**ID and Pedometer**

AfiTag is the first commercial pedometer marketed worldwide. AfiTag serves two purposes – cow identification and activity measuring. The AfiMilk heat detection module is based on scientific researches, which show the correlation between cow activity and its estrus. Continuous improvements brought the AfiTag heat detection system to perfection.

AfiTag incorporates a device that counts the cow’s steps and sends this data to the AfiAct estrus detection module in the PC, where it is analyzed to indicate cows in heat.

AfiTag is an active component (including internal battery) designed for longevity on the cows’ legs. AfiTags may be transferred between cows in the farm, making them a cost effective devices for heat detection.
**AfiTag Pedometer – An Extra Set of Eyes**

What makes the AfiTag one of the most efficient and cost effective methods of heat detection?

The answer to this question is its high reliability and economic advantage. Lehrer et al., 1992, Pennington (1986) reported efficiency of visual observation at 45% and for pedometers at 78% to 96%. Other studies conducted in the USA compared various breeding methods showing that use of the pedometers resulted in lower cost per pregnancy compared with Presync, Ovsync and visual detection.

Afi systems users testify for a great improvement in herd fertility since the employment of the Afi heat detection system. Statistically, after starting to work with Afi heat detection, dairies reduced involuntary waiting period averages by 13-25 days, relying on the Afi heat detection totally.

Bill Basson (South Africa) states: "After starting to use the pedometer we have done no heat spotting at all, every single cow goes through the computer."

Thus, the AfiTag Pedometer is an excellent investment for both large and smaller dairy farms. The improvement in fertility of the herd pays for the cost of the system in a very short period.
Consumers today are much more aware of animal welfare issues. Furthermore, research has shown that ethical treatment of animals, improved concern for their comfort and improved practices have the benefit of also improving milk productivity, foot health and milk quality.

Modern dairy farming practices emphasize on providing better living environment to dairy animals for increasing cow welfare. Producers make efforts providing comfortable bedding, optimal groups’ density, and better access to food and water as well as preventing health problems.

The efforts made in dairy farms today to increase cow comfort require means of monitoring and control. The AfiMilk Pedometer Plus Tag combines standard activity data with valuable information about cow’s rest and restlessness. This combination embraces most of the behavioural parameters thus allowing an accurate evaluation of cow comfort and welfare.
Improve Profit Margins through Early Intervention

The Afimilk Pedometer Plus Tag provides timely detection of changes in individual and group behaviour thus signalling the dairy manager of potential health or environmental issues. By immediate intervention, more serious health issues are avoided, costs reduced, and herd health and comfort levels are maintained.

Product Yield

The Afimilk Pedometer Plus system measures behaviour of individual cows as well as groups of cows.

Each Pedometer Plus measures
- Cow walking activity
- Rest time
- Lying down bouts

These parameters are compared against the behavior history, and alerts for deviations from the norm are generated. By means of smart computation, Afimilk identify behaviour irregularities and alerts for individual and environmental conditions.

Health alerts
- Supporting indicator for Mastitis
- Lameness

Environmental indicators
- Deterioration in bedding quality
- Over density in sheds
- Climate stress

Biological stress
- Calving alert 24 hours pre-partum

Benefits

Pedometer Plus enhances dairy farmer’s decision-making capabilities and farm’s profitability.

By early detection of cows and groups in stress Afimilk enables timely treatment of cows and/or stressful environment (i.e. hard climate conditions, low quality bedding and rest area, feeding and water access etc.) thus improving overall cow welfare.

By improving cow welfare the dairy achieves higher production and better milk quality. Days of treatment for sick cows are minimized and labor required for monitoring, prevention and treatment is reduced.