

## Australian Cattle Farmers Employ Palm™ Solution to Improve Cattle Quality and Herd Management

### Farmers Monitor Herds Electronically Using Palm Handhelds

Advanced technology solutions are playing an increasing role in the agricultural industry. D&K Technology, a small Australian software company, has developed a series of Palm™ handheld-based solutions for farmers, targeting dairy and beef cattle owners.

#### THE CHALLENGE

Dairy farmers must maintain detailed information on their livestock in order to make calculated decisions that can lead to increases in profitability. For a dairy cow, this information includes basic pedigrees, such as sire, dam and grandparentage details; health history; mating information; and even milk-production measurements.

For years, many farmers have documented this information by paper and pen while in the paddock or in their dairies, and then entered it manually into a desktop computer at the end of the day. This process often results in inaccuracies, and requires a farmer who has been up since before dawn to spend a significant time behind a computer at the end of the day.

"In a busy working day on the farm, the pen and paper method gets neglected, robbing livestock owners of vital information and, ultimately, profitability of their herd," said Darren VanLiessum, a partner in D&K Technology and a Dairy Cattle Sharefarmer.

#### THE SOLUTION

D&K Technology developed FarmHand, a Palm™ handheld-based data capture and catalogue application. FarmHand integrates with pre-existing third-party Windows-based herd recording systems, such as Dairy Express, Easy Dairy, Imagenes, Mistro and Pcfarm. The solution currently is being used by more than 20 Australian herd owners to catalogue information on more than 8,000 cattle. FarmHand operates on Palm OS® 3.5 or greater, which means farmers can choose from any of the current handheld products from Palm, Inc. (Nasdaq: PALM).

"The system is currently geared for dairy farmers, but it's got great expansion possibilities in beef and other herd-based markets," said David Haworth, program developer for D&K Technology.

Farmers using FarmHand can carry with them a database of information on their stock, making notes while on-the-go. Information can then be synchronised to the main database on a desktop computer at the end of the day.

Encouraged by the introduction of the National Livestock Identification Scheme, many farmers are starting to implant a radio-frequency passive transponder (RFID) in the ear of animals. The RFID emits a unique low frequency code, providing each animal with an individual identity.





D&K Technology has expanded the software to recognise these transponders via either a handheld wand or a wall-mounted aerial with a direct connection to a Palm™ handheld. When a cow arrives for milking, the RFID is recognised and the animal's history is automatically displayed. This information would typically include any recent drug treatments that might preclude her from being milked, thus helping ensure milk quality control.

### THE OUTCOME

Dairy farmers are able to increase efficiency of herd management, saving five hours of time spent in data entry behind a desktop every week, and any guesswork on the job.

"If I notice a cow on heat in the paddock, I simply make a note in my Palm™ handheld – and then when the cow arrives for milking that evening, it is identified, separated, breed checked, parentage checked and then artificially inseminated," said VanLiessum. "The Palm solution has increased our efficiency, saving us a great deal of time."

D&K Technology has also developed a solution that integrates with automated equipment in the dairy. If a cow has been identified during the day as requiring attention, it is noted on the Palm™ handheld and then at milking time is automatically guided through a set of control gates into a separate holding pen.

"The ability to access information using FarmHand on the Palm™ handheld means that on-the-spot or remote decisions can be made for treatment of various disorders, or to avoid possible doubling-up on previous treatments," said Darren VanLiessum, partner in D&K Technology, and Dairy Cattle Sharefarmer. "This helps to maintain quality control and prevent over-dosing of animals, and results in reduction of costs."

Once a cow is identified, the farmer knows when it last received its medication, what medication has been given to the cow, when the cow is due to calf next, and even the quantity of milk the cow produces per day. By monitoring this information, farmers can, for example, make accurate health diagnoses and know which animals to pair up for mating purposes.

D&K Technology is continuing to develop new applications to assist farmers in the management of their herds. In addition to bar-coding and RFID attached devices, the system is designed to handle other peripherals, such as automated weighing systems and pasture depth meters. With the recent launch of the Palm™ Bluetooth Card for Palm™ handhelds, the company is also looking at developing a Bluetooth-enabled solution to allow sharing of data in the dairy.



Lesley McKnight, marketing manager, Australia, New Zealand and India, Palm, Inc., stated, "Such applications from our Australian developer community are constantly pushing the barrier for mobile applications, allowing them to increase productivity, streamline operations and reduce paperwork, offering a worthwhile return on investment."

## THE FACTS & FIGURES AT-A-GLANCE

**Enterprise:**

- D&K Technology

**Industry:**

- Agriculture

**Category:**

- Dairy and Beef Cattle Owners

**Application:**

- FarmHand V2.3

**Features:**

- Centrally managed administration, storage and analysis of data
- Automatic integration of data on a daily basis

**Benefits:**

- Health detection/prevention
- Enhanced understanding of herd
- Cost-effective
- Reduced paperwork and data entry
- Ease of use
- Small and light

**Specifications:**

- Front-end developed mostly using Microsoft Visual Basic
- Minimum Palm OS® 3.5 or higher

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