

Category	: 8th Rice Genetics Symposium
Select Theme	: Genetic improvement
Endorsement email	:
Keyword 1	: Breeding for specific management (water, labor, nutrients, etc)
Keyword 2	: Abiotic stress tolerance
Keyword 3	: Genetic gain
Title of Entry	: Red and Blask rice Super Food of 21 century - breeding strategy
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Select only one type of presentation	: 15 minute oral presentation

Abstract : Most of the world's population does not receive enough antioxidants, vitamins, microelements. That leads to rapid aging of the body and the development of a number of chronic diseases, primarily cardiovascular, cancer, diabetes. Scientists call black rice «Super food of the 21st century» since the content of antioxidants exceeds most of their known sources. Antioxidant protect cells from free radicals that damage cell membranes, genetic material, lead to oxidation of lipids and protein molecules. Using unique patented technology fixation of heterosis effect we created the row of rice varieties, that possess antitumoral properties, useful for people with the heart diseases and diabetics, render general tonic influence on an organism, assist the decline of mass. They have in 20 times greater maintenance of antioxidants, 5-8 times of microelements, than white grain varieties. 100 g of black rice practically provides the recommended daily rate of selenium, copper, zinc and manganese. Improved nutrition reduces the likelihood of many chronic diseases, increases the effectiveness of treatment by 30 – 40%. We have created black and red varieties with productivity (8 -10 tons per hectare) and production cost of white grain, that provides an excess profit to the producer due to their 6 times higher prices in markets. The difference in price is caused by need of investments in development of production and breeding. Black and red rice is inexpensive product with a range of useful properties that can replace the expensive used in the food, pharmaceutical, cosmetic industry. Black and red rice varieties is produced using the technology of fixing heterosis effect in inter-subspecific hybrid. Technology of fixing of heterosis effect provides reduction of duration of plant-breeding process for 3-4 year, promotes his efficiency

Includes the row of the stages, among that molecular marking (a kind of genomic selection), receipt of the doubled haploids through anther culture.

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