Cattle Grazing Management Survey

Q1. Did you own farm land OR raise cattle in 2012? Check one.

Table Q1 Raise Cattle or Not in 2012

	Yes	No
Raise Cattle	2273 (94.51%)	132 (5.49%)

Q2. How many total <u>acres</u> did you farm in 2012 and how many of these acres were rented <u>from</u> someone else?

Table Q2 Acres Farmed by Type

Type	Mean of Total Acres Farmed (Acres)	Mean of Acres Rented (Acres)
Pasture	274.74	111.98
Hay	59.73	22.25
Harvested Cropland	98.83	51.54
Woodland (Grazed)	54.31	21.30
Woodland (Not Grazed)	31.43	2.16
Other	6.30	1.59

Q3. If you rented land <u>from</u> others in 2012, how long were the rental terms?

Table Q3 Length of Rental Term

	Mean (Years)
Length of Rental Term	1.97

Q4. How much farmland and woodland did you own, but <u>rent to</u> others in 2012?

Table Q4 Acres of Owned Lands Rented to Others in 2012

	Mean (Acres)
Lands Rent to Others	39.16

Q5. Did you have any of the following types of livestock on your farm in 2012? Check all that apply.

Table Q5 Types of Livestock on Farm in 2012

Type	Percentages in 2012
Hogs	2.94%
Goats/Sheep	6.52%
Poultry	7.15%
Horses	18.63%
Cattle	94.95%

Q6. How <u>many</u> of the following types of cattle were in your care on January 1, 2013?

Table Q6 Number of Cattle in Care on January 1, 2013

Type	Mean (Heads)
Brood Cows	55.31
Backgrounded Calves	14.58
Stockers	7.10
Replacement Heifers	9.09
Bulls	3.91
Dairy Cows	0.72
Other	0.88

Q7. Did your cattle graze on pasture owned or rented by you in 2011?

Table Q7 Cattle Graze on Pasture Owned or Rented by Respondent in 2012

	Yes	No
Owned or Rented	2127 (94.74%)	118 (5.26%)

Q8. About how many days per year do you graze your cattle?

Table Q8 Number of Days per Year Spent on Grazing Cattle

	Mean (Days)
Days on Grazing Cattle	293.25

Q9. Which of the following <u>pasture management</u> practices do you use? Check all that apply.

Table Q9 Types of Pasture Management Practices in Use

Type	Percentages
Apply Manure as Fertilizer to Pastures	40.84%
Apply N,P, or K Fertilizer (DAP, UREA, LAN, etc.) to Pastures	51.34%
Water Cattle at Site Other than Stream or Pond	60.04%
Have Buffer Strips of Woody or Grassy Vegetation along Waterways	33.32%
Have Shade Structures, Scratching Posts, and Feed Supplements Placed away from Streams	59.79%
Have Improved Stream Crossings	17.23%
Control Livestock Access to Streams	20.31%
Protect Heavy Use Areas with Geotextiles	8.18%
Replant Bare Pasture with Legumes or Native Grasses	40.70%
Periodically Test Soil	49.49%

Prescribed Grazing

The next section asks you some questions about prescribed grazing. Before answering these questions, we ask that you read the following to ensure that you understand how prescribed grazing is defined in this survey.

What is prescribed grazing?

- **Prescribed grazing is the controlled harvest of vegetation by grazing animals.**
- **Controlled harvest means managing the duration, intensity, distribution, frequency,**
- **and season animals graze on a pasture.**
- **Management practices include:**
    - **Rotating cattle around a number of paddocks (fenced fields) in an**
    - **ordered sequence;**
    - **Monitoring forage stubble height for the best grazing start and stop**
    - **times; and**
    - **Removing cattle from grazing areas to allow forage recovery.**

How would prescribed grazing benefit you?

- **Grow more and better quality forage;**
- **Allow higher stocking rates (estimates are up to 40% increases); and**
- **Increase use of forage from pastures.**

How would prescribed grazing affect the environment?

- **Increased yields and efficiency per unit of land means less pollution; and**
- **Concentrating livestock in paddocks for days at a time lets animals graze lightly but evenly, encouraging roots to grow deeper into the soil, storing more organic matter (carbon).**

What would you need to do to practice prescribed grazing?

Manage forage by:

- Balancing livestock consumption and forage production;
- Adjusting livestock numbers, fertilizer rates, or purchased feed to meet livestock forage needs;
- Limiting feed (hay, silage, gluten, hulls, grain, etc.) to no more than 50% of total livestock diet; and
- Creating a weed control plan and controlling weeds in pastures by clipping, spraying, high density grazing, mixed
- species grazing and/or weed wiping as needed.

Rotate livestock by:

- Using at least 5 different paddocks or fields for grazing;
- Grazing livestock for no more than 14 continuous days on any paddock or field (except during extreme weather
- conditions);
- Buffering sensitive areas like wells, depressions, sinkholes, and all water areas in paddocks;

- Developing a conservation plan that includes a grazing component with a technical consultant; and
- Not grazing more than 20% of the pasture to less than minimum grazing heights of:
    - 2” for bermudagrass, ryegrass;
    - 3” for cool season grasses (e.g. tall fescue, orchardgrass, cereal grains); and
    - 6” for tall upright grasses (e.g. native grass, millet, sorghums).

Recordkeeping:

- Keep records to show continued use of prescribed grazing practices.

Q10. In 2012, did you use any of the prescribed grazing practices described above?

Table Q10 Use Prescribed Grazing

	Yes	No
Prescribed Grazing	1140 (53.40%)	995 (46.60%)

Q11. Which prescribed grazing practices did you use during 2012? Check all that apply.

Table Q11 Types of Prescribed Grazing Practices Used in 2012

Type	Percentages
Balanced Livestock Consumption and Forage Production	58.45%
Adjusted Livestock Numbers, Fertilizer Rate, or Purchased Feed to Meet Livestock Forage Needs	72.46%
Limited Feed (Hay, Silage, Gluten, Hulls, Grain etc.) to no more than 50% of Total Livestock Diet	45.32%
Created and Used a Pasture Weed Control Plan	62.53%
Used at least 5 Different Paddocks or Fields for Grazing	54.36%
Grazed Livestock for no more than 14 continuous Days on any Paddock or Field	29.06%
Buffered Sensitive Areas like Wells, Depressions, Sinkholes, and all Water Areas in Paddocks	20.10%
Developed or Followed a Conservation Plane that Included a Grazing Component	23.14%
Grazed no more than 20% of Pasture to less than Minimum Grazing Height, as Described above	32.51%

Q12. The following table provides cost estimates (by region) for the components needed to adopt or expand prescribed grazing. Please review the cost estimates for your region before answering the questions below. We realize that these costs will vary depending on where you purchase the materials.

Region*	Prescribed grazing ($/AC)	Fence ($/Strand Foot)	Watering facility ($/Gallon)	Heavy use area ($/Sq Ft)
Northeast	34.86	1.86	2.34	1.76
Lake States	36.09	1.34	1.31	1.16
Corn Belt	23.38	1.12	1.80	1.21
Northern Plains	24.96	1.36	1.72	1.72
Appalachia	31.07	1.49	2.43	1.18
Southeast	21.35	1.09	1.14	1.23
Delta	48.26	1.42	0.61	1.20
Southern Plains	28.82	1.38	1.72	1.35

*Northeast: CT, DE, ME, MD, MA, NH, NJ, NY, PA; Lake States: MN, WI, MI; Corn Belt: IL, IN, IA, MO, OH; Northern Plains: KS, NE, ND, SD; Appalachia: KY, NC, TN, VA, WV; Southeast: AL, FL, GA, SC; Delta: AR, LA, MS; Southern Plains: OK, TX

Which of the following best describes whether you would adopt or expand prescribed grazing? Check one answer.

Table Q12 Whether to Adopt or Expend Prescribed Grazing or Not

Type	Percentages
Not Adopt or Expand if it was Profitable	32.23%
Would Adopt or Expand Even if it was Not Profitable	12.94%
Would Adopt Only if it was Profitable	54.83%

Q13. We now ask you about a HYPOTHETICAL PROGRAM to encourage farmers and ranchers to adopt or expand prescribed grazing. Assume the program would:

- **Pay 75% of the costs of purchasing and installing the components needed to adopt or expand**
- **prescribed grazing on your farm or ranch;**
- **Pay you continuing annual payments for 10 years if you follow all of the practices described on page 4 and document these**
- **practices each season;**
- **Not limit the number of acres you can enroll; and**
- **Be limited to acres not enrolled in another conservation program.**

Would you be willing to convert pasture acres on your farm to prescribed grazing for a 10 year period if you were offered a) the 75% installation cost share described above and b) an ANNUAL payment of $10 per acre for each of the 10 years you practice prescribed grazing?

Table Q13 Whether to Adopt Prescribed Grazing with Incentives

	Yes	No
Adopt Prescribed Grazing	961 (68.20%)	448 (31.80%)

Q14. If yes, how many pasture acres would you convert to prescribed grazing?

Table Q14 Number of Acres to Prescribed Grazing

	Mean (Acres)
Lands to Afforest	258.73

Q15. After adopting or expanding prescribed grazing, how would the number of cattle change on your farm?

Table Q15 Change of Number of Cattle on Farm after Adopting Prescribed Grazing

	Yes	Mean Change By
Decrease	51 (5.44%)	28.85%
No Change	427(45.57%)	
Increase	459(48.99%)	31.34%

Q16. In 2012, did you receive payments for practicing prescribed grazing through a government program, such as the Environmental Quality Incentives Program (EQIP) or the Conservation Stewardship Program (CSP)?

Table Q16 Received Payments for Prescribed Grazing through Government Programs in 2012

	Yes	No
Received Payments	107 (11.11%)	856 (88.89%)

Answer Q17-Q22 Only if Payments for Prescribed Grazing are Received

Q17. How many acres did you manage with prescribed grazing under this program in 2012?

Table Q17 Number of Acres Managed as Prescribed Grazing Land under this Program in 2012

	Mean (Acres)
Prescribed Grazing Land	282.59

Q18. Did you receive a per acre annual payment in 2012 to continue practicing prescribed grazing?

Table Q18 Received Annual Payment per Acre in 2012 to Continue Practicing Prescribed Grazing

	Yes	No
Received per Acre Payment	57 (49.57%)	58 (50.43%)

Q19. What per acre annual payment did you receive in 2012?

Table Q19 Annual Payment Received per Acre in 2012

	Mean ($)
Annual Payment per Acre	72.46

Q20. Did you receive any cost share for expenses you incurred to start prescribed grazing?

Table Q20 Received Cost Share for Expenses Incurred to Start Prescribed Grazing

	Yes	No
Received Cost Share	58 (54.21%)	49 (45.79%)

Q21. Approximately how much did you receive as a cost share for adopting prescribed grazing?

Table Q21 Amount Received as a Cost Share for Adopting Prescribed Grazing

	Mean ($)
Amount Received	15,078.79

Q22. In what year did you receive the cost share?

Table Q22 Year Received the Cost Share

Year	Percentages
1991	1.96%
1995	3.92%
1999	1.96%
2000	1.96%
2003	1.96%
2004	1.96%
2005	3.92%
2006	1.96%
2008	5.88%
2009	5.88%
2010	15.69%
2011	19.61%
2012	31.37%
2013	1.96%

Answer Q23-Q37 if Graze Cattle

Q23. How important were the following in determining your decision about the prescribed grazing program?

Table Q23 Importance of the Following in Determining the Decision to Participate in the Program for Prescribed Grazing

	Not at all Important	Somewhat Unimportant	Not Sure	Somewhat Important	Extremely Important
Amount of Time / Labor Required to Implement and Practice Prescribed Grazing	220 (10.98%)	157 (7.84%)	382 (19.07%)	673 (33.60%)	571 (28.51%)
Attitudes of Friends and Other Farmers toward Prescribed Grazing	891 (45.09%)	292 (14.78%)	499 (25.25%)	252 (12.75%)	42 (2.13%)
Availability of Extension or Other Educational Source related to Prescribed Grazing	275 (14.00%)	188 (9.57%)	531 (27.04%)	700 (35.64%)	270 (13.75%)
Investment Cost of Implementing Prescribed Grazing	157 (7.91%)	116 (5.84%)	327 (16.47%)	569 (28.66%)	816 (41.11%)
Amount of Paperwork Required to Participate in the Program	184 (9.29%)	126 (6.36%)	400 (20.19%)	577 (29.13%)	694 (35.03%)
Effect on Your Farm’s Ability to Offset Carbon Emissions	455 (23.23%)	207 (10.57%)	800 (40.84%)	372 (18.99%)	125 (6.38%)
Your Level of Program Payment Offered per Acre for Converting Land to Prescribed Grazing	258 (13.20%)	128 (6.55%)	453 (23.18%)	564 (28.86%)	551 (28.20%)
Potential Damage to Paddocked Pastures during Wet Periods	231 (11.81%)	151 (7.72%)	488 (24.95%)	715 (36.55%)	371 (18.97%)
Impact of Adopting Prescribed Grazing on the Environment	249 (12.67%)	171 (8.70%)	567 (28.85%)	707 (35.98%)	271 (13.79%)
Your Level of Knowledge about Prescribed Grazing Practices	183 (9.22%)	103 (5.19%)	517 (26.06%)	801 (40.37%)	380 (19.15%)

Q24. How likely do you believe participating in the prescribed grazing program would be to:

Table Q24 Likelihood You Believe Participating in the Prescribed Grazing Program Would be to

	Highly Unlikely	Somewhat Unlikely	Not Sure	Somewhat Likely	Highly Likely
Increase the Profitability of Your Farming Operation	220 (10.86%)	184 (9.09%)	541 (26.72%)	713 (35.21%)	367 (18.12%)
Reduce Soil Erosion on Your Farm	230 (11.40%)	260 (12.88%)	402 (19.92%)	758 (37.56%)	368 (18.24%)
Improve Cattle Health	193 (9.56%)	214 (10.60%)	484 (23.97%)	702 (34.77%)	426 (21.10)
Improve Water Quality in the Streams on or Near Your Farm	273 (13.66%)	258 (12.91%)	476 (23.81%)	637 (31.87%)	355 (17.76%)
Allow You to Increase Herd Size	300 (14.85%)	246 (12.18%)	532 (26.34%)	593 (29.36%)	349 (17.28%)
Free up Land for Other Agricultural Uses	564 (28.09%)	436 (21.71%)	607 (30.23%)	283 (14.09%)	118 (5.88%)
Improve the Quality and amount of Forage Produced on Your Farm	203 (10.02%)	182 (8.99%)	420 (20.74%)	781 (38.57%)	439 (21.68%)
Increase Your Supplemental Feed Costs to Support more Cattle	296 (14.67%)	302 (14.97%)	661 (32.76%)	507 (25.12%)	252 (12.49%)

Q25. Years as primary farm business decision maker?

Table Q25 Years as Primary Farm Business Decision Maker

	Mean (Years)
As Decision Maker	31.05

Table Q25 Age in Years

	Mean (Years)
Age	62.72

Q26. Which of the following best describes your farming business?

Table Q26 Type of Farming Business

Type	Percentages
Sole Proprietorship	76.50%
Partnership	14.40%
Corporation	3.03%
Other	6.07%

Q27. What is your highest level of education?

Table Q27 Highest Level of Education

Type	Percentages
Less than High School	7.31%
High School Graduate	35.87%
Some College	21.78%
College Degree or Higher	35.04%

Q28. Which category best reflects your total taxable household income from both farm and non-farm sources for 2012? Check one answer. Please know that laws prohibit us from sharing your personal information.

Table Q28 Total Taxable Household Income from Both Farm and Non-farm Sources in 2012

Income Level	Percentages
Less than $10,000	3.71%
$10,000 to $29,999	11.73%
$30,000 to $49,999	19.94%
$50,000 to $99,999	38.64%
$100,000 to $149,999	11.12%
$150,000 to $199,999	5.07%
$200,000 to $499,999	8.51%
$500,000 or more	1.28%

Q29. What percent of your total taxable household income (both farm and non-farm sources) for 2012 do you estimate came from farming?

Table Q29 Estimated percent of the Total Taxable Household Income from Farming in 2012

	Mean (Percentages)
Estimated Income from Farming	39.59%

Q30. What percent of your 2012 farm income do you estimate came from your cattle operation?

Table Q30 Estimated percent of Farming Income from Cattle Operation in 2012

	Mean (Percentages)
Estimated Income from Cattle Operation	37.04%

Q31. On average, how many hours a week do you spend working:

Table Q31 Average Working Hours per Week

Type	Mean (Hours)
Work on Farm	32.85
Work off Farm	25.60

Q32. How many hours of hired labor do you usually use on your farm in a week?

Table Q32 Number of Hours that Hired Labor Used on Farm per Week

	Mean (Hours)
Hired Labor on Farm	8.47

Q33. Have you participated in any of the following government programs? Check all that apply.

Table Q33 Participation in Government Programs

Type	Percentages
Conservation Reserve Program (CRP)	22.28%
Grassland Reserve Program (GRP)	3.67%
State Programs	13.63%
Other	4.69%

Q34. How many Extension or other educational workshops did you attend in 2012?

Table Q34 Number of Extension or other Educational Workshops Attended in 2012

	Mean No.
Workshops Attended	0.85

Q35. Please indicate the extent to which you disagree or agree with each of the following statements.

Table Q35

	Strongly Disagree	Somewhat Disagree	No Opinion	Somewhat Agree	Strongly Agree
For me, Farming is Not only a Business it is a Way of Life	77 (3.22%)	66 (2.76%)	218 (9.13%)	680 (28.48%)	1347 (56.41%)
I tend to Wait until Others Have Adopted New Technologies or Practices before I Adopt Them	335 (14.33%)	536 (22.93%)	594 (25.41%)	732 (31.31%)	141 (6.03%)
The Government should Offer Incentives to Farmers to Adopt Conservation Practices	243 (10.28%)	203 (8.59%)	560 (23.69%)	764 (32.32%)	594 (25.13%)
I am Concerned that Climate Change will Negatively Impact the Yield of my Product	355 (15.01%)	287 (12.14%)	652 (27.57%)	610 (25.79%)	461 (19.49%)
As a Farmer, I am a Steward of the Land I Farm and it is my Obligation to Protect it for Use by Future Generations	74 (3.09%)	32 (1.34%)	106 (4.43%)	440 (18.37%)	1743 (72.78%)

Q36. Which of the following best describes your plans for your farming operation?

Table Q36 Best Describes Plans for Farming Operation

Type	Percentages
Your Children/Grandchildren will Farm Your Land after You Cease Farming	59.10%
Your Land Will be Sold or Leased to Another Farmer after You Cease Farming	27.45%
Your Land will be Sold for Development after You Cease Farming	5.78%
Other	6.35%

Q37. Do you use the Internet to make farm purchases or farm management decisions?

Table Q37 Use Internet to Make Farm Purchases or Farm Management Decisions

	Yes	No
Use Internet	914 (38.61%)	1453 (61.39%)

Please return the completed survey to us in the enclosed, postage-paid envelope.

Thank you for participating in this study. If you are interested, please check the following website, http://beag.ag.utk.edu/, for a summary of results in the coming months.