What variety of rice is the most appropriate for the parboiling in Gogounou and Banikoara districts in the Northern-Benin?

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ABSTRACT

Objective: Assessment of the parboiling ability of the three (03) most used varieties of rice (IR 841, Oroukokey and Burkina) in the districts of Banikoara and Gogounou (north Benin).

Methodology and Results: Two approaches were used: (i) Parboiling test of the three varieties of paddy rice, (ii) Assessment of the physical quality of the parboiled rice just after husking and also after cooking. For each variety, 40 kg of paddy rice was parboiled by the processors and parboiling parameters were assessed. After husking, a sample of 1 kg of parboiled rice was taken and half (500 g) is cooked. The cooked and uncooked samples were submitted to the 20 consumer’s appreciation. The results obtained showed that no significant difference (p>0.05) was observed between the three varieties of rice tested considering parameters: hot soaking duration, steaming duration, amount of water consumed during the hot soaking and during the steaming. The physical assessment of the uncooked rice samples obtained after the drying process showed that the IR 841 variety is more attractive (54.89 %) compared to the Burkina (31.57 %) and Oroukokey (13.54 %) varieties. IR 841 was found to have attractive aroma (50%) than the Oroukokey (20%) and Burkina (30%) varieties. Considering the cooked form of the three parboiled rice, the panellists preferred Burkina variety in the first position followed by the IR 841 variety and then third Oroukokey variety.

Conclusions and application of findings: The three varieties tested (IR 841, Oroukokey and Burkina) can be used for parboiling. But the IR 841 variety is the best suitable for parboiling compared to the two other varieties because of its husking yield, attractive colour, natural flavour and its good taste highly appreciated by the women rice parboilers.