

Corn Proves Its Value in Dickinson Roughage Trials

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The roughage trial, begun at the Dickinson Experiment Station in 1951, was designed to compare the relative production of corn, sorghum and sudan grass as silage crops for southwestern North Dakota.

The following table summarizes the yields from this trial since it was begun.

TABLE I.—Yield Summary—Roughage Trial—1951 - 1955.

	Average Weight in Tons per Acre.							
	1954		1953		1952		1951	
	to	to	to	to	to	to	to	
	1955	1955	1955	1955	1955	1955	1955	1955
	Green W'ght	Dry W'ght	Green W'ght	Dry W'ght	Green W'ght	Dry W'ght	Green W'ght	Dry W'ght
Corn:								
Rainbow flint (Great Plains)	5.73	1.42	6.94	1.81	5.60	1.52	5.78	1.51
Nodakhybrid 301	5.85	1.42	6.51	1.37	5.34	1.23	5.63	1.28
Rainbow flint (Tall late)	6.04	1.53	7.48	1.57				
Sorghum:								
Rancher	1.90	.44	3.54	.80	2.97	.76	2.98	.76
Black amber	1.92	.47	3.73	.88	3.20	.88	3.15	.84
Fremont	2.34	.57						
Rox orange	3.59	.65						
Norkan	2.09	.47						
Leoti Red	2.78	.59						
Sudan Grass:								
Piper	1.70	.43	3.05	.81				
Sweet	1.89	.34	2.73	.69	2.57	.68	2.42	.69

Corn has been the best producer by a wide margin, yielding approximately twice as much feed as was produced by either the sorghum or sudan grass. The hybrids and open pollinated varieties of corn adapted to a short growing season have both been consistent and satisfactory producers.

Yields from the sorghum and sudan grass varieties have been consistently lower than the corn yields throughout the entire period of the trial.

The sorghums are not well adapted to the southwestern area of North Dakota, as is evidenced by their relatively lower yields in comparison with corn. Some of the conditions unfavorable to the successful culture of sorghum and sudan grass in the southwestern

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³The four photos included in this article were taken by Larkin Langford, Assistant Animal Husbandryman, Dickinson Experiment Station.



FIGURE 1.—Corn at the Dickinson Experiment Station in 1953. Adapted varieties will produce from 7 to 10 tons of silage per acre in favorable years such as this.

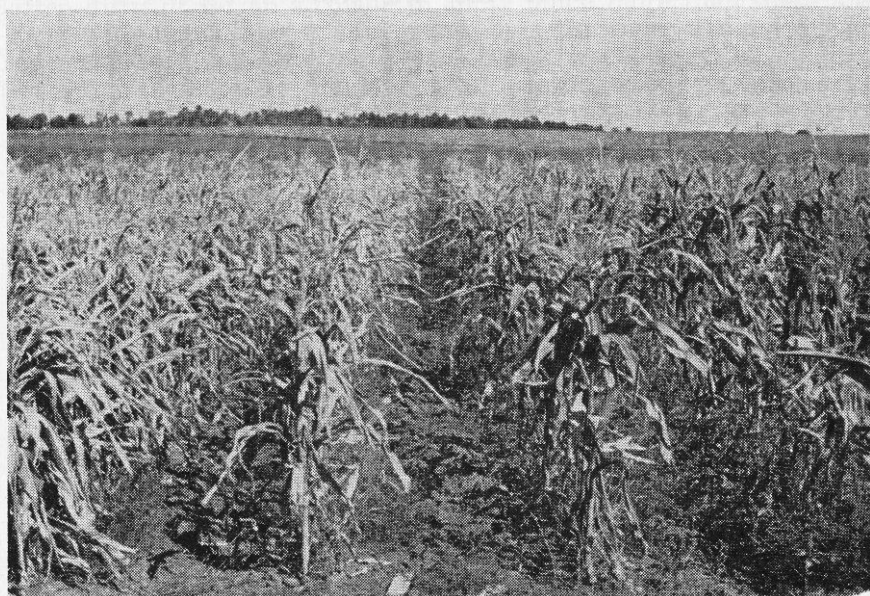


FIGURE 2.—Corn at the Dickinson Experiment Station in 1955. In years that are less favorable for the culture of corn, yields will vary from 1½ to 5 tons of silage per acre. The 45 year average silage yield from corn on the Rotation and Tillage plots at the Dickinson Experiment Station is slightly over 3½ tons per acre.

part of North Dakota are low annual and seasonal rainfall, lower than optimum mean temperatures during the growing season, a growing season that is too short to produce a sorghum crop mature enough for highest quality silage and the difficulty and uncertainty of getting a satisfactory stand.

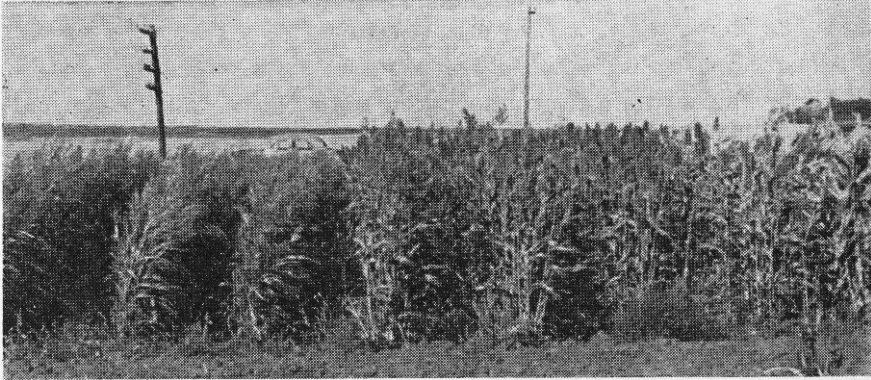


FIGURE 3.—Sorghum and sudan grass at the Dickinson Experiment Station in 1953. Sorghums make a good growth in a favorable year but good growing conditions for sorghum are also favorable conditions for corn. Yields from adapted corn varieties are nearly twice as much as yields from the sorghum varieties, even in favorable years such as this.



FIGURE 4.—Sorghum at the Dickinson Experiment Station in 1955. In the southwestern part of North Dakota the low annual and seasonal rainfall, a lower than optimum mean temperature during the growing season, a short growing season, the difficulty and uncertainty of getting a satisfactory stand and a severe weed problem in many years make the culture of sorghum more difficult.