

Transition to Grazing for Dairy

Matt and Diana Stewart, Oelwein, are PFI members who attended the talk by grazier Joel Salatin that PFI hosted last January. It was an important experience for them, and they began to plan changes for their own farm. In 1994 they received support from Sustainable Projects to document the process of moving their dairy operation to greater use of pasture. Matt's report follows.

"Stewartland Holsteins is very similar to the large number of family dairies in Northeast Iowa. We farm 380 acres and have milked

Matt Stewart moves portable fencing. The cows move themselves.

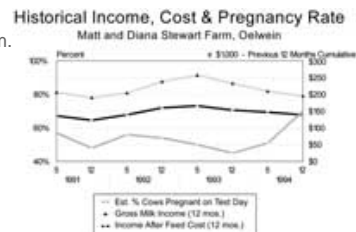


75-80 registered Holsteins in a tie-stall barn. We have two silos with a capacity of 1,000 tons and a liquid manure system with an earthen pit. Over 340 acres are tillable, and our corn base is 245 acres with a 129 bushel yield.

Our cows have been drylot-managed for most of the fifteen years since my wife and I joined my parents. We milked three times a day for the eleven years preceding this spring. Our herd average has been between 21,000-22,000 for the past ten years. The work force has consisted of my wife and me, my father, our four children (aged 3-13), and a full-time hired man. The heifers have been housed on a separate acreage seven miles away, and the man that lives there does the daily feeding in exchange for rent. We have a full line of machinery for chopping, haying, and hauling liquid manure. My brother has planted and combined our corn.

Our objective has been to switch to grass-based dairying as quickly as possible and demonstrate the economics of such a drastic change. Most of the economic data will not be available until next winter, but it does appear that we will be able to stand the transition and show an average net gain. This report covers the physical changes we have made and a couple of observations from our DHIA test sheets.

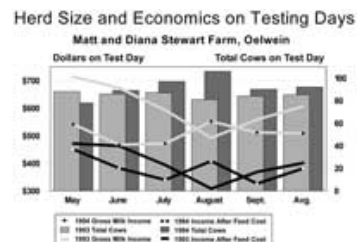
Figure 6. Cost and pregnancy trends, Stewart dairy farm. Bottom line: est. % cows pregnant on test day Middle line: income after feed cost (12 mos.) Top Line: gross milk income (12 mos.)



The first tough decision was to let ASCS know that we didn't want that big advance deficiency payment - we would only plant 60 acres of corn. (Now I know how hard it really is to get off welfare.) Of this 60 acres, 27 acres were chopped and put in the silo for winter feed.

About April 1 we direct-seeded 100 acres with 5 lbs. bromegrass, 1 lb. reed canary grass, 1 lb. ladino clover, and 1 lb. red clover per acre using a Brillion seeder. We have seeded our alfalfa this way for ten years with no chemicals and excellent results. The foxtail was cut before it headed out, and it yielded 3 round bales per acre. The seeding was grazed twice after that in large paddocks with low stock density. As the foxtail regrowth became coarse in August and September, lactating cows refused to eat the lush new seeding beneath. Heifers grazed these fields until late November.

Figure 7. Comparison of 1993 and 1994 economics and dairy herd size on the Stewart farm.



Another 100 acres of alfalfa-orchardgrass hayfields were too thin to hay again this year and diverted to pasture. As bred heifers had been out on cornstalks and hayfields last winter, the stubble was very short, and grazing was delayed until April 20. We had four groups on grass. The first group, the lactating cows, had to return to conventional feeding on October 1. It became very difficult to maintain production in late September. The dry cow group and the two heifer groups maintained excellent condition through the seven months they were on grass, trace-mineral salt blocks, and no supplemental feed. We were extremely satisfied with their performance.

The milking group was allowed to gradually change from silage to grass. The first two days we waited until they were full to let them out to pasture. For the next two weeks we let the cows decide when they wanted to walk away from the bunk and go to pasture. We had been feeding 14 lbs. of grain in the barn and 40 lbs. of wet corn gluten feed with the silage. The transition was very smooth, and production was good. Our biggest mistake was that we should have raised the grain level to 18 lbs. By mid-June, the cows were too thin, production was about 5-10 lbs. lower than we thought it should be, and we did increase the grain to 18 lbs. In July we started feeding 10-20 lbs. corn silage. We monitored the appetite at the bunk to determine feed availability in the pastures. The cows were locked in the paddocks from the end of milking until one hour before milking.

Figure 6 shows our history of gross milk income, income after feed costs, and the estimated proportion of cows pregnant on testing days. The percent pregnant cows is based on confirmed pregnancies plus half of the 'maybe' pregnant cows.

Figure 7 is also based on test days and focuses on the 1993 and 1994 grazing seasons. 'Total cows' is the number of milking and dry cows on test day. For a good part of the year, grazing allows us to milk more cows than the barn will hold at one time - we just move two shifts through from pasture. We were limited to 80 milking at any one time under our conventional system. 'Income After Feed Costs' applies to the whole cow herd on the day of testing. Milk prices were comparable between the two years. The total income after feed costs for the 160-day grazing period is \$3,200 less than for the same 160 days in 1993. This will be more than offset by reduction in labor costs. We let our full-time employee go in May, when we dropped to milking twice a day. We thought we might go back to milking three times when the cows were back in the barn this winter, but so far production has remained acceptable with two milkings."