

# Dairy farms take to tech boost

## Owners Rely On Cellphone Apps And Automation To Get Best Milk Yield

Meenakshi Rohatgi | TNN

**Pune:** From fully automated plants to tagging cows and buffaloes to playing music for better yield and developing cellphone apps to managing cattle and milk production, dairy owners in the state are becoming innovators.

In addition, tracking technologies for cattle and transport vehicles have brought a dose of modernity to traditional dairy farms.

Both small and big dairies in Maharashtra are looking at raising their production, cutting down losses and increasing their client base.

After Amul tagged each milk-yielding animal on their Anand farm using radio frequency identification (RFID), Chitale used the same technology at their Bhilawadi farm in Sangli to tag and track each animal and store the information on their private servers. Gowardhan Dairy in Manchar near Pune also adopted RFID to identify their cattle by numbers.

Vishwas Chitale, Chitale, founder and partner of Chitale Dairy, terms it as the 'cow-to-cloud' phenomenon, where all information about the cattle is stored on the cloud. "Technology reduces the number of people required to look after 10,000 cattle to only five," said Chitale. Earlier, a team of 20 to 40 people were required.

Information such as the animal's age, health, feeding habits, milk production is stored in the dairy-owned central server or data centre. This information is used to give out inputs on the farmer's handheld devices, with in-house cellphone applications. Farmers get daily updates about what and when to feed a cow and if a cow is unwell, the medicine that should be administered.

"We have used RFID on cattle in our Gujarat farms, but we haven't yet applied this in our Maharashtra facility in Virar," said RS Sodhi, managing director at Gujarat Cooperative Milk Marketing Federation,

### IN COMFORT ZONE

▶ Playing music to relax the cows so that the yield of milk is more. Jagran and bhajan in the morning, old Hindi melodies during the day and English rap in the evening is played to set them in the right mood



▶ Rubber mats are laid for each cow or buffalo for comfort



▶ The air temperature is cooled for hybrid cows from other countries for premium brand of milk



▶ Selective mating programmes ensure the best quality in the next generation of cows and buffaloes

### ON THE HYBRID HIGHWAY

▶ RFID tags are used to identify and tag each farm animal and record data. Each cow's or buffalo's entire life-cycle is recorded in private data centres and monitored daily

▶ The farmers are given updates on their handheld devices through cellphone apps built in-house, regarding feeding times, pregnancy cycles, and medicines for their cows



Cows at an automated milking parlour at one of the tech-savvy dairies and qualified members monitoring the milk collection data

Courtesy: Go Cheese plant



### EXPERT SPEAK



We have to be open to innovation and integration of technology into our business now, to increase yield and cut down costs. We have been able to drastically increase the per-cow yield to 2,500 litres per lactation

**Vishwas Chitale** | FOUNDER-PARTNER OF CHITALE DAIRY

Milk collection is done in fully automatic parlours, where cows get on for milking and get off

popularly known as Amul.

Chitale and Amul have also started programmes for selective mating of cows to minimize the shortcomings. While Amul has a 'fertility improvement programme' in Anand, Gujarat, Chitale has a 'genetic mating system' in place in Bhilawadi.

The programme has increased the yield drastically, dairy owners said. India's national average for milk production is 800 litres per lactation for a cow or buffalo, less than their counterparts in the US or the UK, where the averages are 8,000 litres and 1,200 litres, respectively.

"Acceptance of technology is necessary to increase yield and to balance costs and quality," said Chitale. "We have to make the business of milk and dairy seem lucrative for youths, hence cost effective-

ship management systems and we are able to target customers better."

Cattle are being looked after by nutritionists, selectively fed, their health and life-cycle monitored. Soothing music and comfortable mats help produce maximum yield. Automated systems like the rotary parlour at the Gowardhan facility collect milk.

Cows get up on a platform, wait to be milked and get off after the process is over. "Cows are not hurt, and the machine has a massage setting and can detect if the cow needs a massage," added Israni.

Traditional dairies have started venturing into nutraceuticals food — products mixed with nutrients, baby food and other fortified milk products. They are looking for companies who can provide the technology which

has led to many small companies and startups joining the bandwagon.

Navi Mumbai-based Pro-methan Power has come up with a thermal-battery based technology which cuts down the need for using generator backups at storage facilities.

"Our technology helps keep the milk from spoiling, keeps it chilled at below 4 degrees for more than two hours, if there is no power," said its managing director Kaushlesh Varshtney.

HRS Process Systems provides dairies the technology for energy-efficient heating systems. V Gokuldas, managing director at HRS Systems, said their thermal processing units and Ecoflux corrugated heat exchangers help save 60% energy. "The most energy spent in dairy plants is in the heating and cooling processes," he added.