



## The Magic 'N Box'

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### Portable feed analyzer spits out results in 20 seconds

Imagine rolling a box the size of carry-on luggage out to your bunker or feed lane. You grab a sample of corn silage or total mixed ration, drop it into the box and count "one one-thousand, two one-thousand, three one-thousand..." By the time you reach 20, the machine spits out an analysis of the feed: moisture, protein, rumen-soluble sugar, potassium.

You might call such a contraption a magic box. But it is reality—a portable, near-infrared (NIR) machine that analyzes feed samples without drying or grinding. There's one catch: It's priced in the same range as a four-wheel-drive pickup with dualies.

**A dozen of the machines** were purchased by Cargill Animal Nutrition for its consultants and feed manufacturing sites. "As a business unit in the Northeast, we've purchased two units for demonstration and education," says Kurt Ruppel, a Cargill technology leader based in Argyle, N.Y.

"One farmer asked if I could demonstrate feed variability off a bunker face," Ruppel says. "He was having a hard time convincing his feeders to take the time to use a facer to remove feed from the pile and blend it before dumping it in the mixer.

"So I grabbed samples from various points on the pile and ran analysis on each. I also ran a blended sample. The grab samples were all over the place in analysis, but the blended sample showed an average."

The lesson: If feeders were pulling forage from just one side of the pile, they were getting a totally different nutrient profile than if they blended forage from the entire face.

"That one demonstration was enough to convince them to take the time to blend the silage," Ruppel says.

**To help her track** rumen-soluble sugar, Sue Greth, a nutrition specialist from Salem, N.Y., used the N box to test haylage every day at one dairy. As haylage ferments, the amount of the sugar increases. By tracking the trend, Greth could reduce the amount of grain in the total mixed ration, saving purchased feed costs.

Using an N box allows producers to perform real-time analysis rather than waiting two days for samples to be shipped and run at a far-off lab. If you're feeding 1,000 cows and can save 1 lb. of corn at 12¢ per cow per day, the savings can add up fast.

**More on N boxes.**

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