

NEADAP Forages Webinar

December 06 2023

The webinar on forages counted with 40+ participants from all over the East Africa region. These notes are shared with all 160 dairy professionals who registered for the webinar and the 38 people who downloaded the forage tools. The BAMSCOS report is scheduled for publication in January 2024. It will be shared with everyone via NFPCconnects.

The programme of the webinar:

- The importance of forage. Introduction pitch by Geert Westenbrink, NEADAP
- The BAMSCOS case study on improved forage. Presentation by Jos Creemers.
- Using the Forage Finder and the Forage Cost Calculator. Demonstration by Peris Chege.

Jos Creemers and Peris Chege are both dairy consultants for Pro-Dairy East Africa.

In his introduction, Geert Westenbrink stressed the importance of year-round available fodder of good quality as a pathway to increase production per cow. This is especially important on the 9+ million dairy farms in East Africa that have less than 5 cows and combine dairy with cropping. NEADAP aims to focus the partnership and solutions on these mixed crop-livestock systems, that recycle nutrients and provide a relatively stable income, considering the volatility of dairy markets and prices.

The presentation by Jos Creemers covered a forage study with 24 farmers of the BAMSCOS cooperative in Baringo, Kenya. The study analysed the available forages and the current feeding strategy at these farms. Next, it analysed the cost of forage production, the quality of the forages and the requirements of the dairy cows on these farmers. A farm walk and a number of tools were used to research the potential for improving dairy production. Most farms can improve their income and lower their environmental footprint by increasing the quantity of forage, harvest forage earlier for better contents and decrease the forage-to-concentrate ratio.

Mr Abdela Nura (Ethiopia) asked whether and how the BAMSCOS study in Kenya applies to other countries. The conclusions of the study are based on fieldwork with farmers member of the BAMSCOS cooperative. Yet, from his broader experience, Jos expects similar situations with fodder shortages, poor quality diets that inhibit rumen fill, cow condition and then milk production. Also in Ethiopia, the cheapest solution for farmers is to produce and conserve their own roughage.

Farmers that but commercial fodder production may pursue the survival of their animals, but it is likely to be too expensive as a dairy business. The study shows feed prices and production cost for the farmers in Baringo, and so is the formulated, balanced diet. The choice of forage produced, the cost and availability of concentrates may result in a different financial pictures in other situations and other countries.

In his presentation, Jos Creemers made reference to Rumen8. Follow [this link](#) and [this link](#) for more info on Rumen8. You can also watch these videos [5 min introduction](#) and 20-minute [intro on the Rumen8 dairy module by Hink Perdok](#).

Chat questions from the audience:

How to reduce feed cost. The concentrate feed is expensive. As shown in the BAMSCOS study, the advice for farmers is to feed more forage and less concentrate. The balance and the cost of forage can be calculated by using Rumen8 and the Forage cost calculator in dairy farm coaching.

60-75% of dairy cost is feed. The aim of the forage cost calculator and rumen8 is to help farmers lower the cost of feed and/or increase the margin above feed cost. Note that the profit margin of the enterprise also depends on other expenses and may vary between individual farms.

Is there any free software to calculate or analyse dairy business costs including feed cost? Rumen8 is a free software application that helps to formulate cost-effective diets. The Forage Finder will have an Ethiopian forage list included and in the Forage Cost Calculator, you can choose the currency for Ethiopia or other countries.

About inoculants for sorghum silage. Forage Sorghum when harvested below 90 cm contains enough soluble sugar for ensiling and an inoculant would not be needed. Pre-wilt and chop at 1-2 cm length is strongly advisable though. An inoculant is expected to have mor effect when ensiling the mature crop or under less favourable conditions.

While the biomass of the 120cm Napier grass is double to that of the 60 cm Napier grass why the cost is similar for both, i.e. 2ksh/kg. The cost components are found in slide 12. Note that in the time needed to grow 120 cm Napier, a farmer can harvest 2 times the 60 cm Napier, which has better contents. The farmer that opts to harvest the longer stage, have a lower fodder quality. This will increase the cost of concentrate in their cow diet. This is under the assumptions that he/she targets the same level of milk production and targets a balanced diet for this production.

Peris Chege demonstrated the NEADAP Forage Finder and the Forage Cost Calculator. The Forage Finder (and in due course the Forage Cost Calculator) is available for download via this link: <https://forms.gle/4Uc8ko4xQX8uNWqB9>

The Forage Finder was developed in its current version for Kenya. Now the format is tested, the Forage Finder can be expanded to other countries. NEADAP is inviting

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partners interested to adapt and scale the tool for wider use. The Forage Cost Calculator has an option to select the currency in East Africa. It is expected to be released by the end of the year.

In the days before the webinar, a bug was found in the Forage Cost Calculator. This will be repaired, tested and then released via the same download folder. Nevertheless, Peris showed an example and followed the steps from farm plot, surface calculator, pre-planting cost, 1st cutting cost, via silage info and feed library to the output page.

Forage finder use in Ethiopia. How can we modify to the forage resources available in Ethiopia so that we can use it as advisory tool to our farmers? Actually, NEADAP is adding the forages as listed in the Ethiopian Crop Variety Register in the next release of the ForageFinder. Another tip (not mentioned in the webinar) is the app Pasto Certo from the Brazilian research institute Embrapa. Change the language to English. The app allows you to compare 2-3 forages to see what is most suitable for you as a farmer.

NEADAP plans and tools for West Africa. At this stage, NEADAP is focusing on East Africa. Francophone dairy professionals may benefit from automated translation of English reports and resources. The tools may not apply.

KALRO has advanced digital climate information advisory services. These may support planning of forage production in a changing climate. KALRO is a scaling partner for NEADAP forage tools and we certainly look into the complementarity of digital services and tools in relation to dairy production.

How to calculate benefits? A participant from Tanzania sees the benefit of the Forage Cost Calculator for cost analysis. But how to calculate the benefits? The short answer is Rumen8 software, which has this option.

Videos

Geert <https://www.youtube.com/watch?v=TL0AgzH6PyA>

Jos <https://www.youtube.com/watch?v=tYpztsEOEs8>

Peris <https://www.youtube.com/watch?v=QGB7StJ77qk>