

# TECH TALK

✱ Article written by William Elliot, Herd-i's Chief Technology Officer using Claude AI



## AI CAMERA VISION KEEPING A CLOSE EYE ON YOUR HERD

Every experienced farmer knows the look of a cow that's not quite right. Maybe she's walking differently, dropping back from the herd, or simply not carrying the condition she should.

Being aware of those signs early can make a big difference. Keeping on top of lameness and body condition means healthier animals, better production and one less thing on the priority jobs list this week.

The challenge is scale. On a modern dairy farm with hundreds of cows moving through the shed every day, it's simply not possible for anyone to watch every animal closely, every milking. That's where new computer vision technology is changing the game.

### TURNING CAMERAS INTO FARM OBSERVERS

At Herd-i, high-definition cameras are installed in the shed to get videos of the exit race. As cows walk past, the system records short video clips and software analyses them automatically.

The software uses artificial intelligence (AI) models that have been trained using tens of thousands of cows that have been previously scored by experts. By learning from those real cows and their associated scores, the Herd-i system recognises patterns in how cows move and how their body shape appears from the camera angle.

For lameness detection, the software looks at how a cow walks (her gait) – assessing stride length, back posture, hoof placement, head position and how evenly weight is carried. Subtle changes in movement can indicate a developing issue before it becomes obvious to the human eye.

The system can also assign a Body Condition Score (BCS) using AI models which have been trained to assesses body shape from an elevated rear aspect (45o angle); particularly focusing on the backbone, hips, pins and tail head and comparing it with BCS scores learned during training.

## WHAT THIS MEANS ON FARM.

The benefit isn't just automation – it's consistency and coverage.

Because every cow passes the camera every time she is milked, the Herd-i system builds a record of observations over time. This allows trends to be tracked across the herd and highlights animals whose scores are changing faster than expected.

Instead of relying only on staff who are milking to detect lameness, or on occasional body condition scoring sessions, farmers have access to data which shows herd changes through the season and can identify animals that may need attention earlier. At critical times of the season, acting a week earlier can change the entire season, and even potentially the following season as well.

## TECHNOLOGY SUPPORTING FARMER EXPERTISE

Importantly, AI doesn't replace the experienced farmer's eye or a vet's expertise.

**“Think of Herd-i as an extra set of eyes – that never gets distracted and captures detailed data..”**

As AI technologies become available and are adopted, they are becoming a key part of the future focused dairy farmers toolkit – helping farmers to manage herd health, improve productivity and make timely, well informed decisions.

**The future is right here, right now.**

