

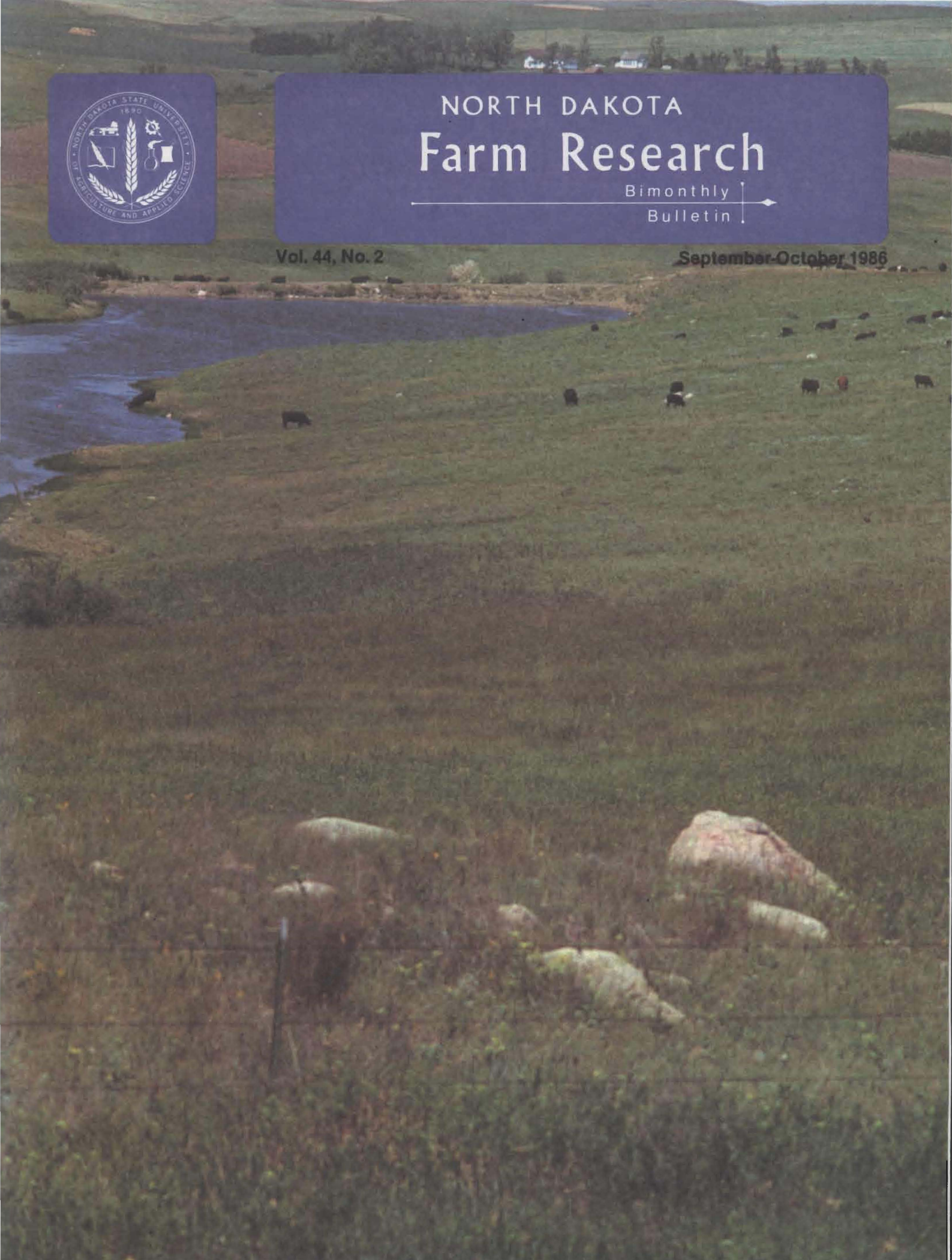


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Guest Column



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Nationally, North Dakota ranks about 17th in livestock numbers, but the livestock industry is a very important part of the North Dakota economy. During the last 10 years, ruminant livestock numbers in North Dakota have averaged slightly more than two million cattle and calves and about a quarter million sheep and lambs. These livestock are primarily grassland supported with some input from feedgrains and crop residue. This makes the 13 million acres of grassland a vital part of the North Dakota economy.

As we look across the North Dakota countryside, it is easy to forget that at one time all of the land was grassland, with small amounts of woodland along the rivers and streams. Historically, an interesting sequence of event occurred to bring about the conversion from use of the grasslands by free-roaming herds of wild grazers, to use by slightly controlled herds of cattle trained in to use the open range, to the present day highly controlled herds and flocks using grassland interspersed with cultivated crops. Most of this change occurred in the past 150 years.

Beginning with the turning of the first sod, the potential livestock production capacity in North Dakota decreased. For lack of soil maps and other technology for evaluating the crop potential of the land, early settlers generally plowed the land that produced the most grass. As more land was cleared of grass and converted to other uses, grazing pressure increased on the remaining grassland. Certainly we need all the products of cultivated farm land and we need roads, urban development, and all the other things land provides. But through the years, some severe problems developed because the need for wise land use planning was not generally known. Drought, both extended as experienced in the 1930s, and short-term as occurs more frequently on a local basis, focused attention toward land management problems. Other problems, including the need for protection of vital watersheds, wildlife habitat, and recreational areas, put new emphasis on the importance and value of grassland management in the land use plan.

We are fortunate in that grasslands of North Dakota are very responsive to management, and that in the early days of statehood, our forefathers took advantage of federal legislation and enacted state legislation to provide an agricultural experiment station system capable of addressing current and long-term problems. Research and teaching at the Land Grant college established at Fargo included botanical work on the grasslands of the state. Much of this work is still very valuable in helping to understand grasslands. Range management research was among the first projects at the branch station established at Dickinson in 1905, and at the USDA field station at Mandan in 1915. As other branch stations were established in North Dakota, part of their work was generally related in some way to grassland

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On the Cover: Once all grassland, North Dakota still contains 13 million acres of native range. This issue contains articles reporting on recent research in range management. Photo by James Berg



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Table 2. Forage production and disappearance and livestock performance on short duration (SD) and seasonlong (SL) grazing treatments, Central Grasslands Research Station.

Year	System	Forage		Livestock			
		Production (lbs/ac)	Disappearance %	Cows		Calves	
				ADG (lbs)	AG/ac (lbs)	ADG (lbs)	AG/ac (lbs)
1982	SD	2194	41	0.7	14	1.6	31
	SL	2453	41	0.8	11	1.6	21
1983	SD	2202	59	0.7	19	1.8	51
	SL	2267	67	0.9	17	1.9	35
1984	SD	1690	55	0.5	16	2.0	52
	SL	1649	42	0.4	9	2.1	38
1985	SD	1446	62	0.6	19	2.1	58
	SL	2832	58	0.7	15	2.1	40

to the SD treatment, yet forage disappearance has been similar despite greater stocking rates on the SD treatment at both locations. Cows have maintained seasonal weight gains better on the SL treatment, while calf average daily gains have been similar between treatments at each location. Increased calf gains/acre on the SD treatment at both locations is a reflection of greater stocking rates on this grazing treatment.

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Continued from page 2

management when the occasion demanded and as resources permitted, and in 1981 the Central Grassland Station was established near Streeter, with its major emphasis on grassland management.

Grassland research in North Dakota has produced technology capable of improving management of this important resource, but much remains to be done to improve production efficiency which in turn will help to improve the efficiency of livestock production. This issue of **North Dakota Farm Research** contains articles designed to in-

form the readers of some of the recent research related to grassland management. Each of these research projects adds something to the knowledge acquired by previous research by North Dakota scientists, and in some cases, by scientists outside North Dakota. Ongoing and future research will improve our understanding of why plants and grazing animals respond to certain management practices, and will help fine-tune grassland management to increase its value and usefulness in the North Dakota economy.

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