

September 10, 2002

Source: The Economic Times

Drought-resistant rice can cut water usage by 50%

JEETHA D'SILVA

TIMES NEWS NETWORK

MUMBAI: Genetically modified rice with drought tolerance properties could bring down the crop's water consumption by almost 50%.

According to a study conducted jointly by the University of Marseilles, France, and Avesthagen, a Bangalore-based agri-biotech company, this could result in savings of Rs 77 crore to Rs 253 crore per year for Karnataka.

The objective of the study was to investigate the present rice sector situation in Karnataka and to project how the situation is likely to change through the use of a value-added rice variety," says Viloo Patel, CEO of Avesthagen.

Rice is one of the main consumers of water. For every kilo of rice produced, about 5,000 to 12,000 litres of water is consumed. Since its cultivation being the primary agricultural activity in Karnataka, a positive impact in terms of water would be significant.

Following different scenarios for water consumption, "the gain for Karnataka is estimated to be up to 17,358,906m litres, an equivalent of 0.9% of the agricultural GDP in Karnataka," says Pierre Socha, one of the researchers involved with the project.

Avesthagen is developing a variety of drought tolerant GM rice which is currently undergoing field tests. The product should be in the market in about four years time.

"The impact of the rice is expected to be significant as the rice systems in the country are primarily rainfed. In this system, insufficient water supply is a major constraint to productivity," says Socha.

The shrinking of water resources is expected to seriously affect its productivity. If not addressed, the problem could assume serious magnitudes because of the current water management techniques.

"This inevitably warrants proactive research efforts to find genetic resources for tailoring varieties adapted to changing growing conditions," says Sarasija Padmanabhan of Avesthagen.

According to Socha, the study was conducted in Mandya, which is in one of the most drought prone regions of Karnataka as well the Shimoga district and the Dakshin Kannada district, which receives significant levels of rainfall.

Surveys consisted of meeting with economists, statisticians, scientists, NGOs and farmers. The regional approach of looking at Karnataka was chosen to get an overview of possible differences in India's rice production systems because, with 10 different agro-climatic zones, all of India's geographic possibilities are available here."