



# Series 8, Episode 6

Sarah and Joseph's Farm, Uasin Gishu, KENYA

*This leaflet contains information on: solar TV system, potato pests and diseases, breeding cows, feeding calves*

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## Azuri PayGo Solar TV System

Kerosene cannot be used to power home devices like radios and TVs. A generator can be used but it is very expensive. Solar systems use energy from the sun to make electricity. The sun is free. The **Azuri PayGo Solar TV System** comes with:



A 50 Watt **solar panel**. This attaches to the roof of your house. It catches sunlight and turns it into electricity.



A **battery**. This connects to the solar panel and stores the electricity for you to use at night.



**4 lights with switches**. You can have light in 4 different rooms of your house!



A solar-powered **radio**. It is charged by the battery.



A small **torch**. It is charged by the battery.



A **digital TV**. A satellite dish gives you more than 50 TV channels and more than 20 radio channels. When the battery is fully charged, it can last for up to 6 hours.

The solar system also comes with **charging cables for your mobile phone**.

## Is the Azuri PayGo Solar TV System affordable?

You can pay a deposit of 4,999/-, with a 1 month advance payment of 520/-. Then pay 130/- per week.

The **Azuri** technical team will install your **Solar PayGo TV System** for free. Send a free SMS to 22213. Their customer care agents will call you back.

The average farmer spends 60/- per day on kerosene. The **Azuri** system works out at 99/- per day, but includes all of the above features.



For more information, SMS “PESTS” to 30606

## Potato Pests and Diseases

### Whiteflies



You may see these white flying insects on the leaves and stems of your potato plant. If you shake the plant, you will see the whiteflies flying around the plant.

### Cutworms



These grow into moths. The worms cut the stems of your potato plants at soil level.

### Potato Tuber Moths



The worms of these moths make holes in your potatoes while they are still in the soil. You will not get a good price from potatoes with holes in them.

## Kill flying pests with *Nimbecidine* and *Final Flight*

Kill flying insects like Whiteflies, Aphids & Thrips by using *Final Flight* and *Nimbecidine* together. *Final Flight* is synthetic and insects can develop resistance to it if used repeatedly. However, *Nimbecidine* is a biological insecticide. The pests cannot build up resistance to it.



Mix 50ml of *Nimbecidine* and 8g of *Final Flight* in 20L of water.

Spray your crop early in the morning or late in the afternoon. Make sure that the leaves are covered on both sides.

Spray once a week. If you have lots of pests, spray twice a week.



## Potato Cyst Nematode



The first sign of a Potato Cyst Nematode attack is wilted plants. When you see this, check the roots. If you see galls (round lumps on the roots) then you know it is Potato Cyst Nematode.

The galls stop the roots taking up nutrients. The plant cannot grow without nutrients so it wilts and dies.

To prevent Potato Cyst Nematode, mix 50ml *Nimbecidine* and 20ml *Bio Nematon* with 20L of water. Soak the seeds before planting.

Once the plants have sprouted, spray your crop once a month.



## Potato Late Blight



Potato Late Blight is a fungus disease. It starts as small light to dark green spots at the tip or edge of lower leaves. Spots grow into large dark brown or black areas. It causes the leaves of your potato plant to turn yellow and then dry up.

Treat Potato Late Blight with *Matco 72*. Mix 50g of *Matco 72* in 20L of water. Spray your potato crop once a month.



## Breeding Cows

Getting a good milk yield begins with breeding. Use **artificial insemination** (AI) to improve your cows over time. Always breed with a pure bred cow. The calf will be worth more if you decide to sell it.

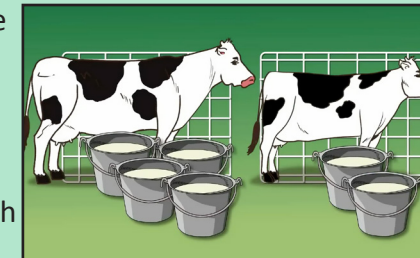
First, decide what you want from your cow. For milk? For heifers to sell? Is your cow good for breeding?

### Look at stature and weight

Big cows produce more milk.

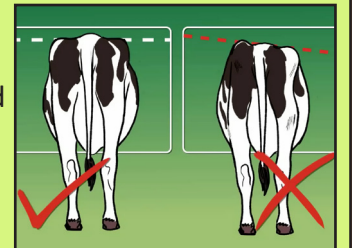
If you can spot 3 ribs, the cow is a good weight and the stomach will be a good size.

If the stomach is big, the cow can eat more which helps it to make more milk.



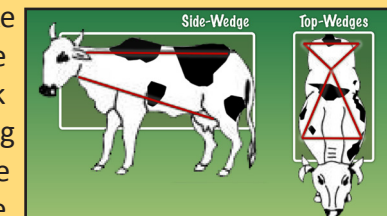
### Look at the pin bones

The pin bones on the cow's back should be balanced and wide. This helps the cow to calve more easily. Less complications when giving birth means less veterinary expenses.



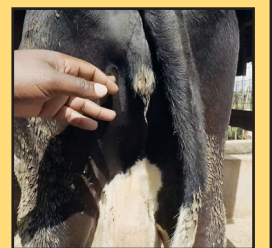
### Look at the shape

A good cow is shaped like a wedge. One of the side lines runs along the back bone and the other along the chest and belly, if the lines widens towards the rear side of body it shows quality of dairy character.



### Look at udder attachment

The udder should be attached well. If the udder is too long and too close to the ground, it is more likely to get an infection like mastitis.



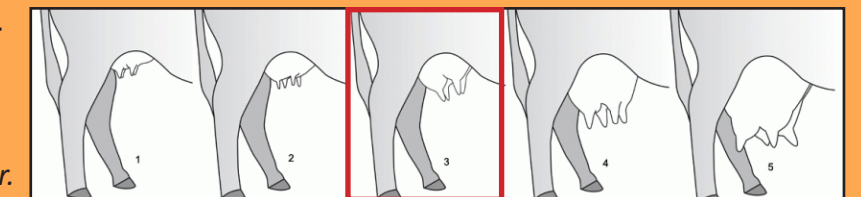
## Choose your bull from Coopers CRV catalogue



The catalogue lists characteristics such as large udder, strong back legs, and longevity. When choosing your bull, think about:

1. **Milk production:** More milk is more profit.
2. **Longevity:** You want your cow to live a long time.
3. **How it looks:** You can get a better price for cows that look good.
4. **Health and fertility:** Your cow should have a good udder free from disease. You want it to be healthy and to give many calves.
5. **Reliability:** Your cow should give calves and milk over a long period of time.

You can correct bad characteristics with AI. For example, look at your cow's udder. Is it too high? Too low? The best is number 3 in the picture. If the udder is too low, choose a bull that will give a calf with a high udder.



## Doing the AI

Choose your bull **BEFORE** your cow comes on heat. Heat only lasts 14-18 hours.

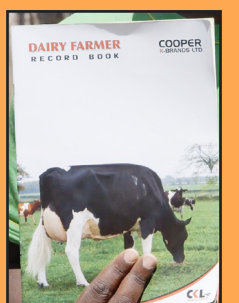
A cow on heat will have a swollen vulva and clear discharge. When you see blood, you are too late.

Make sure the vet is qualified and experienced. A failed AI is expensive because there is delay in giving birth & getting a calf. It also delays profits from selling milk.

## Keeping Records

The Coopers **Dairy Farmer Record Book** helps you to record all the details of your dairy herd, such as illnesses, treatment and calf production.

It helps farmers to judge the value of their cows and get good prices for them at market





## Feeding Calves

With good nutrition, your calf should reach breeding age in 12-15 months. Give **Sprayfo** milk replacer to your calf so that you can sell the milk from your cow.

### Sprayfo Milk Replacer



**Sprayfo** is a milk replacer that is high in protein and energy for fast growth. The milk replacer is cheaper than cows milk. It is given to a calf instead of taking its mother's milk. By selling milk, you will make enough money to pay for the **Sprayfo** and make a profit.

Mix 300g of **Sprayfo** with 2L of clean warm water. The water should be between 40 and 45°C. This is the body temperature of the cow.

For the **first 3 days**, give your calf colostrum.

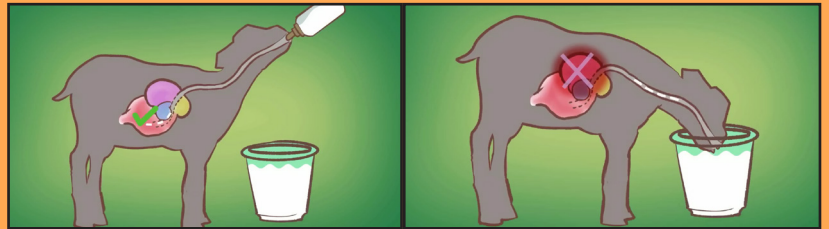
From **7 days to 1 month**, feed your calf 6L of **Sprayfo** a day. Divide it into 3 feedings. Feed 2L 3 times a day.

From **1 month until weaning**, feed your calf 7L of **Sprayfo** a day, divided into 2 feedings. Feed 3 ½L in the morning and 3 ½L in the evening.

## Feed your calf with a raised bottle or bucket feeder



This is to keep the calf's head in the correct position.



The milk will bypass the rumen and go straight to the stomach.

## Calf Weaner Pellets

Calf Weaner Pellets are high in protein and energy. They also contain lots of vitamins and minerals. They help your calf to have strong bone structure and to gain weight fast.

Feed Calf Weaner pellets to your calf from 5 days old. Start with ½kg per day. Slowly increase to 1.5kg per day by 2 months.

At 2 months, when the calf is eating hay only, the rumen will be able to break it down as it has been prepared by the pellets.



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