

## Memo

TO Arjen van Tunen (Keygene)  
FROM Alexander Duyndam  
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SUBJECT Text to be submitted to Financial Times

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New drought tolerance crops provide yield and income increases for Indian farmers.

“The Indian farmer is an entrepreneur”, says Vikram Shriram: “He may not be able to read or write, but he certainly knows economics and what constitutes a smart investment.” As Vice Chairman & Managing director of the listed DCM Shriram Consolidated Limited (DSCL), whose division is Bioseed Research India, Mr. Shriram certainly knows what he is talking about. His company works to bridge ‘the last mile’ to the rural farmer with an extensive distribution and retail network of over 30,000 retailers. Nearly 60% of the rural population in India, i.e. over 700 million people, depend on agriculture for their livelihood. Over 80% of the farmers own a plot of land smaller than one hectare. On top of that about 60% of Indian agriculture is rain-fed. These small scale farmers could lose their entire crop during an extensive drought. With global warming this could become a more common scenario. A strategic partnership between Bioseed Research India with the Dutch technology provider Keygene, signed recently, aims to provide farmers with drought-tolerant crop varieties within five years. Keygene uses proprietary molecular breeding tools to identify and select the desired traits from the natural varieties. These non-GMO breeding technologies are expected to produce a 25% increase through high yield potential coupled with high drought tolerance using the seed library of Bioseed Research in crops such as corn and rice. These new breeding technologies also reduce the time-to-market by at least three years. Bringing the latest breeding technologies to seeds used for agriculture in (sub)tropical climates provides numerous advantages. Key is that the farmers become more productive and thereby more profitable, lifting people out of poverty. In that respect can new hybrid crops really be a game changer for rural India as was Bt-cotton which caused a doubling of the cotton production in India in five years. CEO of Keygene, Arjen van Tunen, adds “India has to double its food production over the next 25 years. Experts estimate that 40% of this increase in output can be achieved with the development of improved genetics of seeds. For corn alone in India, we estimate this to reflect a value of 30 million Euro per year on seed sales. Yet we should not only think of yield-increase but also of yield-certainty. Drought-tolerant crop varieties provide a guarantee that there is food on the table even when rain has been scarce.”

“Our ultimate satisfaction is in achieving commercial success while simultaneously improving the standard of living in rural India by bringing the latest technology to our farmers”, concludes Vikram Shriram.

Wageningen March 23rd 2012.