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Penn State develops spreadsheet for tracking heifer growth

The new Customized Dairy Heifer Growth Chart from Penn State is easy to use. You need only enter the following information about your herd: average body weight and height of your third lactation cows, average birth weight of calves, average services per conception for heifers, and the goal for age at first calving. Given these inputs, the calculations are automated and a customized growth chart is generated. Entering individual heifer measurements will also produce graphs depicting each heifer's performance in relation to those targets as well.

These custom tools will allow you to track heifer performance against the growth required to meet your goals. By eliminating the delay that comes with not measuring heifer performance until first calving, you will be better able to evaluate the future of your herd; potentially allowing you to increase selective pressure on young stock.

Traditionally, heifer growth has been compared to breed standards to determine 'normal' progress. These fixed values are less useful when calves are on an accelerated growth program and also make evaluating crossbred heifers difficult. Both of these issues are resolved by using this dynamic tool because heifers are compared to their herd mates in real time.

This tool was developed because research shows physiological changes, such as the onset of puberty, are more closely related to proportion of mature size than a specific body weight. For these reasons, recommendations for heifer growth benchmarks based on the mature size of the animal were adopted in the 2001 Nutrient Requirements of Dairy Cattle.

The spreadsheet assumes a target body weight of 55 percent of mature weight at first breeding and 85 percent of mature weight after first calving, as cited in the 2001 Dairy NRC. Height targets are assumed to be 55 percent of mature height at birth, 85 percent of mature height at breeding and 96 percent of mature height at first calving.

These targets were derived from a comparison of heifer growth data from all breeds to mature heights calculated by assuming mature body weight and using the relationship between withers height and body weight determined by Heinrichs et al., 1992 (Journal of Dairy Science 75:3576-3581). Mature size of cows can be entered in the spreadsheet as either a herd average or individually for each heifer's dam.

A version of the spreadsheet using metric units is also available.

http://extension.psu.edu/animals/dairy/health/nutrition/heifers/monitoring-heifer-growth/customized-dairy-heifer-growth-chart

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