

International Livestock Research Institute

Safety duplication of forage germplasm

In January 2008, ILRI made its first shipment of forage seeds to the Svalbard Global Seed Vault. In order to safeguard many of its rare samples, the ILRI gene bank is participating in the Svalbard project to place safety duplicates in the Global Seed Vault far beyond the Arctic Circle, where permafrost provides an environmentally friendly solution to long-term conservation of diversity. The first shipment covered 4000 accessions of forage legumes, whose seeds can survive in cold dry conditions for long periods in the Svalbard vault. This is black box storage where the materials are kept unopened for ILRI and returned only to us should we need them in the future if a catastrophe happens to the collection in ILRI-Ethiopia. ILRI also sent some test samples that will be returned to us at regular intervals so that we can check viability of seeds stored in the vault and know when it is time to replace them. ILRI plans to continue to send duplicates of more accessions of those species that can be stored in this way over the coming five years.

ILRI holds in trust almost 19,000 samples of forages in the ILRI genebank under the International Treaty on Plant Genetic Resources for Food and Agriculture as a global public good. Ensuring the long-term security and availability of the collection is a major responsibility of ILRI. The unprecedented rate of loss of diversity is one of the greatest challenges facing the environment and sustainable development today. Increasing demands for human food, urbanization, pollution and land degradation are squeezing out the forages that are not only vital now, but which could be key to adapting to new demands.

Forages are important because they feed the livestock that support nearly a third of the world's rural population. The forage collection at ILRI covers samples from over 1700 species of grasses, herbaceous legumes and fodder trees. This is one of the most diverse collections of forages held in any genebank in the world and includes the world's major collection of African grasses and tropical highland forages. ILRI is conserving and studying forage diversity and making it available for use in smallholder farming systems. Through this research, new sustainable crop-livestock systems are also being developed which make farmers less vulnerable, increase land use options, and can protect against unexpected shocks while minimizing environmental impact.