The potential of native germplasm for forage production

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Brazilian forage breeding programs are below the needs for a country of continental dimensions. They target too few species, and grass cultivars are mostly exotic. The main forage cultivars resulted of phenotypic selection based on agronomic merit, and, just a short time ago, this kind of selection would depart from very small collections. Present trends include acceptance of the value of broad collections, a clear concern on the mode of reproduction, potential introgression of genes from allied species, and a drive for greater use of native species, mostly of the legume genera *Arachis* and *Stylosanthes*, but also of *Paspalum*. Results of such programs are reaching the market, yet at long intervals. Expanded use of native species finds obstacles on lack of information, and frequently on reproductive barriers, to be overcome by cytogenetic studies and pre-breeding activities, that still need to capture the breeder's attention. Many native grasses and legumes have a potential for use as cultivars. For centuries, native plants have been the biological basis for sustainable livestock raising in many Brazilian states. There is a good insight on which species are the main components of productivity in Brazilian natural pastures. Accessions of many native species are now available in genebanks, in spite of their rarity in breeder's working collections. Identification of elite species has been recently stressed, under the "Plants for the Future" governmental project, especially concerning the Southern and West Central Brazilian regions. Initiatives involving outstanding native legumes and grasses will be commented. While in exotic germplasm, the search for expanded knowledge on reproductive mechanisms aims at the incorporation of such knowledge in breeding strategies, the search for biosystematic knowledge of native species has dual purpose: The sustainable management of native pastures, considering the adequate conservation of major components of their yield and environmental services, and balanced survival of plant populations with distinct ecological niches, and the use of such knowledge in pre-breeding activities and breeding programs. Identification of limiting factors for the establishment of a broad span of native cultivars of forage grasses and legumes, adapted to the diverse ecological conditions of the Brazilian territory, will help to find a better niche for native species in the spectrum of commercial forage plants for sustainable pasture establishment.