

AFSTA POSITION PAPER ON MODERN BIOTECHNOLOGY

(Revised in March 2020)

The African Seed Trade Association (AFSTA) recognizes the importance of Modern Biotechnology in improving crop varieties and its potential as part of an integrated approach towards enhancing food security and sustainable agricultural development in Africa.

Improving crop yields reducing losses to pests, diseases drought or heat pressure, enhancing nutritional or storage quality of crops have always been important to plant breeders; they continually identify desirable traits in plants and transfer these to commercially important plant varieties as a basis for crop improvement. Breeders have in the past relied on traditional breeding methods to do this. However, these techniques have evolved with time making it easier to obtain desired qualities in plants. Modern Biotechnology is one such technique which offers efficiency in achieving the desired trait and enabling to cross the inter-species barrier if such trait does not exist in the same species.

Modern Biotechnology has proven useful in improving yields, both directly and indirectly (through improving plant tolerance to various biotic and abiotic stresses) and nutritional quality of crops, whilst impacting on the environment in a number of beneficial ways such as increasing the adoption of environmentally beneficial conservation tillage practices, which help improve soil and water quality, and decreasing the use of pesticides.

Specific examples of significant crop improvements utilizing Modern Biotechnology include insect resistance in maize, soybean and cotton, herbicide tolerance in maize, soybean and cotton, improved oil profile in soybean, non-browning apples and reduced bruising potatoes and virus resistance in fruits and vegetables. Yet another aspect of the Modern Biotechnology contributions to yield improvements facilitating crop hybridization systems that produce plants with hybrid vigour. The technology also holds promise for further crop improvement in areas such as disease resistance, nutritional enhancement, salinity and drought tolerance, which could enable farmers to yield from their land.

Africa, which relies primarily on agriculture, stands to benefit from the application of Modern Biotechnology. Agriculture plays a key socio-economic role in Africa, providing for the livelihoods of over 60% of the continent's active labour force and making the major contribution to the continent's total gross domestic product. Yet in the past decade, crop productivity in Africa has registered a steady decline. The continent loses an estimated 40% of its grain crops to pest, disease and weeds and

to post-harvest spoilage. Faced with stagnated yields and increasing population, farmers in Africa have encroached on forested land and resorted to farming in marginal areas in an attempt to meet the growing food demand. More than half of global population growth between now and 2050 is expected to occur in Africa, according to the United Nations. In order to meet the nutritional demands of the growing population it will be necessary to provide African farmers with access to a range of solutions to improve agricultural productivity. Modern Biotechnology is one of such tools that can enable farmers to produce food and fibre more sustainably.

Modern Biotechnology will enable development of superior, high yielding varieties that can perform under the biotic and abiotic stresses that are detrimental to African agriculture. By helping farmers produce greater yields, biotechnology can play a role in making existing farmland more productive, which in turn could help reduce the pressure on marginal land and help preserve biodiversity in conservation areas.

Believing that Africa stands to gain by adopting Modern Biotechnology in farming, AFSTA:

- Encourages and supports the research and practical application of Modern Biotechnology aimed at improving agricultural productivity.
- Urges the development of appropriate policies and programs to foster rapid development in Modern Biotechnology and its practical applications at the same time ensuring a safe and sufficient food supply while ultimately raising African farmers' standards of living.
- Recommends the use of sound scientific principles in the regulation and safe application of products produced with Modern Biotechnology in Africa. That should be done in a manner that is risk-proportional, practical, enforceable and affordable.
- Recommends that adequate Biosafety laws, regulations and management systems be established as priority, including the domestication of the international Biosafety Protocol, providing the framework for health and environmental risk assessment in the application of this technology.
- Encourages harmonization of regulatory processes among countries and regions, thereby avoiding duplicative and expensive national approval processes, and that these be based on the widely accepted principles of substantial equivalence as recommended by the Organization for Economic Cooperation and Development (OECD) and the Food and Agriculture Organization (FAO) / World Health Organization (WHO).

- Acknowledges that there are no specific risks inherent to Modern Biotechnology and recommends a product-based approach in the biosafety assessment.
- Urges the use of Modern Biotechnology to develop improved varieties of 'orphan' crops such as cowpea, millet, sorghum and cassava, which are key food crops across the continent.
- Acknowledges that the cost considerations in implementing Modern Biotechnology are prohibitive for most African states and appeals for the cooperation of both Multilateral Development Organisations and Foreign Aid Donors in the capacity-building of local scientists towards developing, assessing and implementing the adoption of transgenic crops.
- Encourages discussion and information sharing amongst a cross-section of stakeholders towards building an understanding for Modern Biotechnology within society, which is critical for acceptance and adoption.
- Is willing to cooperate with international organisations dealing with agricultural biotechnology in knowledge-sharing and capacity building.

AFSTA strongly supports the safe use of Modern Biotechnology aimed at improving crop varieties and agricultural practices the continued effort to develop and implement a science-based and risk-proportional regulatory systems on the continent. AFSTA is determined to ensure that African farmers and societies profit from the benefits and the application this technology. The Association affirms that the varieties resulting from Modern Biotechnology hold great promise for improving livelihood by increasing the food, fibre and feed supply of Africa and the rest the world whilst promoting environmental sustainability.