

Small-scale rearing of cattle

Selecting a breeding cow

A good breeding cow should meet the following criteria:

It has its first calf at an early age, and thereafter bears calves at short intervals.

It has an appropriate physical structure:

- Fine appearance, not too fat nor too thin; smooth and thin skin; glossy hair;
- Head, neck, body and shoulder are well proportioned;
- Head is clean-cut; broad muzzle; neck is a good length;
- Chest is wide and deep; rib bones are wide, flat, deep, and slanted toward the rear; well-developed belly that does not sag;
- Legs are strong and straight; rump is long, wide and not steep;
- The rear udder is wide, with squarely placed teats of medium length and with no superfluous teats. The skin of the udder is loose and thin, and the mammary veins are visible.

Breeding of cows

Signs when the cow is in heat

- When the cow or heifer permits other animals



Fig. 1. The cow being mounted is at the standing heat stage, the best time for breeding

to mount her while she remains standing (Fig. 1).

- The vulva is slightly swollen, and its color changes from red to light pink;
- The mucus discharged from the vulva is sticky.

Methods of breeding a cow

- Artificial Insemination (AI): Inseminators use semen from superior bulls and special AI tools to inseminate the cows.
- Natural service by breeding bulls. This is best, provided farmers can find F₂ Zebu bulls with ¾ blood of Zebu breeds such as Red Sindhi, Sahiwal or Brahman (Fig. 2 and Fig. 3).

Caring for calving cows and their calves

Taking care of pregnant cows

Pregnant cows should be given enough feed, with a daily intake of 30-45 kg of green grass, 2 kg of urea-treated rice straw, 1 kg of concentrate (maize, rice bran), 30-40 grams of salt and 30-40 grams of bone meal.

Assisting at a cow's delivery

- In normal cases, no assistance is necessary. The navel cord of the calf, if it does not



Fig. 2. A one-month-old Zebu crossbred calf born from a good local cow

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break naturally, should be cut 10-12 cm from the calf's body and then sterilized with 5% tincture of iodine. It is not necessary to tie the end of the navel cord.

- ❑ Wipe the fluid out of the calf's mouth and nose with a clean cloth so that the calf can breathe normally. Let the mother lick the fluid from the calf's body by herself. If the mother is exhausted, you should clean the calf's body with a dry, clean cloth. The calf's hooves should be put in place to prevent calves from slipping. Within one hour after calving, the calf must be suckled. Farmers should record the date of birth and other important details.
- ❑ If there are calving difficulties, the assistance of a veterinarian is required

Caring for the cow after calving

For 15-20 days after calving, the mother should be fed daily with rice gruel (0.5-1.0 kg of rice/head/day), 30-40 grams of salt, 30-40 grams of bone meal and sufficient green grass.

During the remaining calf-rearing period, the mother should be fed daily with 30 kg of green grass, 2-3 kg of urea-treated rice straw, and 1-2 kg of rice bran or ready-made feed.

Caring for the calves

- ❑ From 1-30 days of age, calves should be kept warm in a clean, dry shed, living next to their mothers. Strong winds should not blow directly into their shed.
- ❑ Calves more than one month old can graze beside their mothers on pastures close to the shed. They should also be trained by feeding them with concentrates.
- ❑ From the 3rd to the 6th month, calves are given a daily feed of 5-10 kg green grass and 0.2 kg ready-mixed feed, and trained by feeding with hay. Calves should be weaned at the sixth month.



- ❑ From the 6th to the 24th month, calves are fed mainly by grazing, with daily supplements of 10-20 kg green grass, sugarcane tops or young maize stems. If there is a shortage of green grass during the dry season, 2-4 kg of hay or good-quality rice straw should be added to their daily feed intake.

Urea-treated rice straw

Materials for straw treatment consist of 100 kg dry rice straw, 100 liters of clean fresh water, 3 kg of urea (46% nitrogen), 0.5 kg salt, and 0.5 kg powdered lime.

Procedure

- ❑ Dissolve urea, salt and lime in water, stirring evenly to become a 3% urea solution.
- ❑ Sprinkle the urea solution onto the dry rice straw, laid out in a layer about 10 cm thick.
- ❑ Place the urea-treated straw in nylon bags or small brick-lined pits.
- ❑ The treated straw is stored for 7 days, then gradually brought out and fed to the cattle.

Preventing and treating of parasites of cattle

External parasites (ticks, flies, mange, lice)

- ❑ Dissolve in one liter of water 1.25 grams Neguvon, 0.3 liter cooking oil and one-half teaspoon detergent powder, and mix well.
- ❑ Soak a clean cloth in the solution, and rub it over the whole body of the animal.

Internal parasites (roundworm, tapeworm and liver fluke)

- ❑ To eliminate roundworm, give one 5-gram packet of Levavet for every 20 kg liveweight of the cow or calf.
- ❑ To eliminate liver fluke, give one tablet of Fasinex 900 for every 80-100 kg liveweight of the cow or calf.
- ❑ Levavet or Fassinex may also be dissolved in 0.25-0.40 liter of clean water and administered as a drench to cows or calves.

Fig. 3. A high-quality F₂ Red Sindhi crossbred breeding cow (R. Sindhi x local cow)