

## **AFSTA POSITION PAPER ON PLANT BREEDING INNOVATIONS**

**(March 2019)**

Plant breeding is the art and science of the genetic improvement of plants, which includes cultivar development to create crops with new combinations of desirable characteristics. Plant breeders develop plant varieties in response to local challenges, such as emerging diseases and pests, environmental stresses, and food chain or consumer needs. It is an essential tool for sustainable agriculture and the key to food security, enabling us to adapt to climate change whilst improving crop yields, food quality and food safety, and benefiting everyone in the food chain, from farmers to consumers.

Plant breeding is not a new concept. Plant breeders have always responded to society's needs. The first farmers selected the best plants to provide seed for their next crop. This provided the foundation for the continuous development of new plant varieties better adapted to meet the local and global challenges we are facing.

While the objectives of modern plant breeding remain the same as those that farmers and breeders have been pursuing for thousands of years, the methods have greatly improved. An increased understanding of plant biology and plant genes has enabled plant breeders to more precisely and efficiently develop useful characteristics such as disease resistance or drought tolerance. Several tools have enhanced the efficiency and precision of plant breeding. The latest breeding methods (such as genome editing) allow the plant breeding industry to develop improved plant varieties similar to those being developed through conventional breeding, while effectively overcoming a number of limitations of conventional breeding. The Plant Breeding Innovations enhance the speed, predictability, precision and rate of success. Many of these tools can be used to produce genetic variation, which is the first step in plant breeding.

Therefore, AFSTA emphasizes that:

- Excessive regulation of products derived from PBIs will discourage innovation and preclude or limit the use by African breeders of these innovative technologies, thereby limiting solutions to solve local agricultural challenges.
- In addition, as many crops are global commodities, there is a risk that policy makers will create trade barriers or disruptions due to non-harmonised PBI policies and practices. AFSTA therefore encourages African regulators to actively engage in international

discussions in this area to safeguard Africa's role in global agricultural production and to safeguard our export markets.

- Policy makers should adopt regulatory policies that are science-based, proportionate to risk, risk/benefit-based, predictable and promoting innovations.
- PBI policies should be in line with the scope of regulatory oversight for products.  
Given that certain applications of PBI result in varieties that are not different from conventionally bred varieties (with a long history of safe use), AFSTA believes it is vital to avoid making arbitrary and unjustifiable distinctions based on the type of breeding methods used.
- AFSTA further supports the position of the International Seed Federation (ISF) that the underlying principle for regulating these plant breeding innovations should be that plant varieties developed through the latest breeding methods should not be differentially regulated if they are similar or indistinguishable from varieties that could have been produced through conventional breeding methods.
- As such, the genetic variation in a final plant product should not be covered under the scope of existing biotech/GMO regulations for plants if:
  - There is no novel combination of genetic material (i.e., there is no stable insertion in the plant genome of one or more traditional breeding methods or genes that are part of a designed genetic construct), or;
  - The final plant product solely contains the stable insertion of inherited genetic material from sexually compatible plant species, or;
  - The genetic variation is the result of spontaneous or induced mutagenesis.