

Dairy Feeding Goes High Tech

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Think about what GPS did for crop production.

That's what the Italian manufacturer and the U.S. distributor of a new precision feeding system believe their equipment can do for dairy nutrition.

Italy's **dinamica generale** and Illinois-based **Engineered Storage Products Company (ESPC)** showcased the new high-tech system Thursday at World Dairy Expo.

Here's the technical part:

Designed to deliver a balanced and consistent ration, the **Harvestore® FeedScan™ Precision Feeding System** analyzes forage and grain dry matter content on the farm in real time before it goes into the mixer. In seconds, it adjusts dry matter weight to match nutritionist recommendations. The system uses software, infrared sensing, a remote control and a weighing scale that wirelessly receives data.



Matthew Dobberstein of *dinamica generale* demonstrates the precision feeding system Thursday at World Dairy Expo.

The **FeedScan NIR Analyzer** is mounted on the **Harvestore** feed conveyor system, while the **dg precision feeding system's NIR (near infrared) analyzer** is mounted in the **pay loader bucket**. The entire system is controlled at one or more personal computers loaded with the **feed management software**.

Here's the marketing part:

The cost is somewhere in the range of **\$60,000 to \$70,000**, depending on its various options, **ESPC officials** said. They believe the system offers a **rapid return on**

investment, in terms of **feed efficiency, production and herd health**.

They have a point about production. Studies conducted by the **U.S. Dairy Forage Research Center** show that variations in dry matter content after rain or snow will decrease dry matter intake by cows. That results in a **sizable drop in milk production**.

But here's the exciting part: Those who have seen the precision feeding system believe it's revolutionary.

"We have not had this technology in the U.S. before," said **Dr. Noah Litherland**, with the **University of Minnesota's Department of Animal Science**. "We have robotic milkers and automated calf feeders. This is the next big thing."

Litherland admitted he was initially skeptical about the precision feeding system. But after seeing it tested at **Minnesota's Gar-Lin Dairy**, he's become a believer. He said the system offers such benefits as **improved consistency of nutrient delivery, providing a diet as formulated, reduced environmental impact, consistent access to feed and improved cow response**.

Andrea Ghiraldi, president and owner of **dinamica generale**, believes the precision feeding system can reduce feed costs by **20%**. Studies on a dairy with **1,000 milk cows** showed a savings of some **\$300,000**, Ghiraldi said.

"This precision feeding technology brings the real-time accuracy of **NIR technology** to the farm versus the laboratory," said **ESPC's Richard Nelles**. "So instead of waiting several days for feed analysis information, the farmer knows instantly the dry matter and nutrient content of feed as it is unloaded."

I was interested in what the dairy that's testing it thinks. **Minnesota's Gar-Lin Dairy** is the first in the U.S. to use the precision feeding system. The well-run operation milks **1,700 cows**. **Dean Allen** is a partner in the dairy.

"The concept is phenomenal," Allen said, as **ESPC officials** demonstrated the system at their exhibit. "It's definitely an advantage and something that's coming down the road."

