

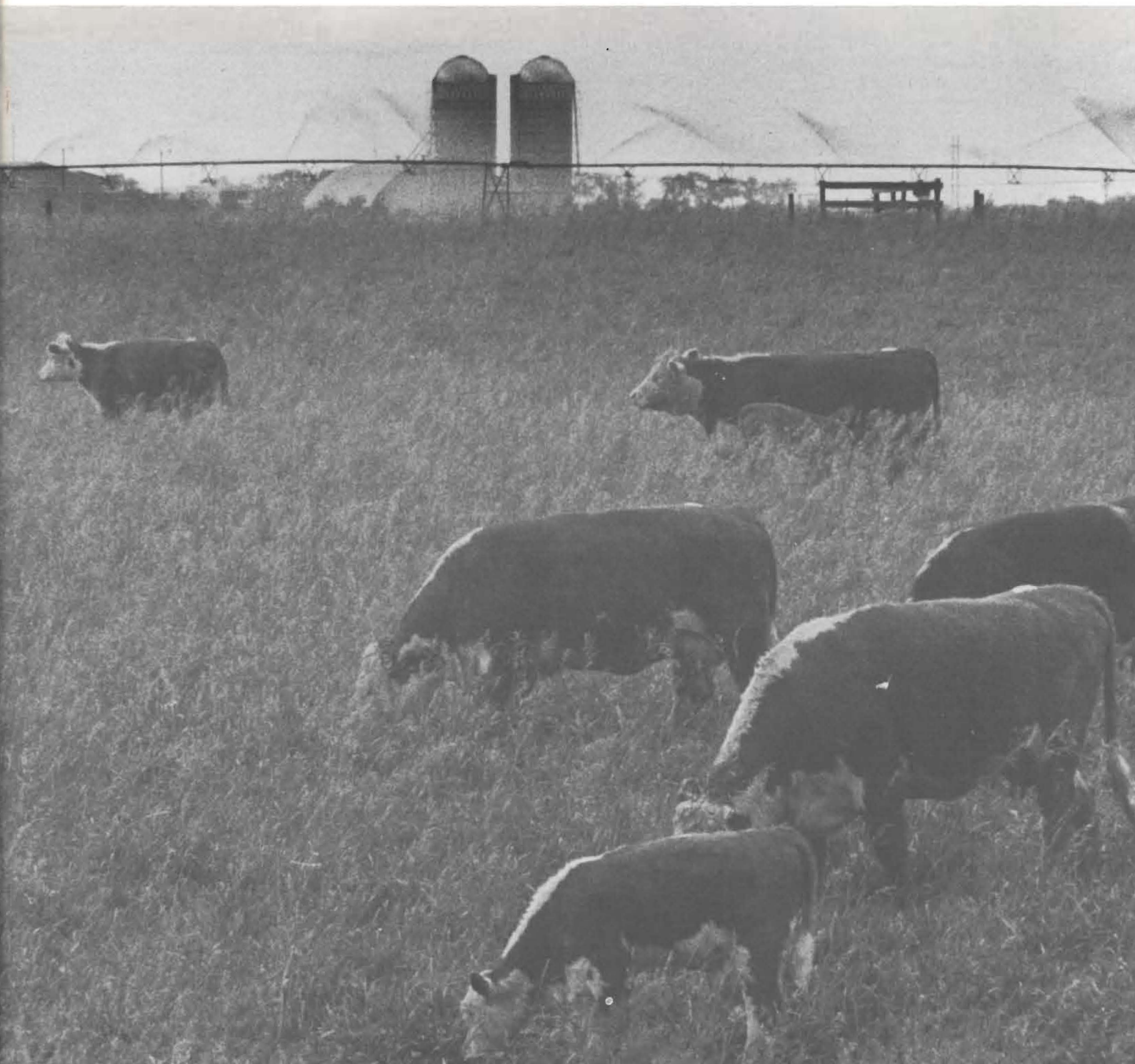


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Cows and Calves at Carrington . . . page 2

From the Director

A. G. HAZEN



On July 10, a dedication ceremony was held at the Carrington Irrigation Branch Station for the new livestock unit. Physical facilities for this unit consisting of several livestock buildings, a utility and feed building and a residence for the animal husbandman were financed by the Garrison Diversion Conservancy District. Operational funds for the unit were initiated by the 1971 Legislature, and will be a continuing part of the regular biennial legislative appropriations for the Carrington Irrigation Branch Station.

The concept of livestock research as an integral part of the Carrington Irrigation Branch Station was part of the original proposal and plan in 1957 to establish the Station. Limitation of funds, facilities and personnel prevented earlier development of the original concept, and it is fortunate the present program is now under way.

Livestock at Carrington are not intended for animal research. Rather, it is intended that enough animals be available to provide statistical control for various experiments which convert irrigated forages into beef. For this reason, the facilities will accommodate 120 head of cows with calves for intensive use of approximately 180 acres of land in a cow-calf type of livestock program.

North Dakota citizens must develop the state's resources looking toward future needs and benefits. Availability of irrigation water to selected lands of the state can be a stabilizing factor in the agricultural production economy, because the total annual precipitation for North Dakota is marginal at best. A slight variation in timeliness and amount of precipitation can have a profound effect upon resultant crops. The program at Carrington, together with some 20 research projects at the Main Station at NDSU involving economists, agronomists, chemists, animal scientists, engineers, pathologists, soil specialists and other scientific personnel, is designed and conducted to assist in developing the water resources of North Dakota.

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On The Cover: Cows and calves feed on the irrigated pasture plots at the Carrington Irrigation Branch Station for the first time this summer. These animals will help researchers to develop programs to convert irrigated forages into beef.



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range in the farrowing date of the treated pigs. Two pigs farrowed five days after treatment, while one pig farrowed nine days after treatment. Retained placentas were observed in two of the seven treated pigs.

In the second trial, 23 sows were injected four days prior to the expected farrowing date with either 10 cc of saline or 5 mg of flumethasone. The 11 pigs treated with flumethasone farrowed an average of four days after treatment, while the 12 control pigs farrowed an average of five days after saline injection. This treatment effect was found to be significant ($P < .10$). Only one of the treated pigs had a retained placenta. The time from treatment to farrowing in the flumethasone pigs ranged from three to five days, but the control pigs farrowed anywhere from one day to eight days after saline injection. The onset of parturition in one control sow the day following injection of saline reduced the mean of the control group such that greater significance was not attained. In both trials there were no significant differences in the birth weights of control or treatment pigs. The average litter size for both trials was slightly greater than 10 pigs, with no significant differences between the two treatment groups.

Generally speaking, it can be concluded that the pigs treated with flumethasone tended to farrow earlier when compared to the control pigs. There was no serious problem with retained placen-

tas in the experiment. Because of the variations in the farrowing date among pigs in the treatment and control groups, an exact farrowing date for flumethasone-treated pigs was not established. The value of this treatment depends on whether or not parturition dates can be selected for with accuracy. So far this accuracy has not been demonstrated.

Table 2. Induction of parturition using flumethasone.¹

	Saline ²	Flumethasone
No. Pigs	12	11
Interval from treat. to birth (days)	5.33 ³	4.00 ³
Std. Dev.	2.01	0.77
Range (days)	1-8	3-5
Birth Wt. (lb)	2.77	2.72
Std. Dev.	±0.55	±0.36

¹5 mg Flumethasone administered I.M. 4 days prior to expected parturition date.

²10 cc saline administered I.M. 4 days prior to expected parturition date.

³(P less than .10)

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