ISAAA Brief 47-2014: Executive Summary

Brinjal (eggplant/aubergine) is a very important vegetable in Bangladesh where it is grown by about 150,000 very small resource poor farmers on about 50,000 hectares, in both the winter and summer seasons. Brinjal suffers regular and heavy losses from a very destructive insect-pest called the fruit and shoot borer (FSB) which conventional insecticides cannot control effectively. However, during heavy infestation, farmers have no option except to attempt controlling it by applying insecticides, sometimes every other day, up to a total of about 80 applications per season, resulting in serious implications for producers, consumers and environment. On 30 October 2013, in a historic decision, Bangladesh approved the official release of four biotech, genetically modified, varieties of insect resistant Bt brinjal for seed production and initial commercialization. Sowing of Bt brinjal began in early 2014 in the spring (basanta) season. The seedlings of four Bt brinjal varieties were distributed by Hon'ble Union Minister of Agriculture, Ms. Matia Chowdhury, to 20 small brinjal farmers on 22 January 2014, who became the first Bangladeshi farmers to plant Bt brinjal over 2.6 hectares in four representative regions of Gazipur, Jamalpur, Pabna and Rangpur where these varieties are well-adapted and carefully monitored. Bt Brinjal-1 variety, popularly known as Uttara, was planted in Rajshahi region; Bt Brinjal-2 (Kajla) in Barisal region; Bt Brinjal-3 (Nayantara) in Rangpur and Dhaka regions; and Bt Brinjal-4 variety, Iswardi/ISD006, was planted in Pabna and Chittagong regions of the country. The Bangladesh Agricultural Development Corporation (BADC) in collaboration with BARI has undertaken seed multiplication of four Bt brinjal varieties to be distributed to farmers in the forthcoming Kharif season 2014. By the next year, Bt gene will be introduced in five other popular brinjal varieties including Dohazari, Shingnath, Chaga, Islampuri and Khatkatia to meet the growing requirement of Bt brinjal seeds which will be planted in different brinjal growing areas. Notably, in the next five years, the government of Bangladesh plans to bring 20,000 hectares or approx. 40% of total 50,000 hectares across 20 districts under nine Bt brinjal varieties.

It is evident from the field performance of Bt brinjal that Bt technology is set to benefit farmers by mitigating economic losses and substantially increasing marketable yield, thus ensuring a bountiful harvest. For the first time, Bangladeshi consumers would have access to blemish-free brinjal fruits. Previous experimental data indicate that Bt brinjal can improve yield by at least 30% and reduce the number of insecticide applications by a massive 70-90% resulting in a net economic benefit of US$1,868 per hectare. This is a princely sum for some of the poorest farmers in the world, in a country where the annual per capita income is only US$700. At the national level, Bt brinjal is estimated to have the capacity to generate a net additional economic benefit of US$200 million per year for around 150,000 brinjal growers in Bangladesh. Consumers will benefit from a cleaner, improved and more affordable food product.

Detailed information is provided in ISAAA Brief 47 "The Status of Commercialized Bt Brinjal in Bangladesh". For further information visit www.isaaa.org and www.isaaa.org/india or contact b.choudhary@cgiar.org andnasirbiotech@yahoo.com