

Embrapa aims at drought-tolerant iron- and zinc-rich rice and common beans

Embrapa Rice & Beans (Santo Antônio de Goiás/GO) and partners are conducting research based on conventional breeding intended for production of drought-tolerant rice and bean cultivars with higher iron and zinc content to fight anemia. Four different varieties offering a potential for biofortification have been identified. Results will be announced during the III Annual Biofortification Meeting in Brazil, to be held from May 31 to June 05 in Aracaju (Sergipe).

Research has focused on micronutrient-rich varieties listed in the Embrapa seed bank, which houses 11,000 samples of rice and 14,000 samples of beans. Lab analyses have identified two traditional rice varieties collected in Maranhão – Zebu Ligeiro and Chatão Branco, as well as two common bean cultivars - BRS Agreste (*mulatinho*) and BRS Pontal (*carioca*).

Rice varieties are currently being evaluated with small farmers in Miranda do Norte, Vargem Grande, Chapadinha and Brejo, in Maranhão. BRS Agreste and BRS Pontal are being tested with rural producers in Sergipe and Pernambuco.

Rice has an average content of 1.3 milligrams of iron and 1.0 milligrams of zinc for 100 grams of boiled rice, while beans have 7 milligrams of iron and 3 milligrams of zinc. The recommended daily intake of both micronutrients for adults is about 12 milligrams of iron and 10 milligrams of zinc.

Beans, in turn, are undergoing drought tolerance experiments in order to determine the plant's ability to withstand long periods of drought during the crop growing season without significant production loss - especially in the country's semi-arid zone.

This project - currently being conducted by Embrapa Rice & Beans Breeding Program - is aimed at producing cultivars with nearly twice the content of iron and zinc found in common varieties and desirable agronomic, cooking and processing traits.

The initiative has the support of Embrapa Coastal Tablelands (Aracaju-SE), Embrapa Tropical Semi-Arid (Petrolina-PE), Embrapa Mid-North (Teresina-PI), Agência Estadual de Pesquisa Agropecuária e Extensão Rural (AGERP-MA), International Center for Tropical Agriculture, and Embrapa Food Technology (Rio de Janeiro-RJ).

Biofortification – rice and common beans research will one of the highlights of the III Annual Biofortification Meeting in Brazil (www.cpatc.embrapa.br/biofortbrasil/), which will count on the presence of Minister of Agriculture Reinhold Stephanes and 200 researchers and technical experts from all over Brazil and abroad. The Meeting is a joint Embrapa Food Technology and Embrapa Coastal Tablelands event held in partnership with HarvestPlus and AgroSalud programs with support from Monsanto, Pepsico, Nestlé, and Halotek Fadel.

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Information on the III Annual Biofortification Meeting in Brazil

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