

Observations on the Incidence of "Ties" in the Hereford

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SUMMARY

The incidence of "ties" in the Hereford and Poll Hereford is discussed. Cows and heifers showed a higher incidence of the defect than bulls.

INTRODUCTION

A characteristic of the Hereford breed is that a large number of its members have a depression along the backline which is referred to as a "tie". This condition is congenital Briggs(1949), and results from the hide being attached by connective tissue to the spinous processes of the thoracic, lumbar and sacral vertebrae. As the flesh accumulates around this attachment, a depression or hole results, Briggs (loc. cit.).

The condition has also been described by Redding(1955), who has outlined a minor plastic operation for the correction of the condition.

This communication describes a survey of this condition in Australian Hereford cattle.

METHODS

Herefords and Poll Herefords exhibited at the Royal Agricultural Society Show in Sydney were examined during three annual shows. The backlines of the animals were palpated, as the hair can conceal the condition. The number of "ties" or depressions occurring was recorded.

RESULTS AND DISCUSSION

From the figures in Table I, it would appear that "ties" are present in 15-19% of the 614 Herefords, and in 27-35% of the 337 Poll Herefords shown. The bulls, cows and heifers exhibited were from studs throughout New South Wales and on the borders of Queensland and Victoria.

TABLE I (See page 134)

As some studmasters will not show cattle with this condition, and as the condition can be corrected by minor plastic surgery, it is suggested that the condition is greater in incidence than Table I indicates.

Females showed a consistently higher incidence in all classes, out of the 442 males and 138 females examined. The differences were significant in two of the three years, except 1956 Herefords, and in this, the difference was approaching significance, $P < 0.1$. The results of analysis are shown in Table II.

TABLE II.
Results of Statistical Analysis of Incidence of "Ties" in Males and Females.

Year	Animal	X ²	P
1956	Hereford	2.92	Significance doubtful < 0.1
1956	Poll Hereford	9.19	Highly significant < 0.01
1960	Hereford	4.62	Significant < 0.05
1960	Poll Hereford	13.68	Very highly significant < 0.001

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TABLE I.
Number of "Ties" in Herefords and Poll Herefords.

Year	Animal	Sex	Number Examined	Number of Spinous Processes Affected				Percentage Affected	
				1	2	3	4		
1955	Hereford	Male and Female	246	.....	37	9	1	.....	19
1955	Poll Hereford	Male and Female	125	.....	29	5	—	.....	27
1956	Hereford	Male	149	.....	10	8	—	.....	12
1960	Hereford	Male	145	.....	7	10	1	.....	12
1956	Poll Hereford	Male	77	.....	8	8	3	.....	25
1960	Poll Hereford	Male	71	.....	6	6	4	.....	22
1956	Hereford	Female	57	.....	7	4	2	.....	23
1960	Hereford	Female	17	.....	3	2	1	.....	35
1956	Poll Hereford	Female	38	.....	8	10	2	1	55
1960	Poll Hereford	Female	26	.....	6	8	3	—	65

NOTE : Sexes in the breeds were not differentiated in 1955 survey.

The higher incidence in females may be due to more critical selection of bulls before showing.

It is known that the condition will not detract from the quality of the carcase. However., their presence does affect the skinning time, and endanger the integrity of the hide, Charles (1960, Personal communication) and therefore can cause some economic loss; and in the live animal, the symmetry of the backline is broken.

Further studies indicating the mode of inheritance of this condition would seem to be required.

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REFERENCES

- Briggs, H. M. (1949).—"Modern Breeds of Livestock". The Macmillan Company: 1st Edition New York: 115.
Redding, R. W. (1955).—The N. Amer. Vet. 36: 22.