Improved Forage Seed Availability in Southern Uganda

P. Grimaud
CIRAD, France

S. G. Byenkya
NARO, Uganda

Elly N. Sabiiti
Makerere University, Uganda

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Grimaud P . , CIRAD-ES / ACSS Project PO Box 7212 , Kampala , Uganda ; grimaud@cirad .fr
Byenkya S .G . , NARO-ZARDI , PO BOX 12 , Mbarara , Uganda
Sabiiti E .N . , Makerere Univ . , Fac . of Agriculture , PO Box 7062 , Kampala , Uganda

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Introduction Feed shortages and poor quality of available feed are the major constraints to increased livestock productivity in Uganda . Increases in animal productivity can be achieved through an improvement of pastures and rangelands , whose quality is not rich enough to meet the requirements of high potential dairy cows . Improving an existing land or sowing a new pasture requires a reliable source of seed or vegetative material of species that farmers can find only through remote and private companies , who sell expensive imported seeds from large-scale Kenyan commercial tropical pasture seed production farms . This issue of improved forage seed availability has been identified in the frame of ACSS (Agricultural Consultation and Sector Structuring) Project (Grimaud et al . , 2004) , funded by the French Development Agency with the objective to support the formation or the strengthening of dairy farmer organizations .

Materials and methods Through a MoU between ACSS Project and NARO (National Agricultural Research Organization) , the surface of the NARO stock farm was increased while some seed farms were installed , selected with the farmers' associations dealing with the French Project in Mbarara region , the main Ugandan milk basin . On both the NARO stock farm and on private farms , two grasses (*Pennisetum purpureum* and *Chloris gayana*) and four legumes (*Dolichos lablab* , *Stylosanthes guyanensis* , *Centrosema pubescens* and *Macroptilium atropurpureum*) have been sown . In addition , seedlings of shrubs have been distributed to the farmers , mainly *Calliandra calothyrsus* . This operation has evolved as an extension of Dryland Husbandry Project which established cooperative relationships with some *Chloris gayana* seed multipliers in pastoral areas of the region (Sabiiti et al . , 1999) . Cooperative input shops , that have been installed within the associations , might now allow seed producers to distribute their products to other farmers .

Results and discussion Seven seed production gardens are now productive , with farmers in a position to sell or to distribute improved forage seeds to other farmers , seed companies or national and international projects desiring genetic materials . Strong relationships formed with NARO and University allow farmers access to new materials and information , first through the fodder bank , but also thanks to some initiatives funded by the French project . Results of this project include : (i) a workshop organized on the NARO station to tackle the different aspects of pasture establishment and management , and (ii) a tour of a Kenyan milk basin , where productive dairy farming systems are dependant on grass , progresssive farmers , scientists and extension services from Mbarara region . Ten cooperative input shops set up in this zone are strongly linked with the milk collection activity . The system encourages farmers to access good quality inputs . The tuition costs of these input shops are deducted from the farmer's milk sales at the end of the period . This very successful pilot action in remote locations has high potential to spread throughout the Project area as it provides several conveniences : (i) widening of the cooperatives' range of services , (ii) increased incomes , and (iii) creation of permanent jobs in rural areas .

Conclusions Installation and maintenance of the seed gardens are extremely labor-intensive , high in cost . Consequently , farmers cannot always afford to establish these gardens . The sustainability of the operation depends on the maintenance of the gardens , and farmers must earn money from the seeds sale to maintain their gardens . That is not yet completely effective and there is need to make this operation better known by the potential customers , farmers , seed companies and stock farms . The support of a strong partnership is recommended along the commercial commodity chain , from upstream (research organizations to maintain a fodder bank and to train the farmers) to downstream (seed customers) .

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