

### **3.4.1.8 Report / working paper on extension approaches to promote forage cultivation in Kenya and Uganda**

To introduce a new technology into a system, the technology must meet the needs of the focus group, be easy to apply and use, be affordable and accessible and in the end provide additional values for the users compared to the traditional technology used.

Many new technologies fulfil the above criteria but they fail and never reach a stage of adoption at scale. Only in rare cases like the introduction of mobile phones a technology spreads more or less by itself. In the most cases the introduction of a new technology has to go along with a campaign to make it known, to show their performance, create interest and provide technical assistance to use it in the right way and the potential users must have easy access to the technology. That is also the case for farmers which you want to convince about new forage varieties. Most farmers, especially the small-scale farmers are conservative and risk adverse, which is well understandable as they generate most of their income and food for their family on the farm. The average small-scale farmer has got limited land and uses all of his 3-5 acres for food and feed production in a mixed crop livestock system. There is normally no space and no budget for additional crops or risky experiments. Depending on the area land is more or less rare and if a farmer is reflecting to spend money to rent land and establish forages he needs the information on the new crop to make up his mind and take the decision for forage growing on leased land or to replace some 'traditional' crops by forages. In the end it will always be a decision on economic bases, meaning which crop will generate a better return of investment.

The information has to be delivered to the farmer to convince them that the introduction of the improved forages in their farm will improve their livelihood. There are many ways to deliver information to farmers and we have chosen a very down to ground approach which is supported by accompanying activities to support it.

Over the last years improved *Brachiaria* (Hybrids and cultivars) and *Panicum* have been brought to Kenya by Tropical Seeds (ABC private sector partner for seed production and commercialization), Research Centers, like ICIPE (push pull technology), ILRI (Climate smart *Brachiaria* grasses for improved productivity in East Africa) and CIAT. The *Brachiaria* were mentioned in different press releases and praised as a wonder grass, but detailed technical information was lacking and uptake of the improved forages was quite limited, what shows that additional extension measures and information transfer are necessary to increase the acceptance and uptake at scale of the improved forages.

We have chosen a wide approach of activities which go hand in hand to reach the final objective. This objective goes beyond the adoption of improved forages at scale, finally it is about a higher and steady milk supply for the populations enabled by better feeding of the dairy cows.

The activity package includes demo plots, field days, trainings, extension by field staff in the main intervention areas, extension material, participation in agricultural shows, radio emissions, cooperation with apps, tv shows, partnerships and lobby activities on different political levels.

### **Demonstration plots and field days**

We decided to use the demonstration (demo) plot approach to make the forages known to the farmers. Demonstration plots with Brachiaria Hybrids, Brachiaria cultivars, Panicum cultivars, Desmodium and Vetch have been established first on private farmers land and in dairy cooperatives. Meanwhile we concentrate our efforts completely on dairy cooperative, as the outreach to the members of the dairy cooperatives is much bigger when the demo plots are closely connected to the cooperatives.

On these demos the farmers are presented different forages and the members can come and see how the grasses look like, discuss with the host farmer about his experience with the different varieties, compare them and also get information how feeding the improved forage effects milk production of the cows. Based on that, farmers can choose the variety which is interesting for them.

However, it showed that the outreach is limited when farmers have to come on their own initiative to the demo plot. Trainings on the demos and organized field days create much better effects and support the number of farmers. Please see Deliverable 2020 3.4.1.4 for details.

### **Trainings**

Trainings are an important element of knowledge transfer and help the potential adopters to handle the forages in a successful manner.

What types of trainings do we offer

#### **Forage establishment and management trainings**

These on the job trainings go along with every establishment of demoplots in the dairy cooperatives and farmer groups. The usual number of participants is around 20 persons. All the steps of the work are explained by the trainer and then practiced by the participants.

#### **Dairy training including forage training**

The collaboration with SNV opened the opportunity to feed forage training elements in the dairy training agenda as an important element. Lead farmer, mainly in Meru county have been trained as trainers and offer 1 day farm visits, 1 day trainings and 1 week trainings to individual dairy farmers and groups from Meru Dairy cooperative union and other dairy cooperatives. All these trainers use their demonstration plots as training sites and three of the trainers even built classrooms. These trainings go along with a fee for the participants. In the case of Meru Dairy cooperative union the training is at least partly supported (financial) by the union as they realized the importance of well trained farmer for a growing and stable milk supply.

### **Extension material**

We have developed factsheets on all the forages we work with. We started with factsheets on the Brachiaria Hybrids / cultivars and Panicum cultivars. These factsheets provide the most important information about the proposed forages. We share them with our partners and interested persons.

As the outreach of the factsheets is still limited we will share printed copies with all farmer groups and dairy cooperatives in 2021. The initial approach providing them access to the factsheets by an app does not seem being successful as expected.

We now have finished a poster on Brachiaria growing. This poster will be used for visualization in trainings and on field days. We will provide the poster to farmer groups and all dairy cooperatives as a permanent source of information for their members.

Factsheets on 4 different business models based on forage production are in preparation.

An extension video will finally be produced in 2021.

### **Media outreach**

The above described activities work very well, but they are very work intensive and based on direct contacts of staff of ABC, partners and trainers. The results are good for the people reached, but the number of people reached however limited. There would be the way to invest into more extension staff, but due to budget restrictions this is not realistic. The other way is to use other means of communication and to transport information to a huge number of people, being well aware that the percentage of adopters out of these people reached will be limited. But when a huge number of people is reached, a small percentage of adopters can also result in interesting figures of adopters and help to spread the technology at scale.

### **Radio**

Radio is still an interesting media especially in rural areas and reaches the largest number of people. Many rural stations have their slots for agricultural features and many farmers listen to it. We decided to use this media more intensive, but due to the charged prices we limited our broadcastings to two series in Meru and Kisii. See detailed information under Deliverables 2020 3.4.1.2

### **TV**

Our presence in TV is close to non-existing. Up to now we had only one presence in Meru TV with a broadcasting on improved forages and interview with our field staff Fredrick Muthomi. The feature can be accessed by: <https://www.utube.com/watch?v=x767xyfLtVI>  
<https://www.youtube.com/watch?v=3e3-QogWd04>

In Kenya and neighboring countries exists a quite popular TV show on agricultural subject, called Samba Shape up, meaning in English Shape up your farm. They reach at least 3,5 million households only in

Kenya plus additional millions in Tanzania and Uganda. We are planning to use this show to make forages more known and to transport our message about forages. Talks about the realization have started.

## **App**

Apps are a mean to reach out many people and also offer the possibility for interactive exchange. There are several apps which focus on farmers, some also with dairy farmers. It was difficult to choose the right one to partner with and from March 2021 we will work together with 'Yielder' in content development and provide extension material and forage knowledge to be fed in the app.

## **Partnerships**

Partnerships with different players in the dairy sector are essential to initiate a system change which results on an uptake at scale of improved forages. Feeding with high quality feed is still a bottleneck in the sector and feeding still accounts for up to 70% of the production costs. Many players in the sector have realized that and share the same interest with us: Improve feeding of the dairy cows to increase their health status and productivity, while bringing feeding costs down at the same time and become more economical. Partnering with different organizations also allow to use their established networks and resources to feed in our technologies and information.

We were able to build up a partner network over the last years consisting of Development organisations (GIZ Green Innovation Centres, Kenya and Zambia; SNV , Kenya, Uganda, Tanzania; Send a Cow, Kenya Etiopia; NARIs in Kenya, Rwanda, Tanzania; Dairy enterprises and their cooperatives, mainly in Kenya and Uganda; private commercial farms in Kenya and just started first talks with Syngenta foundation and Erbacher a private German company which look for establishment of links in the dairy sector of Kenya and Tanzania)

## **Seed system**

The improvement of the offer of forage seeds is playing a crucial role in the uptake of the improved forages. Different seed companies actually undertake efforts to improve the portfolio of available forages in Kenya and other East African countries. A wider range of available forage seeds will open a better choice to farmers to find really the forage which performs best for their needs.

## **Widen the availability of forage varieties**

Tropical Seeds, the private sector partner of ABC already has registered 3 Brachiaria Hybrids and Panicum Mombasa. Brachiaria Camello is in the registration process and will, once registered, expand high quality forage production to Arid and semi-arid areas.

Barenbrug is also showing growing interest to establish stronger presence in several East African countries. Actually, they are part of the KIT seed systems project and different forages (e.g. forage Sorghum, improved Rhodes grass, Turnip, Chicoree) are part of the tests in Kisii and Meru.

Local seed companies do not really show much interest in forage seeds, despite Kenya Seeds Company, which still produces Boma Rhodes and Desmodium seeds.

### **Accessibility**

Easy accessibility of farmers to improved forage seeds is necessary that a large number of farmers can use the momentum created by the above described activities. In the moment access to seeds is one of the reasons that the number of adopters is not yet higher. The distribution network is still poor and farmers can only buy seeds by direct contact to either Amiran or ACL, the 2 licensed distributors of Tropical Seeds or by ABC, some Brachiaria cultivars are also distributed by ILRI in some counties of Western Kenya.

We work intensively on an improved accessibility to forage seeds for farmers in the dairy hubs. We had several discussions with Meru Dairy cooperative union and 6 dairy cooperatives to connect them to ACL. The idea is to stock the AgroVet shops of the dairy cooperatives with forage seeds which would ease significantly the access to the technology. We push for that for more than two years and are optimistic that we will see some positive development soon. ABC serves as a moderator in the process and we create the connections between ACL and its potential distribution partners. However, it is not our mandate to get involved in any contractual arrangements.