

'India emerging as key biotech leader in Asia'

India is emerging as a key biotech leader in Asia, surpassing China for the first time in areas planted with biotech seed, according to a leading agricultural researcher.

Citing the India example, Clive James, chairman of the International Service for the Acquisition of Agri-biotech Applications (ISAAA), said the next decade of research in crops improved by biotechnology will include a major role for the rapidly increasing number of projects in Asia.

ISAAA is a non-profit international network based at Cornell University in New York with centres in the Philippines and Kenya.

Countries in Asia increasingly are investing in agricultural biotechnology research aimed at helping them meet their growing needs for food, feed, fibre and fuel, James was cited as saying by the official state department website.

In 2006, India tripled from the previous year the area it planted in biotech cotton, its first commercialised biotech crop. India now has a total of 3.8 million biotech hectares while China has 3.5 million such hectares.

India is projected to invest \$80 million in 2007 to develop a national network of research laboratories.

Already, with support from the US Agency of International Development and Cornell University, India has been conducting research on major food crops it consumes - eggplant that is resistant to shoot borers, potato resistant to blight, and drought and salt-tolerant rice, James said.

Biotech crops, also known as genetically modified crops, increasingly are being grown in and approved for import by Asian countries, he said.

The researcher, recently back from visiting several countries in Asia, said acceptance is strong among farmers in countries like India, China, Pakistan, Japan, Vietnam, South Korea and the Philippines where traditional crops often are destroyed by insects or harsh environmental conditions.

These farmers stand to benefit financially from increased harvests due to genetic improvements that make certain crops resistant to insects and because such crops need fewer applications of insecticides, James said.

'The development of biotechnology will be a major development for all of agriculture', as scientists look for ways to improve a variety of crops that also effectively will be able to counter soil erosion and conserve moisture, James said.

Plants with genes conferring some degree of drought tolerance, which are expected to become available in approximately 2010 or 2011, will be particularly important for developing countries as drought is the most prevalent and important constraint to increased crop productivity worldwide, he said.

The other countries in the top eight in terms of number of hectares devoted to growing biotech crops

are: the US (54.6 million hectares), Argentina (18 million), Brazil (11.5 million), Canada (6.1 million), Paraguay (2 million) and South Africa (1.4 million), according to an ISAAA report on the global status of biotech crops released in January.

After cotton the next main crop to be commercialised in Asia likely will be 'golden rice' - rice enhanced with vitamin A, which is important for vision and the respiratory, urinary and intestinal tracts, James added. Vitamin A deficiency can lead to children becoming prematurely blind.

China, the largest investor in Asia in biotech research, is expected to spend \$200 million on biotech in 2007. 'China has made a clear decision to invest in biotech because it doesn't want to be dependent on other countries for food, fibre or fuel,' James noted.

He said Vietnam is investing \$70 million for new biotechnology laboratories, equipment and training.

Developing countries would benefit significantly from establishing partnerships with public and private sector organisations in both industrial countries and in advanced developing countries, such as Brazil, which have some experience in producing bio-fuels, according to the ISAAA report.

Biotech crops potentially can contribute to reduction of greenhouse gases, James said. Since these crops need fewer insecticides and herbicides, the reduced use of fossil-based fuels used to apply the chemicals saves carbon dioxide from being released into the atmosphere. Also, herbicide-tolerant biotech crops require less ploughing, which keeps carbon in the soil, he said.

The outlook to 2015 points to continued growth in the global number of hectares planted with biotech crops - up to 200 million hectares in at least 40 countries, the institute said.

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