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Programme



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TranZDVC Bulletin

The newsletter for the Transforming Zimbabwe's Dairy Value Chain for the Future (TranZDVC) project



FEBRUARY 2021



From the Project Coordinator

Integrating crops and livestock for increased incomes in TranZDVC project

Welcome to our first issue of the TranZDVC Bulletin for 2021. As we start the new year, we the TranZDVC partners are geared to consolidate the gains and successes scored during 2020, where we laid the foundation to tackle the challenges that hamper the dairy sector in Zimbabwe. The major milestones achieved include the importation of breeding stock, financing investments in dairy productive assets and infrastructure and training and capacity building programmes.

This year, we will continue to build on these successes as we aim to strengthen the linkages between production, processing and financing within the dairy value chain.

In this bulletin, we share the key highlights and milestones achieved in TranZDVC's work of transforming the country's dairy sector.

Fodder production, processing and preservation is one of the project pillars that has seen dairy producers across Zimbabwe adopting these practices to increase productivity and reduce the cost of production whilst ensuring increased returns.

A combination of high costs of feed and dwindling of pastures continue to marginalise dairy farming production. This has necessitated the introduction of alternative feed supplements to sustain livestock.

TranZDVC is enhancing farmers' activities by involving in integrated crop-livestock trials. Most popular technologies among farmers include conservation agriculture-based climate smart technologies, use of herbicides for weed control, production of mucuna, cow pea and lab-lab as forage crops for feeding livestock.

The major constraints to agricultural productivity in TranZDVC areas include competition between livestock and crops for crop residues. Elsewhere in this issue, we report on how the project is contributing to alleviating these challenges (main story). These include testing the growing of fodder crops such as cow pea, mucuna, lab-lab, among others. Using alternative mulch sources such as leaf litter and grass instead of maize residue, and growing legumes non-palatable to livestock when dry – such as sunhemp as alternative mulch to crop residues for livestock feed, is another example.

To combat poor soil fertility and climate change, we report that practicing conservation agriculture can help in this regard. This includes mulching and minimal soil disturbance; growing Nitrogen fixing legumes as intercrops where grain is for home consumption and stover fed to livestock; precision application of manure to cropped fields and rotating maize with legumes/fodder crops.

We also feature stories on artificial insemination, policy dialogue held in December 2020 and our usual project snippets highlighting developments in TranZDVC.

Enjoy reading!
Dr Edson Chifamba

CONTACT DETAILS

We Effect Zimbabwe | 221 Fife Avenue, Harare, Zimbabwe | +263 242 700 136
E-mail: edson.chifamba@weeffect.org | www.zagp.org.zw/projects/details/2
Twitter: @ZagpDairy



Lead Farmer-based Forage Fodder Demonstrations and Seed Multiplication Transforming Dairy Farming

Production, processing and maintaining the availability of adequate feed for livestock is crucial to dairy producers in Zimbabwe. Traditionally, efforts to improve the quality and availability of fodder have focused on technology, but the TranZDVC project is revealing that strengthening interactions among the various actors involved produces even better results.

TranZDVC discovered that the challenges related to fodder availability have just as much to do with access to knowledge as with access to appropriate technology. In collaboration with Agritex and the Department of Veterinary Services, the projects procured fodder seeds for velvet beans, maize, forage sorghum, cow peas and Katambora Rhodes grass which were used to establish 160 fodder demonstration plots at selected lead farmer sites in the project's targeted districts. In a farmer to farmer extension approach, these sites are acting as knowledge transfer hubs for at least 10 peer farmers located close to the demonstration site. The initiative will also see seed being multiplied and fodder produced for dairy animals while hosting of farmer field schools are ensuring that knowledge and experiences on good agronomic practices of the different fodder crops are transferred to others.

Being an area where most smallholders survive on livestock production, the introduction of fodder crops in Chikomba District, in Mashonaland East Province, was a welcome development.

Fodder production, processing and preservation is one of the pillars of the TranZDVC project to enable farmers to increase productivity and reduce the cost of production while ensuring increased returns.

In response to the effects of climate change, TranZDVC is promoting climate smart fodder production. Two major climatic changes have been self-evident are the rising temperatures as well as a significant decrease in precipitation (2017-2020 seasons) or in some cases flooding due to excess rainfall (the 2020/2021 season). The project is therefore, promoting wide range of measures at the fodder demonstration sites that are required to reduce the livestock sectors' climate-change footprint. These include climate smart dairy farming practices such as growing of drought tolerant varieties, intercropping, manure management and production of highly nutritious fodder.

“Peer farmers gather and assist with labour at the demonstration plots. In return, each farmer will receive fodder seeds for their own use in the coming season and some hay bales for their animals”, said Dr Chifamba.

According to Dr Edson Chifamba, the TranZDVC Project Coordinator, the project is working through the lead farmer extension model “Peer farmers gather and assist with labour at the demonstration plots. In return, each farmer will receive fodder seeds for their own use in the coming season and some hay bales for their animals”, said Dr Chifamba.

TranZDVC is working with ZADF, Dairy Services and local extension personnel offering technical advice and mentorship to the farmers. The demonstration plots will also benefit surrounding farmers and communities who will draw lessons from them.

Through training and technical assistance provided by the project's extension staff and in view of the continued rising stock feed prices for supplementing her dairy cattle Mrs Dorica Hwengwere, the Sadza Dairy Cooperative chairperson, is now engaged in on-farm forage and fodder production. Fifty-three year-old Dorica Hwengwere is one of the selected lead farmers mentoring 10 other farmers, including women and youth. Using seed provided for the demonstration plot and

her own resources, she has utilised her one and-a half hectare field by growing 0.5 hectares of maize, 0.4 hectares of velvet beans, 0.2 hectares of cow peas and 0.3 hectares of bana grass.

Fodder makes up 70 percent of livestock inputs and is critical to the income earning capacities of smallholders in most parts of the country. Most dairy farmers in the rural areas depend on agricultural crop residues and grass provided by the grazing of common or fallow land supplemented by cultivated grass. But most crops are rain-fed and can't be relied on. In addition, shifts in crop type and variety tend to reduce the availability of feed, as does encroachment from other land uses.

“Thanks to ZADF and its partners, we have learnt and increased production of home-grown nutritious feed and during the lean season, our cattle will not starve or have decreased milk production. I have plans to use the harvested crop to make low-cost feed formulations which will lead to reduced cost of production and increased incomes through dairy farming,” said a delighted Hwengwere.



Leader Farmer-based Forage Fodder Demonstrations and Seed Multiplication Transforming Dairy Farming



Mrs Dorica Hwengwere in her bana grass plot. Through fodder production and good animal husbandry practices, farmers will be able to increase milk production and profitability.

Drought tolerant varieties such as sorghum, velvet bean and cow pea were selected to promote climate change adaptation among farmers. Intercropping of cereals such as maize and sorghum with either velvet beans or cow pea is being implemented at the demonstration plots. This practice provides live mulch especially under poor rainfall conditions, as well as contributing significantly to nitrogen levels for following crops (resulting in reduction in use of synthetic fertilisers). Besides the mulching effect, velvet beans intercropped with other crops also help to control weeds as the canopy helps to suffocate the weeds. A reduced weed population implies a reduction in herbicide use, too.

Improving the management and feeding practices within the dairy sector stands to dramatically increase potential sales and incomes for 4,530 TranZDVC small-scale dairy farmers' dairy value chain by 2022.



Creating an enabling environment for dairy farmers in Zimbabwe

To promote an enabling environment for sustainable and inclusive dairy value chain, the TranZDVC project facilitated a one-day conference focusing on discussions on four policy position papers developed by the project's consortium partners.

The position papers on Land Rights in Dairy; Cost of Compliance in Dairy; Institutional Framework for Small-scale dairy and Reducing Cost of Feed in Dairy, were presented at a joint policy conference in December 2020.

The conference, held in Harare at the Cresta Oasis Hotel attended by 62 people, attracted participation from government ministries and departments, dairy industry players, farmers as well as private sector partners.

Presenting on the "Land Rights in Dairy" paper, ZADF Policy Officer, Alpha Manjera highlighted that: "The aim of the presentation is to look into regulatory costs subjected to dairy farmers, processors and input suppliers".

According to his report's overall finding, there are 14 regulatory costs which account for 10.12 percent of the total cost of production.

It was therefore recommended that government reviews and harmonises the various pieces of laws and legislation to reduce the cost of compliance in the dairy value chain. In consultation with stakeholders, the government was encouraged to identify, prioritise, and retain regulatory issues that were necessary for competitiveness of the dairy industry.

The second policy issue, "Reducing cost of feed in dairy" explored sources of raw materials at every stage of the production of dairy meal within the stock feed manufacturing value chain, demystifying the cost build-up, improving transparency and confirming the real cost of dairy feed utilising a value chain approach.

In her presentation of this policy paper, consultant, Dr Patience Siwadi from Midlands State University (Head of Graduate of Business of Leadership Innovation Hub Supervisor) highlighted that "Zimbabwe has the highest cost of production, margins for stock feed manufacturers running up to about 20-30 percent, and there were no monitoring systems in place, creating a profiteering opportunity".

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Zimbabwe Farmers Union (ZFU) policy consultant, Dr Freedom Mazwi, presented on the Land Rights policy paper. The overall objective of this study was to examine Zimbabwe's land tenure systems in the dairy sector across various tenure regimes, to identify their key challenges and to provide a basis for the Zimbabwe Agricultural Growth Programme (ZAGP) consortium to design evidence-based land tenure policy and programmatic recommendations for the Government of Zimbabwe.

According to his findings, some of the institutional frameworks affecting the dairy value chain are: the Communal Land Act; Traditional Leaders Act and Rural District Councils Act. He noted that the Ministry of Lands, Agriculture, Fisheries, Water and Rural Resettlement is the overall land administration institution although other line ministries such as the Local Government portfolios, perform a variety of functions.

The "Institutional framework for small-scale dairy policy paper" was presented by another ZFU consultant Dr Joseph Toindepi.

The main objective of the research was to evaluate the institutional framework for smallholder dairy development in Zimbabwe. The specific objectives included determination of the key policy issues affecting the smallholder dairy industry, identification of key institutions involved in smallholder development pre- and post-Zimbabwe's independence and identification of gaps in the dairy value chain institutional framework.

His findings pointed out to policy inconsistencies, lack of coordination among private and public sectors, unorganised production systems, absence of organised and aggregated systems as well as no collective production and access to finance.

Examining the current policies that affected the performance of the dairy industry is envisioned to assist in promoting an enabling environment for the dairy value chain in Zimbabwe.

Midlands Province small-scale dairy farmers in artificial insemination drive

Zimbabwe Dairy Industry Trust (ZDIT) through the Midlands Dairy Services Unit team has embarked on an artificial Insemination (AI) programme in green fields in the region. The AI programme aims at improving local breeds by cross breeding with dairy blood. This will improve production of milk from the current 2-3 litres per cow per day to an average of 10-12 litres per cow per day from crossbreeds.

Artificial insemination can be a tool to increase farm-level production, contributing to the fight against hunger, poverty and environmental protection. This is part of a transformative change of food systems, especially the dairy food system.

The programme is subsidising straws to US\$5 from the current prevailing market prices of between US\$14 and US\$18 per straw. The response to this programme by farmers was overwhelming. The programme managed to cover Mberengwa and Zvishavane small-scale farmers by November 2020. Eight cows were inseminated with conventional semen. The team followed the synchronisation protocol of Day 1, Day 11 and inseminating on Day 14 using estrumate hormone. Awareness campaigns were conducted in Gweru, Shurugwi and Somabhula for more farmers to join the programme. Mvuma, Msungwe and Chirumanzu farmers also showed great interest in joining the programme.

One hundred straws are awaiting insemination in Somabhula, Zvishavane and Lalapanzi. In January 2021, the team managed to inseminate cows of upcoming farmers in Lalapanzi where four heifers were inseminated using sexed semen. The team is now waiting to roll out a dissemination strategy in AI in Somabhula where 72 cows will be inseminated by end of February 2021.



Dairy technician Tichaona Shadaya conducting artificial insemination in Midlands

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TranZDVC project updates in pictures



1 Mr Makunike of Tsonzo Dairy Association in Mutasa District, Manicaland Province, posing in his 2 hectare plot under Bracharia, Giant Rhodes and Nappier which is ready for silage making.

2 ZADF Field Officer, Sharp Mazivanhanga explaining to farmers how to make and conserve feed for dairy animals during a Fodder Production and Conservation Training held at Mr Makunike's farm in Tsonzo, Mutasa District in Manicaland Province. Mr Makunike grows Rhodes grass, Bracharia, Nappier, Star grass, cow peas, sweet potatoes and Sunhemp. This has shown great results as the farmer's milk production increased from 30 litres to 60 litres per day from his four cows he is milking.

3 Mr and Mrs Elphas Maposa of Somabhula Dairy Association in the Midlands Province, receiving seed for demonstration plots. ZADF supported the farmers by giving lead farmers demonstration plot seed for fodder production. The seed included sorghum, velvet beans, cow peas and maize (All short season varieties).

4 Proceedings at Mr Makunike's homestead during the Fodder Production and Conservation Training event.

5 Mr Peter Muzariri of Agro Prosperity Trust at his plot where the milk hub is housed. He is milking three cows producing an average of 10 litres per cow, supplying their milk to Nestle Zimbabwe. He is also a lead farmer who received seed for fodder demonstrations in Marondera District, Mashonaland East Province.