



DISEASE RESISTANT BANANA: E. AFRICA

EAST AFRICAN HIGHLAND BANANAS (EAHB)

Bananas, particularly cooking bananas, are one of the most important cash and food crops in Uganda in that:

- Uganda consumes the highest per capita amount of bananas in the world
- 65% of Ugandans consume banana once per day
- Bananas occupy an estimated 38% of cultivated land in the country.

In Uganda, banana crop yields are significantly affected by local pests and disease. One source of serious damage is “Black Sigatoka”, an air-borne fungal disease reducing crop yields by 30-50%.

BIOTECHNOLOGY

Less than 25% of banana farmers in Uganda use any pesticides to control Black Sigatoka. Additionally, EAHB are sterile, making conventional plant breeding to develop pest resistant banana varieties a time consuming process.

Biotechnology has enabled the creation of high-yielding banana crops that maintain product and production quality while improving resistance to Black Sigatoka. Disease resistant banana varieties have been observed in the laboratory and are currently being investigated under local growing conditions.



Source: Larry Beach

Ugandan Banana Fields



Source: Larry Beach

Black Sigatoka affected leaves

REGIONAL IMPACT

Estimations are that Black Sigatoka resistant bioengineered crops will increase yield 20% above the 625,000 tons of cooking bananas currently grown in Uganda, increasing annual gross margins US\$6 million.

PROJECT STATUS

The USAID funded Black Sigatoka resistant banana project falls under the umbrella of the Agricultural Biotechnology Support Project Phase II (ABSPII) in collaboration with Cornell University and others. Field trials of bioengineered

bananas, the first trial of a bioengineered crop in Uganda, took place in 2007 in Kawanda, Uganda. Although improved Black Sigatoka resistance was observed, additional crop improvements are ongoing for future trials.

USAID Partner Organizations: Cornell University (USA), Katholieke Universiteit Leuven (Belgium), National Agricultural Research Organization (Uganda), University of Leeds (UK)