



Dairy Cows

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Dairy farming as a business

There are various ways farmers can make money out of dairy farming. You will make money from selling milk, calves and heifers, as well as the old cows.

To invest in a dairy cow you first need to list all the costs you will face. These include building a cow shed, purchasing a cow(s), milk equipment, feeds and, veterinary and medical fees. You can always invest in supplements to help increase your milk production and make more profit.

However, before you start your dairy production, make sure you come up with a business plan. A good business plan will outline what goals you wish to achieve and how you intend to get there. The goals will include how many cows you want to keep and how much milk you plan to produce per month. In addition it will allow you to identify your market.

Your biggest costs are your start-up costs. These are costs that you hopefully only pay once, such as the cow shed and buying your cow.

As start-up costs are high, you might not make a profit in the first milking cycle.



It will take sometime for you to be able to repay the investments you made when starting your dairy business. However, once you break even, you can start making a profit.



Can you afford to buy and raise a dairy cow? Do you need a loan?

If you do not have enough money to cover the start-up expenses of your business, you may need to borrow money. Talk to banks and SACCOs. Some loans you can pay back using your mobile phone. Remember that loans are not free. You will have to pay back your loan with **interest**.

Choosing a good dairy cow

When it comes to dairy farming, having the right breed of cows is really important. Choose a cow that will be profitable under the available resources on your farm.

Breed	Characteristics	Average Milk yield (305 day lactation)
Friesian 	<ul style="list-style-type: none"> • Good dairy breed. Also ideal for beef. • Highest milk producer. • Body weight: 500-600 kg • Colour: Black and white • Require very good management. 	3, 825 litres
Jersey 	<ul style="list-style-type: none"> • Hardy animal and early maturing. • Body weight: 350 kg • Colour: Brown colour normally. • Produces concentrated milk. • Eats less than the Friesian, and adapts well to hot climate. 	2, 970 litres

Breed	Characteristics	Average Milk yield (305 day lactation)
Ayrshire 	<ul style="list-style-type: none"> • Very efficient grazer • Colour: light to deep cherry – brown or mix of these colours. • Body weight: 450 kg • Hardy animals. Adapts well to hot climate. 	3, 375 litres
Guernsey 	<ul style="list-style-type: none"> • Milk production is between Friesian and Jersey. • Colour: Yellow to reddish-brown with white patches. • Milk quality is good (concentrated). 	3, 150 litres

Buy a cow that is healthy. Do not buy the first cow that you see. Ask the owner lots of questions. Look at the cow's records. Barter for a good price. Look out for:

- High milk production
- Whether it is in calf
- Proper records
- A strong, square udder with well-spaced teats
- Straight wide and strong legs and feet
- A cow that breeds and calves easily
- Whether it has been vaccinated
- Whether the cow has ever had any problems.



Up-grading

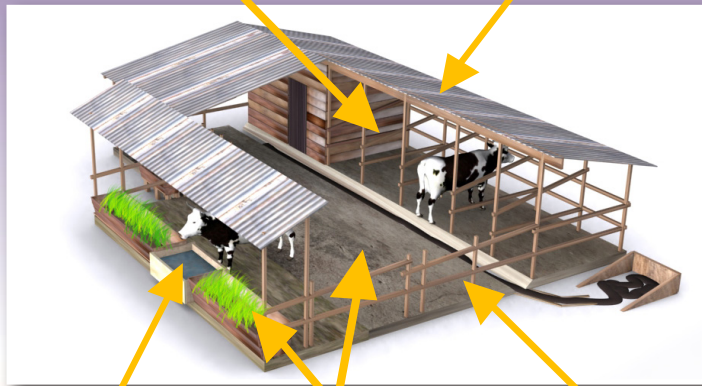
You may not be able to buy pure breed cows as shown above. In this case improve the production by cross-breeding. After a few years you will have a very high producing cow. Artificial Insemination (AI) is the best way to improve your cows. Select semen from a good bull for your cow based on what you will use the calf for.

Building a cow shed

A good cow shed should have a walking area, resting area and, feeding and watering area.

Each cow should have a resting area (cubicle) of 4ft x 7ft.

Roof, made of iron sheets or grass thatch, over rest and feeding area. This protects your cow from sun and rain.



Your cow must always have clean water. Catch rainwater off the roof.

A sloping floor will help waste to drain away.

The surface of the floor in the walking area should be rough so that animals cannot slip on it. It should also be easy to clean.

Feeds in troughs at least 3 ft above the ground.

Clean your cow shed every day!

The cubicle should be constructed such that the cow remains clean all the time. Build enough cubicles for the cows you have and for heifers you may want to rear. Also make a calf pen to keep calves before they are big.

A cubicle has a length of 210cm (7 feet) and a width of 120 cm (4 feet). Cubicles are separated from each other by two timbers.

Feeding your dairy cow

To make lots of good milk, dairy cows need a varied and balanced diet, including energy, protein, quality concentrates, vitamins and minerals, and plenty of clean water.

Energy

Common feed to provide energy are grass forages e.g. napier, boma rhodes, maize fodder. These forages can be used fresh, dry as hay or silage.



Dry feed wheat straw, hay, rice straw, maize stover and other vegetable by products.

Fresh fodders include napier grass, lucerne and sweet potato vines. They usually contain a lot of water.

Do not feed freshly cut grass to your cow. After cutting fresh fodder, leave it for a day to wilt, and chop it into 3 inch (5cm) pieces. This will make it easy for your cow to eat. This will also avoid feed wastage.

Protein

Your cow uses protein for building the body and producing lots of good quality milk. Calliandra is a good source of protein. Other good sources are desmodium and sweet potato vines.



Concentrates

Concentrates are feeds containing a lot of protein. These are normally given to cows producing more than 5 litres of milk. Commercial concentrates include dairy meals.

Minerals

Minerals are needed for good body condition and high milk production. Give the cow mineral supplements in form of licks or powder mixed with any of the feeds mentioned above. Your cow will come on heat 60 days after calving so you can get a calf a year.

Clean Water

More than 80% of milk is water. Therefore for a cow to give a lot of milk, you need to give it plenty of clean water every day.



Calf Care

In any dairy enterprise, calf care is very important, as these young animals represent the future of your herd and dairy business.

Feeding calves

- After a calf has been born, the first milk that your cow makes is called **colostrum**. Colostrum is very good for the calf. It helps it to fight illness and infection.
- The calf has to receive colostrum within one hour after its birth. It should freely access colostrum within the first 3 days.
- The more milk that your calf drinks, the less there is for you to sell. Increase profits by giving the calf a **milk replacer** (after 5 days).
- Start weaning your calf off milk when it is six to eight weeks old.



Make sure your calf keeps its head up while feeding with a **teat bucket**.

A teat bucket can be hung above the cow so it has to raise its head to drink.

Make sure your calf always has access to clean, fresh water. Wash buckets and other utensils after every use with a disinfectant. Keep your calves separate from other farm animals.

Mastitis

Mastitis is a disease that attacks the udder. It is caused by bacteria, which multiply fast in poor hygiene areas and in bad feed. A cow with mastitis will give less milk. The milk is not good to drink. Test milk before milking with a **strip cup**.

How to use a strip cup



A strip cup is a cup with a mesh screen. The screen strains the milk.



Before milking, squirt a stream of milk from each into the strip cup. Squirt and inspect from one teat at a time.



Inspect the cup for signs of bad milk. Signs may be blood, flakes or lumps.

Clean your cow shed every day with clean water. Spray the resting area and milking area with a disinfectant solution.

Practice good milking hygiene

1. Before you begin to milk your cow, you must wash your hands thoroughly.
2. The cow's udders must be washed with a disinfectant solution and warm water then dried with a clean cloth. Each cow should have its own cloth.
3. Milk your cow by gently squeezing the teats. Do not pull the teats. Make sure all the milk is out of the udder. This should take at least 8 minutes of milking.
4. Apply a milking salve to soften the teats and stops them from cracking.
5. After milking, dip each teat in a teat dip solution to help control bacterial infections like mastitis.
6. It takes at least 10 minutes for the teats to close. If your cow lies down, bacteria can get into the teats. Feed your cow to keep it standing up.
7. Wash the milking utensils and equipment after milking. Keep them in a clean place.



Keeping your cows healthy

Controlling parasites

Spray and de-worm your cows to keep them healthy. If your cow has worms and diseases from ticks, it will not grow well and will be poor quality for the market. You will not get a good price. A healthy herd also gives more milk.



Internal parasites

If your cow's hair is falling out, it may have worms such as roundworms, flatworms or live flukes. To control worms, deworm your herd. Dose calves with recommended de-wormer every month for the first 6 months, there after dose every 3 months.

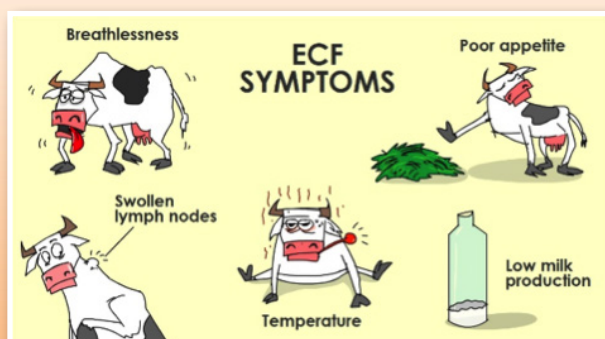
External parasites

These include ticks, fleas, lice and flies. To control parasites like the Brown Ear Tick, practice regular dipping every week. You can also spray your cows with approved and effective acaricides. Brown Ear Ticks cause diseases like East Coast Fever (ECF). Consult your agrodealer for more information.

Diseases and Vaccinations

Make sure you get a vet to vaccinate your cows for you. Don't do it yourself. East Coast Fever (ECF) is a disease spread by Brown Ear Ticks. ECF can kill your cow. You can cure ECF, but your cow will never make as much milk and it is expensive.

The vet will weigh your cow, check its health, deworm it, and give it antibiotics before injecting the vaccine. The vaccinated cow will get an ear tag. This shows others that the cow has had the ECF vaccine. You will get a better price at market.

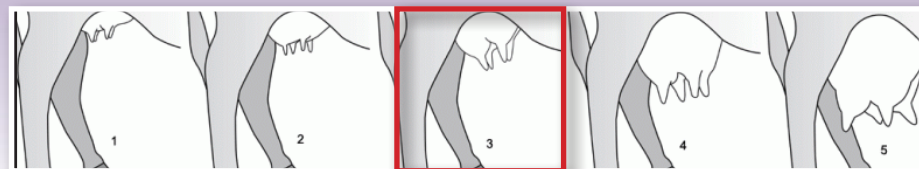


Breeding dairy cows for profit

Breeding dairy cows can be a good business. To get a good calf, you must do **Artificial Insemination (AI)**. This is when you choose a bull from a catalogue, and the semen is put into your cow by a vet.

Select a bull based on the characteristics that you would like in your calf such as:

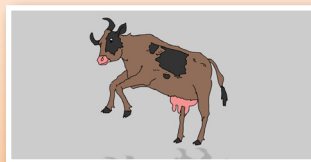
1. High milk production
2. Calves easily and will give a strong and long-lasting calf.
3. Good fertility and is immune to diseases.
4. Comes on heat early.
5. Well-formed body with strong legs. The legs and feet must be well spaced. There must also be space for the udder to fit well.



Look at your cow's udder. Is it too high? Too low? The best is number 3 in the picture. If your cow's udder is too low, choose a bull that will give a calf with a high udder.

Remember to choose a bull before your cow comes on heat. Once your cow is on heat you only have 12-18 hours for the vet to come and do AI.

How will I know if my cow is on heat?



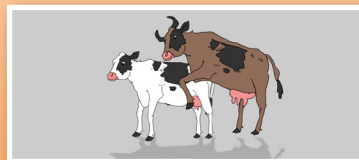
Cow is restless and goes off food



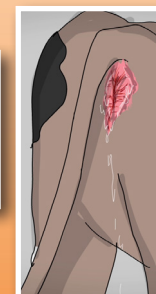
She bellows often



She produces less milk.



She mounts others and stands still when others mount her



She has a swollen vulva and clear discharge. These are the most important signs. Call your vet to do AI when you see this.

Use the **AM-PM Rule**. If your cow comes on heat in the morning, serve in the afternoon. If she comes on heat in the afternoon, serve in the morning. Heat lasts 14-18 hours.

Keeping records of your dairy business

You should also keep good farming records and accounts of your business operation. This will let you keep track of whether you are making a profit or not and keep track of your cow's health and breeding.

- You will know when it will come on heat. Wait 45 days after your cow has had a calf, then keep checking for a swollen vulva and clear discharge.
- Keep track of milk production (litres/day) and note any changes.
- Avoid inbreeding by recording which semen you used for Artificial Insemination (AI).
- If you sell your cow, the buyer will ask to see your records.
- Record lactation, so that you know when your cow gave birth and when to dry off.
- Keep track of your animal's health (diseases & vaccinations).

Name	Heat	Served	If not served	A.I/Bull used	Calving date	Calf Sex
Marula	1/2/2014	1/2/2014	22/2/2014	Jersey Bull	2/11/2014	Male
Maua	3/5/2014	4/5/2015	24/5/2014	Aryshire Bull	7/2/2015	Female
Celina	5/8/2014	5/8/2014	26/8/2014	A.I ABS Isiah	8/5/2015	Male

Get more from your milk: Value Addition

Add value to your product by processing it. Do this by extracting the product or by packaging it. Sell the processed product direct to the consumer. You can make a higher profit.

Some important questions to ask yourself:

- What product do you intend to sell?
- Who is your target audience and how will I market the product?
- Are my location(s) convenient to buyers?
- What is the profit potential of the product?
- How much will people pay for the product?
- How will I demonstrate the quality of the product?

Example of Value addition milk:



Yoghurt



Butter



Ice cream



Cheese



You can take classes, trainings or attend seminars on making the products that you are interested in marketing. Food technologists can also offer guidance on the processes and production of milk products.

Careful business planning and adhering to Uganda National Bureau of Standards (UNBS) regulations will also ensure the success of your new agribusiness venture.

For more information on Dairy Cows

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