2015 PASTURE LEASING ARRANGEMENTS IN KANSAS

Xianghong Li
And
Leah J. Tsoodle

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Department of Agricultural Economics

Kansas State University

Introduction

Pastureland is Kansas' second largest agricultural land use. As a resource, grazing land supports the beef and sheep industries, provides habitat for wildlife, and provides surface water to streams. The 2012 Census of Agriculture showed that total sales of cattle and calves in Kansas was $10.15 billion, ranking second in the U.S. Understanding Kansas pasture use and practice is important for the future of Kansas agriculture.

The Kansas Department of Agriculture (KDA) and the Agricultural Land Use Survey Center (ALUSC) in the Department of Agricultural Economics at Kansas State University (KSU) jointly conducted survey to collect information on pasture land and custom agricultural work. In 2015, KAS/KSU conducted a survey on all types of Kansas pasture use and practices, including Bluestem pastures. The survey included questions on grazing outlook, pasture availability, pasture leasing rates, and charges for fence building. Five thousand surveys were distributed to randomly selected pasture landowners statewide. The survey was also available online for those who preferred to complete an electronic version of the survey. About 587 responses were received; among those, about 378 respondents provided partial or complete information that is included in the following summary of the survey. This article summarizes the information collected from the survey on current Kansas pasture lease arrangements and fence information.[1] This report is intended to provide timely information on Kansas pasture use and practices to interested stakeholders including landowners, managers, operators, extension personnel, consultants, lenders, and policy makers.

Pasture Lease Arrangements

The permanent pasture and rangeland, excluding woodland pastures, in Kansas was 15.53 million acres in 2012.[2] The National Agricultural Statistics Service-Kansas office (NASS) divides Kansas into nine crop-reporting districts (Figure 1). According to survey respondents, Kansas pasture was in relatively good condition in 2015 in those districts (Table 1). More than 50% of the pasture in each district was considered to be in either good or excellent condition, except for the northwest district. A small amount of pasture was regarded as very poor or poor. The pasture in the eastern region of the state was deemed in the best condition by respondents, followed by the central region. The good pasture condition this year was probably attributable to the higher rainfall level in the spring and possibly changes in grazing practices during the previous years' rainfall shortages.

The responses to the 2015 Kansas Pasture Survey showed that the majority of the Kansas rangeland was under contract (Table 2). In each crop reporting district, the percentage of the available pasture under contract was over 90%. This result may be a reflection of both the demand for pasture and the time frame, July, in which the survey was conducted. About 19.42% of the respondents were involved in a pasture lease for activities other than livestock. Moving from north to south and from west to east, the percentage of leases for purposes other than livestock increased. There were 25.58% of the respondents who had leased for activities other

[1] A copy of the survey is available upon request and additional information pertaining to the survey is available from the Kansas State University Department of Agricultural Economics.

[2] Data source: 2012 Census of Agriculture, USDA. http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Kansas/ksv1.pdf.

than livestock in the Southeast region. Hunting and haying were the two main activities other than livestock. Oil leases were another possible activity.

The type of pasture differs across the crop reporting districts because of the differences in soil and rainfall.[3] Within Kansas, pastureland is classified into two categories, native and tame pasture. These are more commonly referred to as rangeland and improved pasture, respectively. Native pasture is rangeland that contains grasses native to the region, without improvement through agronomic practices. The three native categories of pasture covered in the survey are tallgrass prairie, mixed grass prairie, and shortgrass prairie. Tame pasture has primarily been non-native grass species that are planted and managed with agronomic practices (seeding, fertilizer, etc.). The major species are smooth brome grass, tall fescue, and Bermuda grass. More recently, native species have been planted using similar practices with similar performance characteristics.

The percentage of leasing arrangements involving each type of pasture in 2015 is presented in Table 3. With average annual rainfall ranging from 16 to 20 inches and a growing season ranging from 150 days in the north to 185 days in the south of the western part of Kansas, short grass prairie dominates the western rangeland (Districts 10-30). The central third of the state, Districts 40-60, has relatively more rainfall and a longer growing season. Mixed grass prairie has the largest share of the rangeland in this region. Tall grass prairie is mainly located in the eastern third of Kansas, Districts 70-90. In this area, the average annual rainfall is between 30 and 42 inches, and the growing season is between 170 days in the north to more than 200 days in the southern part of the region. About one-fourth of the native pasture acres in the eastern region is comprised of mixed grass prairie. Tame pasture is commonly used with tall grass prairies. Most of the leasing arrangements involving tame pasture are in the eastern regions. In the western region of Kansas, very few leasing arrangements involve tame grass.

Kansas pasture leases involve different contract types. Partial summer contracts are less popular in 2015 for both native and tame pastures, compared with full summer and full year contracts (Table 4). Less than one-third of pasture acres is under partial summer contracts for all of Kansas, except the southeast District 90. There, 49% of the native acres is under partial summer contracts; the high proportion of acres under partial summer contract is primarily because early double-stocking is a common practice in that area. About 55% of total native pasture acres is under full summer contracts, and about 26% of the native pasture acres is under full year contracts. Conversely, almost 50% of total tame pasture acres is under full year contracts for the state, and about 41% is under full summer season contracts. The native acres for four districts are not predominantly under full summer season contracts. In WC-20, NC-40, and SC-60, most native acres are under full year contracts. About half of the native acres in SE-90 is under partial summer contracts. With the exceptions of SC-60 and SE-90, full summer season contracts have the largest share of tame pasture acres.

Cash Rents and Pasture Size

The rental value of the pasture land in Kansas was highly correlated with temperature and rainfall patterns. In Kansas, natural forage production increases as rainfall increases and temperature decreases. Increased grass production potential is reflected in rental values. Tables

[3] Please refer to "Crop Profile for Pasture/Rangeland in Kansas (USDA NIFA, http://www.ipmcenters.org/cropprofiles/docs/KSpasture.pdf)" for detailed discussion on Kansas pasture.

5a and 5b shows the distribution of cash rents for both native and tame pasture by crop reporting district in 2015 and 2010. In general, cash rent increased moving from west to east and from south to north. The changes in cash rent from 2010 to 2015 were not uniform across crop reporting districts. Corresponding to the rising livestock prices, the rental rates of native pasture increased in 2015 relative to the values in 2010 in six of the nine crop reporting districts; the increases ranged from 0.22% in EC-80 to 19.76% in C-50. The increases in the rental rates of native pasture are smaller than the price increases seen in the cattle market, probably due to the length of time between most lease negotiations. Moreover, the 2015 cash rents decreased from 2010 in three districts, WC-20, SW-30, and NE-70. For tame pasture, increases in cash rent were only observed in C-50 and NE-70, among the six crop reporting districts where cash rent changes can be computed. The cash rents of tame pasture in the other four districts, NE-40, SC-60, EC-80, and SE-90, dropped. The decreases range from -0.39% to -15.39%. NASS provides cash rent estimates for pasture land for each state, however, it does not distinguish between native and tame pasture. The last two columns of Table 5b show that the cash rent of Kansas pasture in 2015 from the survey was slightly higher than the comparable 2014 values of NASS in most districts.

Across the state, tame pasture is valued more than native pasture, except in NC-40 and SE-90. The average tame/native rent ratios in Table 5a illustrate that in most crop reporting districts, cash rents of tame pasture enjoyed some premium over those of native pasture. In NE-70, tame pasture rent was, on average, 22% more than native pasture in 2015. The higher rental value of the tame pasture could partially be explained by the higher cost of tame pasture due to its more intensive management requirement. The difference in rental value between tame and native pasture has changed over the years. However, the changes in the premium of tame pasture rent to native pasture rent was not uniform across regions. In districts C-50, SC-60 and NE-70, the premium has increased from 2010 to 2015, whereas the premium decreased or does not exist in other districts. The effect of some tame grasses on livestock may explain the discount on tame pasture in districts NC-40 and SE-90.

For both native and tame pasture, more than 60% of the respondents considered his/her lease rate to be about average for the area (Table 6). About 20% and 15% of the respondents viewed their lease rate to be below the area average for native and tame pasture, respectively. Only 7% and 5% of the respondents for native and tame pasture, respectively, regarded their lease rate to be higher than the area average.

Table 7 shows the mode pasture size by crop reporting district. The mode pasture sizes are 80 acres and larger for native pasture and 80 acres and smaller for tame pasture. The relatively larger mode size of native pasture reflects the management intensive nature of tame pasture. Compared with year 2006 and 2010, the mode pasture size in 2015 was larger in several districts, possibly reflecting the trend in Kansas toward fewer agricultural entities that are managing more acres.

Most of the respondents did not think the area lease rates were based on the pasture size (Table 8). About 66% of the total state respondents considered his/her area lease rates to be unrelated to pasture size. In NC-40, the percentage was almost 80%. Among the respondents who thought the area's lease rates are dependent on the pasture size, 52% thought per acre lease rate in the area actually would increase as pasture size increased for native pastures. Regarding

tame pasture, about 64% of the respondents who thought the area's lease rates are dependent on the pasture size agreed with this positive relationship.

Fence Requirements and Characteristics

In Table 9, the average feet of fence per acre is presented for both native and tame pastures with 2010 and 2006 data for comparison. To be consistent with the previous data, the feet of fence per acre is half of the amount reported in the survey because many pasture lots share boundary fences and a landlord would be responsible for, on average, half the fencing enclosing any given pasture. No systematic pattern is shown across crop reporting districts, probably because the length of fence required per acre of pasture is affected by many factors including pasture size, pasture shape, and the number of cross fences. As the pasture size increases, the feet of fence per acre decreases, and as pasture size becomes more irregular, the feet of fence per acre increases. As a result, we would expect smaller pastures to have a higher average feet of fence per acre; however, a larger pasture may still have the higher average if the larger pasture is irregularly shaped. The average feet of fence per acre for tame pasture is higher than the corresponding value for native pasture. A possible explanation is the relatively smaller tame pasture size. The 2015 values are smaller than the 2010 and 2006 values and may be a reflection of the larger mode pasture sizes. Further study might reveal additional reason(s) for the change.

District mode typical fence data are presented in Tables 10a & 10b. The most prevalent wire for Kansas pasture fencing is barbed (Table 10a). In western Kansas, 4 strand fences were typical, and 5 strand fences were the mode in all other regions. In western and central Kansas districts, a combination of wood and steel posts are used for fences, while all steel posts are common in eastern Kansas. Typical post spacing ranges from 10 to 16.5 feet. Most of the pasture is not permanently cross fenced regardless of its size. Given proper maintenance, pasture fence has a long life that can reach 50 years (Table 10b). Most of the mode changes between 2010 and 2015 occurred in fence post spacing and estimated useful life of the fence. Three districts changed the mode post type, and only SW-30 changed mode fence type.

Pasture Maintenance Costs and Landlord's Share of Expenses

In order to retain the long-term asset value of the pasture land, the pasture needs to be maintained. Table 11 lists the average costs to maintain pasture for both native and tame pasture in 2015. Costs for fence materials and brush and weed control are the two leading expenses. On average, total maintenance costs for tame pasture were higher than the costs for native pasture, reflecting higher management intensity associated with tame pasture.

Although the vast majority of pastureland is leased on a cash basis, landlords participate in pasture maintenance so that the long-term asset value of the land can be retained. Tables 12a and 12b provides information on the type and percent of expenses in which landlords share with the renter. Landlords are responsible for the majority of the fence material costs, whereas tenants took care of a large portion of fence labor costs and maintenance. Landlords also provide most of the chemicals for brush and weed control, while application costs are mainly paid by the tenants. Moreover, landlords pay more of the water supply costs, and fertilizing is primarily paid by the tenants.

Conclusion

Kansas pasture land is very important for the Kansas livestock industry and state economy as a whole. The 2015 pasture survey suggests that the majority of the pasture land in Kansas is under contract. The pastureland rental market can be affected by changes in farm policy, commodity prices, technology, and many other factors. The cash rent has not experienced much change despite of the changes in commodity prices and cost. It is not always apparent what the forces are driving current rental changes. However, one of the most powerful influences, the effect of the traditional arrangements present in a region, has not yet been considered. Albright, et al (1996) suggested that traditional arrangements, which have been in place for lengthy time periods, may not be affected by changes in markets, legislation, or farming practices. More recently, other extension specialists contend that, relatively speaking, tradition is changing rapidly.

Most related K-State Research and Extension publications pertaining to pasture-land leasing arrangements can be found at www.AgManager.info . Below are some of the older and current publications.

Buller, et al. "Economic Evaluation of Season-Long and Intensive-Early Stocking System." Contribution number 90-274-S from KAES, 1990.

Dhuyvetter, Kevin and Glynn Tonsor. "Summer Grazing of Steers in Western Kansas." Publication Number MF1007, Revised April 2014.

Dhuyvetter, Kevin and Glynn Tonsor. "Summer Grazing of Steers in Eastern Kansas." Publication Number MF1008, Revised April 2014.

Dumler, Troy and Kevin Dhuyvetter. "Frequently Asked Questions: Pasture Leases in Kansas." Publication # AM-TJD-2011.2, October 2011.

Langemeier, Larry N. "Pasture Rental Arrangements for Your Farm." North Central Regional Publication #149 (NCR 149), Revised 1997.

O'Brien, D., "Factors Affecting Kansas Pasture Rental Rates." K-State Research and Extension, November 2000.

Schlegel, Jen and Leah J. Tsoodle. "2010 Pasture Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics, Manhattan, Kansas, Paper # 11-05, February 2011.

Taylor, Mykel. "2012 Kansas County-Level Land Values and Cash Rents for Non-Irrigated Cropland and Pasture." Publication: AM-MRT-2013.1, March 2013.

Tsoodle, Leah J., Bill Golden, and Allen Featherstone. “Determinants of Kansas Agricultural Land Values.” Selected Paper prepared for presentation at the Southern Agricultural Economics Association Annual Meeting, Mobile, Alabama, February 1-5, 2003.

USDA NIFA, Crop Profile for Pasture/Rangeland in Kansas, http://www.ipmcenters.org/cropprofiles/docs/KSpasture.pdf

Figure 1: Kansas Crop Reporting Districts

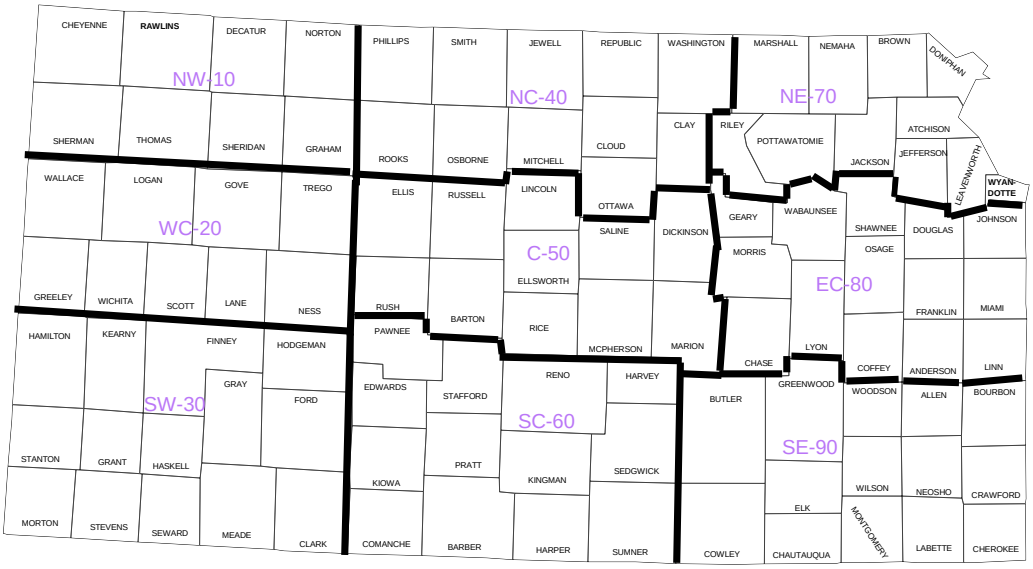

Table 1. Condition of the Pasture, 2015

	Very poor (%)	Poor (%)	Adequate (%)	Good (%)	Excellent (%)
NW-10	1.50	7.00	48.00	31.00	12.50
WC-20	2.31	16.54	34.08	32.69	14.38
SW-30	5.88	8.24	32.35	38.24	15.29
NC-40	0.60	16.60	29.00	47.80	6.00
C-50	0.14	10.43	24.71	52.00	12.71
SC-60	3.23	7.26	28.29	46.94	14.29
NE-70	0.73	4.27	28.41	50.24	16.34
EC-80	0.82	4.15	29.40	40.43	25.19
SE-90	0.76	3.70	22.17	55.43	17.93
State	1.35	7.20	28.40	46.22	16.82

Table 2. Percentage of the Pasture in the Area under Contract, 2015

	% of Acres under Contract				Activities Other Than Livestock
	Native		Tame		
	(%)	# Responses	(%)	# Responses	Yes (%)
NW-10	96.60	5	100.00	1	0.00
WC-20	99.00	6	1/		7.69
SW-30	95.67	9	1/		14.29
NC-40	97.15	13	100.00	3	13.79
C-50	94.06	16	100.00	2	12.82
SC-60	99.29	7	100.00	2	25.00
NE-70	99.79	14	98.40	10	21.05
EC-80	98.14	35	99.12	17	24.62
SE-90	99.23	13	92.86	7	25.58
State	97.69	120	98.07	42	19.42

1/ Insufficient reports to publish.

Table 3. Pasture Types under Leasing Arrangements, 2015

Pasture Type	Native Pasture			Tame Grass
Districts	Tall-Grass	Short-Grass	Mixed-grass	Pasture
NW-10	14.29%	57.14%	21.43%	7.14%
WC-20	0.00%	71.43%	28.57%	0.00%
SW-30	0.00%	70.59%	23.53%	5.88%
NC-40	11.32%	24.53%	47.17%	16.98%
C-50	17.31%	17.31%	46.15%	19.23%
SC-60	15.69%	23.53%	47.06%	13.73%
NE-70	26.32%	8.77%	24.56%	40.35%
EC-80	28.91%	7.03%	24.22%	39.84%
SE-90	33.33%	6.25%	25.00%	35.42%
State	23.44%	18.05%	33.82%	29.25%

Table 4. Percentage of Pasture under Various Types of Leasing Arrangements (%), 2015

	Native Pasture			Tame Pasture		
	Full Summer	Partial Summer	Full Year	Full Summer	Partial Summer	Full Year
NW-10	78.76	0.00	21.24		1/	
WC-20	42.78	0.00	57.22		1/	
SW-30	65.07	12.47	22.46		1/	
NC-40	42.64	11.12	46.24	45.95	8.53	45.52
C-50	63.48	2.76	33.75	89.29	0.00	10.71
SC-60	32.32	12.86	54.82	11.32	0.00	88.68
NE-70	90.59	2.52	6.89	71.17	12.77	16.06
EC-80	61.17	30.11	8.72	52.04	17.54	30.42
SE-90	28.87	49.38	21.75	31.06	6.12	62.82
State	54.94	19.34	25.72	41.10	9.43	49.74

1/ Insufficient reports to publish.

Table 5a. District Average Native Pasture Cash Rents & Tame/Native Rent Ratio

	Native Pasture Cash Rents			Average Tame/Native Rent Ratio		
	2015	2010	Changes from 2010	2015	2010	Changes from 2010
NW-10	$15.81	$14.04	12.61%	1/	93.80%	2/
WC-20	$12.40	$14.00	-11.43%	1/	107.10%	2/
SW-30	$11.11	$12.36	-10.14%	130.55%	1/	2/
NC-40	$21.57	$21.31	1.23%	94.25%	101.10%	-6.77%
C-50	$20.91	$17.46	19.76%	127.53%	115.00%	10.90%
SC-60	$16.05	$14.91	7.65%	110.59%	119.50%	-7.45%
NE-70	$21.07	$25.46	-17.25%	122.71%	98.50%	24.58%
EC-80	$21.64	$21.59	0.22%	109.72%	111.60%	-1.69%
SE-90	$21.21	$20.90	1.48%	96.86%	116.20%	-16.64%
State	$19.06	3/	2/	117.43%	3/	2/

1/ Insufficient reports to publish.
2/ Percentage change cannot be computed.
3/ Not available.

Table 5b. District Average Tame Pasture Cash Rents & Combined Cash Rents

	Tame Pasture Cash Rents			Combined Average Kansas Cash Rents		
	2015	2010	Changes from 2010	2015	2014 (USDA/NASS)	Changes from 2014
NW-10	1/	$13.17	2/	$15.20	$14.50	4.86%
WC-20	1/	$15.00	2/	$12.40	$12.50	-0.80%
SW-30	$14.50	1/	2/	$11.53	$10.50	9.82%
NC-40	$20.33	$21.55	-5.65%	$21.23	$21.00	1.12%
C-50	$26.67	$20.08	32.80%	$22.15	$18.50	19.73%
SC-60	$17.75	$17.82	-0.39%	$16.28	$12.50	30.28%
NE-70	$25.85	$25.07	3.12%	$23.27	$23.50	-0.99%
EC-80	$23.74	$24.09	-1.45%	$22.97	$23.50	-2.26%
SE-90	$20.54	$24.28	-15.39%	$21.94	$20.00	9.69%
State	$22.38	3/	2/	$20.72	$17.50	18.40%

1/ Insufficient reports to publish.
2/ Percentage change cannot be computed.
3/ Not available.

Table 6. Respondents' Perspective Regarding Individual's Lease Rate relative to the Area Average Lease Rate, 2015

	Native (%)				Tame (%)			
	Below Average	Average	Above Average	Not Applicable	Below Average	Average	Above Average	Not Applicable
NW-10	30.00	70.00	0.00	0.00	0.00	100.00	0.00	0.00
WC-20	25.00	75.00	0.00	0.00	0.00	0.00	0.00	100.00
SW-30	29.41	58.82	5.88	5.88	0.00	0.00	33.33	66.67
NC-40	28.57	71.43	0.00	0.00	25.00	75.00	0.00	0.00
C-50	12.82	71.79	15.38	0.00	0.00	87.50	0.00	12.50
SC-60	26.92	69.23	0.00	3.85	0.00	50.00	16.67	33.33
NE-70	20.00	56.67	10.00	13.33	19.05	61.90	4.76	14.29
EC-80	14.04	68.42	8.77	8.77	18.60	60.47	2.33	18.60
SE-90	17.50	62.50	10.00	10.00	12.00	68.00	8.00	12.00
State	20.08	66.80	7.34	5.79	14.53	62.39	5.13	17.95

Table 7. District Mode Pasture Size

	Native Mode Pasture Size (Acres)			Tame Mode Pasture Size (Acres)		
	2015	2010	2006	2015	2010	2006
NW-10	200	80	80	100	80	40
WC-20	80	160	160	1/	1/	40
SW-30	160	80	80	60	80	40
NC-40	80	80	80	80	40	80
C-50	160	80	80	30	40	40
SC-60	80	80	80	60	40	40
NE-70	80	80	80	80	40	80
EC-80	80	40	80	80	40	40
SE-90	80	80	80	80	80	40

1/ Insufficient reports to publish.

Table 8. Impact of Pasture Size on Lease Rate, 2015

	Impact of Pasture Size on Lease Rate (%)					
	Have impact		Native		Tame	
	Yes (%)	No (%)	Negative	Positive	Negative	Positive
NW-10	50.00	50.00	0.00	100.00	0.00	100.00
WC-20	25.00	75.00	66.67	33.33	1/	
SW-30	30.77	69.23	66.67	33.33	0.00	100.00
NC-40	20.83	79.17	33.33	66.67	0.00	100.00
C-50	30.00	70.00	14.29	85.71	0.00	100.00
SC-60	47.83	52.17	62.50	37.50	33.33	66.67
NE-70	37.93	62.07	100.00	0.00	80.00	20.00
EC-80	31.71	68.29	37.50	62.50	14.29	85.71
SE-90	36.67	63.33	33.33	66.67	75.00	25.00
State	33.96	66.04	47.83	52.17	36.00	64.00

1/ Insufficient reports to publish.

Table 9. Mode Average Feet of Fence per Acre

	Native						Tame					
	2015		2010		2006		2015		2010		2006	
	Feet	Resp.	Feet	Resp.	Feet	Resp.	Feet	Resp.	Feet	Resp.	Feet	Resp.
NW-10	34.4	8	37.4	3	56.8	3	52.8	1	52.1	1	1/	
WC-20	18.6	6	33.3	4	52.1	4	1/		1/		55.6	1
SW-30	25.4	12	62.0	5	48.7	6	33.0	1	66.0	1	52.8	1
NC-40	38.9	18	49.8	7	65.5	22	57.9	3	87.3	3	35.1	5
C-50	30.4	21	47.7	15	49.3	15	56.6	2	75.4	10	61.1	3
SC-60	27.8	15	44.0	17	40.6	15	25.7	5	85.6	6	39.9	11
NE-70	26.4	17	47.8	18	34.1	9	44.9	11	56.1	23	64.9	15
EC-80	34.7	32	57.6	36	57.9	19	55.7	24	54.3	32	90.8	24
SE-90	22.1	29	41.1	24	51.1	22	41.5	15	48.6	20	87.3	17

Resp.= Responses.

1/ Insufficient reports to publish.

Table 10a. District Mode Typical Fence Data

	2015		2010		2015		2010	
	Fence Type	**Resp.**	**Fence Type**	**Resp.**	**Post Type**	**Resp.**	**Post Type**	**Resp.**
NW-10	4-Wire-Barb	3-Tie	4-Wire Barb	11	Combination Steel & Wood	3-Tie	Combination Steel & Wood	12
WC-20	4-Wire-Barb	8	4-Wire Barb	13	Combination Steel & Wood	5	Combination Steel & Wood	9
SW-30	4-Wire-Barb	4-Tie	5-Wire Barb	9	Combination Steel & Wood	5	All Steel	11
NC-40	5-Wire Barb	12	5-Wire Barb	35	Combination Steel & Wood	14	Combination Steel & Wood	40
C-50	5-Wire Barb	14	5-Wire Barb	51	Combination Steel & Wood	20	Combination Steel & Wood	50
SC-60	5-Wire Barb	16	5-Wire Barb	63	Combination Steel & Wood	13	All Steel	47
NE-70	5-Wire Barb	20	5-Wire Barb	79	Steel	20	Combination Steel & Wood	68
EC-80	5-Wire Barb	39	5-Wire Barb	90	Steel	39	All Steel	74
SE-90	5-Wire Barb	27	5-Wire Barb	125	Steel	32	All Steel	112

Resp. = Number of responses.

Table 10b. District Mode Typical Fence Data

	2015 Post Spacing		2010 Post Spacing		2015 Pasture Size Cross Fenced		2010 Pasture Size Cross Fenced		2015 Fence Life		2010 Fence Life	
	(Feet)	Resp.	(Feet)	Resp.	(Acres)	Resp.	(Acres)	Resp.	(Years)	Resp.	(Years)	Resp.
NW-10	16	2-Tie	16	3	No Pasture	6	No Pasture	5	50	3	20	5
WC-20	16.5	3	15	6	No Pasture	5	No Pasture	3	30	2-Tie	30	4
SW-30	12	5	10	4	No Pasture	6	No Pasture	4	30	4	20	5
NC-40	15	5	15	11	No Pasture	15	No Pasture	9	50	7	30	7
C-50	12	7-Tie	15	15	All	13	No Pasture	22	50	7	40	13
SC-60	15	4-Tie	12	18	No Pasture	11	No Pasture	29	30	5	20	17
NE-70	10	8	12	31	No Pasture	19	No Pasture	21	50	9	20	17
EC-80	12	13-Tie	12	42	No Pasture	22	No Pasture	38	30	14	20	28
SE-90	15	9	12	51	No Pasture	19	No Pasture	38	50	9	20	33

Table 11. Average Pasture Maintenance Cost, 2015

Cost	Native ($/Acre)	Tame ($/Acre)
Fence Materials	1.87	2.38
Fence Labor	0.97	2.63
Water Supply	0.89	0.73
Chemicals for Weed Control	2.43	4.50
Application	1.12	1.02
Burning	0.56	0.09
Other	0.48	0.00
Total Maintenance	9.79	13.92

Table 12a. District Average Landlord Percent of Costs (%), 2015

Districts	Fence Material Costs (%)	Fence Labor Costs (%)	All Fence Maintenance (%)	Fertilizer (%)	Water Supply Cost (%)
NW-10	66.67	0.00	25.00	25.00	81.25
WC-20	100.00	33.33	0.00	0.00	66.67
SW-30	60.00	22.22	16.67	0.00	55.00
NC-40	74.74	28.13	47.06	33.31	36.67
C-50	64.75	28.57	29.33	20.00	50.00
SC-60	78.42	27.78	33.33	12.50	73.33
NE-70	50.00	32.69	34.00	30.00	39.13
EC-80	80.85	65.91	56.98	26.39	67.11
SE-90	80.65	50.00	38.46	32.35	58.70

Table 12b. District Average Landlord Percent of Costs (%), 2015

Districts	Brush& Weed Control Chemicals (%)	Application Costs (%)	Burning Costs (%)	Other Costs (%)	Total Pasture Maintenance Costs (%)
NW-10	66.67	41.67	0.00	0.00	100.00
WC-20	25.00	0.00	0.00	0.00	1/
SW-30	42.86	33.33	0.00	0.00	20.00
NC-40	43.50	46.06	25.00	0.00	39.44
C-50	36.67	38.24	45.45	25.00	22.50
SC-60	66.64	33.33	45.45	0.00	25.00
NE-70	49.67	39.17	20.24	10.00	51.00
EC-80	78.13	44.23	38.33	12.50	67.62
SE-90	68.84	37.30	30.95	50.00	82.73

1/ Insufficient reports to publish.