation and Development (OECD). Kenya and Uganda have acceded to the OECD and Tanzania has applied for membership. The standardized certification procedure has greatly improved the working relationship between ECA regulators and seed companies.
- The ECA countries are at different stages of developing plant variety protection (PVP) systems. While Ethiopia, Kenya, and Tanzania have PVP laws based on the International Union for the Protection of New Varieties of Plants (UPOV) 1991 Convention, only Kenya has an operational PVP system that complies with the UPOV 1978 Convention.
- As a result of measures to harmonize phytosanitary measures, the time to process seed import/export documentation has decreased, lowering the cost of cross-border trade.
- The welfare analysis gives compelling evidence to support an improved seed policy environment. It lends credence to the calls for policy makers to fast-track the implementation of harmonized seed policies, laws, and regulations.

Diplomatic language comes once more to the fore in Waithaka et al. (2012), where the critical areas needing urgent attention are listed as

- Establishing interagency agreements for seeds in transit
- Hastening establishment of PVP systems in all ASARECA member countries
- Simplifying seed export/import documentation in most countries
- Fast-tracking the enactment of various seed policy bills into laws

Are these not much the same harmonization recommendations suggested by Ferris and Ojok in 2006? The MAAIF’s paper on the seed industry (MAAIF 2012a: 29) suggests as much when it states, “Accepting varieties from regional countries without further testing would immediately establish the elusive regional ‘harmonization’ Uganda’s farmers would gain access to the varieties grown in these countries. This would also establish Uganda’s seed industry as a competitive leader in the region.” Why has this not been done, then?

At the time of writing, ASARECA had a seed study under way to decide how best to support the adoption of the seed agreements. The focus seems to be on the lack of awareness, the complexity of the standards regime, and the institutional complexity that must be wrestled with in the pursuit of implementation. On the positive side, most of the arguments are clear and the issue now is developing a consistent policy with a plan of action and moving on it.

2.8 Support to the Sector

The seed industry has received considerable bilateral, multilateral, and NGO support for many years. This section summarizes the information available, in an approximation of chronological order.

(i) IDEA

USAID’s IDEA project, a \$32 million activity that ran from 1995 to 2004, supported the seed industry with field trials and demonstrations and with assistance for the development of an agro-dealer/stockist network. It was a successor to another USAID project, the Agricultural Non-Traditional Export Promotion Program.

(ii) *The Agricultural Productivity Enhancement Project*

The Agricultural Productivity Enhancement Project 2003–08 (APEP), a five-year, \$21.9 million project, succeeded IDEA and continued the work on food and cash crop productivity. It undertook seed-specific activities including more support to agro-dealers through UNADA

Credit guarantee support to Victoria Seeds, technical assistance for FICA and to help the Mukwano operation set up a sunflower seed business, and support to NARO in sunflower hybrid seed development and in preparation for genetically modified cotton.

(iii) *Agriculture Sector Programme Support, Phase II*

Danida's Agriculture Sector Programme Support, Phase II (ASPSII) project (2003–08) had a component supporting the MAAIF's regulatory services in meat, seed, and, for a while, dairy. It was budgeted at DKr 11 million (some \$1.9 million), of which over half was spent on seed activities. At the core was a program of capacity building at the NSCS. A comprehensive, detailed development plan was prepared. The seed-testing laboratory was renovated and equipped. Staff were trained in seed testing and varietal certification. Administrative and management systems were upgraded. There was active engagement with streamlining the work and processes of the Variety Release Committee. The Phytosanitary Laboratory was built and equipped. The NSCS realized its accreditation to the OECD Varietal Certification scheme and progress was made on International Seed Testing Association (ISTA)²⁰ accreditation. A key problem was that the NSCS could never secure enough budgetary resources to manage its mandate, and it was not allowed to become a semi-autonomous business unit able to retain earnings to fund operations.

The 2009 Semi-Annual Progress Report for ASPSII stated, "There are signs of little improvement in quality of regulatory standards but the speed of progress is pretty discouraging" (Danida, 2009: 4). Two years earlier, the ASPSII work plan and budget had noted that "...unless this unit is either restructured or otherwise receives satisfactory levels of funding, this important function will not be sustained. The USTA initiative to develop their own certification and inspection capacity is thus an important strategic response by the industry.... Chemiphar now has a seed-testing facility. The seed industry, traders and institutions alike should be encouraged to use this" (Danida 2007: 23).²¹ Chemiphar developed its capacity and received its ISTA accreditation within one year.

Under ASPSII, Danida made considerable efforts to formalize NARO's role in maintaining foundation and breeders' germplasm and in archiving the knowledge base of the considerable amount of breeding work that had been done. However, the government never internalized this very critical function.

The USTA was supported to strengthen its capacity. A Code of Good Conduct was established. Members received training. A program to support the 1,000 plus registered members of UNADA

²⁰ The ISTA sets rules and procedures for international seed testing and certification. To participate in the regional market, Uganda must acquire OECD and ISTA certification. Despite efforts to obtain ISTA accreditation, problems remain: (i) a quality assurance (QA) manual has yet to be developed and staff trained in its implementation; (ii) there needs to be an ISTA systems and technical audit and a follow-up period during which the laboratory corrects all substantial deficiencies. Where an ISTA Certificate is required before seed can be exported, Uganda relies on the Kenya Plant Health Inspectorate Service. "This process is expensive, inconvenient, time consuming and does not provide a conducive environment for the export market in the seed industry" (Ssebuliba 2012: 28).

²¹ When the NSCS and then the USTA failed to develop their own certification capacity, donors supported a private lab to undertake seed testing. Other services offered by Chemiphar include microbiological and chemical analysis of food, feed, water, and beverages; analysis of oils, proteins, fatty acids, vitamins, minerals; detection of impurities and toxic insecticides; and determinations of cleanliness and freshness.

was initiated. The input dealer credit scheme that IDEA and the APEP had run was picked up, and smaller, more sharply focused, and discrete support was provided to seed producers to help with multiplication and marketing initiatives, assist with demonstrations and field trials, and develop outgrower multiplication.

Throughout this time, the UNFFE's district farmer associations received comprehensive support, much of it for farmer training and demonstrations of better agricultural practice, including the adoption of improved varieties. IDEA and the APEP had done field trials and the NAADS was running "technology development sites." However, there was no attempt to systematically measure the field trials or to feed that information into formalized knowledge and communication systems. There has been no field compendium for farmers and extension workers for many years.

(iv) *Alliance for a Green Revolution in Africa*

In time, a new generation of supporters emerged. The Alliance for a Green Revolution in Africa (AGRA) was one, and it has supported the seed industry in a number of ways:

- The Program for Africa's Seed Systems (PASS) intended to educate a new generation of plant breeders and seed specialists and to deliver improved seed to the shelves of village-level agro-dealers. According to case studies of the PASS value chain approach in three countries, including Uganda, Ugandan government policy is highly supportive of private sector participation in seed production although the authors list the usual problems: "shortage of seed inspectors within the government system.... the situation weakens supervision of seed production and enforcement of regulations on trading of fake seed. For this reason, the sale of fake seed on the Ugandan market is reported to be very high at around 40%" (Agra 2011a: 30). PASS made 14 grants and one large investment in a program to fund capital investments in seed companies as well as supporting postgraduate training in plant breeding at Makerere University. Among the recommendations of the case studies report are (i) promote the importance of an effective seed certification and regulation service; (ii) lobby for strengthening the NSCS; (iii) consider direct support to the NSCS to define its responsibilities more clearly and to define the resource and staff requirements for an effective service.
- The African Seed Investment Fund, launched in 2009 with \$12 million in committed capital, seeks to invest in at least 20 small- and medium-size seed companies in Southern and Eastern Africa with long-term capital provided at below-commercial rates. The Fund is trying to incentivize companies to better produce, distribute, and market improved seed varieties. It is claimed that significant increases in the volumes of seeds produced and marketed by the Fund's investee businesses have already been observed
- Provision of support to the USTA.

(v) *The Integrated Seed Sector Development Program*

The Integrated Seed Sector Development (ISSD) program, funded by the Netherlands government and implemented by Wageningen University Research Centre, aims to support the development of a "vibrant, pluralistic, and market-oriented seed sector, providing more than 100,000 smallholder farmers with access to affordable quality seed of superior varieties." The ISSD has seven principles:

- Recognize the relevance of the informal seed systems.
- Integrate informal and formal systems.
- Recognize the complementary roles of the private and public sectors.
- Work according to the structure of the seed value chain.
- Promote entrepreneurship and market orientation.
- Promote seed sector innovation.
- Build programs upon a variation of seed systems and foster pluralism.

The program has two components:

- (i) Supporting farmers' groups to produce seed, focusing on less commercial enterprises such as cowpeas, sesame, groundnut, millet, beans, cassava, and pasture seed. Groups are to be helped to access foundation seed (from NARO), and extension support and quality assurance (from NSCS).
- (ii) Supporting the enabling environment (improving quality assurance through the NSCS), improving the supply of foundation seed (through NARO and zonal agricultural research and development institutes [ZARDIs]), improving the variety release system, and training the USTA.

The program intends to build as much as possible on local partnerships with farmers and farmer groups that have experience in seed production and want to become more autonomous seed entrepreneurs. Component One will work with marginalized groups. Action research is supported through Makerere University and Gulu University, and farmer groups will partner with three ZARDIs and involve national agricultural research institutes, the NAADS, universities, and others. Component Two will support the MAAIF, NARO (including the EAAPP), the NAADS, the NSCS (to improve its collaboration with commercial seed companies), local seed businesses, and civil society organizations. This is expected to solve bottlenecks at an institutional level, in relation to seed quality control, access to foundation seed and variety release. The project will run for five years.

(vi) FAO

The FAO is preparing a seed systems proposal to help the MAAIF to focus on capacity building for both private and public sector.

(vii) The EAC Secretariat

The EAC Secretariat has prepared a project called "Support to improving seed quality to enhance seed trade." It has two components: (i) to enhance the development of QA systems with the full participation of stakeholders and (ii) to develop better regulations for seed QA, in line with regional frameworks and international standards. It hopes to find implementing partners among the EAC Secretariat, national seed programs, national seed control agencies, policy makers, private seed companies, training institutions, seed growers, and farmers. The project duration is supposed to be four years at a cost of \$7.8 million.

The objective is to improve the quality of seeds produced by EAC seed programs by developing appropriate seed quality control strategies, codes of conduct and procedures for seed quality control, seed testing, capacity building, facility development, and assistance in formulating and implementing legislation and harmonization processes. The project will work closely with institutions that specialize in seed quality control such as ISTA and national seed agencies, as well as national seed programs, national policy makers, seed trade associations, and the neighboring Regional Economic Commissions e.g. the Common Market for East and Southern Africa (COMESA); the East African Community (EAC) and; the Southern African Development Community (SADC). The project will

- Review regional mechanisms for seed production and exchange, and design harmonized policies, legal frameworks, and procedures.
- Review and assess national documentation procedures on seed control, certification, and quality assurance systems, and draft recommendations to improve the situation.

- Undertake a detailed review of national arrangements for seed quality management and national procedures.
- Monitor, widely publicize, and enforce national seed quality assurance laws and regulations.

This is very familiar material, and in this relatively small sector there is a real danger of duplication, not to mention confusion.

(viii) Feed the Future Agricultural Inputs Activity

After the APEP closed, USAID ran another agricultural project, the Livelihoods and Enterprises for Agricultural Development project, focused on the private sector. Its aim was to help integrate farmers and related micro, small, and medium enterprises into commodity value chains; one specific objective was to increase agricultural productivity. It worked with farmers, suppliers, processors, and traders and included activities with seed improvement.

That project has been followed in 2013 by another five-year USAID agricultural initiative. To increase the responsible use of high-quality agricultural inputs, the Feed the Future Agricultural Inputs Activity will use innovative technology to help farmers select and purchase quality products, improve the management of private sector agricultural supply chains, and decrease the prevalence of counterfeit seeds and fertilizer. Funded to \$7.5 million, the program will also use advanced marketing and sales techniques to raise awareness among rural farmers of the benefits of using high-quality agriculture inputs. Innovations include a text message-based system that will help farmers verify that the products they are purchasing are authentic. Agricultural input businesses will also receive support to develop sales techniques and build greater demand for genuine seeds and fertilizers through social marketing and mass media outlets, with a focus on improving customer service.

(ix) Framework Implementation Plan for Seeds and Planting Materials

Finally, there is the Ugandan government's latest project, still in the design phase, which in normal circumstances would be expected to be the framework within which the projects described above would operate. The MAAIF has formulated the project in the hope that the World Bank, USAID, and others will provide assistance.

Some more context is necessary here. The government prepared and launched the Agricultural Sector Development Strategy and Investment Plan (DSIP) and the related Comprehensive African Agricultural Development Programme (CAADP) compact in 2010. The DSIP has four program areas and 22 subprograms that require detailed implementation plans for operationalization. Two (agricultural research and extension) are being implemented through the troubled Agricultural Technology and Agribusiness Advisory Services (ATAAS) project. After many donors withdrew, the remainder of the DSIP subprograms were bundled into the so-called "non-ATAAS" program under which the MAAIF has been formulating "action plans" for some time. The overall Plan for Non-ATAAS was launched on November 1, 2012. As a key step towards implementing the action plans, the MAAIF and the Ministry of Finance, Planning, and Economic Development agreed to prioritize increasing agricultural exports to the East African market and COMESA as a strategic intervention. Among the objectives of this project are to (i) "Increase farmer access to and use of yield enhancing technologies, specifically: improved seeds and planting materials, fertilizers, labor-saving technologies (mechanization), and water for agricultural production (irrigation); (ii) Improve the enabling environment for increased private sector investment, participation and fair play in agricultural value chains" (MAAIF 2013b: 10).

As part of this process, the Framework Implementation Plan for Seeds and Planting Materials was finalized at the end of 2012 and the MAAIF is working on the Formulation of Project Proposals for Integration in the Budget Process. The proposed Seed Plan has the objective of supporting the development of the seed industry through three components:

- Component 1: Strengthening and rationalizing the Department of Crop Protection's seed services (\$4.5 million) with two activities: (i) strengthening the Phytosanitary and Quarantine Service and (ii) strengthening and rationalizing the NSCS
- Component 2: Enhancing the capacity of the private seed industry (\$3.3 million) with five activities: (i) assisting NARO in training seed companies to produce breeder seed; (ii) helping the MAAIF and NARO train farmers' seed groups to graduate into the formal sector; (iii) providing seasonal and medium-term credit for seed companies to help them expand seed production and carry seed stocks; (iv) providing short courses in seed technology at Ugandan colleges and universities for seed staff and relevant government staff; (v) providing 20 staff members with postgraduate degrees in seed technology and breeding for Makerere University
- Component 3: Upscaling use of improved seeds and planting materials (\$2.8 million) with three activities: (i) recruiting and training agro-dealers to expand the dealer network; (ii) extending and advertising improved varieties through demonstrations by seed companies and by Sasakawa Global 2000, tours and field days, and advertisements by the USTA, seed companies, and other seed-related organizations; (iii) helping the MAAIF provide financial assistance to seed companies to field-test new varieties

(x) *Others*

Still other initiatives with a bearing on the seed sector include the following two:

- The Eastern Africa Agricultural Productivity Project (EAAPP) (see section 2.5). The EAAPP calls for greater focus on improving agricultural productivity and increasing the effectiveness of technology generation and dissemination. This required identifying the subsectors with the greatest potential to drive growth and reduce poverty; namely, commodities that have a large production base and large, growing demand. For Uganda this was deemed to be cassava. The EAAPP is being implemented with the assistance of the World Bank, from 2010 to 2014. The Kenya Agriculture Research Institute is the lead implementing agency. The main activities involve an increase in adoption of new varieties, breeds, and management practices and of improved processing and handling methods, an increase in productivity over control technology, and an increase in land area planted with seeds of improved cultivars.
- The Oilseeds Stakeholder Conference, the first of which was held in November 2012. It announced the Kampala Declarations on seed multiplication and seed access for smallholder farmers. The conference discussed the lack of a functional national seed multiplication program and the limited capacity among seed houses to produce sufficient seed planting materials for oilseeds farmers, weak links with research, and over-reliance on imported seed.

2.9 So Why Does the Seed Industry Struggle?

The introduction to this paper listed some of the many reports and studies on the sector. They describe the technical challenges clearly; some are summarized in annex 3. The political and economic constraints are more entrenched and may be more daunting:

- (i) *Uncertain profitability*: Whether the use of improved seed is actually profitable is unclear at all levels of the value chain:

- Rainfed agriculture under smallholder conditions is highly risky.
- Returns on the use of improved seed varieties are frequently less than they might be because complementary inputs such as fertilizer, water, and pest control are not applied at optimal levels.
- The formal “market” was established on the basis of the relief seed industry, a fundamentally uncommercial undertaking whose practices and impact still affect the commercial environment.
- The seed companies struggle to nurture businesses that can operate on the basis of producing and selling seed in a small (still nascent) market with very variable demand. Most are kept going by support from donors. Where they can get financing, it is at best for five years and at 20 percent plus interest. This is difficult for companies embarking on seed multiplication processes, which may take more than three years to generate income. Competing on price has resulted in periodic races to the bottom. The environment must be conducive if companies are to invest. The market should not be stacked against the risk-taking companies.
- The quantities (and quality) of seed farmers want are often not delivered on time, essentially because the cost of delivery to widely dispersed small farmers is more than the farmers are willing to pay.
- Net revenues from the sale of produce by farmers fluctuate considerably, because marketing costs are high and prices offered for small quantities of poor-quality produce are low. This makes investment risky.
- There are no institutions to collect together, or bulk, the orders and/or to deliver seed or market the produce more efficiently for farmers.
- Counterfeiting of seed undermines all players in the value chain, and the institutions mandated to protect against counterfeiting fail to do so.

(ii) *Weak institutions.* The MAAIF’s long record of obstruction has been noted many times: against the PMA (Oxford Policy Management 2005), against the NAADS (Rwamigisa et al. 2013), against its own restructuring (World Bank 2010). A key insight into why this happens comes from an examination of the MAAIF budget. On paper, the budget is organized by nine vote functions: Crops, Animal Resources; Policy and Planning, Advisory Services, Research, and so on. In fact, the capital or “development” budget (less than 20 percent of the MAAIF budget (Uganda and EPRC 2009)), is all under various projects, 25 at one point, with all the funds provided by donors. “Projectification” creates islands of authority in the sector, which over time accrue funds, power, influence, and control. It has reduced the

formal authority structure and left a parallel structure whose rationale is largely to protect itself.²²

Box 1: Autonomous Agencies: Not Always Popular

The Dairy Development Authority (DDA) mandate is to regulate and develop the dairy sector. The regulation aspect has been quite successful, and the DDA has had a degree of managerial independence. It never had its own budget line, however, and was supported largely by donor funding and ad hoc subventions from the MAAIF. Detailed plans were made in 2005 for the Authority to raise revenue through fees, notably a cess on the processing industry. This had been proposed in the MAAIF's Dairy Master Plan of 10 years before, was supported by all sections of the industry and by the DDA Board and would have given the DDA self-financing status and a degree of power. However, at the last moment, the cess was resisted by one of the main processors, a major beneficiary of donor largesse and a close ally of the president. The plan fell at the final hurdle with the MAAIF refusing "to let DDA go" even though it seemed beneficial for all parties. Derived from Kjær et al. 2012c.

At the heart of the problem is the repeated failure of leadership. Authoritarian structures suck initiative out, reduce space for management, and discourage ideas. This is especially the case in the agriculture sector, where everyone has an opinion about agricultural development and how best to do it, including the president, with both his hobbyist's interest in the subject and two dedicated agricultural advisers orbiting far outside even the limited discipline of the MAAIF and the civil service. The particularly insipid leadership at the MAAIF has puzzled outsiders at least since Mugerwa was minister seven years ago. Leadership has been virtually invisible. Why this is so is not clear. Ambitious technocrats have probably been wise to stay out of the minefield that is the MAAIF.

MAAIF sources will often say the reason nothing happens is "insufficient resources." However, this is ultimately an allocation issue. The

MAAIF does not allocate funds to priority areas. It has some authority to do this and certainly to argue for intrasector reallocations. But it does not. The SWG could be much more closely involved with this work, but few of the participants have the time or inclination to grapple with this at a sufficient level of commitment.

Regular proposals have been made to pull the NSCS out of the grip of the MAAIF and convert it to an autonomous or at least semi-autonomous industry-managed and industry-

²² During this study, sources have asked how this happened. Understanding how this works may lead to ways around the problem. In particular, why are the patrons of these projects not interested in achieving success? Why were they (and the donors who were paying) content, in 2008, to sit on donor-financed development disbursements that were 58 percent below the budget allocation, compared with a shortfall of 20 percent for government-financed undertakings? (See World Bank 2009 and Uganda and EPRC 2009 for many more examples of the poor performance of MAAIF projects.) There are many anecdotes of management exhorting staff to perform better, but in a relatively cash-strapped environment, projects provide vehicles, per diems, travel budgets, study tours, and other benefits, and some donors are less strict about policing the appropriateness of such largesse than others. Three Public Expenditure Reviews in the agriculture sector sought to address why "projectification" has perverse effects. The third volume proved contentious, took more than a year to complete, and was never finalized (Uganda and EPRC 2009).

financed body.²³ Arguably, much of the debate on autonomous agencies is in bad faith. All parties say they support an autonomous NSCS and the DSIP commits the MAAIF to it. However, no sooner was the NAADS up and running than the NRM started to destroy it. The authorities do not want to relinquish budgets and control (Box 1). The reality is that NSCS staff know that if the institution was granted autonomy, they would all be sacked.

(iii) *Erratic policy.* There is a broader context to this: sudden policy pronouncements and unconnected and overlapping initiatives. In the last five years two major parallel initiatives have tended to undermine any headway otherwise being made:

- Prosperity For All: This initiative followed from the NRM's 2006 Manifesto which focuses on production and wealth creation at the expense of poverty reduction. After the 2006 elections, a structure for the Prosperity For All (PFA) program was established under the President's Office, running in parallel with the secretariats of the NAADS and the PMA. The intention of the PFA was to assist "agricultural households to engage in activities that raise their incomes from the current low levels towards a target of U Sh 20 million per household per year" (MAAIF 2008: 7). Officers from the MAAIF were directed to undertake PFA work although not much of this was very visible. There were no PFA documents of substance. The fact that the parallel structure operated, however, meant that the rules, procedures, and ethos of public spirit built up in the civil service were confused and undermined.²⁴
- The Presidential Investors Roundtable is an advisory body of 24 national and international corporate leaders launched in 2004. It seems to have few links to the mainstream civil service but one of its priority areas is agribusiness and, following representations from the industry, it has involved itself with reforms in the seed sector. A report from the 2010 meeting stated that the president had "directed the new Prime Minister to ensure that a new Seed Board be established within the next two months." The meeting report also described how the NSCS "should be transformed into an autonomous body, how MAAIF should partner with USTA, how the "seed policy was developed and will be presented to [the] Cabinet" (RoU 2011: 19). The MAAIF response to the directives, shown in the report, gives an impression of progress but two years later there was still nothing to see. It is suggested that the Roundtable lacks the institutional links to the civil service necessary to get things done and that it is the nature of a body such as the Roundtable to have many agendas, few of which get the amount of attention they need.

Just during the brief period in which this report was prepared, two other developments cast more light on the process of "policy" making in the seed sector:

- The EAAPP initiative "for the National Seed Policy" (see footnote 14).
- The Daily Monitor of October 1, 2013, describes how the government plans to set aside U Sh 57 billion (\$23 million) for seeds and livestock activities. "The President ... tasked the ministry of Agriculture to look into the launching of government established gardens for seed production.... Mr Museveni also urged farmers to encourage the youth to embrace modern commercial agricultural practices, pledging a donation of Sh 20 million to boost

²³ There is a serious absence of reliable seed data: production by crop, market shares by company, gross margins, and so on. The NSCS has the primary responsibility to set up such a database. Despite calls over many years, no progress has been made. The private sector has suggested that the Ministry of Trade, Industry, and Cooperatives should build databases for the input and output markets and disseminate market information as a public good. No progress has been forthcoming there either.

²⁴ This was directly contrary to the PFA document which says, "the process will require hard work and there will be no free money or hand-outs. Instead timely information for guiding the peasants will be continuously provided" (Uganda 2008).

Kisoro boda-boda-run Sacco.” Absurd sums of money, assumptions that the government will be best placed to spend the cash, and a deft back-hander intended to keep everybody smiling. Is it any wonder that the commercial firms are reluctant to invest?

- (iv) Weak parliamentary process. In a 2009 study, Tsekpo and Hudson (2009) describe how recent parliaments managed to pass important bills even if “the legacy of one or no-party rule and the continuing dominance of the NRM, the Executive and President Museveni continue to shape the functioning and performance.” So what is happening with the agriculture bills and specifically the seed bills (see section 2.6)? In the 8th Parliament, which ran until 2011, 23 bills were tabled for which there was no time for debate, and they all lapsed following the dissolution and expiry of that parliament. Among these bills were the seed sector bills.
- (v) Poor donor coordination. As this report was being finalized, several donors were making a new effort to coordinate their activities. The SSCG was preparing to hold its second meeting to improve information sharing and better target resources and energy (although several stakeholders recognized that the EAAPP workshop was not the best precedent). Representatives were present from USAID, the World Bank, the FAO, the ISSD, and Danida. The attendees accepted that there were potential overlaps and synergies in the activities under way and insufficient coordination with the government and the MAAIF. The World Bank offered to use the Non-ATAAS project as a vehicle to improve coordination. Attendees agreed to convene more meetings, with the government present, and to meet regularly to coordinate and harmonize efforts.²⁵

3 Political Economy Insights

Section 2 describes the constrained situation in the seed industry. This section looks at the political economy literature and tries to draw some insights into what is going on. It finds several categories of literature through which to screen seed industry developments.

3.1 The Ruling Coalition

As an introduction, it is appropriate to have another look at how decision making happens. This can begin with a description of the National Resistance Movement (NRM), the core of what Kjær et al (2012c) call “the ruling elite.” NRM members own the key positions of power (Kjær et al 2012c). They are dominated by the president, who is also party chairman and the commander in chief of the armed forces. They have been in power for 27 years. The NRM is strongly represented in

²⁵ As some observers commented, the Kampala donor community is not that big. Why is it difficult to face problems together? There might be several answers. First, the seed sector and seed industry is one of the more technical areas of agriculture and, as one participant put it, “ at a given time, it'd be difficult to find two people in the donor group able to have a qualified discussion on the subject.” In fact, donor attendance at the Agriculture Development Partner meetings over the last three years is nearly as bad as the MAAIF's (according to a private communication). As another source put it, perhaps the participants have been put off by Danida's bad experiences in seed. Second, there are divergent philosophies on how to do seed development: Do you go NGO style and hold decentralized seed fairs and the like, or do you favor the formal system? Seed specialists tend to feel passionate about one or other of these philosophies, and others may have difficulty knowing which to choose. Third, building a commercial seed industry is challenging in a country with a domestic market as small as Uganda's. Some seed (such as millet) is pretty much impossible to make money from. Sales of others (much of the vegetable seed) also struggle to reach adequate volumes. The most obvious commercial opportunities are hybrid seed for industrial and cash crops (oil seed and maize) which, by virtue of their being hybrids, protect themselves.

Parliament with 263 of 364 elected seats. Winning elections with a clear majority is increasingly important in order to stay in power, and expenses for election campaigns have increasingly burdened the national budget (Kjær and Therkildsen 2013).

Kjaer uses another term, “the ruling coalition,” to describe the individuals and factions who help the ruling elite gain and remain in power. The ruling coalition consists of a number of factions which can best be defined regionally. The most important come from the southwest, the former Ankole Kingdom. The top positions in government and the army are occupied by members of a subgroup of the Ankole, the Bahiima.

The president appoints key government officials in the districts, notably the resident district commissioners who play an active role in political mobilization through local government and who are also chairmen of the local security committees (Ssemogerere 2011). These Movement chairmen are powerful and have become more so with the introduction of Movement primaries and decentralization. Favoritism and nepotism have grown: Some of Museveni’s family members hold important government positions and also own big businesses (Kjær et al. 2012c). At least half of the most important NRM party leaders also hold posts as cabinet ministers or other important government jobs they can use to channel funds into the NRM. One way to keep the ruling coalition in power is to nurture support from important individuals and factions by turning a blind eye to their profiting from government jobs (Barkan 2011). Funding for the ruling coalition comes to a great extent from state resources. Most observers would argue that development aid has helped Museveni fund patronage to hold the ruling coalition together (Mwenda and Tangri 2005; Tripp 2010; Barkan 2011). The Movement also receives funding from businessmen, many of them Asian Ugandans, some of whom also have posts within the party (Kjær and Katusiimeh 2011).

In this environment, the potential for change is limited. Patronage politics has drained the budget so that only very visible initiatives will fly (Barkan 2011). Basically, the problems of the seed industry are not visible or demanding enough. But in the early days of the PMA and the NAADS, agriculture and its priorities were higher on the political agenda. A key factor in the early success of those institutions was the willingness of figures in the ruling coalition to champion the cause (Oxford Policy Management 2008). The problem now is the unwillingness of similar figures to support agriculture, and this is partly because of the complicated politics involved. There are reformers, but they keep their heads down.²⁶ A key question then is how to support champions, how to enable those seeking change and help them develop a critical mass.

3.2 Political Economy Literature

Most political literature on Uganda focuses on the type of regime and its implications for development (Tripp 2010; Barkan 2010). Barkan describes Uganda’s government as “in essence an authoritarian patronage based regime....” The reliance on patronage takes two forms: tolerance of corruption, especially by cabinet ministers who use their offices for personal gain or own lucrative businesses on the side, and handouts of both offices and cash to willing takers. This method of retaining power creates a system of inflationary patronage, with many institutions apparently broke and unable to pay their staff.

There is a dearth of literature on the politics of productive sectors. A widely expressed view (Kelsall and Booth 2010;) is that the sustained development of productive sectors requires some state

²⁶ The Independent, 262, April 2013.

intervention, especially in countries where catching up with the rest of the world requires investments on a scale that private entrepreneurs cannot raise. Others argue that ruling elites will support productive sectors when they perceive this will help them remain in power (Whitfield and Therkildsen 2011). The corollary is that long-term endeavors, like promoting production, are a poor basis for assembling ruling coalitions that need quick results to maintain their support (Kjær et al. 2012c). Sometimes long-term endeavors may even hurt the interests of specific factions important to the coalition.

Where political elites have to face elections, that can be the driver for initiatives that seek to benefit a large number of voters quickly. These could be productive sector initiatives such as the inputs giveaways under the NAADS (Kjær and Joughin 2012), but their success is far from guaranteed. An important factor in the calculation is the government's relations with the actors in the industry in question. It is therefore important to understand the interests and strength of the actors.

Three papers by Kjær (2012a, 2012b, 2012c) on the politics of productive sectors (dairy and fisheries) provide a useful entry point to understanding the seed industry's relationship with the Ugandan government. In summary, Kjær argues (2012c: 24) that the dairy industry succeeded in the 1990s and beyond because the ruling elite had an interest in it, while the fisheries industry did not because the benefits were much harder for the elite to capture. She argues that the ruling elite supported the fishing industry at first, because of industry pressure, but failed to enforce standards when the political costs rose. The dairy sector, on the other hand, was initially supported because it was located in the heart of the regime's geographical base, where it wished to strengthen its core support. The sector was regulated because the biggest processor pressured the ruling elite to do so and because the implementing agency was able to bargain with the well-organized producers.

Kjær and Therkildsen (2013) discuss the argument that power is not primarily won by those who provide public goods but by those who provide private and club goods to specific interest groups. They cite Keefer and Vaicu (2008) as arguing that political leaders in young democracies favor the provision of targeted goods to important clients over public goods and so reduce the importance of broader developmental policies and their implementation. Poulton and Kanyinga (2013) discuss some of the same issues in the context of Kenya where efforts at radical reform of the agriculture sector have made very little headway.

Could it simply be that the elite in Uganda fails to grasp the economic importance of the seed industry and that if the leaders could be persuaded to engage more actively, positive results might follow? Or could it rather be that actors (farmers and seed companies) in the seed sector whose political support is important benefit from the status quo and that it is safer not to disrupt them? Kjær's work in the dairy sector suggests that if the president wanted to regulate the seed sector more effectively, it would be done. As a result, we may infer he feels no pressure to do so.

The long, tortuous history of the NAADS project might shed some more light. The NAADS was an innovative public-private initiative designed to target the development and use of farmer institutions and empower them to procure advisory services, manage links with marketing partners, and monitor the services and their impacts. Initiated in 2001, it was managed by a semi-autonomous Board under the MAAIF budget but with services contracted out and sustainability sought through cost recovery and cost sharing. Two independent evaluations (ITAD 2008; Benin 2009) gave very positive assessments but, just as the program was beginning to deliver results, in late 2007, it was suspended, the president being quoted as saying that "there was nothing to show for it" (Daily Monitor February 15, 2008). Thereafter, the program has stumbled from one crisis to another, and at the time of writing is a shadow of its original self. In place of the ambition and promise of the

original NAADS is the ATAAS and the “new NAADS,” which uses about 80 percent of its considerable budget for input handouts. Arguably, the ruling elite saw no great electoral gain from NAADS. It needed a much quicker payback. Handing out goats was more effective than the systematic work of planning, implementing, and evaluating that was necessary under the NAADS project.

3.3 The Agriculture and Seeds Literature

Papers published by the Future Agricultures Consortium (Odame and Muange 2012; Mutonodzo-Davies and Magunda 2012; Dawit 2012; Chinsinga 2012) and summarized in Thompson and Scoones (2012) suggest other perspectives from which to view the dynamics of agricultural development and of the seed sector. Thompson and Scoones (2012) draw on lessons from case studies in Ethiopia, Ghana, Kenya, Malawi, and Zimbabwe, examining how configurations of interests affect the cereal seeds industries and seeking opportunities for opening up alternative pathways towards more sustainable and socially just seed systems. They make the point that many major initiatives in Africa that attempt to address issues related to producing more food for a growing population share a “market-led technology adoption” theory of change, an approach which they describe as emphasizing the promotion of new seeds and fertilizers. They note that this approach is supported by AGRA, the Millennium Villages Programme, and the USAID Feed the Future Programme and suggest there may be other solutions. They show that the reason certain “innovation pathways” are pursued, and others are not, relates to “a politics of narratives and pathways shaped by power relations and institutional interests” (Thompson and Scoones 2012: 3.) Certainly, the vision for the agriculture sector in Uganda is dominated by the “market-led technology adoption” approach, although some NGO and donor initiatives have leaned more towards alternative innovation pathways. This difference in the underlying development narrative could be considered one significant fault line in the effort to improve the seed sector.

Another fault line is explored by Rwamigisa et al. (2013: 9). They describe the extension reform process as being shaped by the interaction of “two discourse coalitions ...the first one which was led by the World Bank staff that designed and later managed the NAADS project, can be referred to as ‘Radical Reform Coalition’ the other coalition, which was led by the technical staff of MAAIF, can be described as the ‘Gradual Reform Coalition’” and they ascribe the failure of the NAADS project to an inability to achieve consensus between these coalitions. The paper describes how the exclusion of the technically oriented gradual reform coalition in the design and early implementation phase of the NAADS increased the program’s vulnerability to capture by political forces that emerged during implementation.

Two points can be made here:

- (i) There certainly are two conflicting belief systems and a dividing line, and much of the description is accurate and provides an enlightening degree of detail and anecdote. There is also much fascinating material on the gulf between the coalitions, exposing the considerable level of “contempt, distrust, and suspicion” between people who call themselves “development partners” (Rwamigisa et al. 2013: 10).
- (ii) The fundamental problem lies in describing the two belief systems. Nothing in the authors’ lengthy exposition suggests that this coalition can be called reformers at all. As the long history of the NAADS is unfurled, the terms “gradual” and “technically oriented” come to seem less appropriate as qualifiers.

The question must be asked: is this so-called coalition interested in performance in any applied sense of the word, that is, in accountability, in impact, in value for money? Do the gradual reformers have a principled or consistent position behind their argument, even something left over from a statist, interventionist earlier phase? Is it not more that the gradualist position is one of default go-slow? Staff resentment at being left behind in a ministry far down the pecking order, frequently scorned by other technocrats higher up, is noted even by those sympathetic to their cause (Rwamigisa et al. 2013: 9). Could it not be that, by this obstruction, the gradual reformers have achieved nothing more than pulling the ministry and its budget (and, in this case, the NSCS and its regulatory regime) even further down?²⁷

Turning the argument around, one might ask what the gradual reformers want, relative to their technical orientation? The problem is they have no documents to represent their position. Curiously, the NRM vision to which many of them give allegiance uses the very language of modernization to which they otherwise apparently object. The PFA has been discussed already. Vision 2040, the latest planning document, aims at transforming Uganda into a middle-income country with a per capita income of \$9,500 within 30 years. How is this going to happen without a change of pace, particularly in the agriculture sector? The gradual reformers do not even attempt to answer this question. The reality is that they represent nothing more than the forces of bureaucracy, patronage, and opacity, the very things holding up the development of the seed industry.

A further take on prevailing but fundamentally different belief systems is provided in a report by the African Centre for Biosafety (2012), which spells out the view that the separation of farming and seed breeding will disempower African farmers and reorient agricultural research towards the private pursuit of profit. The report suggests that “African governments are being co-opted” by the international seed lobby into reviewing their seed trade laws and supporting the implementation of PVP laws through fast-tracked regional harmonization processes. Very real and important issues are brought to the fore here, and the urgent case for substantive national debate is made very clearly.²⁸ But is civil society in Uganda in a state to have this discussion?.

4. Towards a Better Path

The purpose of this paper is not so much to make a new set of recommendations as to tease out why the many excellent recommendations of the past have not been implemented and, in so doing, chart a better course. However, the very fact that these recommendations have been current for several years, and have been tried and tested by the full range of stakeholders in the industry, is all the more reason for putting them down as simply as possible, one more time: a manifesto for the seed sector, the key steps to a modern seed industry. The real questions are about whether and how the steps can be pursued. These steps can be examined within the context of two hypotheses, both within the broad finding that institutional dysfunction has held back a set of pressing and useful reforms.

²⁷ As this report was finalized, reports were circulating that that the MAAIF, after two years in Kampala, is to be relocated to its old offices in Entebbe. The ministry's poor performance will be further compounded by geographical distance and dislocation.

²⁸ Tests have already been approved and carried out for several GMOs, including disease-resistant banana cultivars, WEMA maize, and Bt.- and glyphosate-resistant cotton. It is said that 90 percent of maize in South Africa is already GMO so presumably this is well entrenched in Uganda. However, the MAAIF has no capacity to formally respond to the situation.

Hypothesis One: Political Benefits and Losses

The president clearly cares about agriculture, but the rise of a culture of inflationary, and often capricious, patronage, along with a degree of unpredictability of donor support, has created a situation where an efficient seed market cannot easily develop. It may not be that powerful political forces are actively blocking it, but the political investment required to address the problem is beyond that of most of the players.

In this situation, the short-term political benefits of distributing agricultural inputs are clearly perceived to exceed the uncertain efficiency gains a competitive market would produce; that is, short-term political advantage is dominating the policy-making process (Kjær and Therkildsen 2011). This argument is backed up by the way in which the PFA and ATAAS programs have evolved, from the market-driven paradigm of the PMA which prevailed during 2001–07 (Oxford Policy Management 2007) to the handout programs of today (Kjær and Joughin 2012). The government has rational, long-term plans for the sector (for example, the DSIP and the NDP), but they are not being implemented with any commitment, in an environment in which short-term political calculus increasingly prevails.

Hypothesis Two: Economic Benefits and Losses

A second hypothesis is that certain economic interests benefit from the status quo. Of the 25 firms trading, half a dozen may make a reasonable profit while the remainder make opportunistic profits when they can. Some may be involved, or complicit, in deceptive practices, such as selling counterfeit seed. Were the market to become more competitive, with inspections and enforcement, there would likely be a considerable shakeout of the less competitive players. There is no evidence that private firms are lobbying against more efficient policies but it could certainly be that they recognize the benefits of staying with the status quo and might campaign against reform if pressure for it mounted.

To explore this hypothesis, it would be useful to know more about who benefits from the status quo and who would lose in a more competitive market: Which seed companies are connected with politicians and high-ranking civil servants; which large farmers are politically influential and how do they source their seed? How would they fare under policies that make the agricultural sector more productive for small farmers? Even if they are not blocking efforts to create a more efficient market, are seed companies able to do so?

The conclusion of this paper is that the impediments to developing a more competitive market for seeds derive from the lack of political benefits for political elites and the risk of economic losses for large farmers and domestic seed producers. There is now a situation of relative stasis that is difficult to break, especially because there are likely to be large overlaps between the political and economic beneficiaries of the status quo.

These remarks notwithstanding, a road map for change can be envisaged. Key milestones are support for advocacy, institutional reform, and regional integration:

- (i) *Build a constituency for reform:* appropriate and targeted meetings, workshops, and fora. The existence of many persons of goodwill among stakeholders has been noted. It is tempting to ask why they do not come together more readily to fix some of the problems. Booth (2012b: 11) writes that most actors “face prohibitive problems in acting collectively to take even elementary steps in pursuit of their interests.” He argues persuasively that governance challenges in Africa are not about “one set of people getting another set of

people to behave better. They are fundamentally about both sets of people finding ways to act collectively in their own best interests.” This leads to the radical insight: “Development progress is about overcoming institutional blockages, usually underpinned by collective action problems. It is not, for the most part, about resource shortages or funding gaps.”

In a paper examining how to improve service delivery outcomes, Wild and Foresti (2013: 2) discuss a new “consensus that the lack of institutional and political capacity to deliver policy reform is an important part of the problem.” They ask what could be done differently and discuss a number of themes:

- There is a need to start with a comprehensive diagnosis of the underlying problem, a recognition of the need to understand how things work in practice and why chronic problems persist. This involves looking at the motivations and incentives of stakeholders: a case from Uganda is cited (Andrews 2013: 110) to show that the “problem” lies in the underlying political logics that pervade the public sector and allow poor performance with impunity.
- Process-driven solutions are preferable, where the emphasis is placed on incremental reform efforts, continuously monitored and checked to ensure they address underlying problems rather than surface issues. Such “problem-driven iterative adaptation” requires continually testing and “muddling through” to find solutions by way of small, incremental steps (Andrews 2013).
- Reforms must be driven by domestic actors. Experience in China, Indonesia, and Rwanda shows success comes when governments have been in charge of reforms, developing problem-solving approaches to close core gaps, and building on existing institutions and norms. External actors can be facilitators or brokers, rather than drivers, of reform.

(ii) *Agree on and finalize the policy and legal framework.* The policy and regulatory environment issues need to be settled. There needs to be a review of the bills pending to do whatever is necessary to strengthen the seed regulatory framework to make it comparable to the high standards of Kenya and South Africa. The aim should be to facilitate rapid diffusion of new technology and to change policies that either deter the private sector from investing in seed value addition or generally hinder trade in seed in the region. Real effort needs to be made to get the bills streamlined and passed and the policy agreed.

Following Keyser (2013), it is possible to suggest areas where practical action could be taken in the near term:

- Streamline variety release procedures based on mutual recognition of test results. Uganda could decide to accept other variety lists with or without a limited number of domestic field trials whenever it wants.
- Simplify national variety trials. This could be done without amending national legislation. Greater willingness to accept data supplied by public and private plant breeders, who know their seeds best, could also help avoid bottlenecks and speed the introduction of varieties.
- Make national variety release criteria more transparent. The lack of known criteria means that variety release committees may reject a seed and ask plant breeders to improve traits arbitrarily.
- Allow seed companies to embark on production of pre-basic, breeder, and even certified seed while release trials are under way. The seed industry must be a private sector activity, with the public sector in a facilitative role.

- Make wider use of the FAO's Quality Declared Seed System to help avoid bottlenecks during certification. This would be a practical way to improve on the current situation in which many farmers have no choice but to rely on uncertified and potentially counterfeit seed sold in open markets.

The Seed Board must be immediately constituted to oversee the new seed policy and organize reform in the NSCS (see below).

Pursue the benefits of regional trade and economic integration. A real statement of intent would be for Uganda to set a six-month deadline for opening the borders to all seed certified elsewhere in EAC. This would mean all regionally certified seed could be freely traded in Uganda. Imports from Kenya will raise standards (although there is already opposition to this, purely on nationalistic grounds). Reformers need to meet their Eastern African counterparts, develop plans, and especially pursue action against non-tariff barriers. The next issue becomes how to motivate the regional economic commissions—EAC and COMESA—to apply pressure, mount joint inspections, and enforce standards. Such pressure is at best embryonic, but it would seem to offer some possibilities.

(iii) *Regenerate institutions that can deliver action.* Expecting the government to reform from within may be unrealistic, but donors should be ready:

- The regulatory services and the NSCS. The NSCS should be taken out from under the Crop Protection Department and made an autonomous, revenue-keeping agency for inspection and certification of agricultural inputs (as described in the DSIP). This will strengthen the seed industry and enhance its capacity to capitalize on emerging regional export market opportunities. The NSCS needs to be proactive, constructive, and supportive, with a business plan that shows how it can move towards self-financing. The lessons learned from the autonomous agencies in the MAAIF are there to be absorbed. Action on this front is a function of political will and leadership.

Not all lessons from the autonomous agencies are encouraging. The authorities do not want to relinquish budgets and control. No sooner was the NAADS up and running than the NRM started to destroy it (Joughin and Kjær 2012). Even as the DDA tried to move to self-financing, its default position seemed to be a top-heavy cost structure with little reference to the modest industry that was expected to finance it. There was at least, however, the chance to see how the model could have worked with a more robust approach. The practical approach might be to offer the government a project to follow through on this effort. As one donor source put it, "When NSCS is granted at least semi-autonomy and when it is ISTA accredited, then let's talk about a seed project".

- Build up the USTA. A key task is to lobby government at the highest level for policies conducive to seed market development and for integration into the regional seed market. While the DDA is certainly a cautionary tale, there are also quite well-functioning membership-based lobby groups like the Uganda Law Society, the Uganda Timber Growers' Association, the Uganda Bankers' Association, and the Uganda Hotel Owners Association, and there are surely lessons to learn from their narratives: how to keep up standards, discourage free riding, and offer services that the members value.
- Continue with agro-dealer strengthening programs. The emphasis should be on produce marketing, value addition, and exporting. Dealers must have profitable

businesses. This means not dealing only in seeds. They must broaden into other farm inputs and services, equipment leasing, and so on. Currently, most of the companies are amateur and manage their businesses very passively. This leads to the ever present need to facilitate access by small and medium-sized local seed companies to more appropriate business finance products.

- Re-invigorate donor-supported fora. The first is the SWG, which can meet bimonthly and press for appropriate budget allocations and associated actions. Then the new SSCG can be mobilized to feed ideas up to the SWG. Perhaps the point is to look for areas where interests can converge.
- Improve advocacy and press coverage. Although there are columns of newsprint about the agriculture sector every day, most of it struggles to engage. There must be scope for some better-argued pieces. This also applies to radio and TV and even social media. At base, this is about establishing at the highest level (and lobbying for) the need to improve seed quality across the country and across all crops and commodities as one of the key priorities of agricultural development.

(iv) *Undertake further investigative and supportive work:* In a couple of areas, further study and investigation would make an immediate input to the process:

- Define as precisely as possible the people who benefit politically and economically from the situation and their relationships to each other.
- Map the market more thoroughly, including product flows and value chains.²⁹ Get seed companies to say how much of their production is procured by third parties (development agencies and government). The domestic seed companies probably do not push too hard because so long as a good part of their production is procured by such third parties, there is not much motivation to buck the system. How much of the trade is genuinely private sale and how much is to institutions is still not clear. One source said it had been as high as 50 percent but was probably less now. In this environment, the deck is stacked against maintaining a straightforward business model and staying solvent.

²⁹ Be more specific about which seeds are the priority. The issues vary by seed. For coffee it is coffee wilt disease-resistant materials that need to be multiplied and distributed; for maize, the issues are certification and fake seeds and wild gyrations in seed demand; for oilseeds, there is a need for more soy; for OPVs and vegetatively propagated materials, there are different issues and the Dutch ISSD is working on them; there are still other issues for fruit tree seedlings and vegetable seeds.

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Annex 1: Registered Seed Companies, 2012

Name and location of seed company	Description	Main seed crops handled	Source of varieties
NASECO Seeds (1996), Kibaale	Local, seed producer	Maize OPV, maize hybrids, upland rice, cowpeas, beans	Public research
Farm Inputs Care Centre (FICA) Ltd, Kampala	Local, seed producer	Maize OPV, maize hybrids, upland rice, sorghum, beans, cotton, ground nuts	Public research
Victoria Seeds Ltd, Kampala	Local, seed producer	Maize OPV, maize hybrids, upland rice, sorghum, beans, soybean, groundnuts, vegetables, pasture seed	Public research, Imports
Otis Garden seeds Ltd, Lira	Local, seed producer	Maize OPV, maize hybrids, upland rice, beans, sorghum, sunflower, soybean, finger millet	Public research
Rial Seeds, Ltd, Kampala		Maize OPV	Public research
El-Shaddai, Ltd, Mbale	Distributor	Maize OPVs and hybrids, upland rice, beans, sorghum, sunflower, soybeans	Imports
A.K. Oils and Fats, Ltd Kampala	Distributor	Hybrid sunflower	Imports
General & Allied Ltd, Kampala	Local	Vegetable seeds	Importer
East Africa Seeds, Ltd, Kampala	Regional	Maize OPVs and hybrids, upland rice, sorghum, vegetables	Public research, Importer
Mt Elgon Seeds Ltd, Kampala	Regional	Maize hybrids, pastures, vegetables	Importer
Safari Seeds Ltd, Kampala		Vegetable seeds	Importer
Grow More Seeds & Chemicals, Kampala	Local	Maize OPVs, upland rice, sorghum beans, vegetable seeds	Public research, Importer
AMLA Seeds Enterprises, Kampala		Maize OPV	Public research
CAII Seed Company, Iganga	Local	Maize OPV and hybrid, upland rice	Public research
Kazinga Channel Seed Company, Kasese	Local	Maize OPV	
Agro-Genetic Technologies Ltd, Kampala	Local	Tissue culture–derived plantlets for bananas, coffee, pineapples, and others	Public research
Supa Seeds Africa Ltd, Kampala	Local	Maize OPVs	Public research
Masindi Seeds Ltd, Masindi	Local	Maize OPVs, upland rice	Public research
Pearl Seeds Ltd, Kampala	Local	Maize OPVs, upland rice, beans, groundnuts, millet, soybeans	Public research
CEDO Seeds, Rakai	Local	Beans	Public research and CGIAR
BRAC Enterprises Ltd, Kampala	Local	Maize OPVs, beans, upland rice	Public research
Green Nile Agro-Tech Ltd		Maize OPV	Public research
Equator Seeds Ltd, Gulu		Maize OPV, upland rice, beans	Public research
Monsanto	International	Maize and sunflower hybrids; testing Bt. cotton; source of WEMA biotechnology	Own research

Note: OPV = open-pollinated variety. CGIAR = Consultative Group on International Agricultural Research. Bt. = *Bacillus thuringiensis*. WEMA = Water-Efficient Maize for Africa.

Source: MAAIF 2012a.

Annex 2: Seed sales from registered seed companies (tonnes)

Crop	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Maize	777	960	1,180	1,400	4,273	3,896	4,280	4,050	5,635	6,952	8,704	7,364
Beans	778	800	850	880	1,039	634	272	50	119	440	1,098	1,577
Rice	41	32	48	50	298	564	708	256	1,103	1,286	996	1,855
Sorghum	191	100	70	110	308	1,280	320	40	—	134	254	430
Millet	5	8	10	19	87	414	22	16	—	—	120	41
Soybean	10	25	20	5	—	100	158	45	40	54	230	405
Groundnuts	16	70	60	120	375	135	120	15	25	8	23	233
Sesame	1	2	1	1	—	—	30	—	—	115	76	92
Sunflower	20	15	25	30	180	100	226	—	2	—	106	133
Total seeds	1,839	2,012	2,264	2,615	6,560	8,675	6,168	5,387	7,679	10,397	11,607	12,130
Share of total, Uganda Seeds Ltd	1,763	700	368	—	—	—	—	—	—	—	—	—

Source: MAAIF 2012a.

Annex 3: Seed Industry: Selected Technical Challenges

- (i) The rate of cultivar introduction in Uganda is too low. During 2000–11, the fastest rate for field crops was 2.6 per year for maize (MAAIF 2012a), as compared with rates of 9 per year in Tanzania, 12 in Zambia, 15 in Kenya, and 45 in South Africa. These rates are insufficient to sustain targeted rates of agricultural growth. MAAIF (2012b) suggests that there needs to be a minimum of four to seven new varieties per year for each crop,³⁰ although there is also no process for evaluating whether what is produced is what is needed.

The process of releasing a new variety is part of the problem. It involves tests, fees (in excess of \$2,000), and time (currently two years). This contrasts with—for example—India, which allows companies to introduce varieties without registration, and South Africa, where variety registration is easy. Lobbying has been tried to get the MAAIF to accelerate introductions of varieties but so far without success. The MAAIF could, for example, announce that they will recognize and accept field crop varieties registered in any ASARECA or COMESA country without any further tests and decisions. Doing so would open the door to the world seed industry.

- (ii) The need to maintain a national germplasm bank has been neglected. The notion of systematically establishing and maintaining a national germplasm bank has never been prioritized. Efforts still need to be made to support public breeders in sourcing and developing germplasm to broaden the genetic base of various crops, probably with special attention to crops that the private seed industry ignores.

- (iii) The supply of pre-basic and basic seed is inadequate: Currently, most of the varieties that are important to Uganda's seed industry come from NARO; however, production for some time has been below the level the seed companies need (MAAIF 2012a). This would be helped if the companies could source more varieties from other countries and also start their own breeding programs.

Seed quality is variable and poor. The IFDC was reporting in 2002 that “poor enforcement of quality control regulations poses a serious threat to orderly development of well-functioning input markets (Ferris and Ojok 2006: 56). Experience around the world suggests that quality can be improved by allowing the seed companies to use their staff to supervise seed production to ensure that their marketed seed is good quality. Seed companies in competitive markets are aware that farmers who are displeased with the seed they buy can easily shift to another company's seed. The best strategy for the Ugandan government would be make it easy for companies to get into the seed market and then take steps to promote competition. One crucial factor in seed quality assurance is phytosanitary controls on imported seeds, so that pests and diseases are not introduced from imported seeds to inflict damage on domestic crop production. The Crop Protection Department has long been unable to deal with this.

³⁰ Most of the improved varieties accessed by Uganda's seed companies come from NARO breeding. Looking only at new varieties released during 2000–11, of the 95 approved varieties, 63 came from NARO and 32 from private companies (MAAIF 2012a).