

Increasing livestock production by improving animal feeding and health services in South Kivu and Tanganyika provinces, Eastern of DR Congo

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Introduction

·Livestock production in Eastern DR Congo is constrained by scarcity of veterinary extension services and the low nutritive value of forages during the dry season.

·ILRI is collaborating with Food for the Hungry (FH) and IITA on the “Tuendelee Pamoja II” Project to improve smallholder farmers food security, household nutrition, income and resilience through (i) training of Community Animal Health Workers (CAHWs) and (ii) adoption of improved



Approach

PROJECT SITES (i) High altitude equatorial zone - Walungu territory (South Kivu Province), (ii)Tropical lowland agroecological zone - Kalemie and Moba Territories (Tanganyika Province)

Component 1 : Scaling “best-fit” fodder options

1.Effect of manure and Rhizobium inoculant on biomass production of two provinances of *Mucunapruriens*

A field experiment with a RCBD and split-split plot arrangement of treatments was conducted in 3 villages of Walungu territory, to evaluate biomass production potential of the two varieties..

Forage variety was the principal factor, followed by manure and *Rhizobium*, respectively.

2.Evaluating agro-ecological adaptation and farmers' preferences of selected forage legumes

Field demonstration trials were established in 6 villages of Walungu and 4 of Kalemie, to evaluate two varieties of *M.pruriens* (Utilis (white seeded) and Cochichennensis (black-seeded)) and two cultivars of *Lablab purpureus* (Highworth and Rongai). The trial involved participatory evaluation of forages by farmers.

3.Inventory of suitable crop residues and agro- industrial by-products for animal feeding in Eastern DRC

A data collection tool was developed to make inventory of crop residues and agro-by-products that are fed to different types of livestock in S.Kivu and Tanganyika

Component 2 : Training of and equipping CAHWs

Sixty farmers received a 15-day CAHWs training in their respective Territories. The training included 6 days of classwork and 9 days of field practicals.

ILRI developed two training manuals on (i) Animal health (ii) Rearing rabbit and covies. These were used on the course. The manuals were in English, French and Swahili. After training, each CAHW received the two training manuals, start-up veterinary equipment and medicines, a smartphone and a bicycle, to facilitate their field work

Results

Fig 1. Biomass production of two varieties of *Mucunapruriens*, following the application of 30 tons manure/ha and Rhizobium inoculant

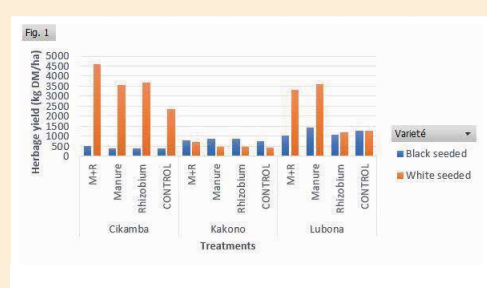


Fig 2. Farmers’ preferences of different varieties of forage legume at different Project sites

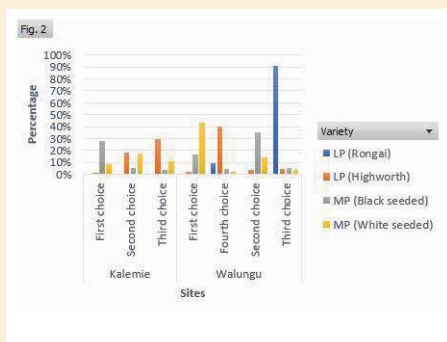
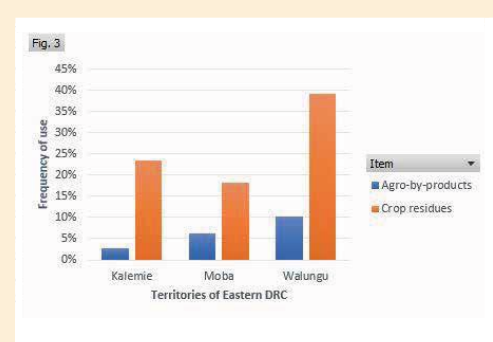


Fig 3. Crop residues and agro-by-products popularly used by farmers in Eastern DRC



Training and equipping CAHWs



1. In most Walungu sites, herbage yield of *M.Pruriens* was high (6.1 tons DM/ha) in var. Utilis and lower (5.4 tons DM/ha) in var. Cochichennensis. However, an opposite trend was recorded at the Kakono site only. Highest herbage yield (6.9 tons DM /ha) on var. Utilis was recorded where *Rhizobium* inoculant was applied in combination with manure.

2. Farmers’ preferences on forage legume varieties were influenced by biomass production, leaf size, animal preference and drought tolerance, in decreasing order. In the high altitude *M.pruriens* var.Utilis was most preferred, followed by *M. pruriens* var. Cochichennensis. In low altitude areas, preference followed the order, *M. pruriens* var.Cochichennensis > *M. pruriens* var Utilis > *Lablab purpureus* cultivar Highworth.

1.3 Crop residues and agro-industrial by-products are mostly used in Walungu Territory, which is more developed. Agro-industrial by-products are generally not used because of lack of knowledge,lack of storage facilities and shortage of cash to buy them.

2. The 60 CAHWs are now working in their respective villages, under supervision of Local Government veterinarians.

Take-home message

Adoption of improved legume forages, efficient use of crop residues and agro-industrial by-products and the availability of CAHWs in the rural communities is leading to improved food security, nutrition, income and livelihood.

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