Introduction

The Genetic Resources Unit (GRU) of CIAT was established as such in late 1978, and inherited the bean collections from the breeders. In 1978-79, the collections of tropical pastures were progressively passed to the GRU for their conservation and study. With world mandates for Phaseolus beans and lowland tropical forages, the GRU conserves mostly as seed collections 35,656 and 23,140 accessions of these crops, respectively (CIAT, 2007).

Because germplasm activities - namely distribution - have been on since 1973 (surely on a formal basis since 1980) to date, some analysis of trends is possible.

The signing of an agreement in October 1994 between the Food and Agriculture Organization (FAO) of the United Nations and CIAT confirms further the curatorship role of GRU. Since 1995, distribution of germplasm to external users has been systematically done under the acceptance of a Material Transfer Agreement (MTA). In 1995-1996 the first designation to FAO (i.e. the sending of an electronic file about all accessions maintained in-trust by CIAT) took place, with subsequent updates every two years since. As per the last update in 2007, 65,392 accessions have been designated (for beans: 35,656; cassava: 6,596; and tropical forages: 23,140).

Methods

Pending on seed availability, CIAT GRU distributes to recipients small samples of seeds, once the following conditions are fulfilled: i) the user is identified, ii) the requested material is defined, iii) the purpose of the request is spelled out, iv) the user has agreed on the requested material is defined, and v) the obligations as per the phytosanitary regulations are met.

Results

Over the period 1973-2007 (Figures 1-4), CIAT GRU has distributed 485,847 samples (402,027 of beans to institutions in 98 countries, and 83,820 of forages to 104 countries), over 8.5 times the size of the collection. The main users of CIAT genebank have been the commodity and beans, respectively). Breeding is important for bean, agronomy trials has been the main purpose of external users to ask CIAT for germplasm (70 and 45% of the accessions distributed to external institutions, for forages and beans, respectively). Breeding is important for bean, but less so for forages. Basic research (e.g. phylogeny, studies of gene pools, gene mapping) and applied research (e.g. reactions to diseases and pests) are important purposes of external requests, particularly over the last decade. Training is an important purpose only for forages. On the other hand, the entry into force of MTAs since 1995 has not affected distribution rates in contrast with the reduction of network activities for germplasm evaluation (IBYAN for beans, RIEPT for pastures) due to financial constraints.

Next to CIAT programmes are the national programmes of agricultural research: they have received more than 50% of distributed accessions, followed by universities with 20-35% of distributed accessions. NGOs, networks, other genebanks, and individual farmers represent less than 4% of distributed germplasm. Commercial companies have a share of 1-2% of total distributed.

Figures 1a, 1b, 2a, 2b, 3a, 3b, and 4a, 4b

Testing germplasm for yield and adaptation through agronomy trials has been the main purpose of external users to ask CIAT for germplasm (70 and 45% of the accessions distributed to external institutions, for forages and beans, respectively). Breeding is important for beans, but less so for forages. Basic research (e.g. phylogeny, studies of gene pools, gene mapping) and applied research (e.g. reactions to diseases and pests) are important purposes of external requests, particularly over the last decade. Training is an important purpose only for forages. On the other hand, the entry into force of MTAs since 1995 has not affected distribution rates in contrast with the reduction of network activities for germplasm evaluation (IBYAN for beans, RIEPT for pastures) due to financial constraints.

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Literature cited
