



GEA finds the right balance for unique organic dairy farm

For small organic dairy farms, finding the right level of automation is key. For Camphill Village in South Africa, updating to a smart GEA in-line milking parlour was the best solution for improving efficiency without losing the hands-on approach the unique farmers require in their daily work. Camphill Village is a residential facility, where nearly 100 adults with diverse disabilities and special needs are given an opportunity to lead a healthy and productive life by creating useful, value-added products.

Set on a 220-hectare farm near Philadelphia just north of Cape Town, the organisation added a Jersey dairy herd and milk processing facility to its operations in the late 1980s. Alongside other flourishing activities, Camphill Village provides organic dairy products for the residents and surrounding communities. The income from the dairy provides critical funds for the residents and for paying the support staff. But increasing raw material handling and dairy production had remained a long-standing challenge for Camphill. The original milking equipment needed an urgent upgrade, along with the dairy processing facility. Soon after Camphill Farm Manager Antonius Verhoeven got a glimpse of GEA milking equipment at a trade fair in 2018, a GEA team began working closely with Camphill's management team to find the right milking solution for their needs. The equipment and installation would need to deliver on process optimisation, ease of maintenance and repairs, improved hygiene and safety.

Two years later, with financial support from German NGO Rays of Hope and some goodwill investment from GEA, Camphill was able to replace its bucket milking system with an in-line 'flat' milking system featuring a 1x8 point high line layout. This meant the new parlour could be installed without altering the existing building or major construction work. In this case, it was necessary that the milking equipment meet modern standards but without a high degree of automation since residents benefit from maintaining close contact with the cows during milking. In fact, this physical interaction is considered to have therapeutic benefits. By integrating a system for recording milk coupled with the DairyPlan Herd Management Software, the team is able to take informed decisions related to production, health and fertility to effectively grow the milking herd over time.

Thanks to these upgrades, Camphill Village has a much higher throughput of milk products and provides a more stable income stream. Today, with just under 30 cows currently being milked out of a herd of 50, Camphill will finally be able to increase its milk production and dairy processing output.



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It is in the feed

It is obvious that digitalisation and automation are already busy transforming dairy farming around the world. Farm and herd management via smartphone, tablet and agriculture apps has become commonplace.

Automated feeding frees farmers from manual work so they can devote their time to farm management and optimising their feeding strategy. They can target feeding by group, record and reference mixing times and feed intake, and make changes to feeding plans based on analysis of milk performance, animal health and costs, to name a few examples. But even the best automated system will be limited if the feed itself is not fresh, nutritious and otherwise appealing to the cow. The primary component of a dairy cow ration, good quality roughage is essential to keeping cows healthy and productive.

Harvesting and silage preparation is a critical step in the process to ensure that cows are presented with attractive, nutrient dense feed throughout the year. A quick, effective harvest will have a positive impact on all subsequent steps of the feeding process: silage preparation in the silo, feed mixing, feed intake, selection of feed and amount of waste.

Grass is the natural feed for cows and mostly forms an important part of rations for dairy cows. How the grass is cut also has a major impact on the quality and attractiveness of the feed. Corn is gaining ground as a source of both roughage and starch for dairy cows. Whether corn is harvested conventionally or with the shreddage method, farmers should make sure the corn itself is broken down very well to help bacteria in the rumen extract the starch and other nutrients necessary for (milk) production. To avoid low pH values in the rumen, a feed ration should always include enough structural feed like straw or hay to stimulate rumination and the associated saliva formation. Since straw quality has often been only moderate in recent years and supplies tight, many dairy cattle farms have turned to alfalfa hay as a structural component for their feed. Beyond roughage, there are many different feed options for farmers to consider like wheat for energy, additional protein sources like canola, and some supplemental vitamins and minerals.

Optimum dairy feeding today involves a complex, coordinated effort across multiple areas. Automated feeding can then make sure that a fresh, consistent, homogenous mix is targeted to different feed groups and served around the clock so that cows eat well, stay well and produce well throughout the year.

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