Common concerns associated with introduction of GM crops in Uganda

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1. Impact of GM crops on human health

- Numerous studies conducted over the past three decades have supported the safety of food derived from GM crops.
- Consumers have been eating food containing GM ingredients since 1996 with no evidence of harm demonstrated so far.
- The World Health Organization (WHO), Food and Agriculture Organization (FAO), American Medical Association (AMA), European Food Safety Association, and a broad range of other scientists agree that GM foods currently on the market are as safe as the non-GM foods.

2. Impact of GM crops on our bio-diversity

- Our indigenous seeds are part of bio-diversity and our heritage; they are very critical for our current and future survival.
- Under the proposed Biotechnology & Biosafety law, no activity involving biotechnology shall be conducted if it poses any significant threat to our environment, livelihoods, bio-diversity, or health (See Cl. 26; Cl. 29).
- With or without the use of biotechnology products, our bio-diversity is being lost due to climatic stresses, diseases, and pests; requiring farmers to opt for new varieties. As such, Government has established some gene banks and community seed banks.

3. Mixing of GM pollen with non-GM crops in neighbouring farms

- Cross pollination occurs naturally in many plants such as maize; but it does not happen for others such as rice, banana, cassava, millet, and beans.
- The proposed regulatory system will not approve environmental release of biotechnology products that may have negative impact on other plants. Co-existence of different kinds of crops has been accomplished through zoning; sensible farming practices can also be considered to cater for different regional preferences.
- The Constitution of Uganda, the supreme law in the country, under Article 50 guarantees any person the freedom to seek redress from courts of law if they believe that any of their rights have been infringed.

4. Multinational companies' involvement in the seed industry

- Our farmers must never be compelled to procure any particular type of seed and the Government has ensured through the years that farmers have adequate choice on varieties for each crop.
- The National Agricultural Research Organisation has in the past 22 years released more than 1000 varieties of different crops for farmers and continues to conduct conventional research for farmers.
- Farmers always have the right to save their seed for subsequent seasons and the science of genetic modification does not forbid seed saving. The hybrid technology is what recommends buying of new seed every year.

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5. GM crops and development of chemical-resistant weeds

- This is true for herbicide-tolerant GM crops, especially in environments where herbicide use was originally not a common practice. Increase in glyphosate-resistant weeds has been reported in Brazil, Australia, Argentina and Paraguay.
- For large-scale commercial agriculture, using an integrated weed management system including timely application of herbicides is still more efficient than ploughing and tilling the soil, and is less environmentally damaging (Gilbert, 2013[a]).
- The proposed law mandates the regulators to conduct an environment impact assessment before environmental release of any GM crop.

6. GM crops and their impact on beneficial insects like bees

- Prior to release of GM crops that can act as insecticides, a safety assessment is conducted to determine their impact on various beneficial insects.
- Effect of Insect resistance GM crops on beneficial insects is less than application of broad spectrum pesticides because their target-pests are more specific.
- Use of insect-resistant GM crops has resulted in less application of broad spectrum pesticides thus increase in insect biodiversity in GM crop fields (Lu et al., 2012[b]).

7. The proposed law and labelling of GMOs

- The Biotechnology & Biosafety Bill provides for labelling/product identification under Clause 44 (2) (c).
- The Committee on Science and Technology has further made recommendations to clarify labelling of products of biotechnology.
- Special labelling of food is required if a food allergen is introduced, the nutritional content is changed, or if there is any other substantial change to the food's composition.

8. GM technology is not a magic bullet for solving all agricultural challenges

- No single technology or activity can solve all farming challenges. An integrated approach is needed to address production constraints including supply of good seed, water and soil management, improved post-harvest handling, and marketing and among others.
- Biotechnology is one of many tools used to provide better seeds and planting materials.
- Government of Uganda is aware that biotechnology and GM technology are not the single solution to all our challenges. Government is committed to implement several approaches in curbing farming challenges.

[a] http://www.nature.com/news/case-studies-a-hard-look-at-gm-crops-1.12907

[b] http://www.nature.com/nature/journal/vaop/ncurrent/abs/nature11153.html?message-global=remove

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