

Southern Iowa Grazing and Forage Budgets for Beef Cows

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Southern Iowa soils and topography are conducive to pasture and beef cattle. The Iowa State University McNay research farm is located in this region.

The McNay 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 six 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 2021 and 2022 is shown in Table 2 and Table 3, respectively. In 2021, there were 484 head (372 cows, 97 yearling heifers, and 15 bulls) (Table 2). In 2022, there were 451 head (396 cows, 65 yearling heifers, and 17 bulls) (Table 3).

In 2021 and 2022, 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 2021, there were 99,805 AU grazing days (Table 2). In 2022, there were 103,646 AU grazing days or 3.7% more (Table 3). This was due to greater numbers of mature cattle grazing and earlier grazing of some of the herds.

The McNay farm has 690 acres of improved grass legume pasture plus additional unimproved pastures that include river bottom, timber, ditches, and lots. The additional unimproved areas were valued as the equivalent of 361 acres of improved pasture in 2021 and 2022 for a total of 1,051 acres improved pasture equivalent.

Table 1. Animal unit for beef cattle type.

Pair (1,200 lb. cow + calf)	1.50
2-year 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. 2021 spring/summer grazing 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+ year-old cow	95	172	16,340	1.50	24,510
3-5 year-old cow	95	163	15,485	1.50	23,228
2 year-old cow	67	164	10,988	1.20	13,186
Yearling heifer	97	182	17,634	0.75	13,241
Fall calving cow	115	177	20,355	1.20	24,426
Bull (breeding season)	15	45	540	1.80	972
Total	484		81,497		99,805

*Grazing season April 16 to October 15 depending on the herd.

Table 2. 2022 spring/summer grazing 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+ year-old cow	95	173	16,435	1.50	24,653
3-5 year-old cow	129	173	22,317	1.50	33,476
2 year-old cow	59	173	10,207	1.20	12,248
Yearling heifer	65	173	11,245	0.75	8,434
Fall calving cow	113	173	19,539	1.20	23,439
Bull (breeding season)	17	45	765	1.80	1,377
Total	476		80,518		103,646

*Grazing season April 25 to October 15 depending on the herd.



Results and Discussion

For 2021, the 99,805 total AU grazing days divided by 1,051 acres equals 77 AU grazing days/acre. The 81,497 total grazing days divided by 1,051 acres equals 61 cow grazing-days/acre.

For 2022, the 103,646 total AU grazing days divided by 1,051 acres equals 99 AU grazing days/acre. The 80,518 total grazing days divided by 1,051 acres equals 77 cow days/acre.