



WISCONSIN AGRICULTURAL STATISTICS SERVICE

P.O. Box 8934 Madison, WI 53708-8934

In cooperation with WI Department of Agriculture, Trade and Consumer Protection



May 2005

Wisconsin Electrical Dairy Equipment Survey Results

Wisconsin Dairy Producers— Have You Had Your Electrical Equipment Tested Lately?

Wisconsin milk producers answered the Dairy Equipment Survey in February 2005. Almost 60% of the selected dairy operators responded to this voluntary survey conducted by the Wisconsin Agricultural Statistics Service.

The results from this mail survey represent approximately 8,600 dairy operations in the state. These producers either tested their farm for stray voltage and/or had concerns about stray voltage.

Wisconsin Dairy Producers Management Decisions by Milk Production 1/

Annual milk per cow	Farms tested for stray voltage 2000 - 2004	Producers concerned about stray voltage 2000 - 2004
	Percent	
Under 16,000 lbs.	26	36
16,000 - 19,999 lbs.	37	45
20,000 - 25,000 lbs.	51	54
Over 25,000 lbs.	63	52

1/Percentages represent 15,400 Wisconsin dairy farms and are based on the 2004 Dairy Survey.

Wisconsin Dairy Producers Management Decisions by Herd Size 1/

Herd size	Farms tested for stray voltage 2000 - 2004	Producers concerned about stray voltage 2000 - 2004
	Percent	
1 - 29	13	28
30 - 49	28	36
50 - 99	41	48
100 - 199	55	56
200 - 499	63	60
500 +	77	65
All herds	37	44

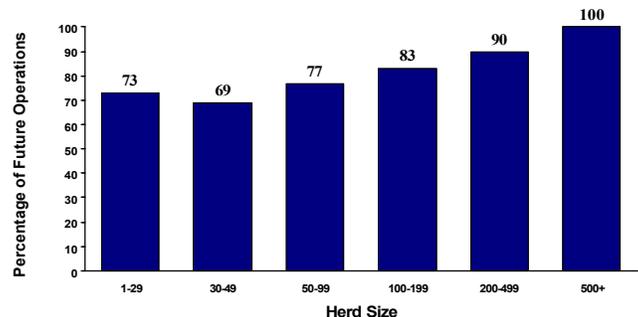
1/Percentages represent 15,400 Wisconsin dairy farms and are based on the 2004 Dairy Survey.

Wisconsin Dairy Producers Rank Reasons for Testing Electrical Equipment 1/

- #1 High Somatic Cell Count
- #2 Cow Behavior Concerns
- #3 Electrical Concerns
- #4 Reproductive Issues
- #5 Low Milk Production
- #6 High Cull Rate or Death Rate
- #7 Cow Lameness
- #8 Regular Testing Plan

1/Rankings reflect 6,650 dairy farms that tested for stray voltage.

Wisconsin Dairy Operations Planning to Continue to Milk in 2009 1/



1/ Percentages reflect 8,600 dairy producers who had their farm tested for stray voltage and/or had concerns about stray voltage.

Top Reasons Wisconsin Dairy Producers Chose Not to Test their Farm for Stray Voltage 1/

- #1 Not aware that utilities are required to provide a free stray voltage test annually.
- #2 Not a big concern. Other issues with the cows have taken priority over testing for stray voltage.
- #3 No extra money to fix things.

1/Top reasons reflect the 1,950 dairy farms that had concerns about stray voltage, but did not test for stray voltage.

**Wisconsin Dairy Farms
Stray Voltage Test Schedules, by Herd Size 1/**

Herd size	Tested regularly	Tested only as needed
	Percent	
1 - 29	0	100
30 - 49	24	76
50 - 99	17	83
100 - 199	27	73
200 - 499	40	60
500 +	53	47
All herds	22	78

1/Percentages represent 6,650 dairy farms that tested for stray voltage.

Wisconsin Dairy Farms with Electrical System Concerns

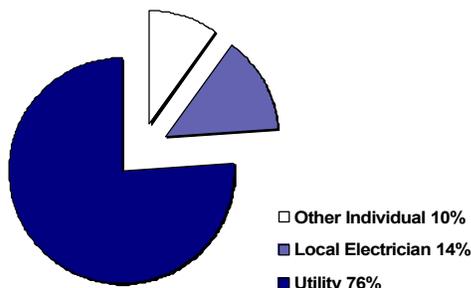
- ▶ 51% of the "tested regularly" farms had stray voltage or other electrical system problems detected on their last test.
- ▶ 60% of the "tested only as needed" farms had stray voltage or other electrical system problems detected on their last test.

**Stray Voltage Test Results
by Herd Size, Wisconsin 1/**

Herd size	Stray voltage or other electrical system problems were detected
	Percent
1 - 29	28
30 - 49	63
50 - 99	58
100 - 199	60
200 - 499	60
500 +	57
All herds	58

1/Percentages reflect 6,650 dairy farms that tested for stray voltage.

Who Conducted Stray Voltage Tests on Wisconsin Dairy Farms? 1/



1/ Percentages reflect 6,650 dairy farms that tested for stray voltage.

Satisfaction with Test Results and Recommended Actions by Frequency of Testing

- ▶ 86% of the producers who had their farm "tested regularly" were satisfied with the stray voltage test and recommended actions.
- ▶ 82% of the producers who had their farm "tested only as needed" were satisfied with the stray voltage test and recommended actions.

**Dairy Producers Satisfaction
by Herd Size, Wisconsin 1/**

Herd size	Dairy producer was satisfied with the test results and recommended actions
	Percent
1 - 29	72
30 - 49	85
50 - 99	83
100 - 199	83
200 - 499	84
500 +	82
All herds	83

1/Percentages reflect 6,650 dairy farms that tested for stray voltage.

Satisfaction with Test Results and Recommended Actions by Outcome of Test

- ▶ 85% of the producers that had stray voltage or other electrical system problems " detected " on their farm were satisfied with the stray voltage test and recommended actions.
- ▶ 80% of the producers that had stray voltage or other electrical system problems " not detected " on their farm were satisfied with the stray voltage test and recommended actions.

**Wisconsin Dairy Producers Opinions
on Third Party Inspection, by Herd Size 1/**

Herd size	Would like third party to inspect wiring
	Percent
1 - 29	8
30 - 49	53
50 - 99	46
100 - 199	57
200 - 499	57
500 +	63
All herds	47

1/Percentages reflect 8,600 dairy producers who had their farm tested for stray voltage and/or had concerns about stray voltage.

Types of Dairy Equipment Most Frequently Needing to be Fixed 1/

- #1 Service Panels/ Fuse Boxes
- #2 Power Lines Between Buildings
- #3 Electric Fencers
- #4 Cow Trainers
- #5 Heated Livestock Waterers
- #6 Lights – Standard Fluorescent
- #7 Ventilation Fans
- #8 Silo Unloaders
- #9 Plugged in Devices (Shop Tools, etc.)
- #10 Barn Cleaner

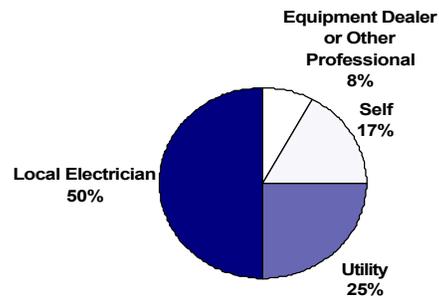
1/Rankings reflect 6,650 dairy farms that tested for stray voltage.

Wisconsin Dairy Electrical Equipment 1/

Equipment	Equipment needing to be fixed	Farms with existing equipment
	Percent	
Dairy equipment		
Cow trainers	10	64
Barn cleaner	5	86
Electric water heaters	5	84
Milk pump - standard	4	87
Bulk tank electrical equipment	3	99
Vacuum pump - standard	3	88
Milking machine pulsation	2	92
Refrigeration compressor	2	97
Manure pump	1	40
Vacuum pump-variable speed	1	13
Crowd gate	1	16
Automatic take-offs	1	33
Milk pump - variable speed	1	10
General farm equipment		
Service panels/ fuse boxes	24	98
Power lines between bldgs.	21	87
Electric fencers	14	90
Heated livestock waterers	9	72
Lights - standard fluorescent	7	71
Ventilation fans	6	94
Silo unloaders	6	88
Plugged in devices	6	93
Well pumps	5	100
Lights - electronic ballast	2	29
Lights - compact fluorescent	1	26
Lights - metal halide	1	25
Lights - high pressure sodium	1	37

1/Percentages reflect 6,650 dairy farms that tested for stray voltage.

Who did the Majority of the Repairs or Replacements on Your Farm? 1/

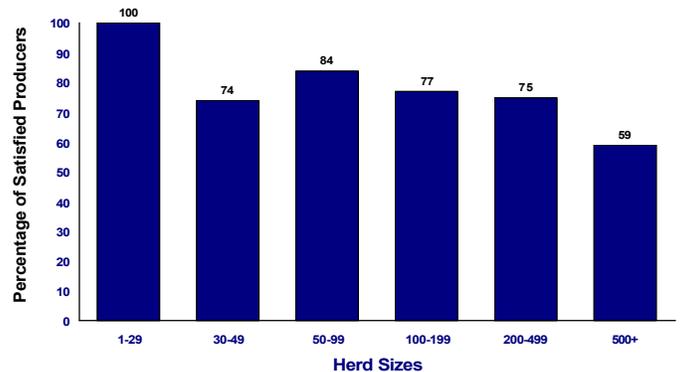


1/ Percentages reflect 3,850 dairy farms that had items repaired or replaced which were identified in a stray voltage report.

Wisconsin Dairy Producers Satisfaction with Services Received

- ▶ 92% of 6,625 producers were satisfied with recent services received from their local electricians.
- ▶ 80% of 6,320 producers were satisfied with recent services received from their utility support persons.

Wisconsin Dairy Producers Satisfaction with Most Recent Service Provided by Utility Support Person 1/



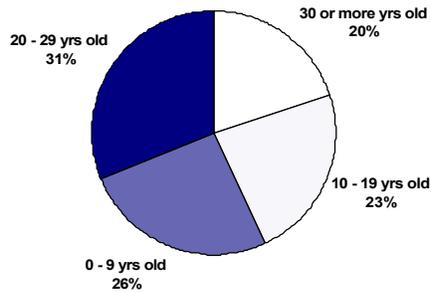
1/ Percentages reflect 6,320 dairy producers who recently used services.

Wisconsin Dairy Farms, Specialized Stray Voltage Equipment 1/

Equipment	Dairy farms with existing equipment
	Percent
Equipotential planes	14
Neutral isolator	19
Unique grounding systems	20
Isolation transformer	12

1/Percentages reflect 6,650 dairy farms that tested for stray voltage.

Wisconsin Dairy Barns by Age of Wiring, 2005 ^{1/}



^{1/}Percentages reflect 8,600 dairy producers who had their farm tested for stray voltage and/or had concerns about stray voltage. Percentages reflect the age of the majority of the wiring.

Wisconsin Dairy Producers using the Rewiring Program by Herd Size ^{1/}

Herd size	Participated in rewiring program
	Percent
1 - 29	0
30 - 49	13
50 - 99	18
100 - 199	30
200 - 499	44
500 +	35
All herds	20

^{1/} Percentages reflect 6,650 dairy farms that tested for stray voltage.

We would like to thank those farmers who took the time to fill out this important survey.

This survey was initiated by the Rural Energy Management Council with assistance from the Division of Agricultural Development, WDATCP, in cooperation with the Wisconsin Agricultural Statistics Service.

Results from the survey can also be found on the web at: <http://www.nass.usda.gov/wi/>

Survey Methodology

In the fall of 2004, Wisconsin dairy farmers were mailed a dairy questionnaire which asked various management questions. This survey showed 5,700 or 37% of Wisconsin dairy farms **tested** for stray voltage between 2000 and 2004. The survey also showed 6,800 state dairy producers or 44% had **concerns** about stray voltage on their farm.

A sample of 1,000 dairy farmers who had their farm tested for stray voltage, and/or had concerns about stray voltage was drawn from the 2004 Fall survey. These producers were mailed the Electrical Dairy Equipment Survey in February 2005.

The four-page questionnaire asked specific questions about the stray voltage test, sources of electrical concerns, satisfaction of services, and wiring on the farm.

Producer responses were expanded to represent 8,600 Wisconsin dairy farms, of which 6,650 tested for stray voltage.

Contact Information.....

Wisconsin Farmers Assistance Hotline
1-800-942-2474

David Hansen,
Rural Electric Power Services Supervisor, DATCP
608-224-5055

Wisconsin Agricultural Statistics Service
608-224-4848