Livestock

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Livestock

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
301	Reproductive Performance of Animals	10%		10%	
302	Nutrient Utilization in Animals	15%		15%	
304	Animal Genome	5%		5%	
305	Animal Physiological Processes	10%		10%	
306	Environmental Stress in Animals	5%		5%	
307	Animal Management Systems	30%		30%	
311	Animal Diseases	20%		20%	
315	Animal Welfare/Well-Being and Protection	5%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	10.2	0.0	44.9	0.0
Actual	16.7	0.0	58.4	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
420398	0	1951593	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
912910	0	7275751	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
16466	0	4640742	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Experiment Station: Livestock related research spans the continum of translational applied research to basic, cellular research.The following are some research areas in which MAES supported research has made more contributions and impacts in 2008:

•Leading the Minnesota beef industry in efforts to enhance production and marketing conditions and sustainability of beef operations under downgraded bovine TB status. •Research into animal welfare and cow comfort. •Defining the cellular mechanisms of steroid-enhanced muscle growth in steers. •Genome signature of artificial selection and genome-wise association analysis in Holstein cows.

Other research impacts are described under the "Outcomes" section.

Extension:Through direct education to producers, collaborative efforts with state departments, trade associations and others, and outreach with information through multiple media sources, livestock educators and specialists provide education to producers of hogs, cows, and poultry, making them more profitable and responsive to their industry.In 2008, the team worked to migrate many educational programs on line, and responded to demands for safe and healthy livestock production from America's consumers and the retail companies that serve them. (For more information, visit http://www.extension.umn.edu/topics.html?topic=4.)

2. Brief description of the target audience

The Livestock education team serves Minnesota dairy producers, pork producers, poultry producers, beef producers, veterinarians, consumers, Minnesota feed industry. Forage growers and feeders, and commercial hay producers.The 2008 organizational network surveys underscore the collaborative work this team does to improve animal health and protect consumers.Extension's livestock team collaborates with trade associations (27.5% of contacts), private farming businesses (16.5%), professional associations and state government (11.3% each) to deliver research-based information that producers can use.Their efforts are split somewhat evenly between partnering for a joint effort with mutual benefit, providing expert advice, and delivering substantive information through and with these groups.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
Plan	19000	3800	0	0
2008	47575	145256	4672	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	1
2008:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	10	80	
2008	19	74	93

V(F). State Defined Outputs

Output Target
Output #1

Output Measure

Through demonstration projects, provide ideas and solutions to producers on such topics as milk house waste, manure rate application on fields, and on-farm demonstrations of forage topics such as alfalfa brown root rot variety screening, and alfalfa fall cutting. (Target expressed as number of demonstration projects.)

Not reporting on this Output in this Annual Report

Output #2

Output Measure

Provide workshops, training sessions, schools, and other processor specific events. (Target expressed as number of events.)

Year	Target	Actual
2008	250	206

Output #3

Output Measure

The Quality Count$ initiative will sustain its cooperative partnerships with regulatory, association and production groups that assist in addressing the issue of somatic cell count. (Target expressed as the minimum number of groups involved.)

Year	Target	Actual
2008	25	28

V(G). State Defined Outcomes

O No.	Outcome Name
1	Through the Quality Count$ program, the average bulk tank somatic cell count in Minnesota dairy operations will be maintained at a low level, and move downward over time through changed attitudes and improved consistency of dairy producers. (Target expressed as the somatic cell count under which Minnesota's dairy industry will stay.)
2	Participants will gain knowledge in research-based practices related to beef, dairy, horse, poultry, swine management and manure related management. (Target expressed as the number of direct person contacts reporting new knowledge.)
3	Participants will act upon university-based research learned. (Target expressed as the number of direct person contacts who acted on or have made plans to act upon information associated with their Extension learning.)
4	Profits of small beef operations will increase through joint marketing activities. (Actual is expressed as total added profits for 14 producers.)
5	Research will provide knowledge on alternative swine and dairy housing systems for improved animal health.
6	Research will provide better understanding of the PRRS virus transmission and control, for improved swine health.
7	Research will develop methods and provide information on options to improve odors emitted from open manure storage.

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Outcome #1

1. Outcome Measures

Not reporting on this Outcome for this Annual Report

2. Associated Institution Types

3a. Outcome Type:

3b. Quantitative Outcome

Year	Quantitative Target	Actual

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area

V(H). Planned Program (External Factors)

External factors which affected outcomes

Natural Disasters (drought,weather extremes,etc.)
Economy
Appropriations changes
Public Policy changes
Government Regulations
Competing Public priorities
Competing Programmatic Challenges
Populations changes (immigration,new cultural groupings,etc.)
Other (Changing consumer preferences)

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

After Only (post program)
Before-After (before and after program)
Time series (multiple points before and after program)
Case Study
Comparisons between program participants (individuals,group,organizations) and non-participants
Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

Evaluation Results

Key Items of Evaluation