A Summary of Dairy Grazing Practices in Wisconsin

Laura Paine, Wisconsin Department of Agriculture, Trade and Consumer Protection and Rhonda Gildersleeve, University of Wisconsin Extension

This report summarizes recent surveys of dairy producers using managed grazing. Two sources were used for the study; the first is the 2007 Census of Agriculture. The second data source was an original survey designed and distributed in partnership with the Wisconsin Agricultural Statistics Service in early winter, 2010. A mailing list was generated from randomly selected dairy farmers who checked the rotational grazing box in the 2007 Ag Census. A total of 1,568 surveys were distributed with 771 of those being returned (49% return rate).

While the survey dealt with many aspects of Management intensive Grazing (MiG), this article will focus on the questions that dealt with grazing management practices.

Table. Managed grazing at a glance in Wisconsin.

Number of Dairies Using MiG	3,070
All Dairy Farms	22%
Average Herd Size	61
Average Years Using MiG	19
Rolling Herd Average	15,430 lbs
Pasture Percent of Ration	
Herds <50 Cows	66%
Herds >50 Cows	49%
Farms Using Cross-Breeding	27%
Average Culling Age	6.4 years
Acres of Pasture	93 acres
Length of Grazing Season	7 months

Pasture Management

Pasture rotation. Nutritional quality of pasture is maximized when lactating cattle are moved to a new pasture every day or after every milking. Twenty-one percent of respondents reported moving their milking herd twice or more per day. Seventeen percent reported moving cows once a day. In contrast, 48% reported a rotation of 3 days or more on each paddock, with nearly half of these respondents reporting they move their milking herd less often than once per week. Thirty-one percent reported moving dry cows every 3 days or less; 20% reported moving heifers that often.

Start and end of grazing season. A majority of respondents (58%) reported starting grazing in May, 40% starting in April, and 2% starting in March. Forty-nine percent of MiG farms graze cattle into November, while 44% end their grazing season in October. Six percent reported taking cattle off pasture in September. Twenty percent reported use of stockpiling to extend the grazing season.

Stocking rate and pasture acreage. Stocking rate (acres/cow) decreased with increasing herd size. Stocking rates are calculated by dividing total pasture acres by the sum of all animals on the farm (lactating cows, dry cows, and replacement heifers). Farms with milking herds of 1-49 cows reported an average of 72 acres of pasture and had stocking rates of 1.19 acres/head. Farms with milking herds between 50-99 cows averaged 77 acres of pasture and 0.7 acres/head while farms with over 100 milking cows reported 132 acres of pasture and had 0.47 acres/head on average. These trends are very similar to those reported in 2007 Census of Agriculture.

Pasture management and renovation methods. The survey asked about use of a series of common and not-so-common grazing practices. Fifty-four percent of respondents reported use of permanent paddock divisions, suggesting the remaining 46% made use of temporary fencing (e.g., polywire and fiberglass posts) for dividing larger pasture areas into paddocks.

About two-thirds of respondents (65%) indicated they provide water in their pastures.

Strip grazing, the division of a pasture area into narrow strips, and moving the herd from one strip to the adjacent one using temporary fencing, was used by 32% of respondents.

Mob grazing is a relatively new practice involving very high stocking densities (100,000 or more lbs of cattle/acre) for short periods of 4-6 hours. Advocates of this practice report better forage utilization, better weed control, and improved pasture plant community diversity and health. This practice is used by 28% of respondents.

Eighteen percent of respondents use a leader/follower system. Leader/follower grazing is the practice of grazing two herds of animals through a pasture simultaneously, one immediately following the other. The leader herd generally has a higher nutritional need, such as the milking herd, and is allowed to graze off the highest quality top growth before moving on. The follower herd is a group of lower nutritional need animals, such as heifers and dry cows. They graze down the pasture to the desired residual level, consuming the lower quality material.

Leaving adequate residual following grazing is essential for rapid recovery and regrowth. The recommendation is to leave no less than 4" or half of the grass leaf area. Residual heights of 4-5" were reported by 35% of respondents, 6-7" by 12%, and 8-9" by 2% of respondents. Fifty percent of respondents reported leaving a residual height of <4" after grazing a paddock.

Of the acres of pasture reported by survey respondents, 68% was dedicated solely to grazing, with 28% of the pasture acres used both for grazing and hay production. Four percent of grazed acres were used in rotation with row crops. Fifty-nine percent of respondents reported never rotating pastures with row crops, and 24% reported rotating from pasture into row crops once every 4 or more years, 16% every 2-3 years, and only 1% rotated annually between pasture and row crops on some acres.

Pasture renovation can also be achieved by introducing new species into existing pasture sod. However, more than half of respondents reported never frost seeding (65%) or interseeding (57%) to renovate pastures. Frost seeding is the application of seed in early spring by broadcasting over existing pasture. Red and ladino clover are most commonly used and the goal is to have the freezing and thawing of the ground in early spring work the seed into the soil, allowing for better seed-to-soil contact. While mechanically interseeding into sod with a no-till drill has a higher success rate, frost-seeding is less costly. Among farms using these pasture renovation practices, ~13% do so annually, 44% do so every 2-4 years, and ~24% frost-seed or interseed pastures every 5 years or more.

Of those surveyed, 49% use soil testing, 44% use nutrient management planning, and 42% use commercial fertilizer on pastures. Two percent reported using pasture irrigation.

Acres of hay grown on MiG farms averaged 65 with 56% of farms reporting making haylage on an average of 84 acres. About two-thirds of MiG farmers (66%) reported raising an average of 75 acres of corn for grain and 70% reported growing an average of 36 acres of corn silage.

Winter management. Twenty-three percent of respondents reported outwintering their cattle. Outwintering is the practice of feeding livestock outdoors during the winter months. Outwintered cattle are either rotated through a series of paddocks where bales are set out in advance or they are stocked on a 'sacrifice paddock' that is renovated the following growing season. Twenty seven percent of respondents reported using sacrifice paddocks, 33% use bedded packs, 23% use windbreaks, and 7% use compost barns in their wintering system.

Summary

Results of both surveys indicate that farms using management intensive grazing are successfully substituting fresh pasture for half or more of their dairy cow ration during the months when pasture is available. Producers are motivated to use MiG to improve animal health, increase net income, and reduce labor. While neither survey was designed to determine whether these goals are realized, a 91% satisfaction level among respondents suggests that responding MiG farms are meeting their personal farming goals through use of managed grazing.

References

Undersander, D., B. Albert, D. Cosgrove, D. Johnson, and P. Peterson. 2002. Pastures for Profit: A Guide to Rotational Grazing. Accessed on line on June 14, 2011 at http://learningstore.uwex.edu/Assets/pdfs/A3529.pdf