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IINTRODUCTION

A lot of factors are going to be considerer in the evaluation of rice cultivars. All of them are related to obtain a neccesary equilibrium between producers, people of the rice industry and consuming interest.
This paper shows the determination of physicals, nutritional, and cooking traits of quality of some varieties of rice, wich are now at experimentation stage in Uruguay.
The following quality traits were determined:

PHYSICALS TRAITS
Grain dimmension:
Length
Width
Area
Volume
Weight of 1000 grains
Roundness

NUTRITIONAL TRAITS
Moisture content
Total fat content
Protein content
Ash content

COOKING TRAITS
Gelatinization time
Gelatinization temperature
Water absorption during cooking
Alkali test
Grain appearance after cooking
Solids in the water cooking
Volume expansion during cooking
Amylographic paste viscosity

MATERIALS

Some studies over four milled, long grain type rice varieties, were selected to be shown in this po ster. The varieties are : L5309 and L5306 that belong to american quality, and L3821 and L2908(aromatic), that belong to tropical quality.

Methods:
The following methods were used to determinate physicals and nutritional quality traits :
Grain dimmension : Graincheck equip by FossTecator.
Moisture : Based in AACC 44.15 A Tenth Edition
Total Fat: Extraction by Tecator Soxtec System HT
Protein : Based in UNIT-945-94
Ash : Based in UNIT-ISO-2171-93

Key Words

Rice varieties
Quality traits
Evaluation
Uruguayan Rice

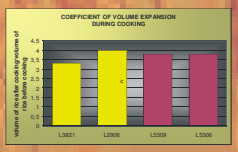
Varieties		L5309		L5306		L3821		L2908	
Length (mm)	Std (mm)	6,670	0,720	6,820	0,790	6,475	0,650	6,660	0,680
Widt (mm)	Std (mm)	2,062	0,248	2,272	0,241	2,092	0,244	2,316	0,246
L/W		3,235		3,002		3,095		2,876	
Area (mm^2)	Std (mm^2)	10,960	1,830	11,990	1,98	10,940	4,380	12,490	1,910
Volume (mm^3)	Std (mm^3)	15,510	4,170	18,440	4,210	15,890	4,380	20,160	4,570
Roundness	Std	0,175	0,047	0,206	0,050	0,193	0,046	O,224	0,053
Weight of 1000 grains (g)		16,160		18,340		15.850		19,400	
Broken (g/100g)		4,7		2,8		1,9		0,7	

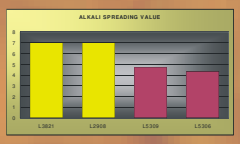
Varieties	L5309	L5306	L3821	L2908
Moisture (g/100 g)	14,5	14,0	15,2	14,8
Total fat (g/100g) dry basic	0,21	0,29	0,34	0,34
Protein (g/100g) (N× 5,95) dry basic	9,7	10,6	10,3	10,0
Ash (g/100g) dry basic	0,30	0,34	0,50	0,47

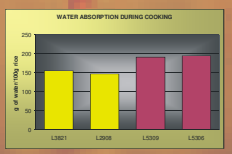
Varieties	L5309	L5306	L3821	L2908
Gelatinization temperature (based in alkali test) (ºC)	70-74	70-74	Minor than 70	Minor than 70
Gelatinization temperature class	Intermediate	Intermediate	Low	Low

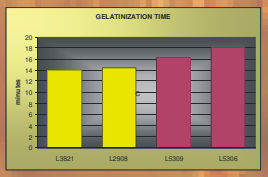
Methods:
The following methods were used to determinate cooking quality traits :
Gelatinization time : Evaluation of gelatinization time of kernels during cooking. ISO 14864
Gelatinazation temperature : Based in alkali test, 1,7% KOH solution:
Alkali test : USDA procedure, based in Little R.R, B.G.Hilder and E.H.Dawson, Differencial effect of dilute alkali on 25 varieties of milled rice. 1,7 % KOH solution, 20 hours, 25ºC.
Grain appearance after cooking: by determination of percent of damage ker nels.
Amylogram: Brabender Visco/Amylograph, AACC 61.01.Tenth Edition
Volume expansion, solids in the water cooking, and water absortion during cooking :
:"Made in house", based in "Rice Chemistry and Technology" B.Juliano.Second edition,1985.

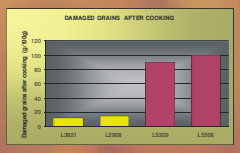
Varieties	L5309	L5306	L3821	L2908
Amylographic paste viscosity ,BU				
Peak	No peak	No peak	No peak	590
At 95ºC	340	350	220	580
Cooked 20 minutes at 95ºC	520	500	580	480
Cooled to 50ºC	990	1000	1040	880

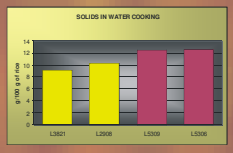












Taking in account this study and the agronomical studies,prominent varieties will appear; those that will be included in the next sowing time in our country.

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