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Management Intensive Rotational Grazing in Wisconsin: the 1990s

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Wisconsin Family Farm Facts

No. 9, February, 2000

Current research findings from
the Program on Agricultural Technology Studies

Management intensive rotational grazing on Wisconsin dairy farms: the 1990s

Growing numbers of Wisconsin dairy farmers have reported success using management intensive rotational grazing (MIRG) techniques that rely on pastures as the primary source of forage for their milking herds. The Program on Agricultural Technology Studies (PATS) has been tracking the use and performance of MIRG systems in Wisconsin since the early 1990s through periodic large-scale, random sample surveys of Wisconsin dairy farmers. This fact sheet incorporates recent results from PATS 1999 Dairy Farmer Poll into an overall summary of PATS grazing research.

As in any grazing research, there is ambiguity about just what constitutes “management intensive rotational grazing.” In our surveys, the dairy farmers who report utilizing pastures for forage are a diverse group. At one extreme, dairy cattle are moved 2 to 3 times a day through a network of upwards of 50 or 60 individual improved pasture paddocks. At the other end of the spectrum, the entire milking herd is turned out in the same large field every day throughout the summer months. In analyzing our mail surveys, we defined MIRG as *a system in which dairy farmers rely on pastures for at least part of the forage ration of their milking cows and move these cows to fresh pastures at least once a week*. Farm operations that did not rely on pasture for any part of their forage ration were categorized as *confinement systems*. On our 1999 survey, 23 percent of farmers reported using MIRG systems, 21 percent used pastures non-intensively, and 56 percent used full confinement systems.

This PATS grazing research summary focuses on four key questions:

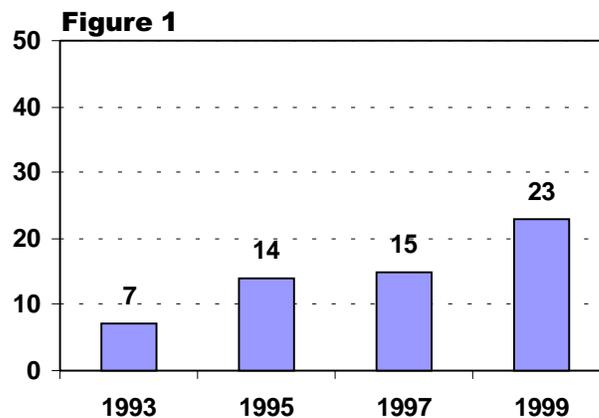
1. How widespread is the adoption of MIRG among Wisconsin dairy farmers?
2. What are some of the regional patterns in the adoption of MIRG across Wisconsin?
3. What are the characteristics associated with operations that utilize MIRG?
4. How are MIRG systems performing (in economic and social terms)?

The prevalence and growth of MIRG on Wisconsin dairy farms

The use of MIRG practices by Wisconsin dairy farmers has increased sharply since PATS’ first Wisconsin Farm Poll was conducted in 1993. The prevalence and growth of MIRG among Wisconsin dairy operations is presented in Figure 1 which summarizes the results of four major random sample surveys. While in 1993 just over seven percent of the dairy farms surveyed were utilizing MIRG systems, by 1995 this number had doubled to 14 percent, and by 1999, it had tripled to over 23 percent of all dairy farms.

In addition to increases in overall rates of MIRG adoption, our data suggest that graziers have become more successful at maximizing the total feed they obtain from pastures. In 1997, more than 10 percent of WI dairy farmers reported utilizing pasture as their primary source of total feed for their milking cows during the grazing months in contrast to less than four percent in 1993. Among MIRG farmers surveyed in 1999, roughly a third moved their cows once a day or more, a third moved them every 2-6 days, and a third moved them weekly.

Use of intensive grazing practices varies significantly around the state, with the southwest, north central, and west central regions having the highest rates of adoption, and the central, south central, and southeast regions having the lowest (See Figure 2). The higher regions of adoption tend to correlate with lower-priced farmland and more rolling topographies.



Characteristics associated with MIRG dairy farms

Survey results indicate that rates of MIRG use vary substantially across different subsectors of the dairy industry. The following characteristics distinguish MIRG systems from other types of dairy systems:

Less likely to have farm background. While intensive graziers tend to be roughly the same age as other types of dairy farmers, they are slightly less likely to have a farm background or to have acquired farmland from a parent.

Tend to operate smaller dairy farms. Intensive graziers generally operate fewer total acres and have smaller average herd sizes in comparison with other types of farms. The average size of MIRG farms was 246 acres in contrast to 390 acres for confinement operations and 327 acres for dairy farms as a whole. In 1999, MIRG farmers milked an average of 50 cows in comparison with the statewide average of 72 cows. Confinement operators milked an average of 91 cows. While MIRG farms tend to be smaller than state averages, there are a handful of very large grazing operations that suggest it is possible to operate at a larger scale.

Use fewer output-maximizing technologies. MIRG farms are significantly less likely to be using herd production testing programs, TMR machinery, regular feed ration balancing, and rBST. MIRG operators are slightly less likely to have a milking parlor, although this may reflect the relatively small scale of most of these operations.

Popular among recent entrants. Beginning farmers appear to utilize MIRG practices at dramatically higher rates than dairy farmers as a whole. Among a sample of recent dairy farm entrants surveyed in 1996, nearly 30 percent were employing MIRG systems (nearly twice the adoption rate of other dairy farms at that time). Moreover, when questioned about their future intentions, nearly 46 percent of new farmers indicated that they planned to use improved pastures to obtain feed for their milking herd in the future.

Rely more on off-farm income. Over twice as many MIRG operators (20 percent) had off-farm jobs as confinement operators (9 percent). However, spouses of farm operators were no more likely to work off-farm than other types of dairy farms. Just over 8 percent of dairy farmers overall and just under 11 percent of graziers obtained most of their income from off-farm sources.

Better perceived quality of life. MIRG operators were more likely to report feeling “very satisfied” with their family’s quality of life than were confinement operators (39 versus 32 percent) and slightly more likely to state that their family’s quality of life had “become better” over the past five years than confinement operators (43 versus 37 percent).

Percent of Respondents
Using MIRG by County

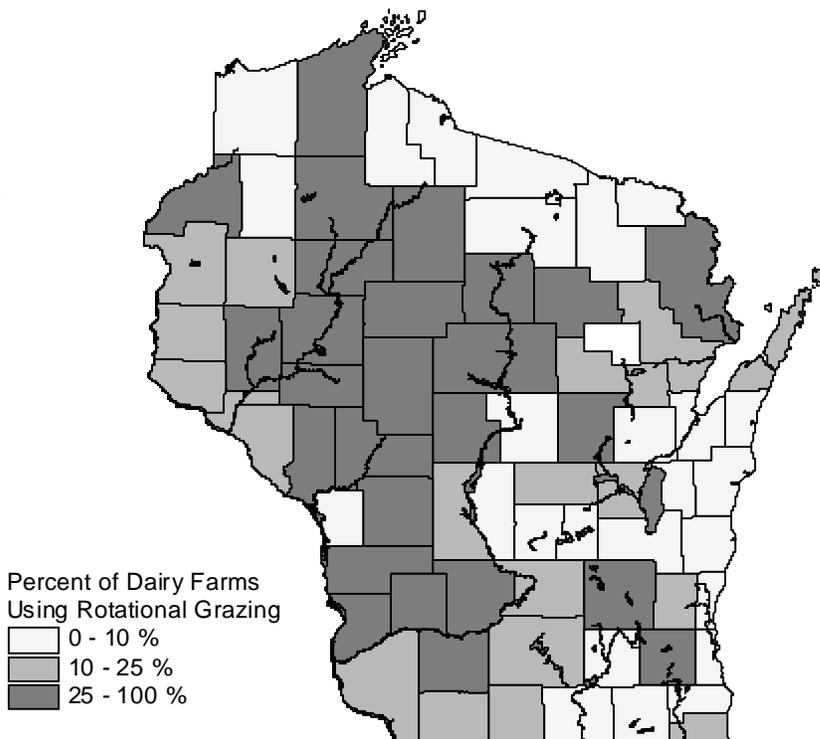


Figure 2

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