

Grazing Dairy Heifers and Cows

Tran-Land Dairy Kieler, WI

Tran-Land Dairy consists of 70 acres (+/-) of good quality silt loam soil with a combination of Tama B (35%), Tama C (40%), Tama D (20%) and Judson (5%) soils. Although soil tests vary slightly, the average pH is 6.6 (6.4-6.9) with organic matter of 3.5% (3.4%-3.7%). P and K levels are excessive or very high except for just across the creek where they are in optimum range.

The farm was purchased in 1995 as a alfalfa and corn crop farm with inactive dairy facilities. It then became a leased dairy farm until 1998 when the owners began milking 36 cows on a part-time basis (\$800 net return to labor after equity charge, \$15/hour) until May of 1999 when the dairy heifer enterprise was established. Grazing began in 1995 with 22 acres divided into a 20 paddock system. In 2000, a new lane system and watering system were established and much of the farm re-fenced. Many of the pastures were converted alfalfa fields; were re-seeded to an alfalfa/kura/reed canarygrass mixture; or were interseeded with a kura/reed canarygrass mixture. In 2003, it again became a dairy farm with a swing 10 milking parlor built in 20003.

The 50-60 dairy heifers grazed on ~17 acres in spring, moving to ~30 acres in early summer and ~45 acres in late summer. The land across the creek was seeded in 2001 and 1997, respectively to an alfalfa/reed canarygrass mixture for haying and late fall grazing purposes. Typically, at least 7 months of grazing are attainable and the high range occurred in 1998 from April 1st-December 28th or just short of 9 months.

Tran-Land dairy originally purchased heifers in addition to raising offspring of the 1998 milking herd. The heifers are then traded for younger heifers (1200 lb. springer for two 550 pounders~). Tran-Land was seeking to graze more heifers from April-November based on a custom grazing contract. Heifers not traded were sold privately or at auction.

Labor was estimated at 365 hours per year with 12 hour paddock shifts. Heifers were bred both AI and with use of bull. Stall barn was converted to freestalls.

Profitability of Dairy Heifers on HIGH Quality Pasture

Determining the profitability of a dairy heifer grazing enterprise on a per acre basis is most realistic relative to alternative crop enterprises. The same format can be used with other livestock species to compare one livestock species to another.

***Assumptions:**

One acre will support 1350# of animals (1.68 head of 800 lb. heifers)

DMI = 18 lbs; 210 days x 18 lbs DM x 1.68 head/acre = 3.17 ton DM harvested/acre

1.6 daily rate of gain (210 days or 7 months x 1.6 lbs/day = 336 lbs/head)

336 lbs/head gain/season x 1.68/hd/acre = 564 lbs/acre

564 lbs/acre gain x \$0.75 = \$423 gross per acre

Expenses per acre:

a. Fence: \$60/acre over 15 years	\$4
b. Water: \$40/acre over 10 years	\$4
c. Fertilizer/Lime	\$0 (not presently fertilizing due to excess)
d. Seed \$60/acre over 6 years	\$10
e. Interest on setup expenses	\$5
f. Lane: \$50/acre over 10 years	\$5 (not presently implemented)
g. Land Rent	\$120
l. Grain (1 lb x 210 days x 1.68)	\$0 (gain being achieved w/o supplement)
j. Labor (3 hours x 10 hour)	\$30
Total Annual Expenses/Acre	\$178
Return to Management**	\$245 per acre

*Assumptions are conservative as > 4 ton dry matter has been attained and 1.75 pounds/gain/day achieved along with 250 days grazing with basically same expenses. This increases net per acre (1.78 hd/acre x 1.75 = 779 lbs gain/acre x \$0.75 = \$584 gross/acre or \$406 net return to management). Utilization of grazed grass grown (not machine harvested) is estimated at 75-80%).

**Weed control included in labor; machinery not used except for acres which go into hay harvest; manure during grazing season is negligible; death loss of 1% not accounted for; fly control and deworming not included but minimal; breeding fees average \$21/head and also not accounted for as part of this crop related budget.

Costs of Forage Dry Matter

Annual pasture costs per ton of dry matter with \$178 per acre expense in above scenario and 3.17 tons dry matter harvested equals \$56/ton DM. At 4 ton per acre, the cost is \$44 per ton of dry matter. Thus, yields consumed has a great impact on cost per ton and profit. Tran-Land Dairy estimates its cost per ton of dry matter at \$40/ton and about one-half the cost of baled forage. This equates to \$0.02 per pound of dry matter or \$0.36/hd/day (assuming 18 lbs dry matter consumed). Mineral, salt and ionophore supplementation may add another \$0.07 per head per day. Thus, \$0.43 feed cost per day divided by 1.75/day/gain equals \$0.25/lb/gain, not including breeding, deworming, fly control, veterinary/medicine and death loss which have been minimal.

The Beginning Farmer Program

Currently, the farm is run by a herdsman milking about 80 cows and grazing about 40 acres in first and second crops, moving on to 55 or so acres in late August and eventually the whole farm during stockpiling season. The cows are milked in a swing 10 parlor which fully installed with milking equipment and feeding system (w/o labor) cost \$10,000, half of which was paid by renters and half by owner. The goal is to assist beginning farmers to get started dairying.