

Southern Iowa Grazing and Forage Budgets for Beef Cows

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Introduction

Southern Iowa soils and topography are conducive to pasture and beef cattle. The ISU McNay Research Farm is located in this region.

The McNay Research Farm has a beef cow herd used for research purposes. The cows and replacement heifers are grazed predominantly on improved cool-season grass pastures. There are approximately 300 spring-calving cows and 100 fall-calving cows. Grazing season is mid-April to mid-October or about 6 months (180 days), dependent on grass growth in the spring.

Materials and Methods

Animal units for the various beef cattle types are shown in Table 1. The McNay cattle inventory (herd) for 2019 and 2020 is shown in Table 2 and Table 3, respectively. In 2019, there were 455 head (365 cows, 78 yearling heifers, and 12 bulls) (Table 2). In 2020, there were 451 head (361 cows, 78 yearling heifers, and 12 bulls) (Table 3).

In 2019 and 2020, head of cattle multiplied by grazing days equals total grazing days, which when multiplied by the Animal Unit (AU) value for the type of cattle equals total AU days by type. When all AU days are summed, the total AU grazing days for the farm for the season is generated.

In 2019, there were 93,059 AU grazing days or 11.5 percent less (Table 2). In 2020, there were 91,446 AU grazing days or 1.7 percent less (Table 3). This was primarily due to the delayed start of grazing in the spring.

The McNay Farm has 690 acres of improved grass legume pasture plus additional unimproved pastures that include river bottom, timber, ditches, and lots. In 2019, the additional unimproved pasture areas were valued as the equivalent of 439 acres for a total of 1,129 acres of improved pasture equivalent. The additional unimproved areas were valued as the equivalent of 494 acres of improved pasture in 2020 for a total of 1,184 acres improved pasture equivalent.

Results and Discussion

For 2019, the 93,059 total AU grazing days divided by 1,129 acres equals 82 AU grazing days/acre. The 74,118 total grazing days divided by 1,129 acres equals 66 cow days/acre.

For 2020, the 91,446 total AU grazing days divided by 1,184 acres equals 77 AU grazing days/acre. The 72,408 total grazing days divided by 1,184 acres equals 61 cow grazing-days/acre.

For the 2020-2021 winter-feeding period, 150 acres of stockpiled fescue generated 60 grazing days/acre.

Table 1. Animal unit for beef cattle type.

Pair (1,200 lb cow + calf)	1.50
Two-yr old (1,000 lb cow + calf)	1.20
Yearling (750)	0.75
Dry cow (1,200 lb)	1.20
Mature bull (1,800 lb)	1.80
1,000 lb cow (3% intake)	1.00

Table 2. 2019 spring/summer grazing at ISU McNay Research Farm, Chariton, IA, including cattle inventory, grazing days, total grazing days, Animal Unit (AU), and total AU days.*

Type	Head	Days	Total days	Animal unit	Total AU days
6 + yr-old cow	97	179	16,684	1.50	25,026
3-5-yr-old cow	97	167	16,199	1.50	24,299
Two-yr-old cow	44	167	7,348	1.20	8,818
Yearling heifer	78	173	13,494	0.75	10,121
Fall calving cow	79	179	14,141	1.20	16,969
Fall calving cow (trial)	48	119	5,712	1.20	6,854
Bull (breeding season)	12	45	540	1.80	972
Total	455		74,118		93,059

*Grazing season April 10 to October 10.

Table 3. 2020 spring/summer grazing at ISU McNay Research Farm, Chariton, IA, including cattle inventory, grazing days, total grazing days, Animal Unit (AU), and total AU days.*

Type	Head	Days	Total days	Animal unit	Total AU days
6 + yr-old cow	97	168	16,296	1.50	24,444
3-5 yr old cow	99	167	16,533	1.50	24,800
Two-yr-old cow	63	169	10,647	1.20	12,776
Yearling heifer	78	160	12,480	0.75	9,360
Fall calving cow	102	156	15,912	1.20	19,094
Bull (breeding season)	12	45	540	1.80	972
Total	451		72,408		91,446

*Grazing season April 29 to October 15 depending on herd.