

# Zambia Dairy Transformation Programme

MAY 2021 NEWSLETTER



*Welcome to the latest edition of our monthly newsletter, which summarises activities carried out under the Zambia Dairy Transformation Programme (ZDTP) in May 2021.*

*Left: Belita Mwale is a dairy farmer and Vice Chairperson of Kalindini Dairy Cooperative in Mufulira. "It takes a long while to grow a cow for sale; [however] there's great profit in dairy farming, as one gets to sell milk."*

## Farmer spotlight: Belita Mwale

Belita Mwale has been a dairy farmer in Mufulira for six years and has been working with the ZDTP along with her fellow dairy cooperative members for three of those years.

### **How did you get involved with dairy farming?**

I went to a wedding at Palabana [in Chongwe District] and my in-law took me to visit a Milk Collection Centre. One of the workers said he collected 60 litres a day. I was excited and when I got back home, I joined Kalindini [Dairy] Cooperative.

### **How many animals do you have?**

I have one animal. I had three, but I sold two of them.

### **What are some of the things you have learnt from the ZDTP?**

I've learnt to make silage and how to feed [dairy] cows [using] maize and soya beans to reduce costs. Previously, we didn't know the measurements and didn't have anyone to teach us. But through [the ZDTP], we have learnt [that] if you plant yellow maize, you can grind it, mix it with salt, DCP and soya. A cow needs to be fed properly. It doesn't produce milk if you only feed it dry grass, or if it hasn't had any water... or if the feed isn't properly mixed. I'm getting about 10 litres a day now.

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# Farmer spotlight: Belita Mwale

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I [also] thank Mr. Zimba [ZDTP's Cooperative Business Support Officer] for teaching us business transactions. I have learnt to record every amount I make in my business, because without writing it down, I forget. Record keeping helps me know the exact date when something has happened.

## **How do you ensure your milk is of good quality?**

One needs to wash their hands with soap before milking the cow. After milking, you add teat dip to prevent bacteria on the cow teats.

## **Every farm must have a vision. Where do you see this farm in about three years from now?**

It will progress. The plans I have are to buy a chopper of my own, so in the rainy season I can plant [crops for silage] with the help of the young men around here. I want to buy another cow when I sell my maize, so I can have more milk. I'm also planning on expanding into the poultry business, keeping village chickens and eventually I want to have a piggery. I also need boreholes.

## **How does the dairy business help you at home?**

It helps with [milk for] my diet and helps send the children to school.

## **Do you have any help running the business at the farm?**

My child assists me in taking the milk to the Milk Collection Centre. When he helps, I give him ZMW 100 at the end of the month to buy some clothes. He doesn't work for free.

## **What advice would you give to those who want to venture into dairy farming?**

It takes a long while to grow a cow for sale; [however] there's great profit in dairy farming, as one gets to sell milk. In a year, I can make about ZMW 20,000 from selling milk (from one cow). It's even better when you have two or three cows.

*To view an interview with Belita Mwale, visit <https://vimeo.com/557035930>.*

## Providing good nutrition to your dairy cows throughout the year

Now that we're heading towards the middle of the dry season, here are a few reminders of how to ensure you dairy animals receive adequate nutrition.

1. Follow our annual feeding plan which focuses on making best use of home-made feeds, i.e.,
  - Fresh pasture during the wet season (December and January);
  - Pasture plus additional forms of locally available roughage during the early dry season (February to June);
  - Silage during the remainder of the dry season (July to November);

Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Natural pasture		Supplement natural pastures with green crops such as napier, maize or sorghum. Or silage if available.					Silage (or hay) produced during the wet season.				
60 days		150 days					150 days				

2. Reduce or avoid feed wastage by feeding using a trough or rack;
3. Reserve concentrate feeds for the cows that are going to pay for this, i.e., milking cows during the first three months of lactation;
4. Try and grow / make as much of your feed at home as possible – this will reduce costs;
5. If you have not made enough this year, plan to make more next year; and
6. Remember to ensure that all your animals always have access to clean, fresh water!

For further information, see our feeding fact sheets at <https://www.zambiadairy.com/fact-sheets>, which cover these topics.

# Important considerations if using poultry litter as feed



If you keep chickens on your farm, it might be tempting to use poultry litter as a low-cost feed for your dairy animals; however, be warned: doing so can have serious implications.

*The following information is from our latest fact sheet, F09: Poultry Litter, available at <https://www.zambiadairy.com/fact-sheets>.*

Poultry litter is the waste bedding from poultry houses. It includes droppings, bedding (i.e., sawdust and maize bran) and uneaten feed.

## **Why do some farmers feed poultry litter to their cows?**

Poultry droppings include chemicals such as uric acid and ammonia, which bacteria in the cow's stomach can use instead of protein.

These chemicals are referred to as Non-Protein Nitrogen or 'NPN'.

Poultry litter may also be cheaper and more available than some other protein feeds.

## **What is the nutritional value of poultry litter for cattle?**

The nutritional value of poultry litter can be affected by several things, such as:

- The composition of the diet of the birds (layers or broilers);
- The type of bedding material and frequency of cleaning;
- Litter processing and management;
- The number of birds and time spent on the bedding material;
- The moisture content of the litter, which is affected by things like climate, ventilation and the birds' diet.

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*It is difficult to know the nutritional content of poultry litter or manure. There is no standard formula for it, so you never really know what you are feeding to your animals.*

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## **What are some good practices when producing poultry litter?**

To make sure poultry litter is hygienic and safe to feed to animals:

- Remove dead birds immediately to prevent contamination with Clostridium (the bacteria that causes botulism);
- Record all medicines given to your birds (layers or broilers);
- Do not feed any litter with medicine residues in it to livestock (see fact sheet M04 for more information on avoiding residues in milk); and
- Sift the manure to remove foreign objects and lumps due to moisture;
- Remove pathogens (organisms that cause disease) by i) stacking the litter 2 metres high for at least 3 weeks, ii) ensiling it with whole or chopped pasture or iii) putting it in the sun to dry; and
- Store the litter safely to stop it becoming moist / wet.

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### **What are some good practices when feeding cows with poultry litter?**

To ensure your litter is safe to feed your cows, we strongly advise you to have “crude protein analysis” done on it. This can be carried out at local laboratories, such as those for ZABS or UNZA in Lusaka. If nothing is known about the litter (and you cannot do crude protein analysis on it), do not give it to milking animals. In addition, if you are planning to eat or sell an animal for its meat, you should use a 14-day withdrawal period before slaughtering it. This is to ensure there are no antibiotic or other drug residues in the meat. Meat containing residues can be harmful to humans.

We also advise that you:

- Vaccinate your cows against botulism, even if the litter is processed;
- Use very dry litter (most bacteria and fungi cannot live in dry litter);
- Mix the litter with maize meal or molasses to improve digestion of ammonia;
- Ensure that poultry litter is less than 30% of the ration, based on the dry matter content; and
- The amount of poultry litter than can be fed to cows is 1% of their body weight per day; that’s equivalent to 4.5-6kg/cow/day.

### **What are some of the risks associated with feeding poultry litter?**

Poultry litter is not well balanced nutritionally and needs a source of energy such as maize meal or molasses to be utilised effectively. It is a low-quality feed that reduces production when included at high levels in the diet. Poultry feed also contains very low levels of vitamins A and E. If it is fed to animals for a long time, you may need to supplement animals with vitamins A and E. Poultry litter may also contain soil, which, if eaten in large quantities can lead to impaction in a cows’ digestive system. Litter may also contain sharp or foreign objects, such as wire, glass or plastic, so make sure you check for these before feeding. As mentioned above, poultry litter may contain bacteria, toxins and fungi, which can make your cow sick, or antibiotic residues which can be secreted in milk. Remember that some medicines fed to poultry such as coccidiostats are toxic to cattle. And finally, poultry litter can predispose late pregnancy animals to milk fever, so it’s best not to feed it to in these animals.

## **E-SLIP field days promote feed planning**

We were delighted to be involved in two E-SLIP (Enhanced Smallholder Livestock Improvement Programme) field days held in May.

The first was held in Mukobeko Agriculture Camp in Kabwe and the second in Chitwi Veterinary Camp close to Luanshya.

We joined colleagues from the Ministry of Fisheries and Livestock to demonstrate and share knowledge on good feeding for dairy animals.

Our team provided fact sheets to attendees and were also involved in silage demonstrations.

Strong emphasis was placed on the need to produce and preserve feed in times of plenty (i.e., the rain season) for use in times of scarcity (i.e., the dry season).

*Right: ZDTP Field Extension Manager Kelvin Mulusa, left, with MFL Principal Planner Packwell Chooka during the E-SLIP field day at Chitwi Veterinary Camp*



**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](mailto:tania@primeconsultants.net) or +260 96 456 4206.**