

mutants were 18-24% shorter.

Yield samples were milled, polished, and evaluated for their physicochemical characteristics. All mutants had grain quality similar to Basmati 370 (Table 2). □

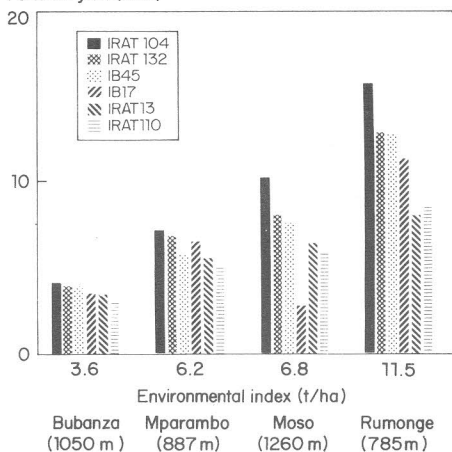
## Upland rice varieties released in Burundi

J. P. Tilquin and P. Njinginya, *Crop Improvement Department, Agricultural Faculty, University of Burundi, BP 2940, Bujumbura, Burundi*

Upland rice has been planted for two centuries by Arabized populations along Lake Tanganyika. The Institut des Sciences Agronomiques du Burundi (ISABU) has decided to develop upland riziculture for 800-1300 m altitude in the Imbo and Kumoso plains.

In 1985, four improved varieties from IRAT and two local populations were evaluated at four stations (Fig. 1). Potential yields were estimated from yields in 30 15-cm pots. Statistical analysis of yields between varieties showed no significant difference at Bubanza ( $F=2.13$ ), a highly significant difference at Mparambo ( $F=5.58^{**}$ ), and a very highly significant difference at Moso ( $F=10.47^{***}$ ) and Rumonge ( $F=9.29^{***}$ ). Results are very highly significant for varieties ( $F=19.6^{***}$ ),

Potential yield (t/ha)



1. Potential yield of 4 improved and 2 local varieties at 4 stations. Bujumbura, Burundi, 1985. Station altitude is in parentheses.

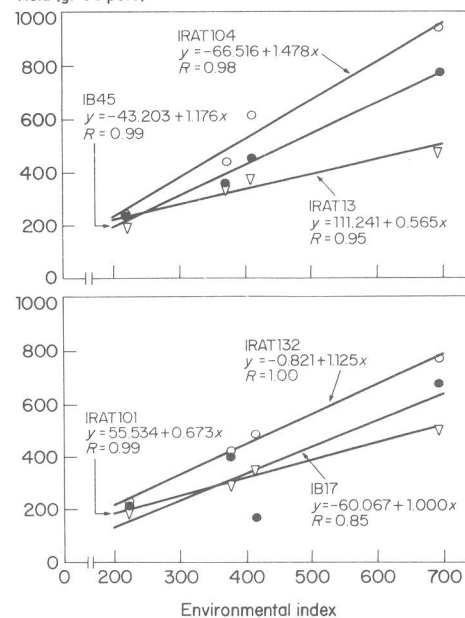
sites ( $F=54.6^{***}$ ), and variety  $\times$  site interaction ( $GXE-F=5.5^{***}$ ).

To isolate responsive varieties ( $b > 1$ ) for intensive riziculture, a regression analysis of yield on environment was made (Fig. 2). Environment was taken to mean such diverse factors as fertility, water supply, climatology, and disease and is the mean of yields at each site.

Three varieties showed a positive interaction: IRAT104 ( $b=1.47$ ), IRAT132 ( $b=1.12$ ), IB45 ( $b=1.17$ ). One, IB17, showed no interaction ( $b=1$ ); and two, IRAT13 and IRAT101, were stable ( $b < 1$ ). The stable nature of IRAT13 is attenuated by its susceptibility to *Sarocladium oryzae*, a major pest at middle altitudes (1000-1400 m) in Burundi.

IB45 showed total resistance to *S. oryzae*. All the IRAT varieties are susceptible. □

Yield (g/30 pots)



2. Regression analysis of yield.

## Guarani, a high-yielding short-cycle upland rice for Midwest Brazil

E. P. Guimarães, O. P. de Moraes, and B. da S. Pinheiro, *National Research Center for Rice and Beans (EMBRAPA-CNPAF), Caixa Postal 179, 74000 Goiânia, Goiás, Brazil*

CNAx 095-BM30-BM9-28, a line selected from the cross IAC25/63-83 has been released as Guarani for Midwest Brazil.

Guarani is a short-duration variety (105-110 d), 100 cm tall. Leaves and spikelets are pubescent and panicles are semicompact, showing good spikelet fertility. Grains are 7.30 mm long and

2.67 mm wide with good cooking quality. In multilocation trials, it was superior to check in blast and drought resistance.

Overall average grain yield (2.7 t/ha) is 15% more than that of the traditionally grown short-duration IAC165 (see table). □

Average grain yield of Guarani and IAC165 in 4 states of Brazil, 1982-86.

State	Trials (no.)	Av yield (t/ha)		Yield increase (%)
		Guarani	IAC165	
Goiás	41	2.8	2.5	14
Mato Grosso	12	2.6	2.2	17
Minas Gerais	7	2.4	1.9	26
Mato Grosso do Sul	7	2.2	2.1	6
Av		2.7	2.3	15

## RY1 - a newly released upland variety for Zaire

B. Longanza, M. Baibinge, and U. Alitum, *Programme de Recherches sur le Riz, Centre de Recherches de Yangambi, INERA, B.P. 2015, Kisangani, Zaire*

In 1976, seven varieties received from IRAT Cote d'Ivoire, were included in observational trials. RY1, RY2, and RY7 were selected for advanced yield trials 1977-80 in three locations, with R66 (check) and C4-1-5.

RY1 yields in Yangambi, Bambesa, and Boketa were 30% and 23% more than that of local check R66 (Table 1).

RY1 is moderately tall (142 cm), making hand harvesting easier and reducing lodging susceptibility in