OPTIMUM GENETIC CHOICES FOR DAIRY PRODUCERS USING GRAZING PRACTICES

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Abstract

The decline in cow fertility has had a negative financial impact on all dairy producers, especially those who practice pasture-based dairying (grazing) and seasonal calving. Two breeding approaches that have been tried by some US grazers to obtain cattle with better fertility or other desired characteristics are: 1) use of bulls from countries that practice grazing (such as New Zealand and Ireland) and 2) use of bulls of a breed different from that of the cows to strengthen characteristics desired in the herd. This study compared performance of US daughters of New Zealand artificial-insemination (AI) Holstein bulls and daughters of other (predominantly US) AI Holstein bulls in the herd; no AI Holstein bulls from Ireland had US daughters of milking age. Herds were required to have at least five daughters of New Zealand bulls; cows were required to have calved from December 2001 through December 2003 and to have had an opportunity to express the performance trait. Data included records from 163 daughters of New Zealand bulls and 1966 daughters of other bulls in 19 herds. Mean milk and protein yields were lower by 1572 and 24 lbs, respectively, for daughters of New Zealand bulls than for daughters of other bulls, but mean fat yields were equal. Daughters of New Zealand bulls had higher mean somatic cell scores (indicator of mastitis susceptibility) than did daughters of other bulls (3.1 versus 2.8) and shorter mean productive life (longevity) by 4 mo (31.9 versus 35.4 mo). Mean pregnancy rate (fertility measure) for daughters of New Zealand bulls was 29.7%; mean DPR for daughters of other bulls was 27.9%. Grazer breeders may have focused more than other breeders on improving reproductive efficiency as the mean pregnancy rate for US Holsteins that calved from 2002 through 2003 was only 25.8%. Selecting bulls entirely on reproductive performance would not be warranted because other traits have economic value as well. A better choice for breeders who want more emphasis placed on reproductive traits is to use an index with more weight on daughter pregnancy rate than is recommended for the majority of the US dairy cattle industry.

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