Entry No. IRRC-0554

Category	: International Rice Research Conference
Select Theme	: Genetic improvement
Endorsement email	:
Keyword 1	: Germplasm Enhancement
Keyword 2	: Breeding for future markets/novel products
Keyword 3	:
Title of Entry	: Characterization of rice grain quality in brands, varieties, and promising lines from Latin America and the Caribbean
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Affiliation 1	: Latin American Fund for Irrigated Rice
Affiliation 2	: Latin American Fund for Irrigated Rice
Select only one type of presentation	: 15 minute oral presentation

Abstract : Rice is a staple food in most countries of Latin America and the Caribbean (LAC), while in some producing countries rice is mainly a commodity for export. The characterization of rice quality is fundamental for selecting varieties that meet the demands of producers, industry, and consumers. The objectives of this research were: 1) to know the similarity in appearance and cooking quality of rice in three groups of materials: brands, varieties, and promising lines, and 2) determine which samples from these groups have grain quality associated with high-value markets in LAC (translucent, long and slender grains, loose, and consistent after cooking). This research was carried out in the Rice Quality Laboratory of the Latin American Fund for Irrigated Rice, in CIAT-HQ, Palmira, Colombia. Grain appearance (white-belly, length, and width) and cooking quality by indirect methods (amylose content and pasting properties of starch) were scored in 147 materials (49 brands, 53 varieties, and 45 promising lines) from 10 LAC countries. Rice brands were purchased in supermarkets whereas varieties and lines' grain samples were provided by breeders from each country. Significant differences were found among groups of materials, for most traits. Only length, width, and length-to-width ratio were statistically similar (long and slender) among groups and countries. In Costa Rica, Honduras, and Venezuela, rice brands had a greater white-belly score than the varieties and lines of each country, possibly because the industry also commercializes imported rice that may be less translucent. In Costa Rica, pasting properties were

similar among groups, corresponding to loose and consistent grains after cooking. A contrasting case was Peru, where the three groups were statistically similar for intermediate amylose and for pasting properties associated with softer rice grains after cooking. Out of the 147 materials, 12 (two brands, seven varieties, and three lines) from six countries (Argentina, Colombia, Costa Rica, Dominican Republic, Nicaragua, and Uruguay) had the complete profile of appearance and cooking quality associated with high-value markets. This study is part of a project aim to provide useful information to breeders in LAC for selecting rice varieties that meet the demands of grain quality of the markets.

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