



ZAGP News

The Newsletter for the Zimbabwe Agricultural Growth Programme (ZAGP)

ISSUE 9: JANUARY 2020

Compliments of the new year! We welcome you to the first issue of ZAGP News for 2020. As we begin the new year, we must reflect on the programme successes over the last 12 months, where the partnerships across the different livestock value chains have successfully delivered on the key milestones set. The efforts of the different stakeholders have made in the initial strides towards addressing the challenges in the livestock sector which are limiting its contribution to the national economy and adversely affecting the incomes of the farmers.

Overall, 2019 was a difficult year for agriculture in Zimbabwe, with the crop and livestock situation in a dire condition due to erratic rains with some areas virtually getting nothing. Cattle have been the most affected in the livestock sector, with at least 16,000 reported to have succumbed to the drought in Matabeleland South.

These challenges will continue in 2020. ZAGP's work is already cut out to implement innovations to tackle these challenges and develop sustainable livestock production strategies to increase productivity, production, and incomes.

In this issue, we do a deep dive on ZAGP's initiatives to lower the cost of feed for livestock farmers. The biggest and most critical cost item on a farm is feed. Currently, most farmers are meeting the animal dietary requirements through veld grazing and limited supplementary feeding.

We also provide updates from the **VALUE** and **SAFE** projects.

We welcome feedback on this, and future issues of the publication.

Thank you, and enjoy reading!

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This publication was produced with the financial support of the European Union. Its contents are the sole responsibility of the Zimbabwe Agricultural Growth Programme and do not necessarily reflect the views of the European Union.

ZAGP NEWS FOCUS

ZAGP Tackling the High Cost of Livestock Feed

LOWERING THE COST OF FEED IN THE BEEF VALUE CHAIN



Beef production systems are largely based on natural rangelands for feed. However, these provide inconsistent supplies in terms of quality and quantity due to seasonality and recurring droughts/dry periods. Nutritional supply from the natural ranges cannot support optimal animal production throughout the year.

As such, beef producers ought to intervene in rangeland management, growing fodder, harvesting hay and making appropriate timely considerations such as supplementation, culling, relief grazing and priority feeding. Beef production cost drivers are associated with supplementation costs during the drier months/unproductive season.

The dry season is a yearly period of low to no rainfall. The period is characterised by maturation of grasses, lignification, drying and the concurrent loss in nutritional value of natural pasture. With little to no intervention, there is generally a negative energy balance, where the nutrient supply from pasture is far less than the nutrient demands of the animals for maintenance and production.

This, in the shared grazing lands, is exaggerated by the distance travelled to access water and scavenging for the little feed available in this lean season; further worsening the energy

demand and supply gap. The period also coincides with the onset of winter, which generally requires high energy levels for all stock to maintain their body systems particularly for young stock.

Due to high cost of feeds, beef cattle farmers usually fail to feed their animals, thus threatening animal productivity, health and survival.

The [Beef Enterprise Strengthening and Transformation \(BEST\)](#) project is implementing the following initiatives to lowering the cost of supplementation:

- Training and demonstration on good pasture management. High-quality pasture that has been allowed to bulk up but is also prevented from going to seed by proper grazing management will require the least supplementation, entice the cattle to graze longer, and will stand up best to the ravages of wind and rain.

It is therefore important to adjust beef production systems to replace expensive bought in feed with cheap pasture by extending the grazing season long after the growing season ends.



Starving cattle brought to the Chiredzi Cattle Business Centre (CBC), in Masvingo Province. The prolonged drought is threatening livestock in the province as a result of dwindling pastures and water sources.

- Promoting harvesting, preservation and bulking of hay. The BEST project will procure tractors and bailers that will be used to lead in timely hay cutting and bulking for dry season feeding.
- Training, demonstration and further scaling up of Lead Farmer led fodder and seed multiplication exercises.
- Promotion of localised beef production calendars, proper planning, preparedness and good animal husbandry practices. This will prepare the animals to endure the dry season and limit the need for supplementation.
- Promoting on-farm ration formulation and processing of low-quality forages. The project will encourage on farm ration formulations using locally available resources and crop by products to enhance palatability.
- Developing and managing viable business models to identify feeding options which are cost effective and increase profits.
- Collaboration with private sector in coming up with effective feeding options, input delivery and early warning.
- **Processing/treatment of Low Quality Roughages** - Urea treatment of maize stover and augmenting with molasses.
- **Leader Farmer-based Forage Fodder Demo and Seed Multiplication** -100 Lead Farmers are in the process of establishing a variety of fodder crops and legumes in the targeted districts. The initiative will see them multiplying seed and producing fodder for their priority stock.
- **Irrigated pastures** – The BEST project is establishing 10 Cattle Business Centres (CBCs). Two of the centres will have centre pivots to grow fodder crops. The fodder will be used in feedlots and also availed to farmers to buy on a cost recovery basis. All other CBCs will have a minimum hectare for seed production and demonstration plots.

INITIATIVES BEING IMPLEMENTED BY BEST:

- **Capacity Building** - Extension personnel and farmers are receiving training in nutritional intervention strategies using the Training of Trainers (ToT) approach.
- **Linking Beef Cattle Producers to Input Providers** - Farmers have been linked to input suppliers using the last mile approach.
- **Promoting Usage of Local Resources** - Farmers have been encouraged to utilise local resources such as cane tops, mopane leaves and crop residues.



Farmers participating during the production of urea treatment of stover in Chiredzi district, Masvingo province.



ZAGP Tackling the High Cost of Livestock Feed



VALUE TACKLES THE HIGH COST OF FEED IN THE PORK VALUE CHAIN

The cost of feed constitutes between 60 to 80 percent of costs in pork production. This has not been helped by incessant droughts that have ravaged the country for the past five years, affecting production of the major ingredients for pig feed which are maize (60% - 80%) of feed) and soya meal (between 20% to 27%). The low reserves of maize have further worsened the situation with the pork industry competing with humans and other demanding value chains.

The prevailing acute feed shortages have reduced its availability and access as it becomes costly to most small to medium-scale producers. This has adversely affected the growth of production in the pig industry, with small to medium-scale producers either destocking or completely halting production and shifting to other initiatives.

The [Value Chain Alliance for Livestock Upgrading and Empowerment \(VALUE\)](#) project has lined up several strategies and interventions to tackle the high cost of feed. These include localisation of feed production under which farmers procure ingredients locally, buy-in micronutrients and process feeds as groups through the Pig Producers Business Syndicates (PPBS).

The project is using two main basic methods of supplying feed nutrients to pigs; namely purchased complete feed and grain combined with a concentrate or supplement. Additionally, farmers are being advised to adopt methods that eliminate feed wastage such as floor feeding; trough design and good stock-man ship.

As part of the strategy to reduce the cost of feed, the project is also working with an independent consultant and research institutions to undertake research into alternate affordable fodder crops. The research will assist in the development of alternative feed solutions that adopt recommended animal nutrition management protocols to ensure nutritionally adequate daily diets and optimising production efficiency performance.

These strategies are targeted at 1,000 pig farmers under the project and are projected to reduce feed costs by at least 30 percent. Already, the project is in the process of procuring feed plants to be housed at the two pork integrators based in Mashonaland East and West production corridors.

Follow the links below to learn more on how VALUE will work with the pork integrators:

- [Bradford Farming, Mashonaland West province](#)
- [Shamiso Farm, Mashonaland East province](#)



[Follow the VALUE project on Twitter](#)

IPVC) Interventions to Reduce Cost of Feed for Poultry Producers

The continuous rise in prices of chicken feed in Zimbabwe due to the unstable economy has forced a lot of poultry farmers to downsize. Most farmers are unable to cope with the expensive chicken feed, leading to high mortality rates, underweight chickens and in some cases, low egg production.

Approximately 65 percent of the costs incurred by producers is attributable to the purchase of feed and small to medium-scale producers (SMPs) pay higher unit costs for feed and other inputs compared to larger-scale players due to non-bulk purchases.

The [Inclusive Poultry Value Chain Project \(IPVC\)](#) is implementing two approaches for reducing the total costs of feed for SMPs. The first model will facilitate local production of feed using local cereals/legumes. IPVC is working with SMPs on the growing of appropriate crops like maize, small grains such as sorghum, soya and sunflower seeds. In addition to reducing costs of buying and transporting inputs, this approach helps to stimulate local markets and to increase the markets for small grains in Zimbabwe's agro-ecological region IV and V areas, characterised as semi-arid and arid areas with low rainfall (especially around the Masvingo and Bulawayo clusters).

The second model focuses on organising SMPs into cluster hubs for bulk purchase of stock-feed. IPVC is facilitating linkages for bulk purchase in all five targeted clusters. These linkages are to be facilitated through capacitated local agro-dealers or directly with

existing high capacity producer associations, which will ultimately gain the benefit of bulk purchase discounts.

In addition, IPVC sought the expertise of an animal nutritionist, who embarked on a mission to access the opportunities for own feed formulation for poultry farmers. The nutritionist made field visits across all IPVC clusters (Harare, Masvingo, Bulawayo, Gweru and Mutare) and met with different IPVC partners. This research will inform the development of a strategy for locally produced feed.

To facilitate this initiative, IPVC has identified Lead Farmers, who have more than 500 chickens each, to disburse inputs towards feed formulations. Inputs have been distributed to 60 lead farmers within Harare and Mutare clusters, 40 lead farmers within Bulawayo cluster, 26 lead farmers within Gweru cluster and 20 lead farmers within Masvingo cluster. The aim is to train farmers to formulate their own feed using available grains within the homestead. Distribution of inputs is being done in two phases;

- **1st phase-** Each farmer receives; 15kg of maize seed 50kg, soya bean seed, 150kg Compound D fertilizer, 75kg compound C/L fertilizer, 2 litres Atrazine 2 litres, 1 litre Dual Magnum, 0.5 litres Lampda 0.5 and 50g Rhizobium
- **2nd phase-** An evaluation of the performance of crops will be made and some farmers may receive all the inputs again due to poor performance of their crop.



146 Lead Farmers received inputs to grow crops to be used in feed formulations. The farmers will receive training on formulating their own feed using available grains within the homesteads.



[Follow the IPVC project on Twitter](#)

ZAGP Tackling the High Cost of Livestock Feed

National Foods Stock Feeds and ZAKIS Public Private Partnership

Livestock feeds constitute about 75 percent of total production costs in a commercial livestock business. For profitability to be realised, strategies and innovations have to be employed to improve feed conversion efficiencies or reduce feed costs.

To promote innovative livestock feeding strategies the [Zimbabwe Agricultural Knowledge and Innovation Services \(ZAKIS\)](#) project has entered into a partnership with one of the leading stock feeds manufacturers in Zimbabwe - National Foods Limited, to carry out feed trials for poultry, pigs and cattle. The results of the feeding trials will be cascaded to the farmers through the two Agriculture Centres of Excellence (ACEs) at Chibero College of Agriculture and Matopos Research Institute.

This initiative goes hand in hand with the first outcome of ZAKIS - to have two ACEs established and capacitated to coordinate market-oriented, demand-driven research, education and extension as replicable proof-of-concept models for the sector, informing policy in the context of a functional enabling environment for agricultural development. This outcome relates to the establishment of the physical, governance and policy structures needed for successful functional integration of agricultural knowledge and innovation services at all levels. The establishment of ACEs will involve serious and intentional private sector engagement for co-investment and knowledge gathering and sharing. National Foods Limited's initial visits to the ACEs have been conducted to assess the feasibility of the partnership and National Foods Limited has committed to setting up feed performance testing centres at the two ACE sites.

The Chibero College of Agriculture ACE (ChACE) will have a pig and poultry feed testing centre while the Matopos Research Institute ACE (MACE) will have a beef feed performance testing facility. This partnership will also take advantage of National Food Limited's strong training component and will provide such training at the ACEs and District Agricultural Centres of Excellence (DACEs). For the feed testing centres they will provide the feeds and the institutions will sell the livestock to generate income and build sustainability into the production of the animals. For the poultry feed performance demonstration at Chibero College of Agriculture, National Foods Limited will provide the day-old chicks and feed for the first batch. The ChACE will sell the finished birds and the proceeds will be used to finance the next batches.



[Follow the ZAKIS project on Facebook](#)

The high costs of feed are forcing livestock farmers to drastically reduce production levels. The ZAKIS partnership with National Foods Limited will result in the implementation of innovative livestock feeding strategies.

ZAGP Tackling the High Cost of Livestock Feed



TRANZDVC APPROACHES TOWARDS FEED COST REDUCTION

The Transforming Zimbabwe's Dairy Value Chain for the Future project (TranZDVC) conducted a nationwide analysis on the contribution of feed to the total variable cost of milk production. It was noted that on average, feed constitutes up to 70 percent of total variable costs (TVC) in the dairy value chain. The table I below shows the contribution per sector:

Farming Sector	Proportion % contribution to Total variable costs
A1	40
A2	80
Communal	65
Old Resettlement	67
SSC	75
Peri-urban	77
Large Scale Commercial Farmer	84

Feed cost as a percentage of TVC.

TRAZDVC APPROACHES TO LOWERING THE COST OF FEED:

1. Study to Analyse the Cost-effectiveness of Different Feed Options

The project will conduct a study to analyse the cost drivers of supplementary feed with a view to taking an industry position on measures to be adopted to reduce costs and increase competitiveness. A consultant will be hired to carry out this activity.

Transforming Zimbabwe's Dairy Value Chain for the Future

2. Support Training on Cow Nutrition Requirements and Own Fodder Production

Protein is the most expensive but key ingredient for improved milk quality and quantity. Only about 55 percent of small-scale farmers are reported to be producing own feed for their dairy enterprises. To reduce cost of feed, farmers need to increase own feed production. Various trainings will be conducted for farmers on:

- On farm feed, hays, fresh fodder, silage
- Cost effective feed options development
- Establishment of demonstration sites by the Lead Farmers
- Feed out-grower schemes
- Use of on farm by-products
- Production of high protein mixed silage

Other activities will include:

- Public-Private Partnerships (PPP) including bulk purchases and bulk transportation of feed
- Strengthening agro-dealer networks including bulk purchases of inputs
- Piloting hydroponic production techniques for fodder production.
- Study circles aimed at developing capacity and competence of farmer groups through interactive exchange knowledge. TranZDVC will facilitate the

development of dairy cow management study circle material, which will include animal nutrition and different feed options and dairy farm management models.

The Zimbabwe Association of Dairy Farmers (ZADF) Field Officers through Agricultural Extension Officers, will facilitate the sensitisation and mobilisation of the study circle groups. Lead Farmers will provide practical training on fodder production through commercial demonstrations and field days.

3. Support to Small-scale Feed Entrepreneurs.

For those farmers with limited access to suitable land and water, purchasing fodder from feed entrepreneurs may be a lower cost option. Such entrepreneurs may be farmers specialising in animal feed production and/or entrepreneurs buying/collecting feed from local farmers, and processing the same into feed for the dairy farmers.

4. Matching Grants Facility (MGF)

TranZDVC is capacitating farmers through provision of a matching facility to enable them to buy productive assets including: silage cutters, solar powered boreholes, pulverisers, feed mixers and feed transporting vehicles. The facility will also capacitate an independent laboratory for feed, soil, water and milk testing.



Farmers like Washington Sagonda from Manicaland Province, will benefit from the project's activities aimed at reducing the cost of feed. From 14 milking cows, Washington produces an average of 205 litres of milk per day.



Follow the [TranZDVC project on Twitter](#)

PROJECT UPDATES

VALUE Imports Goat Breeding Stock from Namibia

The VALUE project received the first consignment of goat breeding stock from Namibia on 20 December 2019. A total of 224 goats were received comprising Kalahari Red, Boer and Saanen breeds, the goats were delivered to Michview, Zvikomborero Farm and Matopos Research Institute.

“The imported superior goat breeds will be housed at Michview and Zvikomborero Farm for cross breeding with indigenous breeds for improved genetics. The offspring of these goats will then be made available to farmers for breed improvement,” said Lindani Ncube the Technical Manager at Michview. Grasslands and Matopos Research Institutes will also house part of the breeding stock for the purpose of creating a gene pool.

Farmers will also access the breeding stock at Goat Improvement Centres across the 12 districts where the goat value chain is being implemented.

Project Team Leader, Newton Chari said “the coming in of the breeding stock is a key step in the project which will contribute towards the genetic improvement in the country. The VALUE project is indeed grateful to the European union, government of Zimbabwe and our private sector players namely Zvikomborero Farms and Michview for the support in procuring top quality genetics which will significantly advance the commercialisation agenda.”



The goats captured at Zvikomborero Farm, in Chivhu district getting acclimatised to their new environs soon after delivery.

PROJECT UPDATES

SAFE Baseline Study On Course

The [Transforming Zimbabwe's Animal Health and Food Safety Systems \(SAFE\)](#) project's baseline study team has gone through the field work comprising of intense key informant interviews, questionnaire administration, and focus group discussions with major stakeholders across the four provinces of Manicaland, Masvingo, Matabeleland South and North. However, the flow of the field survey activities was slowed down by the festive season break and a brief mop-up exercise commenced on the 6th and completed on the 16th January 2020 with some of key stakeholders.

The study has reached out to a wide array of key stakeholders at both national and subnational level to gather as much information as possible so that the project responds to the real needs on the ground. As highlights and in part, the study has gathered evidence and justification for the SAFE interventions in the following areas;

- Incidences of animal diseases affecting human health, productivity and marketing
- Trends in disease outbreaks for priority livestock diseases, probable reasons for such outbreaks
- Surveillance of foodborne and animal diseases, current systems of tracing back disease outbreaks to point of origin
- Quarantine times for notifiable disease outbreaks and effects to livestock trade
- Response time between detection of a disease outbreak and implementation of control measures,
- Desired changes or amendments to the animal health policies and regulations
- Areas of focus for Standard Operation Procedure (SOP) manuals, areas of overlaps within various Department of Veterinary Services departments and the Department of Environmental Health (DEH)
- Existing information management systems under animal health and food safety and the gaps to be addressed by the SAFE project
- Existence of Livestock Identification and Traceability Systems (LITS) in place, services being currently offered at Animal Health Management Centres (AHMC) and how these can be improved

- Challenges being encountered in delivering services at AHMC
- Biosecurity features at ports of entry
- Inventory of staff trained in risk analysis
- Establishing the existence and gaps of the functional one-health platforms at both national and subnational level.

Data analysis and report writing is now underway and the report is going to be made available to key stakeholders by 27th of January following which a validation workshop is going to be conducted on the 6th of February 2020.

Importance of Standard Operation Procedures (SOPs) in service delivery

Under SAFE, the delivery of the project interventions is being conducted by the personnel in the respective departments of the Department of Veterinary Services (DVS) and the Department of Environmental Health (DEH). The field operatives are expected to carry out their service provision in the same way from station to station thereby maintaining a high degree of service delivery the standard.

This is made possible by training the staff on the administration and proper use of the SOPs. To achieve this, SAFE is organising for a writers' workshop in mid-February for the development of the first lot of SOPs.

There are a number of services that require good adherence to the SOPs such as the ante-mortem and post mortem of ruminants and poultry. The ToT approach is going to help to cascade the training to all districts.

Once all staff members are familiar with the respective SOPs it becomes easy to monitor and check for quality of service delivery.

In addition, SAFE is going to work closely with the other ZAGP projects to develop the SOPs for Goat Improvement Centres (GISs), Cattle Business Centres (CBCs), Poultry Hubs and Milk Collection Centres (MCCs).