

RESEARCH NOTE

BIRTH WEIGHT AND HEIGHT AT THE WITHERS OF PUREBRED AND GRADE HOLSTEIN HEIFER CALVES OF THE AGRICULTURAL EXPERIMENT STATION HERD

Records of birth weight and height at the withers of purebred and grade Holstein heifer calves born during the natural years 1960 to 1966 were evaluated and are summarized in the following tabulation.

<i>Criteria</i>	<i>Purebred</i>	<i>Grades</i>
Total animals evaluated	131	128
Average birth weight, (kg.)	33.4	34.4
Range	(22.7-45.5)	(18.2-45.5)
Percentage of standard ^{1, 2}	76.6	78.8
Average height, (cm.)	66.5	69.9
Range	(55.9-83.8)	(55.9-76.2)
Percentage of standard ^{1, 2}	90.8	95.2
Average weight of dams, (kg.)	500.5	466.8
Range	(333.2-727.3)	(291.8-622.7)
Percentage of standard ³	80.3	74.9

The data, although not representative of the local population, indicate that, on the average, the purebred or grade Holstein heifer calf of the Agricultural Experiment Station herd has been smaller than the standards of the breed at *birth*.

A possible explanation of the differences observed is found in the wide range in weight and height at birth in both purebreds and grades, as well as the wide range in weight of the dams. This suggests a variety of conditions that need further study.

Weight of the heifer at first calving could also be an important factor affecting the average weight of the calves born. This might be related to a low plane of nutrition. Results of the latest experiments in this Station with heifers fed *ad libitum*, a full-course ration composed of sugarcane bagasse, corn, cane molasses, protein supplements, minerals, and vitamins, showed that, although considerably below the standard at 6 months of age, they had surpassed it at 12 months of age, as compared with others under a conven-

¹ Based on Beltsville Growth Standards for Holstein Cattle, U.S.D.A. Tech. Bull. 1099, September 1959.

² Standards published by Morrison in Feeds and Feeding are about the same as those indicated in¹.

³ The Weight Standard for the Dam was based on the mean between the weights for a 27-month-old cow and a mature cow (7 years of age) given by source (1) above.

tional feeding system of green chops *ad libitum* and 6 pounds of concentrate daily.

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