



Figure 1. *Cratylia* in seed production in CIAT-Quilichao, Colombia.

Availability of tropical forages has been and continues to be a major factor of impact to improve animal production and agricultural productivity in the tropics including marginal conditions, and quality protein shares in human diets, while their potential effects on the environment and industrial utilization are largely unexplored. It is estimated that for Colombia alone the socio-economic impact of using new options of forages, namely the African grasses *Brachiaria*, in 1994-2001 has been US\$ 189 millions (CIAT 2002). On October 16, 2006, CIAT and ILRI have celebrated an agreement with the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture. Through it, they maintain available to the world community as international public goods 41,801 accessions of tropical forages, for a total of 2,111 different plant species, all of tropical and sub-tropical origin. The user target and regional focus of their respective research activities at CIAT and ILRI over the last decades have resulted in two very diverse collections being assembled (Maass et al., 1997). The collections include in major proportions accessions of tropical grasses and legumes (above 6,000 and 35,000, respectively). These collections complement each other botanically (728 taxa at CIAT and 1,750 taxa at ILRI, and only 367 species shared) and ecologically (CIAT maintains only 1,105 accessions (5% of CIAT collection) from original sites above 1,400 meters above sea level, while ILRI has more than 4,000 accessions (21% of ILRI collection) from above 1,400 masl). Apart from the well-known forages for the tropics (e.g. *Brachiaria*, *Centrosema*, *Desmodium*, *Stylosanthes*), the collections provide unexpected success stories. *Cratylia* (Figure 1) has been one of them: collected in Brazil in the 1980s, it has made a breakthrough as highly tolerant to drought in Central America when 'El Niño' hit that region fifteen years later! Uses are so diverse that women of Ethiopia can find in the grass collection of ILRI the raw material for their handicraft basketry (Figure 2).



Figure 2. Use of two species of grasses in traditional Ethiopian basketry.

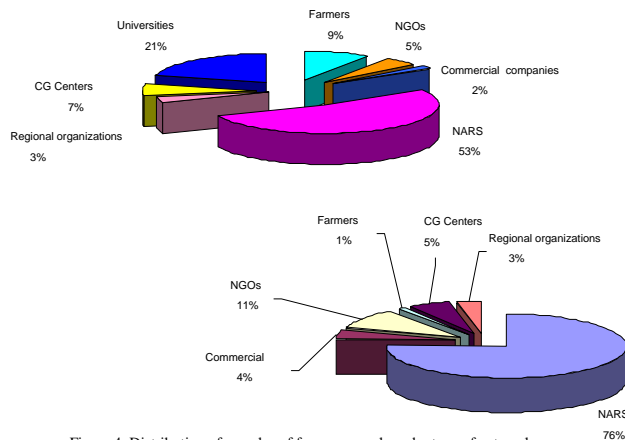


Figure 4. Distribution of samples of forage germplasm by type of external users: CIAT (1980-2006: 43,640; upper left) and ILRI (1983-2006: 30,967; lower right).

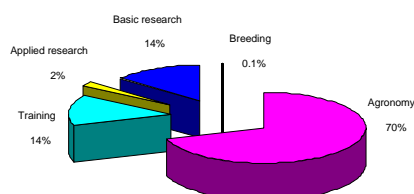


Figure 5. Distribution of samples of forage germplasm to external users by purpose: CIAT (1980-2006: 43,640; as an example).

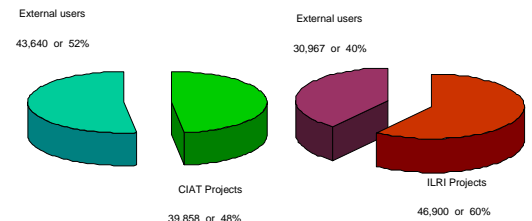


Figure 3. Distribution of samples of forage germplasm: CIAT (1980-2006: 83,498) and ILRI (1983-2006: 77,867).

These collections have been widely used by the programmes of the respective Centers, but almost to an equal level by external partners (Figure 3). As the Genetic Resources Units do not know in advance which forage material would be requested, the distribution service thus implies the 'shelf availability', namely that the materials have been checked for seed viability and germplasm health. As expected, the main purpose of the utilization has been in agronomic trials for adaptation and production of quality dry matter, with the National Agricultural Research Systems being the main recipients (Figure 4) (also Hanson & Peters, 2003). University departments obtain significant amounts of materials too, in order to advance many basic research works in plant and nutrition sciences. Since breeding is concentrated on only a few species, direct use of forage species has been overwhelming (Figure 5). Whilst the host countries are the principal recipients of materials, other countries also receive materials; interestingly, the top five recipients represent all together less than or about half of the total shipped outside (Figure 6). Given the current status of tropical forages in the International Treaty, it is anticipated that these two collections will be key in the distribution of well-documented germplasm in the near future.

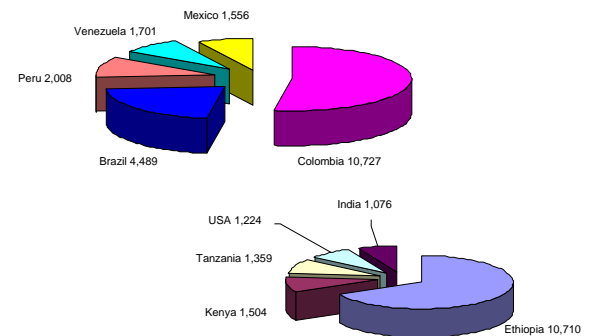


Figure 6. Top five recipients: CIAT (1980-2006; 20,481 samples or 47% of total distributed to 104 countries; upper left) and ILRI (1983-2006; 15,873 samples or 51% of total distributed to 104 countries; lower right).

Literature cited

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