

Learning When to Calve in a Grass-Based Dairy

Matt and Diana Stewart, Oelwein

This report is a continuation of the article that appeared in the Winter 1994 issue of *the Practical Farmer*. If anyone would like a copy contact us at (319) 203-1337 or got in touch with the PFI coordinators.

The past twelve months have seen us continue to test the extremes of low-input, grass-based dairying and how we can adapt some of New Zealand's management strategies to our Northeast Iowa dairy. Last winter we experimented with wintering heifers (over one year old) and dry cows outside. We kept this group of about 60 head away from the buildings and fed them round bales of hay on our newly-seeded pastures.

Our land is gently rolling with a small creek. The cattle kept the creek open all winter and learned where to seek protection from the wind. Round bales were fed on pasture without being unrolled or placed in round bale feeders. There was very little residue left in the spring, and a light spring seeding of ryegrass and clover seed covered up any trace of hay by the middle of May.

Our only mistake was in expecting these cattle to graze effectively in February. We are having to develop a cow-calf person's eye for body condition, and I think we will be better able to manage this situation this winter. We are now calving heifers at 28-30 months of age, since that age heifer per-

formed better this past year under our low-input system.

Another trial this past year has involved drying up cows early if we didn't think there was much to be gained by continuing their lactation. This may be the most radical idea to traditional U.S. dairyman that we have observed in the New Zealand paradigm. We have employed this practice in a couple of different situations on a significant number of cows. It will allow us to increase the number of cattle we have on grass in the next year, and it helped to increase our cow density this past year (Figure 8). It is affordable because of our low-cost methods of maintaining these cattle.

The first situation was with a group of heifers that calved in July and August, 1994, that was dried off on February 1, 1995. Six of these were bred in late January and one other was open. The experience has prepared us for what we expect to occur this coming year, but it caused a cash flow problem at the time that took most of the summer to work through.

This is an example of something we've done to learn how far we can go. The cash flow problem should not be as severe this year because a greater number of cows will freshen beginning in February. The second major dry-up came on November 1, 1995, when we moved inside and dropped from 100 to 79 cows milking. Our barn only holds this many, so we will stay at 79 until we go back to grass.

We have now set up our herd to calve seasonally, calving in both the spring and fall. Phil Specht in Clayton County, Iowa has done this for the past few years, and it seems to be the type of low-input system that will fit the traditional, established dairy of the upper Midwest. We will not have to increase our capital investment in facilities and can probably double our cow numbers without sacrificing profit per cow. The advantages to spring-calved, grass-based dairying have been well documented. Fall-calving dairies built the Midwest dairy industry. As is the case of much of the sustainable agriculture movement, many of the answers to our future can be found in our history.

Herd Size on Testing Days

Matt and Diana Stewart Farm, Oelwein

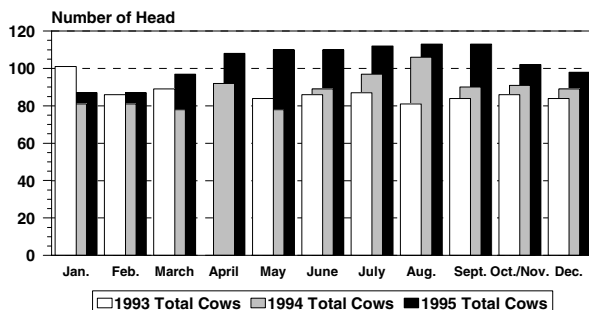


Figure 8. Herd size over three years, Stewart farm.

Economics on Testing Days

Matt and Diana Stewart Farm, Oelwein

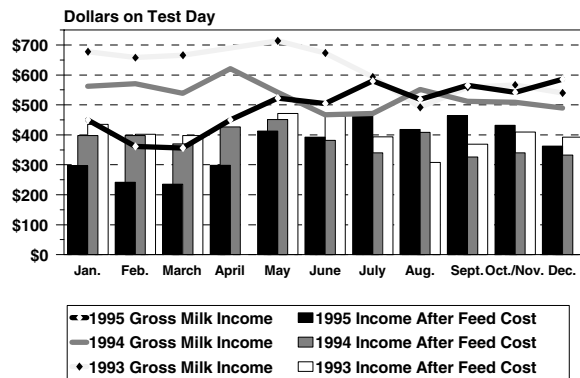


Figure 9. Gross and income after feed cost for three years.

Fall-freshened cows are bred in December and January, not in the heat of summer. These same cows will milk enough more in the winter (because of the lack of heat stress) to compensate for the cost of baling hay. Come spring these cows can go to grass without grain supplementation and produce profitably during the latter part of their lactation. Spring-calved cows, on the other hand, would have to be on hay and grain during the the latter part of their lactation, which would come in late fall and early winter. One of the biggest differences, though, may be the cost of raising calves. Fall-born calves can be raised outdoors with little supplement feeding from 8-24 months. Our area of Iowa requires more feed, shelter, and labor for spring-born calves.

We started grazing in April of 1994 and the first grazing data appears in the May, 1994 test (Figure 9). Supplemental forage feeding started in July of that year and in October of 1995. Nineteen ninety-three and 1994 had similar milk prices. Milk has been worth about 10% less in 1995, depressing our income-over-feed cost by about \$50 per week compared to last year. Given that, our income-after-feed held up well. And we feel we are making progress toward a system that utilizes grass and seasonality in ways that fit our goals and climate. 🌱

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hoeing seems to be unnecessary in his ridge tillage system. The data indicate that 1995 was not one of those years. He reports grass was significantly more prevalent in the no-herbicide-no-hoe treatment, and the soybean yield difference (2.9 bushels) was statistically significant.

Other Seed and Seeding Trials

In 1995 Ted and Donna Bauer, Audubon, repeated an evaluation of row spacing for soybeans. They compared their customary 38-inch rows to 19-inch rows achieved with a double pass of the planter (Table 6). In the 38-inch rows, Ted banded Pursuit® and Destiny® and cultivated once. In the 19-inch rows he broadcast these materials and did not attempt to cultivate. The seeding rate in 38-inch rows was 144,000 seeds per acre, while in narrow rows it was 185,000 seeds per acre.

In 1994 the narrow rows yielded more but netted less due to additional costs involved. In 1995, the narrow rows again yielded more (4.5 bushels), and this year they penciled out to a \$4.73 per acre advantage. That is taking into account the additional labor and equipment cost of a second planter pass (estimated at \$7.98). The costs connected with a dedicated narrow-row planter would be less.

Dave and Lisa Lubben, Monticello, evaluated a planter attachment to improve seed-to-soil contact (Table 6). The simple plastic device presses the seed firmly into the slot created by the planter, an effect similar to that of a narrow press wheel. There was

