

Nutrient content and yield of upland rice crop cultivars under sowing rate

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INTRODUCTION

Techniques for rice crop production, cultivars adapted and more productive as well as adequate plant population may allow the resumption of upland rice crop in the "Vale do Ribeira" Brazil. The aim of this study was to evaluate the effect of upland rice cultivars and sowing rates to nutrient content and rice yield.

MATERIAL AND METHODS

The study was carried out at Sao Paulo State University, in the county of Registro, 2012/13 crop year. The experimental design was randomized completely blocks with 20 treatments and 4 repetitions, composed upland rice cultivars (IAC, 202, IAC 203, IAC 400, IAC 500 e IAC 600) and sowing rates (50, 100, 150 and 200 kg ha⁻¹ of seed).

Was determined nutrient content (N, P, K, Ca, Mg and S - on flowering plants) and the yield grain rice.

The data were submitted to analysis of variance (test F) and means compared by Tukey test and polynomial regression (p<0.01).

CONCLUSION

IAC 202 and IAC 203 cultivars were those who had higher levels of magnesium content in leaves and IAC 400 the lowest. To yield grain rice IAC 202 and IAC 203 cultivars were those with higher yield, being these more adapted to environmental conditions in the "Vale do Ribeira".

RESULTS

The rice cultivars and sowing rates did not produce significant changes on nitrogen foliar levels. To IAC 202 cultivar were verified major phosphorus and sulfur foliar levels.

To potassium, the cultivar with the highest concentrations was the IAC 600 and IAC 500 was lower. To Calcium concentration the cultivar with the highest concentration was IAC 203 and the lower levels was to IAC 400.

To Magnesium content in leaves IAC 202 and IAC 203 cultivars were those who had higher levels and IAC 400 the lowest.

To yield grain rice IAC 202 and IAC 203 cultivars were those with higher yield, being these more adapted to environmental conditions in the "Vale do Ribeira".

There was no significant difference between sowing rates to yield, showing that the plant population from 50 kg ha⁻¹ of seed was sufficient to provide adequate yield grain rice to the cultivars tested.