



Zambia Dairy Transformation Programme

MARCH 2020 NEWSLETTER



Welcome to the latest edition of our monthly newsletter, which summarises activities carried out under the Zambia Dairy Transformation Programme (ZDTP) in March 2020.

Left: Study Tour participants visit a dairy farm in Waikato, New Zealand.

A message from Country Manager Tania Thomson

Well our Fourth Year of the programme is certainly turning out slightly differently than we had envisioned, with the additional challenge COVID-19 is bringing to us and the rest of the world. March was yet again another busy month as I, along with 12 programme participants, took part in a truly inspirational study tour to New Zealand. We were fortunate to visit a range of organisations and speak to a lot of different members of the dairy industry in New Zealand, who were extremely open and honest in sharing their experiences and advice. It is clear from the tour that New Zealand dairy farmers are passionate about their profession and have a lot of resources on hand to help them to build on their already impressive knowledge base. Farm workers are empowered to learn just as much as farm owners, through being given opportunities to train and improve their skills. This is something that all tour participants thought could be applied to dairy farms in Zambia too. There are plenty of other 'takeaway' messages from the study tour which we will be sharing in upcoming newsletters. For now, please check out some early feedback from programme participants on page 4. On another note, myself and the rest of the ZDTP team are encouraged by the number of farmers who are making silage this year and look forward to working with them to plan how best to feed this to their animals to ensure optimal milk output. To further encourage this, we have been providing technical advice via fact sheets (see www.zambiadairy.com) and facilitating the use of various chopper machines. As our focus this year is on sustainability beyond the term of ZDTP funding, which is due to expire in December 2021, we are encouraging farmers to make silage with minimal support from the programme. Whereas last year we provided some farmers with inputs, such as plastic and fuel, this year we are expecting farmers to fund these items themselves. We are of course still fully funding silage and concentrate making at our 40 farmer hosted demonstration plots which show one or more of the practices we are showcasing. We look forward to sharing some of the lessons we have already learned from that in next month's edition of the newsletter.



"Myself and the rest of the ZDTP team are encouraged by the number of farmers who are making silage this year."

Tania Thomson
ZDTP Country Manager

Farmer spotlight: Mr. Dickson Manford Kamanga



Rocky Mountain Farm in Kitwe, in the Copperbelt, has dedicated its efforts to dairy farming for about seven years. The farm's Dairy Supervisor, Mr. Dickson Manford Kamanga, pictured left, manages three staff who are currently milking 17 cows, out of a total herd of 66 animals. Milk production is approximately 250 litres a day. Mr. Kamanga says he has noticed improvements in milk quality, production and dairy hygiene since he started passing advice onto his team from ZDTP extension staff, ZDTP fact sheets, training workshops and field days. As well as managing the milking shed, Mr Kamanga is responsible for monitoring animal health and ensuring good on-farm record keeping.

Having realised the importance of keeping good records, he says he now regularly records data on herd numbers, animal health, feeding, reproduction, milk volumes and more. Mr. Kamanga says the best thing about the ZDTP is how extension staff are always available to help. "I [have] learnt, and I am still learning, a lot of new things [in relation to] good farming practices," he says. We had a big problem [with] mastitis but [now] we are experiencing fewer cases ... and we are able to get rid of [each case] within a short period of time." Mr. Kamanga says Rocky Mountain Farm is making more silage this year, having done so previously, and will be depending on the ZDTP for further guidance. Check out an interview about Rocky Mountain Farm here: <https://vimeo.com/410048556>.

Milk quality: reflecting on changes at farm level



For the past 15 months our National Milk Quality Specialist, Mr. Friday Sampa, left, has been training Milk Collection Centre (MCC) staff and farmers on good practices for handling milk to avoid waste and spoilage, including cost-effective ways to improve milk hygiene, testing, cooling and storage. In this month's newsletter, he provides some feedback on changes he has observed at farm level. Next month, we will follow up with changes observed at MCCs.

Mr. Sampa says MCCs and farmers have, in general, been keen to learn and adopt new ideas resulting from the practical trainings he has been conducting. One of the issues he has helped address recently is milk rejections from processors due to water adulteration, something that has been extremely frustrating for farmers as it has been occurring despite farmers insisting they had not added water.

"I carried out some enquiries and found out that these farmers were freezing milk overnight," Mr. Sampa says. "Water was then separating off from the rest of the milk once defrosted and the water was being picked up as added water during testing." As a result of this discovery, "farmers are now advised and trained to only cool milk rather than freeze it".

There have also been disputes during testing where antibiotic residues have been detected in milk, despite farmers insisting they have not injected their animals. "We have trained farmers to prevent this unfortunate scenario by avoiding contamination," Mr Sampa says. "In practice, this means avoiding antibacterial detergents or rinsing milking equipment with freshwater thoroughly after cleaning it, separating cows on medication and preventing cows from drinking water from treated sources."

Mastitis has become less of an issue because farmers have starting testing milk from each teat before milking, using a dishwashing detergent solution (see our Home-made Rapid Mastitis Test (RMT) fact sheet at www.zambiadairy.com for more information).

"Farmers have also been advised to avoid keeping animals in muddy enclosures, to separate cows with clinical mastitis, to use teat dip where possible and to always wash their hands and milking equipment before and after milking."

Mr. Sampa says farmers, especially those who are off grid, have also been advised not to mix their morning milk with the previous day's milk to minimise loss due to spoilage. "I always explain the significance and importance of the changes I am suggesting, then demonstrate how they are done and, finally, explain the consequences for profitability."

Zambian farmers and policy makers visit New Zealand on study tour

As mentioned in our last newsletter, a dozen participants from the Zambian dairy industry, plus ZDTP Country Manager Tania Thomson, visited New Zealand on a 10-day study tour to New Zealand in early March 2020. We will feature more about the tour and how it is contributing to transforming the Zambia dairy industry in coming newsletters, but we thought we would take the opportunity in this issue to provide you with some of the initial feedback we've received.

Mrs. Beatrice Mwilima

ZDTP Extension Officer Mrs. Beatrice Mwilima, finished the study tour feeling like “bringing New Zealand to Zambia” because “all the problems [in New Zealand] had solutions and were addressed”.

However, she acknowledged that it was unrealistic owing to the huge differences between the countries. For example, New Zealand has access to better technologies and is free of the many tick-borne diseases that Zambian dairy farmers struggle with, plus others such as foot and mouth disease. The climate in New Zealand is also much easier to work with, with rain throughout the year. Zambia receives, on average, only six months' worth. Mrs. Mwilima was impressed with the strong focus on skills development within the New Zealand dairy industry. A major challenge in Zambia was that many small-scale farmers “still want to do business like their ancestral fathers. In most cases, dairying is [considered] a way of life not a business”.

Mr. Clifford Chisenga

Mr. Clifford Chisenga, who is the Board Secretary for the Liteta Small Scale Dairy Cooperative Union, said the study tour helped him appreciate how “dairy as a business” had grown in New Zealand – from the early days in the 1800s to today. He was impressed with New Zealand's farmer-owned co-operative Livestock Improvement Corporation, or LIC, which has provided genetics expertise, information and technology (i.e. high-grade sperm for use in Artificial insemination) to the dairy sector for more than 100 years. Mr. Chisenga said he would apply some of what he learnt on the study tour to his own 3.5-hectare farm in Liteta, which is home to nine dairy cows. For example, he planned to train his dairy farm worker in animal care and heat detection so he could avoid unwanted pregnancies in his dairy cows from local animals that reduced the quality of his herd.



Above: Study Tour participants examine farm inputs in a New Zealand store.

The tour included visits to and engagement with various departments of the Ministry for Primary Industries (the Ministry in charge of agriculture and the New Zealand equivalent of the Zambian Ministry of Fisheries and Livestock), teaching and research institutes (Massey University and AgResearch), organisations providing extension and other support to farmers (Dairy NZ, Dairy Women's Network, Federated Farmers), private sector input suppliers (Livestock Improvement Corporation, Farmlands), a working farm and organisations support disease eradication and animal tracing (OSPRI) and training of industry personnel (Primary ITO).

“The enthusiasm and commitment of farmers towards dairy farming was motivating and it was energising seeing young people participating.”

- Mrs. Beatrice Mwilima

Mr. Chisenga said there were also several industry-wide changes that he would like to see in Zambia, such as incentives for farmers to grow their businesses (i.e. lower interest rates for borrowing money to buy quality cows) and stronger involvement of the private sector. “For instance, in New Zealand the private sector plays a very significant role in the industry ranging from genetics (i.e. extraction of semen for the improvement of herds) to general administration and management.” He would also like to see the Dairy Association of Zambia (DAZ) take “centre stage” in the pricing of milk in Zambia, in consultation with farmers, rather than leaving it in the hands of buyers. In addition, the DAZ could become more active in giving information to farmers on subjects such as where to buy animals, how to obtain loans and what vaccinations are needed and when.

“I will ensure [that] each time there is a meeting about dairy [that] my worker will come with me so we can learn together because I now understand that an informed worker is an asset to the business.”

- Mr. Clifford Chisenga

Mrs. Evelyn Chona

Mrs. Evelyn Chona, who is the DAZ representative for the country’s Northern Region, said the tour was worthwhile and she brought home several new ideas. These included the benefits of using ear tags to identify and trace one’s animals and the value of private veterinary services and breeding centres, particularly for cross breeding. Mrs. Chona was also inspired by the strong women’s network in the New Zealand dairy industry.



Study tour representatives during a final official engagement at the Ministry of Foreign Affairs and Trade in New Zealand. The study tour delegation was led by Dr. Benson Mwenya, Permanent Secretary of the Ministry of Fisheries and Livestock (MFL) and included members from MFL’s Headquarters and Provincial and District Offices, representatives from DAZ, ZDTP and farmers from some of the ZDTP’s target cooperatives.

Mr. Caroline Lubinga

Mrs. Caroline Lubinga, who is the Chairperson of a cooperative affiliated to Kwanshama Dairy Cooperative Union, said she left New Zealand “in awe” of how the country’s dairy farmers had taken ownership in managing their industry. “This is an area severely lacking in our country. Individual cooperatives have little influence over the main processor ... and the DAZ, the organisation that represents farmers who pay levies to it, has no autonomy.”

Mrs. Lubinga is the owner of Rocky Mountain Farm (see *Farmer spotlight: Mr. Dickson Manford Kamanga* on page 2), and is excited to put what she learned in New Zealand into practice on her own farm, including making silage in a quest to revert to a pasture/forage feed system. “We have planted our first lima of Rhodes grass [and we] have also planted sun hemp and will be planting velvet beans as well.”

“On a scale of 1-10, I'd rate my experience a perfect 10. It was exciting and very inspiring and left me with a greater determination to commit and succeed at my dairy business by employing some cost-effective practices that worked for New Zealand and could be adapted to our country too. Rome was not built in a day, but if we commit and work together, we too can make our mark on the world market.”

- Mrs. Caroline Lubinga

Mr. Mwape Mweni

Mr. Mwape Mweni, a Livestock Production Officer at MFL, said the consistency of the information provided by all organisations involved in the study tour was “amazing”, which “showed high levels of collaboration, appreciation and knowledge within the sector”. Mr. Mweni was interested to learn about the market-driven extension services provided to New Zealand farmers by Dairy NZ and other private entities, which is in contrast with the mostly government-run Zambian extension system. “[It] shows how possible it is to have a privately-operated extension system as long as the clients/farmers appreciate the role of the private extension providers in their dairy enterprises’ success.”

“The market oriented dairy industry is possible... if it begins with farmers themselves.”

- Mr. Mwape Mweni

Mr. Mweni was also impressed by dairy breeding and pasture improvement research agencies LIC and AgResearch, which have played a major role in the development of the dairy industry in New Zealand and milk quality. “Since LIC is a farmer funded organisation and provides breeding services to the farmers, its research activities are applied and adaptive to address the farmer’s needs, making it more practical and market oriented.”

Ms. Jedrine Mushili

Ms. Jedrine Mushili, a Luanshya-based veterinary assistant with MFL, said it was clear that education and information sharing had played a vital role in the development of the New Zealand dairy industry. As with the ZDTP, farmers utilise discussion groups to share experiences and help each other solve immediate problems. Ms. Mushili was interested to learn that herd replacement in New Zealand takes place every year at an average rate of 20 per cent. “Only the least performing animals are replaced [every year and] accuracy of such activities is aided with the used of [an] animal identification and traceability application which contains all records of a particular [animal] recorded to monitor performance.”

“All stakeholders in the [New Zealand] dairy industry have distinctive roles and they all work together for best results of the industry. There is no competition amongst the stakeholders.”

- Ms. Jedrine Mushili

She hoped the Government of Zambia, through MFL, might invest money in research that will help breed an animal genetically suited for the environmental conditions of Zambia. She herself planned to do a number of things differently in her role as a result of the study tour, such as encouraging farmers to invest in planting pastures during the rainy season and preserving it by making silage, balage or hay for use during the dry season and making sure there is a good flow of information between farm owner and workers.

The ZDTP is focused on supporting dairy farmers to improve their productivity, milk quality and linkages to urban markets. The views expressed in this publication are those of the implementers of the programme and do not necessarily reflect those of the New Zealand Government. For further information, please contact ZDTP Country Manager Tania Thomson on tania@primeconsultants.net or +260 96 456 4206.