

SUCCESS STRATEGIES 2010

By Susan Harlow

A \$40,000 investment in barn and stall improvements at Howland Acres paid for itself in one year

Renovation improves cow comfort and production

Since Rob and Darlene Howland remodeled the tiestall barn on their Candor, N.Y., dairy three years ago, they're more convinced than ever that it was a good move. Other dairy producers should seriously consider doing the same, they say. Renovations can pay off quickly in cow comfort, higher milk production and greater profits – no small things in today's economic climate.

Too many producers struggle with old-style facilities that rob them of profit unnecessarily, says John Conway, senior Extension associate and PRO-DAIRY specialist. He headed a case study for PRO-DAIRY that assessed the effect of renovations to Howland Acres' 80-stall barn.

Data shows the \$40,000 in stall and barn improvements bettered cow comfort and health, and contributed to profitability. In 2009 the Howlands' farm income improved by more than \$42,000 over 2006, before they renovated the barn.

Two factors in particular that improved profitabil-

ity can be partially traced to barn renovations:

1. Cows now live longer: In 2009, 36% of the Howlands' cows were in third or more lactation, vs. 29% in 2006. That means more replacements to either boost the quality of the herd or to sell.

The Howlands' involuntary cull rate improved – from 32% in 2006 to 15% in 2009. Then, during the 12-month period ending last November, they sold 28 dairy replacements from their herd compared to just eight in 2006. That netted them about \$25,000 in extra income.

2. Somatic cell counts (SCC) and cases of mastitis declined. The herd SCC fell from the mid-200,000s before the renovations to its current 50,000.

"We don't treat cows or do the things we had to do with mastitis," Rob Howland says. That alone can be a huge cost savings.

Meanwhile, higher quality premiums raise the couple's milk price. With an average 45-cent-per-cwt. increase in quality premiums, the Howlands earned an extra \$9,000 this year.

"In a year when every dollar counts, those two things are huge," Howland says.

Milk production improved from an average 80 lbs. per cow in 2006 to between 83 and 85 lbs. in 2009. "There are a lot of factors that go into that, but cow comfort is one of them,"

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In a year when every dollar counts, improved longevity and fewer mastitis cases are huge, says Rob Howland. "All of a sudden I'm saying it's a tough year, but I'm not seeming to feel as much pain like the next guy."

FYI

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■ To read more about the Howlands' tiestall barn renovations, see *Eastern DairyBusiness*, May 2007, page 16.

■ See these websites for information on renovating tiestalls and recommended dimensions developed by Dr. Neil Anderson: www.omafra.gov.on.ca/english/livestock/dairy/facts/info_tsdimen.htm
www.omafra.gov.on.ca/english/livestock/dairy/facts/info_cowbehave.htm

initial K level. (Graph 1)

What explains an increase in soil test K when potassium was only applied to crop removal level? Much of the clay in New York soils has fairly significant K content. As the clay particles naturally break down, they release K that becomes crop available. We expect that the plots receiving more fertilizer K will also have higher K levels in the forage, reflecting luxury consumption. The forage samples from this project still need to be analyzed for K content.

Take home message

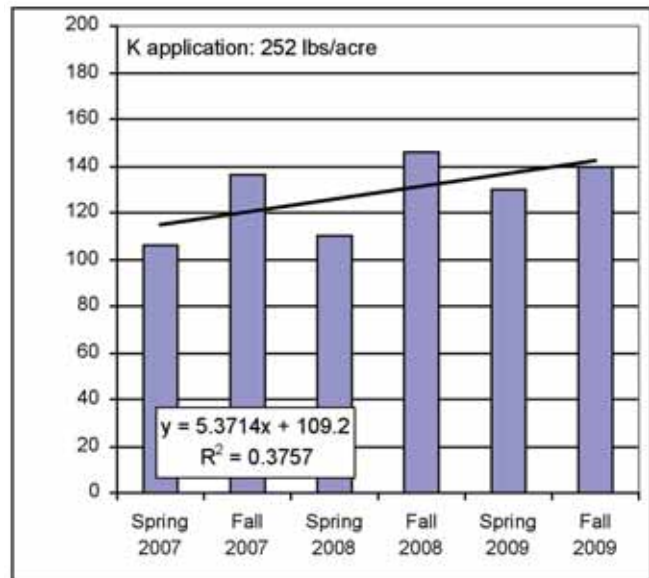
This research supports the current Cornell guidelines for K on alfalfa-grass hay on High K fields. By following the guidelines, we achieved optimum yields economically – that is without applying additional K. However, soil test K levels will go down during alfalfa-grass under high yield conditions if no potassium is added. Application of K to crop removal levels increased soil test K.

The research data stress the importance of using soil testing to monitor and maintain K in the High range. Confirm the K status with soil tests and if High or Very High, take advantage of the soil test K built up during the corn years. It's quite possible that little or no K will need to be applied during the alfalfa-grass years, and the soil test K will be replenished again during the corn silage years.

Fields that receive manure rates of 8,000 to 10,000 gallons per acre or more during several years of corn silage may very likely have High or Very High soil test K levels by the time they are to be rotated to hay.

If K is needed and odor control isn't a problem, applying manure to hay stands in their later years is an excellent way to fertilize and replenish K. That is if it can be done at modest rates and quickly

Graph 1. On plots that received no manure in the corn silage years, soil test K levels increased when fertilizer K was applied at approximate crop removal of 252 lbs. per acre after establishment of alfalfa-grass plots.



after harvest to minimize burning and traffic damage.

We will be conducting side-by-side tests for K responsiveness on multiple New York dairy farms across the state to see if our results can be repeated on other soil types and under different growing conditions. Please contact us if you would like to participate. □

Renovation improves cow comfort and production

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between 83 and 85 lbs. in 2009. "There are a lot of factors that go into that, but cow comfort is one of them," Howland says. "When you make a better environment for cows, it's a better environment for the farm manager and you become a better manager."

The Howlands' veterinarian, Ben Laudermilch of Rome Veterinary Center, Rome, Pa., can attest to that. "[Howland] has time to manage other aspects of his herd compared to putting out fires here and there," he says.

Comfortable cows

The Howlands see lots of evidence that cows are comfortable. Feet and legs are better, and there are few banged-up hocks.

More cows lie down in the tiestalls. "Before we remodeled, it's fair to say a third of the cows would be standing up," Howland says. "It's not unusual anymore to see out of 74 cows at least 70 of them lying down. That tells me that something is going on with those stalls that wasn't going on before."

"I saw 90% or more of the cows lying down vs. the majority of other tiestalls you see, where it's normal for only half the herd to be lying down," says Laudermilch. "We put cows in those stalls all the

time and they're uncomfortable, and that filters down and affects all aspects of the cow."

End to 24/7 struggle

In the renovations, the Howlands replaced old tiestalls with stalls designed by Dr. Neil Anderson of the Ontario Ministry of Agriculture, Food and Rural Affairs and built by PBZ LLC (formerly Zimmerman's) of Lititz, Pa. The new stalls are larger than standard tiestalls, and have modifications to stall dividers, tie chain length and other components.

Anderson also recommends precisely locating trainers 48 inches forward of the gutter curb. But Howland thought he could get away with leaving his old trainer line. Not so fast. The cows still got dirty.

"Then we moved the new line 3 to 4 inches, and overnight the dirty cow problem went away," Howland says. "Neal's measurements are perfect. You can't short-cut this thing. If you're going to do anything, do it from the ground up."

"Many, many families struggle along 24/7 in cow spaces that lead to injuries and a chronic stress that leaves cows vulnerable immunologically to every pathogen in their immediate environment," Conway says. "Unlike the tractor with the blown engine that needs a \$40,000 overhaul, the lights still come on in the old barn and the pipeline still works. No action is taken with this quietly egregious profit robber. □