Developments Needed to Bring Agricultural Biotechnology to Africa

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Summary of Talk

- Background on CSPI and Biotechnology
- Product Development in Africa
- Biosafety in Africa and the Cartagena Biosfety Protocol
- Roadblocks to product adoption
- Conditions favorable to adoption

Center for Science in the Public Interest (CSPI)

- Food and nutrition consumer organization.
- Nutrition Action Healthletter – 850,000 subscribers in US and Canada.
- No government or industry funding.
- Advocacy and education based on the best available scientific evidence

CSPI's Biotechnology Project

- Purpose
  - Identifying benefits and risks
  - Establishing strong regulatory systems in US and abroad
  - Educating and informing the public
- Positions
  - Current crops in US appear safe to eat and environmental risks are manageable
  - Some benefits from current crops
  - Future products need to be assessed individually
  - Regulatory systems in US and abroad need strengthening to address next generation of products
- Involvement in Africa
  - Worked in South Africa, Malawi, Kenya, Uganda, Tanzania, Ghana, Nigeria and West Africa.

Current Status of Biotechnology in Sub-Saharan Africa

- Only one country with commercial products – South Africa (corn, cotton, soybeans)
- A handful of countries with field trials in past ten years – Kenya, Uganda, Burkina Faso,
- Laboratory research on products in some countries
- Biotechnology capacity is very limited

The Biotech Pipeline in Sub-Saharan Africa

- Transferred products from developed countries
  - Burkina Faso: Bt cotton
  - Kenya: Bt cotton and Bt corn
  - Malawi: Bt cotton
- Locally developed products
  - Nigeria: Bt cowpea
  - Kenya: Virus resistant cassava
  - Uganda: Disease resistant bananas; virus resistant cassava
  - South Africa: Bt potato; virus resistant corn
  - Transgenic sorghum

Status of Biosafety Regulation in Sub-Saharan Africa

- One country with fully functional biosafety regulatory system – South Africa
- A handful of countries with partially operating systems (can handle and approve a field trial)
- Most countries have nothing more than a few draft documents on how their system will operate
- Limited regulatory capacity throughout the region

Background on Cartagena Protocol

- Key driving force in regulation of biosafety and establishment of biosafety regulations
- Agreement under Convention on Biological Diversity
- Negotiations completed in 2000
- Came into effect on September 11, 2003
- Most countries have not yet implemented requirements
- Significant donor funds are being used across the continent to implement obligations

African Countries That Have Ratified Protocol

- 40 Countries -- Algeria, Benin, Botswana, Burkina Faso, Cameroon, Cape Verde, Chad, Congo, Democratic Republic of the Congo, Djibouti, Egypt, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Kenya, Lesotho, Liberia, Libyan Arab Jamahiriya, Madagascar, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, South Africa, Sudan, Swaziland, Togo, Tunisia, Uganda, United Republic of Tanzania, Zambia, Zimbabwe

Biosafety Protocol -- Objective

- Ensure adequate level of protection for safe transfer, handling, and use of living modified organisms that may have an adverse effect on the conservation and sustainable use of biological diversity, taking into account risks to human health and specifically focusing on transboundary movements.

Biosafety Protocol -- Key concepts

- Applies to transboundary movement, transit, handling, and use
- Living modified organisms produced through modern biotechnology
- Addresses effects on conservation and sustainable use of biological diversity
- Also mentions taking into account risks to human health
- Discusses the precautionary approach

Roadblocks to Biotechnology Development

- Misinformation about biotechnology and biosafety
- No useful products produced by local scientific institutions
- International debate and the precautionary principle
- Perceived risks (trade and economic, not safety)
- Perfect being the enemy of good

Conditions for Biotechnology to Develop in Africa

- Political will to back biotechnology
- Benefits from a particular product (e.g. Bt cotton)
- Willingness to conduct field trials before biosafety policy and regulations are completed
- A perceived competitive advantage from adoption
- Country with less influence from outside NGOs
- Lessening of the international debate (make the mountain into a hill)
- Developing biosafety regulations along with biotechnology products

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