



**Dairy  
Australia**  
Your Levy at Work

# Precision dairy technology

## Automatic milking systems

### Frequently asked questions:

#### Why consider adopting automatic milking systems?

Milk harvesting in conventional milking systems is currently a time consuming and labour-intensive activity. It is not surprising that people from outside of the industry often develop a negative perception of the lifestyle associated with dairying. Finding, training and retaining quality staff to work on-farm is one of the biggest challenges that dairy farm owners and managers are facing today and is likely to become more challenging in the future.

Milk harvesting-related tasks usually account for 50% to 70% of daily farm activities (based on hours spent). Automatic milking systems (AMS) aim to reduce the need for labour in the majority of the milking-related tasks and are most commonly used to reduce the total labour requirements on farm and/or to create an improved (more flexible) and attractive lifestyle.

Other reasons may encourage farmers to consider automatic milking systems as a viable option for their operations. These include the possibility of achieving higher milking frequencies (especially in early lactation), individual quarter milking and the possibility to feed cows individually, as well as greater information that should allow for improved herd management decisions.

#### What are the key things I must be aware of in my decision making and what homework should I do?

If you are considering a switch to automatic milking, you should have realistic expectations and devote sufficient time and care to plan the farm layout, taking into consideration actual farm practices. Seek advice from, and visit, farmers that have already adopted automatic milking to learn what they see as essential design elements and gain from their experiences.

Take time to consider what is important to you with regard to how you want to operate your dairy farm. Consider things like target production level, the feeding system that best suits you/your region/your existing infrastructure and standard working routines. Be realistic with your goals and expectations and how you plan to capture the benefits of this investment.

Farmers should be conservative with targets and forecast budgets. Even though it may be possible to milk 70 cows per single AMS, experience has shown that a much smoother transition can be achieved by starting up with around 60 to 65 cows per AMS. In fact some farmers prefer to maintain a lower ratio of cows:robots even when the system is settled as it reduces the pressure on the system and allows them to achieve higher levels of production per cow.

The Australian dairy industry has heavily supported this new way of farming. FutureDairy ([www.futuredairy.com.au](http://www.futuredairy.com.au)) has focused on understanding the likely challenges associated with voluntary milking herds to manage and improve cow traffic. FutureDairy has also developed a *partial budget calculator tool* that may help you to assess the impact of the introduction of this technology on a farm business.

Both The University of Sydney (Camden) and The University of Melbourne (Dookie) have invested in automatic milking technology to ensure that they are at the leading edge as teaching and research facilities. The WA College of Agriculture (Denmark, WA) has also decided to invest in automatic milking, which makes it the first secondary school college in Australia to adopt the technology. In addition, NSW Department of Primary Industries has shown its support through the appointment of Dr Nicolas Lyons to the new national role of Development Officer – Robotic Milking Systems. In this role, Dr Lyons ([nicolas.lyons@dpi.nsw.gov.au](mailto:nicolas.lyons@dpi.nsw.gov.au); 0401 650 073) aims to increase the knowledge about and successful uptake of automatic milking systems on-farm.

### Should I talk to farmers that are already doing it?

Every dairy region in Australia has farmers that have decided to commission automatic milking systems. These installations are from every commercially available type (single box systems, multi box systems and automatic rotary) and operate in an array of farming system types (grazing with variable levels of supplementation, feedlot and indoor housed systems). The experience of the existing commercial operations, together with research conducted at FutureDairy, has proven that the technology and existing farm management knowledge of automatic milking systems can be implemented successfully in Australian dairy farming systems.

### How much of my farm system will need to be changed? Will I have to clear all the fences and laneways and start again?

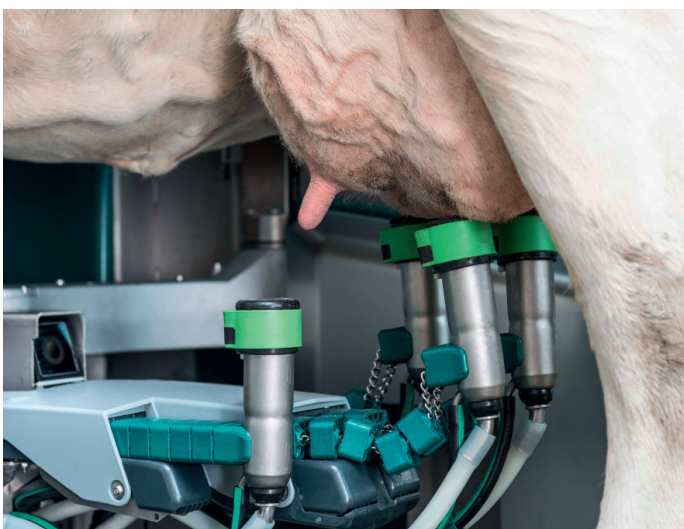
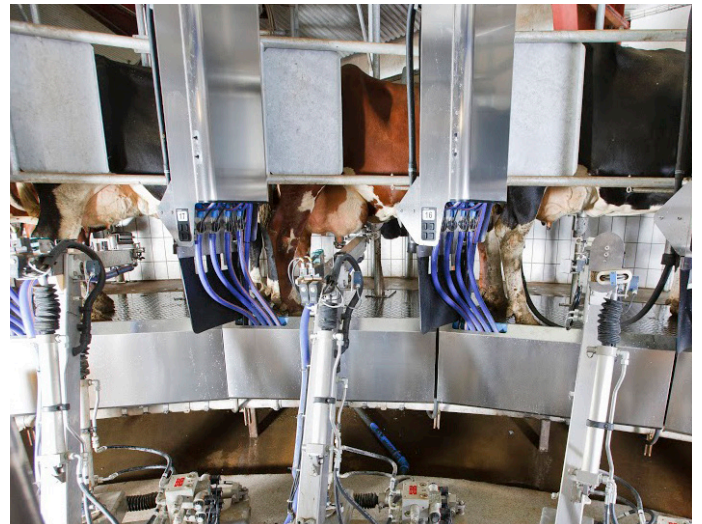
Automatic milking systems are suited to different herd sizes and farming systems, but most farms will require some modifications when making the change from conventional to automatic milking. Most routine farm tasks other than milking will still need to be conducted, although farmers may

need to change how and when these tasks are performed. For example, in a conventional system farmers can treat all hospital cows during or after milking or inseminate particular cows around milking time. In automatic milking systems, such procedures require farmers to set the cow up for automatic drafting so that she can be attended to when the farmer comes to the dairy facility.

There may also be a need to add or split some laneways to achieve the popular practice of 'three-way grazing', in which cows are given three pasture allocations within each 24-hour period.

### Should I wait for the next generation of AMS?

There will always be new technology around the corner. Today, a wider variety of systems and brands cater to different farmers and farm system preferences compared to a couple of years ago. Companies have also announced that they are developing robotic cup-attachment arms to retrofit to existing external rotaries. The possible configurations have either one arm per milking position (which means they rotate with the platform) or fixed robotic arms (quantity depending on platform size) that handle multiple milking positions.



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