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## COMMON BEAN KEEPERS AND CULTIVAR DIVERSITY AT TERRA INDÍGENA DO GUARITA INDIAN RESERVE IN BRASIL

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### INTRODUCTION

Lately the role of genetic variability and species diversity has been stressed as a valuable support towards food safety (Bevilaqua and Antunes, 2008). The common bean (*Phaseolus vulgaris*) is a staple food for the Brazilian people, mainly for the low income classes. The species is rich in important nutrients like calcium, iron, proteins and vitamins as like those of the B complex. Indigenous populations constitute one of the most traditional human groups that make use of common beans as food, originally located in the South and Meso Americas. For these groups, common bean represents an important energy source for daily activities as fishing, hunting and agricultural practices.

Embrapa Temperate Climate, located in Pelotas, Rio Grande do Sul State, Brazil, has been conducting studies directed to characterize and preserve landrace germplasm of different crop species. One of the key elements in the landrace germplasm context is the so called “guardião”, the seed keeper. “Guardiões” can be identified among the indigenous populations, and play a paramount role in the maintenance of biodiversity.

In order to identify indigenous Guardiões and characterize the crop and cultivar variability, Embrapa Temperate Climate in a joint venture with Tenente Portela municipality – Brazil, conducted a work at the Terra Indígena do Guarita Indian reserve. The present paper shows results obtained in relationship to the common bean.

### MATERIALS AND METHODS

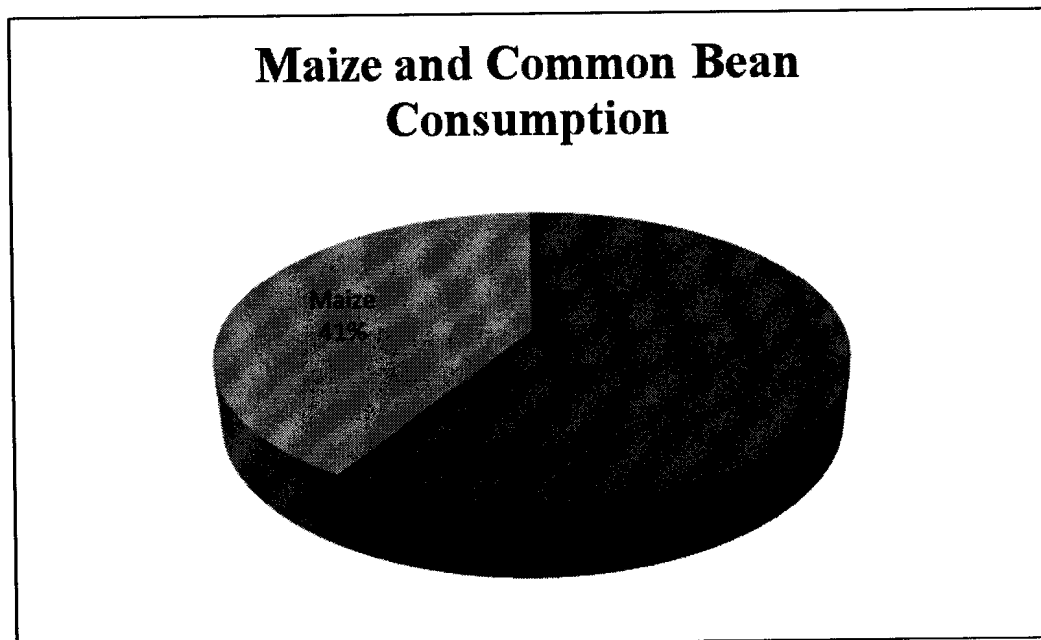
Field work was carried out in the January-March 2012 period at the Terra Indígena do Guarita Indian reserve (TI), located in Northwestern Rio Grande do Sul State. The indigenous “Guardiões” were identified from a meeting comprehending the Tenente Portela Agriculture and the Environment Departments staff members, the Embrapa Temperate Climate common bean research staff and the indigenous representatives. Following this meeting, it was delivered a speech to the indigenous group on the goals of the research project which have been officially registered. A semi-structured quest was submitted to the Guardiões and the crop and cultivar inventories were built. Twelve Guardiões’ families located at the Pedra Lisa, Linha Esperança, Três Soitas and Km 10 sectors of the TI were consulted. For sake of clarity, “Guardiões” are considered those farmers that keep their seeds for a long period of time, even for generations.

### RESULTS AND DISCUSSION

Results show that all the twelve families consulted are common bean keepers. Ten cultivars were identified, namely, preto, carioca vermelho, carioca branco, amarelinho precoce, taquara, grão precoce, mouro, mouro grão, preto taquara and azulão. Another important factor detected, was

the existence of genetic erosion. It has been found that the cultivars carioquinha vermelho, carioquinha branco, enxofre, lentilha, carioca vermelho gráudo and chumbinho were lost. Among the causes for the losses drought is considered as the main one.

Besides common bean, maize and cassava are important crops for food. Cassava production however has been below the needs, also due to droughts. Peanuts (*Arachis hypogaea* L.) and sweet potato (*Ipomoea batatas* L. (Lam.)) are also crops used for food by the indigenous people at TI. The proportion of common bean and maize consumption among the indigenous people at TI are shown in Figure 1.



**Figure 1:** Common bean and maize consumption of indigenous families at Terra Indígena do Guarita Indian reserve

## CONCLUSIONS

- All indigenous Guardiões are common bean keepers.
- Common bean constitutes the most important food source for the TI people.
- The detected existence of common bean cultivar genetic erosion, being drought as the main cause, justifies the need for collection and maintenance of the landrace germplasm.

## REFERENCE

BEVILAQUA, G.A.P.; ANTUNES, I.F. Agricultores guardiões de sementes e o desenvolvimento in situ de cultivares crioulas. 2008. Artigo em Hypertexto. Disponível em: <[http://www.infobibos.com/Artigos/2008\\_4/guardioes/index.htm](http://www.infobibos.com/Artigos/2008_4/guardioes/index.htm)>. Acesso em: 3/7/2011.