Notes

A SCALE RACK AND PROCEDURE FOR RAPID, PRECISE CATTLE WEIGHTS

THE use of animal performance as criteria for pasture evaluation with grazing trials requires the minimum of error in animal weights. The usual basis for expressing beef production refers to gains and losses of animal tissue weight expressed as gain per head, rate of gain or gain per acre. Differences in weights of an individual steer, resulting from fill and shrink variations, may completely overshadow animal gains and losses in tissue weight. Procedures for handling and weighing experimental animals must be designed to minimize errors due to these large variations. This requires careful, uniform handling of animals during the preweighing or “shrink” period combined with rapid, precise individual weighings taken within the shortest possible time lapse.

A dual-gated scale rack combined with a working chute and sliding “cut-off” gate have been effective means of accomplishing rapid, precise weighing of experimental animals at the Southeast Oklahoma Pasture Fertility Research Station, Coalgai, Okla. The 70 steers in the present Main Station experimental herd, divided into 18 different lots, are weighed individually by separate pasture lot in less than 1 hour. Only two men work the animals. One weighs and works both scale rack gates controlling the animal on the scale. The other moves the animals up the working chute and, using a sliding gate, cuts off one steer into a waiting space at the scale. Both men move the animals by lot from their corral pens to the scale chute. The corral pen gate of the lot being weighed is left open, blocking the corral alleyway, allowing the animals to wander back to their pen after weighing.

The scale rack is 4½ by 9 by 5 feet. The sides and ends including the gate frames are made of welded 3/4 inch pipe with each section made separately and fitted together with ½ inch steel pins. The gates easily slide up and back on roller bearing wheels in guide tracks (figure 1). A three-pulley arrangement for each gate allows the man at the scale to easily control both gates with little effort and no loss of time or movement. Steers at this station are number branded on the right hip, allowing quick identification as they move onto the scale. The open pipe rack allows a quick, thorough observation of the animal for causes that require additional attention such as cuts, keratitis, screw worm infestations, etc. The man working the cattle in the chute usually has ample time to obtain fecal samples for internal parasite surveys. Samples are collected in small ice cream cartons and identified with the depositing animal’s number.

The pre-weighing shrink is obtained at this station by combining with a uniform procedure of obtaining weight shrink, does much to increase precision and reliability of animal weights in grazing experiments with beef gains.—J. Q. LYND, Oklahoma College.

TRANSFERRING THE Ga FACTOR FOR DENT-INCOMPATIBILITY TO DENT-COMPATIBLE LINES OF POPCORN

POPCORN seed production in the corn belt area without contamination by dent pollen is a serious problem with proper isolation. A small percentage of contamination often occurs in seed fields grown under ideal conditions. This requires extra expense to separate popcorn ears from the commercial crop.

Most popcorn lines isolated from South American Superb, and Japanese Hulless varieties set little or no seed when pollinated by dent pollen. In contrast, lines isolated from Supergold, Golden Amber, Queen’s Golden, and Yellow Pearl varieties have normal seed set when pollinated by dent pollen. Pollen from Superb, Amber, Queen’s Golden, and Yellow Pearl lines will not affect fertilization of South American Superb, and Japanese Hulless varieties is effective on dent corn. This requires extra expense to separate popcorn ears from the commercial crop.

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