

Assessing production systems, economics, marketing, producer and processor perceptions and characteristics of meat from forage-based systems

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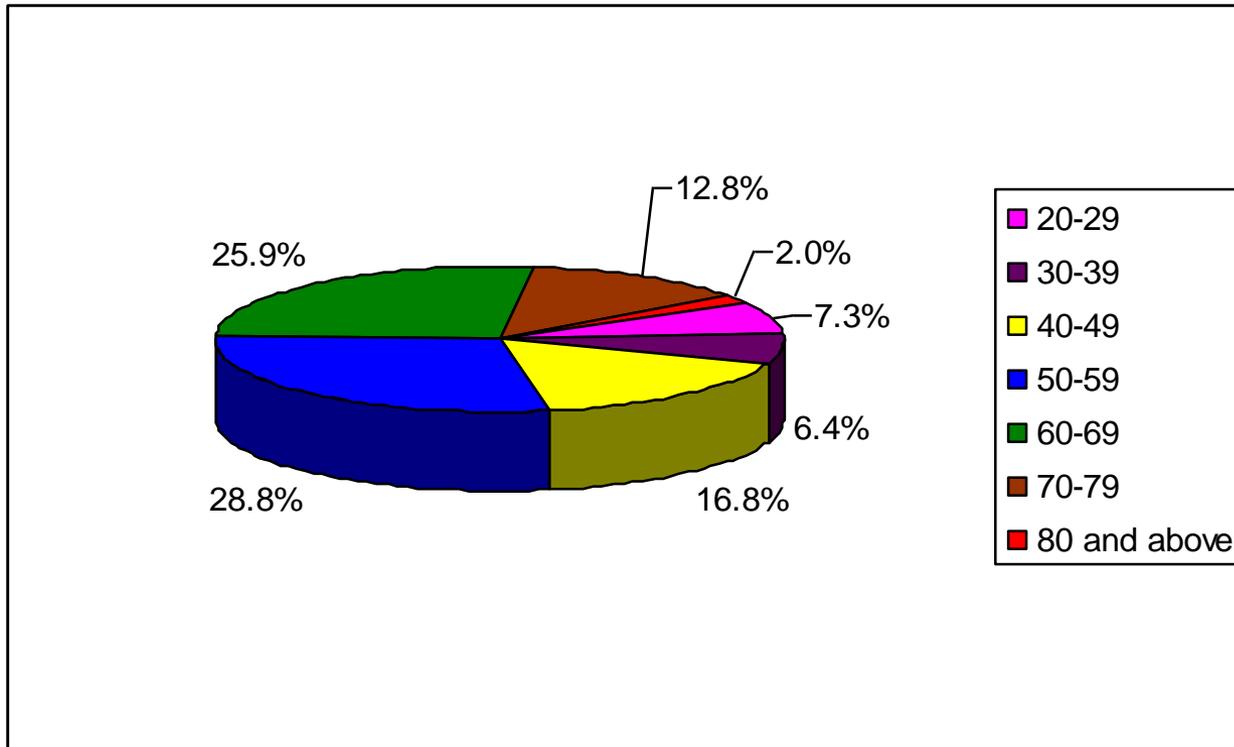
Background and Justification

- Small to medium sized family farms are at a disadvantage compared with large commercial farming entities if production efficiency is the measurement criterion.
- The economic prosperity of these small farms is important, as they are critical to rural economies and total food production in the United States.
- Grass-based finishing systems are uniquely well suited to small and medium sized beef and sheep producers.
- Due to an increasing consumer demand, the value of differentiated grass finished products is greater than that of commodity products in areas of high human population density.

Goals

- Determine the current producer understanding of direct- and niche-marketing, e.g., organic, forage-based, local or natural meat product.
- Determine effects of novel forage-based beef and lamb finishing systems on: measures of animal production; measures of carcass quality and composition; and measures of production efficiency.
- Determine the effects of various forage-based management and nutrition options on the value and consumer desirability of the final beef and lamb meat products when compared with the same meat cuts produced by rearing animals in a confinement grain feeding system.
- Determine the effect of forage-based systems on farm profitability through comparative financial analyses of revenue, input costs (fixed and variable) and total returns.
- Determine the willingness of local, small-scale, State and Federally - inspected, meat processors to work with niche or specialty meat producers.
- Based on results from the above goals, develop appropriate extension publications and curriculum for use by county educators and other non-profits who work closely with forage-based small to medium sized farms.

In 2010, as part of the AFRI grant, a survey identifying the extent of grass-based beef and lamb production was sent to over 600 producers listed as active in county Extension databases in Ohio. Survey responses were received from 246 beef producers and 110 lamb producers.

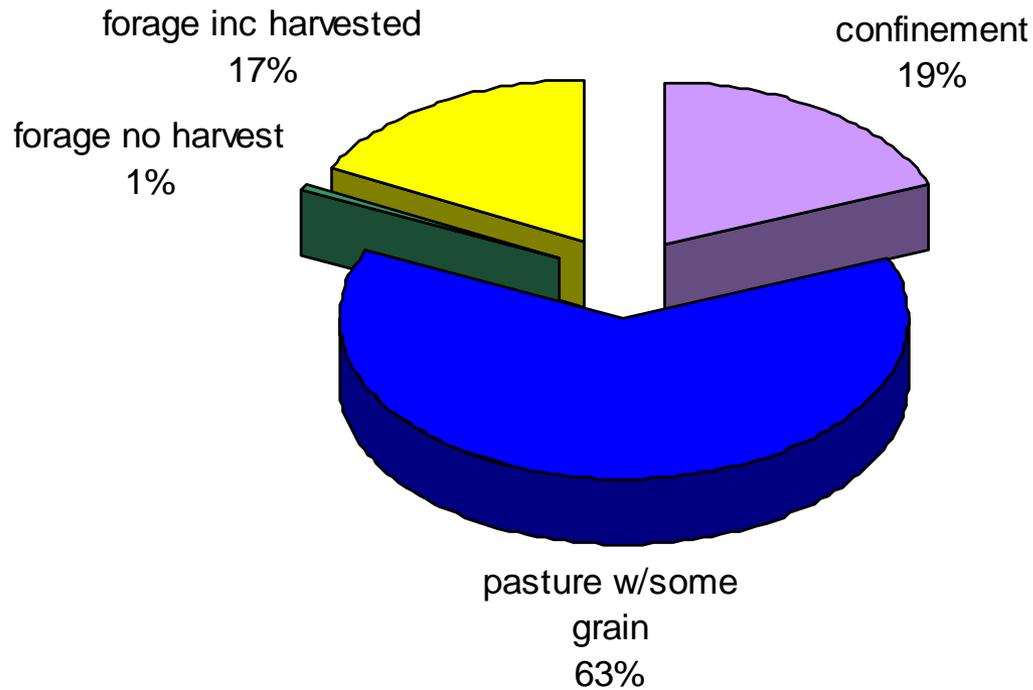


The median age of Ohio residents is 37.9. The livestock producers in general are older people. The mean age of all producer respondents was 54, with the median age being 56.

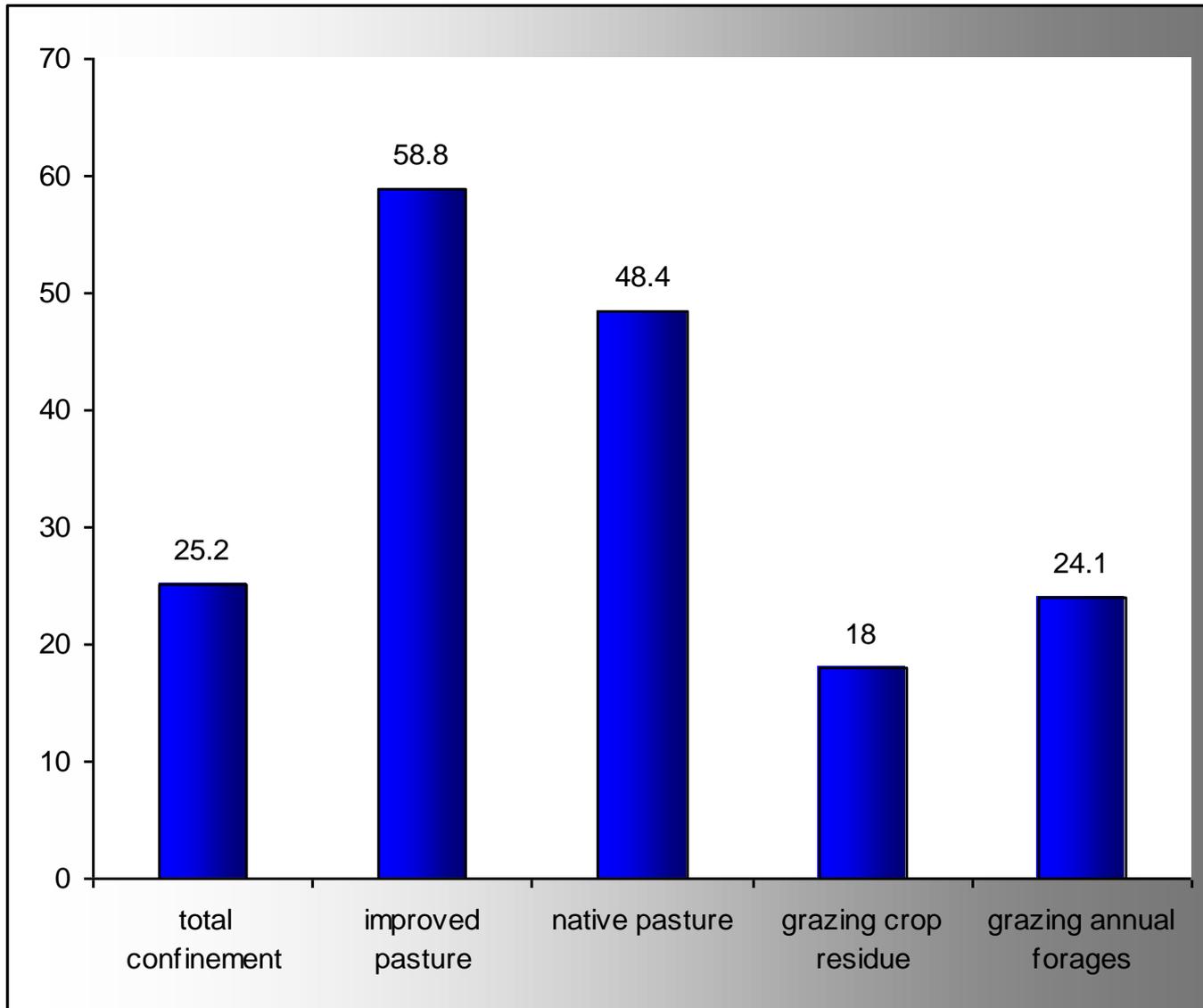
Beef Operation Information

	Mean	Media n	S.D.
Total acres owned	219.67	151	268.405
Acres owned in hay or pasture	74.5	41	94.778
Acres owned in row crops	97.29	2	216.110
Total acres rented	201.34	16.5	539.593
Acres rented in hay or pasture	62.47	0	340.450
Beef cows	28.25	17	38.080
Feeder calves	79.68	11.5	645.272
Finished cattle/market ready	33.34	2	110.267

Which of these best describes your livestock management? (N=338)



What are the components of your current livestock rearing system? (N=344)

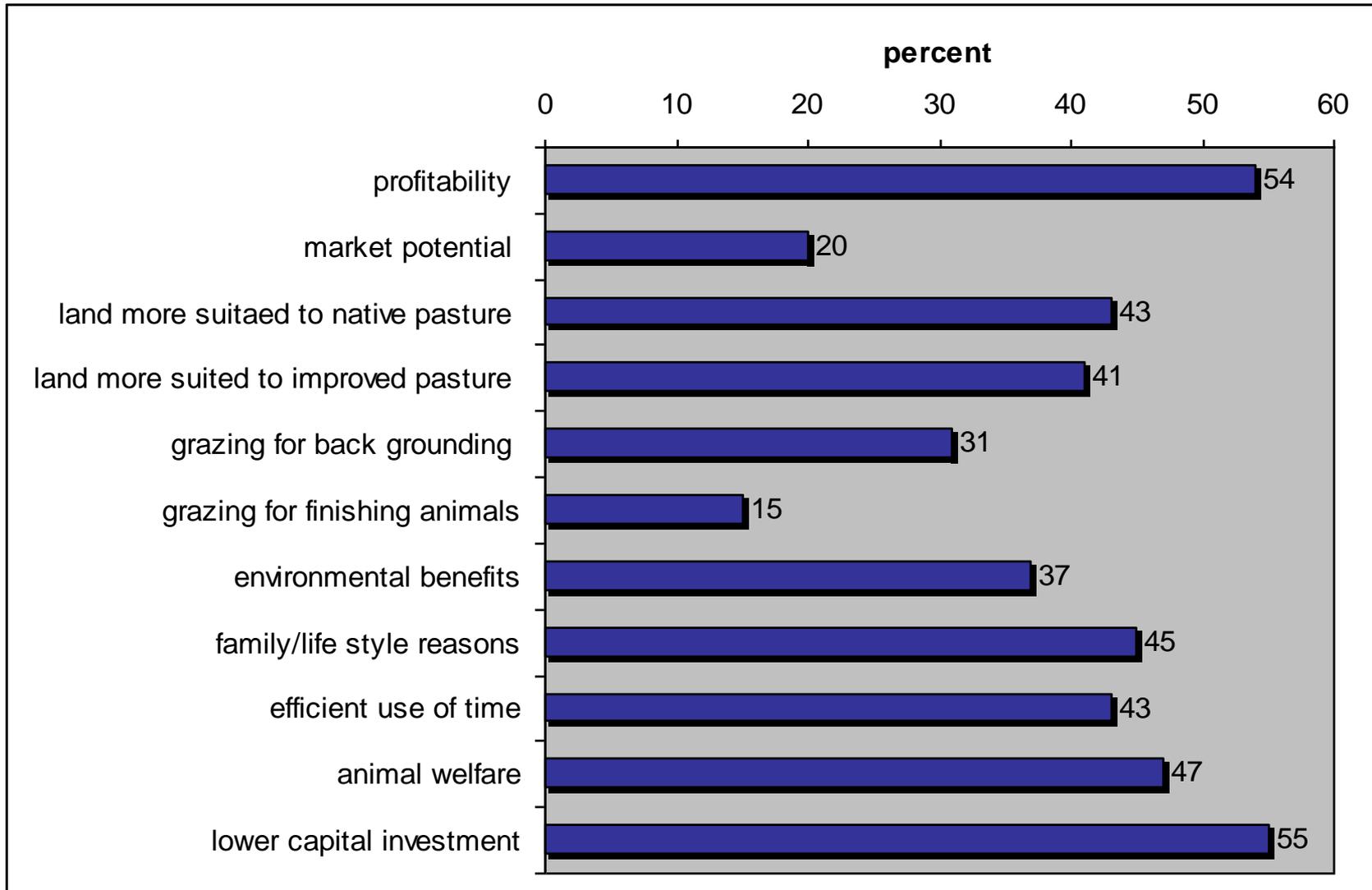


How frequently do you feed the following to your livestock?

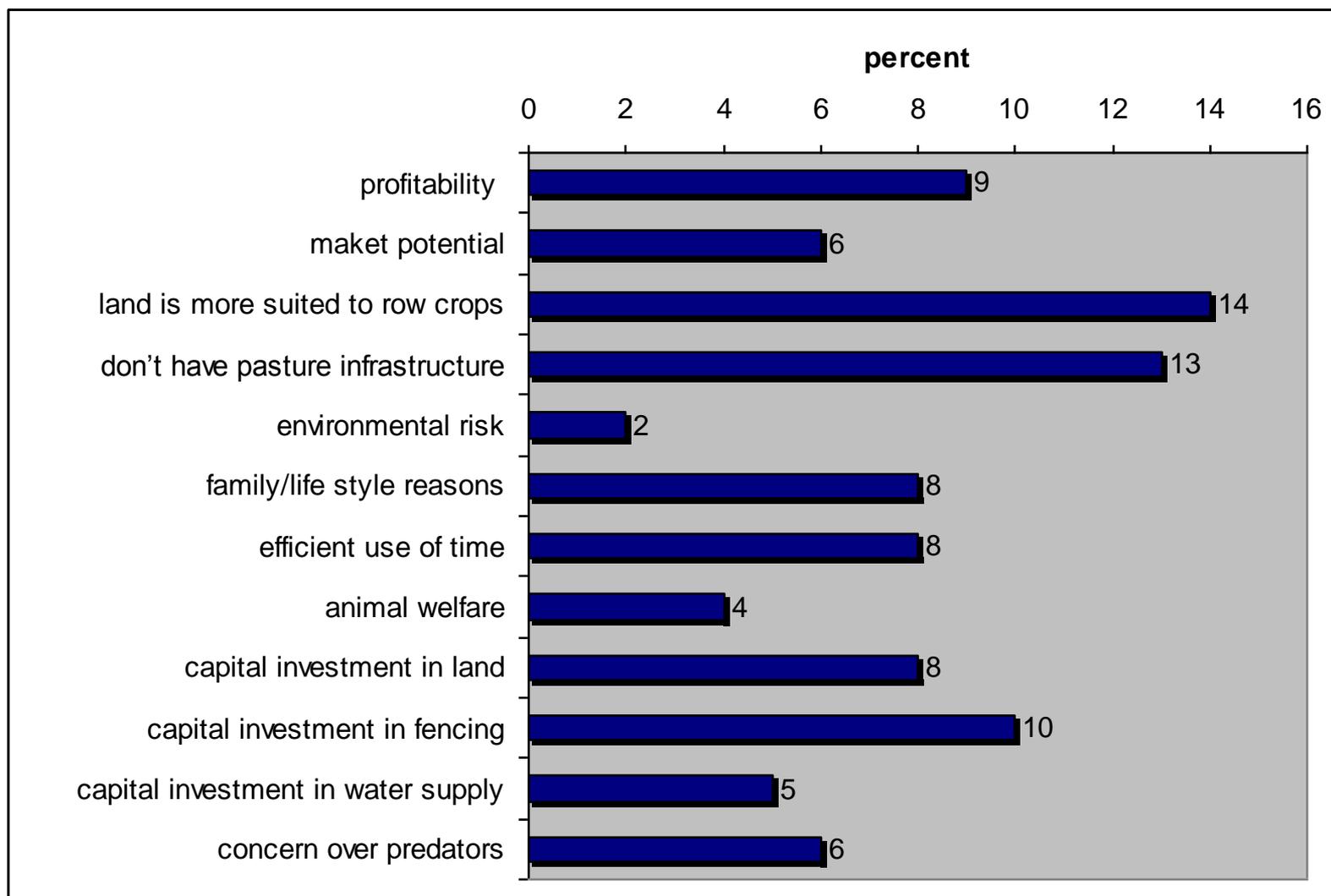
(1 = never; 2 = sometimes; 3 = often; 4 = always)

	N	Mean	Median	S.D.
Grain	329	2.83	3	.949
By products	283	1.66	1	1.003
Hay	326	3.15	3	.762
Baleage	248	1.50	1	.904
Silage	251	1.48	1	.961

75.60% said they currently used a grazing based system to manage their livestock. Why?



24.4% said they currently DO NOT use a grazing based system to manage their livestock. Why?



Effect of beef management system on animal growth, carcass weight, and carcass characteristics

	Spring Born 10 Month	Fall Born 10 Month	Spring Born Yearling	Feedlot Finished
7 Month wt, lb	511.9	540.8	514.2	513.5
10 Month wt, lb	684.3	746.5	607.0	647.8
Wt off test, lb	684.3	746.5	923.7	1110.5
Age off test, days	278	298	483	425
HCW, lb	360.5	404.1	479.9	661.2
Marbling score ¹	494	419	428	604
USDA Quality Grade ²	4.5	3.8	3.9	5.6
USDA Yield Grade	2.1	2.3	2.4	3.6

¹Marbling 400-490=Select; 500-590=Low Choice; 600-690=Average Choice

²QG 4.0-4.9 = Select; 5.0-5.9 = Low Choice



Ongoing Studies and Conclusions

- A meat processor survey is being analyzed to determine the willingness to process grass-fed cattle for specific consumer markets.
- The second year of the cattle system experiment is underway.
- Lamb growth studies are ongoing.
- Results of the producer survey are being compiled into refereed journal submissions.
- Producer materials regarding grass-based production systems are being written.