



A Review of Seed Certification Procedures, Prospect and Policies in Nigeria

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Abstract

Seed certification is to maintain and make available to the public, through certification, high quality seeds and propagating materials of notified kind and varieties so grown and distributed as to ensure genetic identity and genetic purity. This paper reviewed the seed certification procedures, prospect and policies in Nigeria. Certified seed is the starting point to a successful crop as well as an important risk management tool. Clean seed, Varietal purity, guaranteed quality assurance, access to new opportunities, new genetics, improved traits like better yield, better deal on crop insurance, maximum use of other inputs, access to premium markets and trace ability are the importance of seed certification.

Keywords: *Review, Seed Certification, Procedures, Prospect and Policies.*

Introduction

Seed certification is a quality assurance system whereby seed intended for marketing is subject to official control and inspection. Seed

certification is an evidentiary and field inspection based process that aims at ensuring that the genetic identity and purity of a plant cultivar is maintained

during multiplication from one generation to the next. It is also scientific and systematically designed process to secure, maintain, multiply and make available seeds of notified and released varieties to the farmers (Seed Services Australia, 2013). It is part of a wider system including plant breeding and plant breeder's rights, plant genetic resources, biodiversity and international trade. Seed certification schemes rely upon a set of documented standards and procedures implemented at each step of seed production process to protect the varietal identity and purity of a seed lot.

Plants grown from seed of high genetic purity can be expected to look and perform in the manner as originally bred and described by the breeder. This in turn provides users of certified seed with the confidence that the expected advantages of a cultivar can be delivered. Examples of important genetic characteristics include:

- seedling vigour
- insect resistance
- disease resistance
- high seed yield

This paper reviewed the seed certification procedures, policies and prospect in Nigeria. Certified seed is the starting point of a successful crop as well as an important risk management tool.

Seed is the unit of reproduction of a flowering plant, capable of developing into another plant. Types of seeds are Breeder, Foundation, Registered and Certified seeds. Certification is the process by which a state seed certifying agency gives official recognition to seeds produced of a cultivar or named variety under a limited generation system which ensures genetic purity, identity and a given minimum level of quality (Louisiana Department of Agriculture and Forestry, Seed programme, 2018). Seed certification is then a quality assurance system whereby seed intended for marketing is subject to official control and inspection (Ministry of Agriculture and farmers welfare, 2018).

The objectives of seed certification are to ensure genetical identity of a variety, to ensure high degree of physical purity, to ensure freedom from all designation seed borne disease, weeds and other crop seeds (Ministry of Agriculture and farmers welfare, 2018).

CLASSES OF SEEDS

Four classes of seeds are recognized in seed certification namely; Breeder, foundation, registered and certified.

BREEDER SEED: It is a class of certified seed directly controlled by the originating or sponsoring plant breeding institution or person or designee thereof and is the source for the production of seed of the other classes of certified seed.

FOUNDATION SEED: Foundation seed is a class of certified seed which is the progeny of breeder or foundation seed. Foundation seed is produced and handled under procedures established by the certifying agency, in accordance with this part for producing the foundation class of seed for the purpose of maintaining genetic purity and identity.

REGISTERED SEED: Registered seed is a class of certified seed which is the progeny of breeder or foundation seed. Registered seed is produced and handled under procedures established by the certifying agency, in accordance with this part for producing the registered class of seed for the purpose of maintaining genetic purity and identity.

CERTIFIED SEED: Certified seed is high in genetic purity, high in germination and vigour, and of good quality (i.e., free from disease and from damaged or immature seed). It is a class of certified seed which is the progeny of breeders, foundation or registered seed. Certified seed is produced and handled under procedures established by the certifying agency in accordance with this part for producing the certified class of seed for the purpose of maintaining genetic purity and identity (Agrigance, 2016).

SEED CERTIFICATION PROCEDURES IN NIGERIA

The 1992 decree established the Seed Certification Department of the National Agricultural Seed Council (NASC) as the seed certification agency. The NASC assigns a seed certification officer to each seed company (or sometimes one officer for a group of small companies) while one to three seed officers are assigned to each of the ADPs (state governments) that produce seed. There are few complaints from seed producers about the arrangement, which streamlines certification. In spite of this, and for reasons not entirely clear, there are still some cases of seed contamination. Even some of the breeder seed, which should be pure, is contaminated with other varieties. Mixture gets worse as seed moves down the chain to foundation seed and certified seed.

The seed quality control and certification of all classes of seeds for distribution and marketing shall be carried out by National Agricultural Seeds Councils through its officials in accordance with the National Agricultural Seeds Act No 72 of 1992 (revised).

- NASC must be notified of the intentions to embark on multiplication of any class of seed.
- The seed fields must be registered with NASC with the payment of registration fee to be determined by NASC.
- NASC Officials shall embark on pre-planting inspections for verification of seed source and other measures put in place to ensure quality e.g. land preparation, rouging of ratoon and volunteer crops etc.

The procedures for seed field certification:

- Application for certification.
- Payment of N1,000 grower registration fee.
- Issuance of registration form for certification.
- Return of duly completed registration form.
- NASC shall verify the source of the planting materials to be used for further multiplication with documentary evidences such as certification tag, invoice or delivery note or any other appropriate documents from the source of the planting materials.
- Commencement of inspection visits by certification officer attracts the following payment per section (N1,000 for up to 5 ha, N2,000 for 6 to 9 ha, N5,000 for 10 ha)
- Issuance for completion of certification certificate.
- NASC shall ensure that all agronomic practices leading to the production of good quality planting materials are strictly adhered to.

In order to ensure the full implementation of the provisions of the National Agricultural Seed Act No 72 of 1992. The Federal Government of Nigeria in 2007 approved the establishment of the National Agricultural seed council (NASC) as the agency to oversee the development and regulation of the seed industry in Nigeria. The Governing Board of the Council came on board in 2009 with representation from both the public and private sector. The first Governing Board was dissolved along with others in 2011 and is yet to be reconstituted.

Nigeria realized that it would be impossible to certify all seed and argued against it during negotiations, but it was outvoted. Companies can no longer sell uncertified but truthfully labelled seed, so the formal sector must decide what to do with legislation that is impossible to meet. Between 5 and 10% of the national seed requirement comes from certified seed, the rest from the informal sector or farmer-saved seed. Except for a few crops, most varieties being planted now are improved varieties, although many have been planted by farmers for a long time without renewing the seed.

The National Agriculture Act 72 of 1992 was enacted to provide legal framework for regulating various aspect of seed research, production, processing, marketing and quality control activities. It also provided for the establishment of the National Agricultural Seed and Council and also defined the roles and responsibilities of various stakeholders to the National Seed Industry. The regulation in the seeds Act covers:

- Variety development
- Variety registration, release and certification of seeds
- Seed quality control
- Seed law enforcement
- Seed planning, monitoring and management
- Seed production and marketing
- Institutional structure, giving broad outlines of roles and responsibility of various stakeholders
- Import and Export of seeds
- Seed promotion and seed extension
- Capacity building(National Agricultural Seeds Council 2017)

The Functions of the NASC include:

- Analyse and formulate programmes, policies and actions regarding seed development and the seed industry in general, including research on issues relating to seed testing, registration, release, production marketing, distribution, certification, quality control, supply and use of seeds in Nigeria, importation and exportation of seeds.
- Design improved management systems and procedures relating to the administration of seed activity.

- Advice the Federal Government on the organization, management and financing of seed programmes.
 - Analyse the market and prices of seeds.
 - Advice the national research system on the changing pattern of seed demand and farmers needs.
 - Monitor and evaluate the achievement of the national seed system and recommend improvement.
 - Encourage the establishment of seed companies in Nigeria for the purpose of carrying out research, production, processing and marketing of seeds.
 - Regulate the seed industry in Nigeria.
- (D-8 organization for Economic cooperation (2014).

SEED CERTIFICATION POLICES IN NIGERIA

Agriculture was the mainstay of the economy and accounted for over 50% of the total Gross Domestic product (CBN, 1991) before Nigeria`s independence. Nigeria government provided little support which was concentrated on export crops such as cocoa, groundnut, palm produce, rubber and cotton as self-sufficiency in food production seemed not to constitute any problem (Abdullahi 1999; FMAWR & RD, 1989). Agricultural production over this period was predominantly traditional, as farmers made use of mainly local practices and implements in their production.

By late 1960s and 1970s, there were signs of problems existing in the agriculture sector, for example, shortages in food supply and increases in food prices, were noticed. By the mid 1970s the contribution of agriculture to the nation`s GDP had declined remarkably to about 26% and the food deficit gap had widened significantly. There were also shortfalls in government revenue from agriculture, in foreign exchange earnings from agricultural exports. This situation was attributed to the devastation of many farmlands during the Nigerian Civil War, 1967-1970; drought in some parts of the country, migration of labour from the agricultural sector, low agricultural output, rising food prices and increasing population. There were also the effects of government fiscal and monetary policies (Abudllahi, 1999).

In a bid to revitalise the agricultural sector and salvage the situation the government initiated several policies and agricultural development programs project in context with three successive national development plans executed

1970-74, 1975-80 and 1981- 85. These included the National Accelerated Food Production Programs, Operation Feed the Nation, Green Revolution and the creation of River Basin Development Authorities and Agricultural Development Project (ADPs). The need to transform traditional agriculture through the adoption of modern farm technologies was realised and incorporated in these programs. (Akinola, 1979; Ejiga 1990).

Despite these efforts, the performance of Nigeria`s agricultural sector was still poor. The food supply demand gap widened, food prices rose tremendously and agriculture`s contribution to GDP declined to about 23% by the mid 1980`s (CBN, 1991). Experience from the policies, programs and projects, however, convinced the government that there was no alternative to well-designed and articulate agricultural policies and instruments for promoting agricultural growth and development in Nigeria (FMAWR & RD, 1998). In pursuance of this, the first comprehensive agricultural policy was formulated in 1985. The policies instruments, which were to remain valid for the next 15years, were composed of macro-economic policies for the support services. The macro-economic policies included trade, exchange rate and agricultural land policies. The sector-specific policies included food production, input supply and subsidy policies while the support service policies included agricultural technology generation and extension, agricultural credit, insurance, produce marketing and research.

The ultimate goal of Nigeria`s agricultural policy is the attainment of self-sustaining growth in all the subsectors as well as the realisation of the structural transformation necessary for the overall social-economic development of the rural areas.

The present national seed policy was developed in 2010 in line with the seven point Agenda and the vision 20-2020 of the federal Government and in accordance with dynamics in the global seed industry. To provide legal backing for the policy, an amendment of the seed Act No 72 of 1992 was initiated and passed by the 6th National Assembly in 2011. At the onset of the Agricultural Transformation Agenda (ATA) in 2011, some policy changes have taken place which includes:

- The liberalization of foundation seed production for the purpose of enabling National Agricultural Research Institutes (NARIs) and companies that have requisite facilities to undertake commercialization of this class of seed.

- Total withdrawal of Government agencies from certified seed production and marketing. The key goals of the seed policy are to:
 - i. Support varietal development, registration, release and multiplication of released varieties.
 - ii. Improve the quality of seed sold to farmers.
 - iii. Re-orientation the operations of public sector agencies along commercial lines.
 - iv. Encourage private sector participation in seed operation through appropriate policies and promotional activities.

SEED CERTIFICATION PROSPECT

The national seed policy is in line with regional and international standards and makes provision for the withdrawal of public sector agencies in favour of private sector in key areas of the seed industry. The private sector has the potential to supply inputs efficiently and cost effectively. The capacity of the public sector in the production and distribution of certified seeds has been constrained by the deteriorating financial position of the participating institutions (Abdullahi, 1999).

It has been reported that the development of private seed companies is vital because of their reliability, sustainability, cost-effectiveness, responsiveness to farmers' needs, greater commitment to quality and generation of employment (Joshua, 1997). The private seed sector by all indications is a better partner for the production of improved certified seeds and distribution to farmers. Conducive macro policy environment, improved access to finance, a developed and implemented regulatory framework, timely release of seed varieties, as well as improved human capital for market development are required.

The National Agriculture Seed Council (NASC) says it will soon go digital with the certification of seeds to ensure that farmers get quality seeds to enhance their production. NASC aimed at building a stronger seed sector in Nigeria and Africa. Re-certification would enable easy monitoring of seeds from the sources by the Council to farmers across the country. With the help of seed trackers, farmers would soon be able to detect adulterated seeds from any part of the world electronically (NASC, 2019).

Conclusion

Seed is an essential in agricultural production. The Nigerian government aims to improve the provision of better quality seed at lower costs to farmers through seed certification, seed subsidies, and promotion of private sector participation in foundation seed production and so forth, however, knowledge gaps still exist (NASC, 2019).

Seed certification is also an essential input in agriculture but there still exist problems associated with non-availability of adequate quantities of certified seeds to the farmers due to low production of breeder and foundation seeds as well as poor seed distribution and information disseminating network; slow release of improved varieties which encourages the dominance of the local low-yielding crop varieties and the existence of adulterated, unviable and infested seeds due to poor implementation of seed quality regulatory mechanisms.

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