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Report Highlights:

Publicly, there appears to be GON support for modern agricultural biotechnology in Nigeria, especially in the country's quest to address its food security challenges. The Biosafety Guidelines were approved in 2001. The draft of the Biosafety Bill was recently completed. Apparently, in the Government's quest to fulfill its commitments under the Biosafety Protocol it is moving at an acceptable pace considering the current resources of the Biosafety Secretariat. Under the current Guidelines, the GON can approve biotech varieties for field trials. An application for biotech cassava variety developed in the U.S. submitted by IITA is pending with the GON. Under the draft Bill, mandatory labeling is required.

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SECTION I. EXECUTIVE SUMMARY

Nigeria, Africa's most populous nation (130 million), is a poor food deficit country. Formally a net food exporter, Nigeria's subsistence agriculture can no longer supply the needs of its growing population. According to trade sources, Nigeria imported \$2.5 billion of agricultural commodities in 2004. In CY2004, U.S. agricultural exports to Nigeria reached \$444 million. Nigeria is largely a bulk commodity market with the U.S. having a major share of the wheat market. Opportunities also exist for soybean products, tallow, rice and high value products.

At present, Nigeria has no laws governing modern agricultural biotechnology and biosafety. In 2000, the GON established a 15-man National Biosafety Committee (NBC) to oversee the implementation of the national Biotechnology Program. To date, the committee has developed a draft Biosafety Bill, which is yet to be circulated for national debate. The NBC Secretariat indicated public debates will be organized across Nigeria for all stakeholders- scientists, farmers, government, press etc. There is no set time frame by the NBC to complete this process. The draft bill generally portrays products of biotechnology as safe for animal and human consumption, it however, advocates strict adherence to the 'precautionary principle' and mandatory labeling of all products of agricultural biotechnology to protect "consumers right to know." If the bill were enforced once passed, it would likely affect exports of U.S. food products to Nigeria.

SECTION II. BIOTECHNOLOGY TRADE AND PRODUCTION

a) Nigeria does not currently produce any biotechnology crops commercially. Capacity exists at the International Institute for Tropical Agriculture (IITA) and the Sheda Science and Technology Complex (SHESTCO) to conduct and apply biotechnology research. Scientists in Nigeria are assessing genetic diversity in the major crops grown in Nigeria. With transgenic insect-resistant cotton in its second year of field trials in Burkina Faso, Nigerian cotton growers have indicated strong interest in conducting field trials.

b) There is no biotechnology crop under development in Nigeria that will be on the market in the coming year. Sustained research using modern agricultural biotechnology methods in Nigeria is being conducted at the IITA. The institute is doing preliminary work on bio-engineered cowpea. IITA also collaborates with the National Root Crops Research Institute (NRCRI) on biotech cassava research.

c) Agricultural products such as soybeans, soybean meal, soybean oil and processed food are currently imported from the U.S., EU, Brazil and Argentina and may contain biotech ingredients. Corn was imported from the U.S. until the recent ban until a recent ban implemented by the GON to protect local producers.

d) Nigeria is a food aid recipient. Rice, soybean meal and skim milk powder are commodities that have been monetized under USDA food aid programs in the past few years.

SECTION III. BIOTECHNOLOGY POLICYi. Responsible institutions involved in agricultural biotechnology in Nigeria:

National Focal Point -- Federal Ministry of Environment
National Biosafety Authority (NBA) - Proposed
The National Biosafety Committee (NBC)
National Biosafety Technical Sub-Committee
Institutional Biosafety Committees
National Biotechnology Development Agency (NBDA)

The Federal Ministry of Environment is the national focal point on Biosafety in Nigeria. This Ministry is the GON's liaison with the Secretariat of the Convention on Biological Biodiversity for administrative functions required under the Cartagena Protocol on Biosafety. The National Focal point is responsible for all correspondences with importers, exporters and applicants on movement of products of modern biotechnology. Pending the passage of the National Biosafety Bill, the Minister of Environment acts for National Biosafety Agency (NBA). The Ministry of Environment is proposing the establishment of an independent NBA.

ii) Role and Membership of the Biosafety Committee

The NBC serves as the Competent National Authority for biosafety in Nigeria. The NBC is responsible for the safe management of biotechnology activities, including research, development, introduction and the use of LMOs/GMOs. The Committee has 15 members drawn from the Ministries of 1) Agriculture 2) Science & Technology, 3) Environment, 4) Commerce, 5) Education, 6) Health (NAFDAC), 7) Industry, 8) Foreign Affairs, 9) Internal Affairs (Nigerian Customs Service), 10) Justice 11) NACCIMA/Organised Private Sector, 12) a Biologist, 13) a Physical Scientist, 14) a Social Scientist and 15) a Representative of NGOs distinguished in environmental/conservation matters. The NBC shall oversee the implementation of the National Biotechnology Program, consistent with the Biosafety Law.

The National Focal Point (Environment) has developed a National Biosafety Framework (NBF) to provide guidance on the implementation of Nigeria's Biotechnology program. This framework is a combination of policy, legal, administrative and technical instruments that will regulate all biotechnological work to minimize or eliminate any potential hazards. It is also intended to ensure the safe transfer, handling and use of biotech materials that may have adverse effects on the conservation and sustainable use of biological diversity, taking into account risks to human health. The Framework is meant to provide a one-stop clearinghouse in the NBC.

The NBC has also established National Biosafety Technical Sub-committees (NBTS) to focus on sectoral interests such as agriculture, health, industry and the environment. The sub-committees review proposals for research and recommend the conditions under which experiments should be conducted. They are to provide technical advice to the NBC and contribute to its functions in relation to contained use, field trials, release and placement on the market.

The Framework also require the establishment of Institutional Biosafety Committees (IBC) by all institutions in Nigeria, both private and public (e.g. research institutes, universities, international research centers etc.), which plan to undertake biotechnology research and/or development. The IBC shall consult and seek approvals from the NBC and implement recommendations from NBC among others.

The NBDA was established in 2001 in the Ministry of Science and Technology to promote the development of biotechnology in Nigeria. The agency is active in creating awareness for products of biotechnology. NBDA conduct regular workshops for the major stakeholders in biotechnology.

All applications for import, field trials, transit and contained use must be routed through the registrar of the NBA. The NBC will meet and direct the relevant NBTS to carry out risk assessment and ensure participation of all relevant stakeholders. Findings of the NBTS are submitted to the NBC. The NBC takes a decision, which is then conveyed to the applicant by the Registrar of the NBA. A license to carry out event is issued by the Registrar of NBA.

iii) Political factors

The Nigerian government appreciates the potential of biotechnology to improve agricultural productivity. The national biotechnology policy document states that the GON "supports biotechnology because of its immense potential to more rapidly contribute to sustainable food

security and economic growth". President Obasanjo was also quoted as saying that " as a matter of priority government will initiate appropriate steps in the area of biotechnology and facilitate the effective utilization of this new technology for the benefit of our people." The government established the National Biotechnology Development Agency (NBDA), approved the National Biosafety Guidelines in 2001 and is in the process of establishing the Nigeria Biosafety Law. There are mixed opinions from government officials regarding the progress of Nigeria's biosafety measures.

b) No law exists to approve biotechnology crops for food, processing and feed.

c) In 2001, the GON approved the National Biosafety Guidelines. The guidelines have a provision for field-testing bio-engineered crops. So far, no bio-engineered crop variety has been approved for field-testing. An application is currently before the National Biosafety Committee (NBC) to introduce the first LMO virus resistant cassava variety for field trials in Nigeria. The variety was developed in the U.S. in collaboration with two Nigerian scientists. The processing of the application for field trials in Nigeria is delayed because the NBC says it lacks funding to meet and deliberate on the application. Post expects this application, the first of its type, to be approved over the next one year. If application were approved, it would allow local regulators and scientists to gain familiarity with biotech crops and encourage development of workable Biosafety systems.

f) The National Agency for Food and Drug Administration and Control (NAFDAC) is the GON's regulatory body responsible for food product manufacturing, importation, advertisement and distribution in Nigeria. The NAFDAC was established to protect and promote public health by ensuring the wholesomeness, quality, and safety of food and drugs consumed in Nigeria. NAFDAC regulations require food labeling to be informative and accurate. The minimum labeling requirements include net content, specifying essential ingredients in metric weight for solids, semi-solids and aerosols, and metric volume for liquids. Ingredients must be listed by their common names in order of their prominence by weight. The regulations are being strictly enforced, but they are not specific to products of biotechnology.

g) The GON signed and ratified the Convention on Biological Diversity in 1994 and the Cartagena Protocol on Biosafety in November 2002. Nigeria, having signed and ratified the protocol is now under obligation to implement it. The implementation of the protocol is slow and has had no effect on trade.

h) We are not aware of any biotechnology-related trade barriers affecting U.S. exports to Nigeria.

g) A draft Biosafety Bill is currently being prepared. The draft bill advocates mandatory labeling of all products of agricultural biotechnology to protect "consumers right to know." If the bill were enforced once passed, it would likely affect exports of U.S. food products to Nigeria.

SECTION IV. MARKETING ISSUES

a) Generally, most Nigerians are not aware of products of modern agricultural biotechnology and the issues involved. Information and discussions on modern biotechnology have been undertaken largely among GON officials, scientists and researchers. Nigerian farmers and the general public will need to be educated about the technology.

Wheat importers in Nigeria favor the precautionary approach to biotechnology. They have learned about bio-engineered food products primarily from the U.S. - EU debate over biotechnology. Overall, Nigerian wheat importers have expressed the opinion that the U.S. should not introduce bio-engineered wheat into the market until all long-term health concerns are resolved. Nigeria is the third largest export market for U.S. wheat, with exports reaching 2.5 million tons in MY2004/05.

b) The results of a focus group survey on the attitude of the public to biotechnology revealed that about 40 percent of respondents would not mind consuming bio-engineered food products. Many respondents especially among those with little education were ignorant of biotechnology and its potential usefulness. While respondents did express concern about the long-term health effects of consuming such products, these concerns seem to be overshadowed by their basic need for affordable food." The survey also revealed a marked preference for biotech products develop locally to those that are imported.

Following press statements by the AgAttache and a series of workshops conducted by USAID funded NAPB for civil servants, policy makers, legislators and for the members of the media, the level of awareness of issues relating to agricultural biotechnology has improved somewhat. Most newspaper articles are well balanced and are devoid of misconceptions about biotechnology.

SECTION V. CAPACITY BUILDING AND OUTREACH

a) Over the last four years, the USDA has helped to fund scientists to work on biotechnology at the IITA, under its technical assistance program. In addition, the AgAffairs Office in Lagos utilized the Cochran Fellowship Program to provide training in biotechnology in the U.S. to four Nigerian scientists during the same period. In June 2005, AgAffairs Office in Lagos also nominated a journalist to participate in a biotechnology seminar sponsored by the US Grains Council.

In 2004, agricultural biotechnology in Nigeria received a boost with the launch of two linked initiatives funded by the USAID. These are the West African Biotechnology Network (WABNET) and the Nigeria Agricultural Biotechnology Project (NABP), implemented by CGIAR's International Institute for Tropical Agriculture (IITA), in close collaboration with Tuskegee University. Signed on August 21, 2003, NABP is a \$2.1 million project to assist Nigeria in building the framework for decision-making that will facilitate access to the opportunities biotechnology offers and will ensure the safe and effective application of this technology to improve agriculture. A key element of the project is to improve implementation of bio-safety regulations; and, enhance public knowledge and acceptance of biotechnology.

Presently, the project has developed collaborative linkages and is providing facilities to some Nigerian universities/institutes to facilitate implementation; National Biotechnology Development Agency (NABDA) for biotech information dissemination; Sheda Science & Technology Complex (SHESTCO) for training of scientists; National Root Crops Research Institute (NRCRI) for plant transformation; Institute of Agricultural Research (IAR) for tissue culture and University of Agriculture, Abeokuta for advanced biotechnology training.

b) Capacity building training is required for the personnel of the Ministry of Environment to be able to move forward the process of creating an enabling regulatory environment for biotechnology. SHESTCO requires up to date laboratory facilities to act as a national center of excellence that will be able to conduct research and assessment tests.

SECTION VI. REFERENCE MATERIAL

Nigeria Biosafety Guidelines 2001
Draft Nigeria Biosafety Bill 2005
Draft National Biosafety Framework
National Biosafety Policy

Copies of these documents are available in the AgAffairs office.

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