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Hypermastia and Hyperthelia in Cattle.

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PRACTICAL buyers of dairy sires in South Africa will sometimes be seen crouching down in order to count the rudimentary teats* of a bull, the idea being that the greater the number the better the milking strain.

This opinion is based on tradition, the significance of factors such as an inherited tendency for milk production or other important points, eg. conformation, not having been taken into consideration.

In view of the diversity of opinion on the subject and the fact that a judge might easily gauge the tendency to milk production by the features indicated above modern opinion does not encourage this procedure. There is also the disadvantage of disfigurement of the udder of the progeny to be considered. The occurrence of rudimentary teats in cattle is, therefore, of academic interest.

Richter (1933) inspected 1,738 Friesland cows and 943 oxen in Germany, and found that 30.44 per cent. of the cows and 15.6 per cent. of the oxen had rudimentary teats. The condition was likewise found to be less frequent in those animals that had not been bred for high milk production. This author examined the teat canals in 206 cases and concluded that the tendency for teat canal formation was greater the more abundant the rudimentary teats. Neither the age of the animal nor the size of the teats had any influence on the development of the teat canal. Only in the case of 27 cows (1.6 per cent.) did rudimentary teats actually produce milk.

When correlating production with number of teats, Richter found that a larger number of rudimentary teats stimulated milk production, but resulted in a correspondingly lowered fat production. He states that it was, therefore, doubtful whether rudimentary teats could be considered of any importance.

* Obviously the *extra* rudimentary teats in male animals are under consideration.

Much work on the subject has recently been done in White Russia by Sergeeff (1929), who examined 6,686 cows in an attempt to correlate production with rudimentary teats. In the Polozk area cows with such anomalies produced 9.1 per cent. more milk than other cows. In the Mogilow area the production was 14.6 per cent. greater, and in the Mosirisk area 17.9 per cent. more than for cows without rudimentary teats. Not only was a definite increase of production established, but this author proved the ease with which increased rudimentary teats could be inherited.

The differences between the findings of Richter and Sergeeff are striking. The latter's work, however, appears to lack the data furnished by Richter.

In South Africa rudimentary teats are often seen on the udders of dairy heifers and they are generally associated with rudimentary glands. In a few cases, however, two teats may be associated with one gland. These teats are usually located behind and above the main teats, though they may appear as branches of the main teat, either between the main teats, or elsewhere on the udder.

A fact worthy of note is the marked prevalence of this condition in our domesticated breeds, e.g. 16 per cent. Friesland cows at Onderstepoort have rudimentary teats, the condition being hardly, if ever, present in native cattle. As elsewhere they generally secrete no milk. Where there is secretion annoyance may be caused in leaking milk from accessory teats. Although cases occur where hormonal influences stimulate the production of milk from the teats of males, the condition in females may be ascribed almost entirely to hypermastia.

Perhaps the best example of secretion in the male is that reported from the Delaware Station (Mumford, 1923), where a registered Guernsey bull owned by that Institute, produced milk.

Milk has also been produced from the glands of male goats and sheep. In man the teats of males have produced milk at birth and at puberty and in exceptional cases at other times. This milk is known as witch milk.

Although these rudimentary structures may be easily removed (if absolutely necessary), this is not recommended in very young heifers, when the teats are small, or in cows more than a year old, as there is difficulty in distinguishing them from main teats in the case of the former and trouble may easily result in the latter. The disastrous results of removing the wrong teats are apparent.

Finally, in order to illustrate clearly the occurrence of rudimentary teats in cattle, the photo of a grade Friesland heifer D.O.B. 5163 (now in an experiment at Onderstepoort) is given in Fig. 1.

One rudimentary teat is placed so near to a rear main teat that trouble may be expected in the form of a leaking teat.



Fig. 1.—The Placement of Teats in a Grade Friesland Heifer.

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