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## Breeding programs for locally developed hybrid rice and present scenario in Bangladesh

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Rice is the main source of livelihood in terms of providing food, income and employment in Bangladesh, with 79.4 percent of the total cultivatable land area under rice crop but the demand for rice is constantly rising. Shifting the yield frontier in rice, hybrid rice is one of the best options available to plant breeders. The development and use of hybrid rice in Bangladesh began in the early 1990s. During 1993, only public sector (BRRI) started research of hybrid rice and NGO's and other private entrepreneurs just commercialized Chinese and Indian hybrid rice. Bangladesh government attempted to develop hybrid rice varieties and their seed production technologies and takes necessary measure for its use by the farmers suitable for Bangladesh. In addition, production of nucleus and breeder's seed to meet the demand of hybrid rice seed in the country. Three line hybrid breeding techniques were used in the breeding work with the selection of desired traits. Among 118 hybrid varieties only eight varieties is originated from Bangladesh, others 94 from China and 15 from India. BRRI released first locally developed hybrid variety in 2014 named as BRRI Hybrid Dhan1 along with its CMS (IR58025A from IRRI) with its restorer (BR827R originated from BRRI). After that BRRI released three hybrid rice varieties with their parental lines named as BRRI Hybrid Dhan2 (BRRI10A/BRRI10R) in 2008, BRRI Hybrid Dhan3 (BRRI11A/BRRI15R) in 2009 for Boro season and BRRI Hybrid Dhan4 (IR58025A /BRRI10R) in 2010 for Aman season. Moreover, BRRI supplied a total of 665.0 kg of parental lines and F1 seeds to 4 seed companies including BADC, farmers and BRRI staffs in 2013-2014. The Government identified hybrid rice research as a priority area and established a national research and development network across the country involving public and private sector organizations as well as NGOs.

### Biography

Afsana Ansari graduated the Faculty of Agriculture at the Bangladesh Agricultural University in 2014 and masters in Environmental Science in 2006. She has been working as a scientist of Hybrid Rice Division, Bangladesh Rice Research Institute, since 2006. She is finished her 2<sup>nd</sup> master's in Genetics and Plant Breeding at BSMRAU, Bangladesh. She is now continuing her PhD in the Institute of Crop Sciences, Chinese Academy of Agricultural Sciences since 2012. She is the author of 19 original papers in English and three booklets in Bengali. She has involved in development and released of BRRI released three hybrid varieties named as BRRI hybrid dhan2, BRRI hybrid dhan3 and BRRI hybrid dhan4.

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