A Summary of Beef Grazing Practices in Wisconsin

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Managed grazing is an effective option for beef producers in Wisconsin. This system, which dramatically increases yield and quality of pasture and focuses on reducing production costs, has potential to improve profitability of beef operations of all kinds. Managed grazing is a size-neutral, flexible practice that can be adapted to any farming system and can be implemented with little cost in equipment and time.

Table 1. Managed grazing at a glance in Wisconsin.

Number of Beef Farms Using MiG	4,763
Percent of All Beef Farms	42%
Average Herd Size	27
Average Years Using MiG	19
Pasture Percent of Ration	74%
Percent of Farms Using Cross-Breeding	32%
Average Culling Age (brood cows)	9.1 years
Acres of Pasture	92 acres
Length of Grazing Season	7 months

Managed grazing involves dividing up large pasture areas into smaller paddocks of a few acres in size and rotating the herd from one paddock to the next, with residence times in each paddock of a few days. Pasture productivity is often two or three times higher as a result of the rest period provided between grazing events in each paddock (Undersander et al. 2002). Improved pasture nutritional quality allows for higher weight gains with less supplementation. The substitution of pasture harvested by the cow for mechanically harvested feeds can reduce production costs significantly for dairy producers (Kriegl and McNair 2005). There is no similar dataset on cost of production for beef farmers, but the 2007 Census of Agriculture provides information that suggests that similar cost savings can be achieved.

This report summarizes recent surveys of beef producers using managed grazing. Two sources were used for the study. The first is the 2007 Census of Agriculture. In Section 32 of that survey, question 1-G asks if the producer practices 'rotational or management intensive grazing'. Using that question, the rest of the data were sorted based on whether respondents checked that box or not. 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 names of beef producers who checked the rotational grazing box in the 2007 Ag Census. A total of 3,307 surveys were distributed and 1,848 were returned (a 56% return rate).

The report contained here includes only information from the 2007 Census of Agriculture. For access to the entire survey results go to: http://fyi.uwex.edu/grazres/research-updates/.

Characteristics of Grazing Beef Farms in WI

Data from the 2007 Census of Agriculture

According to the Census of Agriculture, an estimated 4,763 Wisconsin beef farms used management intensive grazing (MiG) in 2007 (42% of all beef farms). Cow-calf herds averaged 27 brood cows with another 36 head of young stock, significantly larger than the average herd size on non-MiG farms (19 brood cows; 37 head of young stock). MiG farms owned an average of 203 acres, versus 181 owned acres for non-MiG farms. Forty-seven percent of MiG farms reported renting additional land (an average of 164 ac) while 43% of non-MiG farms reported renting additional land (an average of 172 acres). Totals for both owned and rented acres for MiG and non-MiG farms were similar at 367 and 353 acres, respectively.

Total acres farmed per head of cattle averaged 5.8 for MiG farms and 6.3 for non-MiG farms, although the size of farms in both categories suggests that cash grain production is likely a substantial secondary enterprise for many beef producers. Land values were similar at $2,782 and $2,849 for MiG and non-MiG farmers, respectively.

MiG farms in the Census averaged 92 acres of pasture or 3.4 acres per brood cow (1.5 acres per head including young stock). Three categories of pasture are identified in the Census. Cropland pasture is pasture on ground that can also be used for producing annual row crops. Permanent pasture is pasture that cannot be plowed due to slope, wetness, or other limitation. Woodland pasture is pasture that has tree cover. A majority of respondents (78%) reported relying primarily on permanent pasture, with an average of 58 acres. Forty-two percent of respondents reported cropland acreage averaging 39 acres per farm. In contrast, among non-MiG farms, 66% reported permanent pasture acreage (46 acres) and only 25% reported cropland pasture acreage (26 acres). Woodland pasture acreage was reported by 44% and 33% of MiG and non-MiG farmers, respectively. Woodland pasture acreage averaged 53 acres for both MiG and non-MiG farmers.

Acres of hay grown on MiG farms averaged 55, with just 13% of farms reporting making haylage on an average of 70 acres. Under half of MiG farmers (43%) reported raising corn for grain (an average of 92 acres) and 26% reported growing an average of 28 acres of corn silage.

MiG farms were more likely to fertilize pastures than non-MiG farms (23% vs. 10%) and they fertilized more acres (50 vs. 43). Both MiG (61%) and non-MiG (52%) farmers reported using manure on pastures for fertility. Participation in government conservation programs was very low for both categories at 12% and 11% for MiG and non-MiG, respectively. Participation in crop insurance programs was similar between the categories at 21%. Those that reported using crop insurance tended to be larger farms averaging 234 and 270 acres enrolled for MiG and non-MiG, respectively. Very few beef producers reported using organic production practices at 3% (114 farms) among MiG producers and 1% (52 farms) among non-MiG producers.

Demographics

There were no differences between MiG and non-MiG farms for most demographic questions. Operator age averaged 54 and 55, respectively. Farmers reporting a majority of their income from off-farm sources totaled 52% for MiG and 51% for non-MiG households. About 69% of MiG households reported having internet access and 34% reported having a high speed connection. Among non-MiG farms, 54% reported having internet access, with 24% reporting a high speed connection.

Herd Size Comparison

Herd sizes were compiled by including all cattle on the farm including brood cows, calves less than 500 pounds, and calves over 500 pounds. For both MiG farms and non-MiG farms, the largest number of herds fall in the 21-50 cow range, but the proportion of herds that do not use MiG increases as herd size declines. More than half of herds in each category greater than 20 cows use MiG, while only 28% of farms with fewer than 20 cows use MiG.

Table 2. Production costs per cow for MiG and non-MiG Beef farms from the 2007 Census of Agriculture.

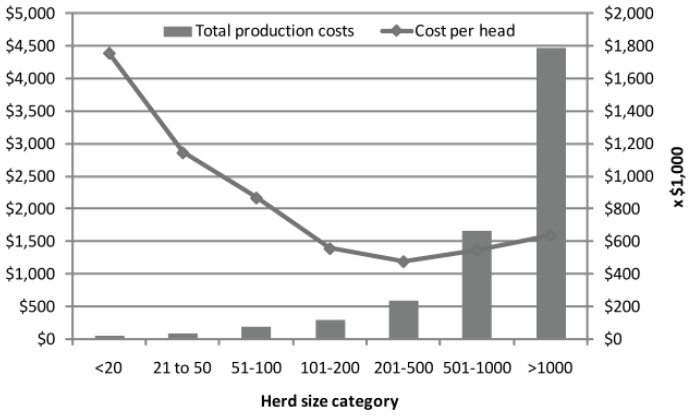
Cost Category	MiG Beef Farms	Non-MiG Beef Farm	Percent MiG: Non MiG
Hired labor	$258	$352	0.73
Feed cost	$144	$193	0.75
Equipment rent	$75	$118	0.64
Custom work	$54	$80	0.68
Chemical cost	$78	$98	0.80
Land & facilities rent	$190	$231	0.82
Depreciation	$207	$264	0.78
Fuel cost	$73	$88	0.83
Repairs cost	$110	$130	0.85
Fertilizer cost	$130	$171	0.76
Utilities cost	$40	$51	0.78
Total	$1,359	$1,776	0.77

Financial Performance

The 2007 Ag Census asked for cost of production information in 11 categories (Table 2). Cost of production per head of cattle for MiG farms was lower at $1,359 than for non-MiG farm, which was $1,776 per cow. Cost of production was lower in all categories for MiG farms, with the largest differences in the cost of equipment rental, custom work, and hired labor. Of the 11 categories surveyed, MiG farms had lower costs by 20% or more in seven categories.

Cost of production per head for MiG farms decreased as herd size increased to about 100 head, and then leveled off at $1,300 to $1,500 per head (Figure 1). Cost of production per market animal (excluding brood cows) averaged $2,173 for herds of 51-100 head, $2,866 for herds of 21-50 head and $4,390 for herds below 20 head. These data suggest that there is an economy of scale at work, above which additional cattle do not add significantly to operational costs. A relatively small proportion, about 24%, of MiG farms currently are large enough to take advantage of these cost savings.

Figure 1. Cost of production per head and total for the farm.



Pasture acreage increased with herd size, while pasture acres per head decreased. A common rule-of-thumb suggests that at least one acre of pasture per cow can provide adequate grazing acreage for the growing season. The smallest grazing beef farms with fewer than 50 cows had between 2-3 acres of pasture per cow. Farms between 51-500 cows averaged between 1-1.5 acres per cow and the 2 largest herd sizes had less than 1 acre per cow.

References

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