

## **Impact of breeding for dairy traits on beef production**

### **Background**

In recent years, there has been a large expansion in the dairy herd, accompanied by a reduction in the beef herd. Consequently, there has been a growing proportion of beef originating from the dairy herd. This study aims to investigate the impact of the current dairy cow breeding program on beef merit.

### **Methods**

Following data edits, this study analysed 53,358 records of cow live weights and body condition scores, as well as slaughter records for 58,151 cows and 156,522 prime animals. Covariance components were estimated between various cow traits (BCS, live weight, carcass weight, conformation and fat score). Additionally, the covariance of cow traits with prime animal carcass traits (carcass weight, conformation, fat score and age at slaughter) were estimated.

### **Results**

The current dairy cow breeding goal aims to breed lower maintenance cows for improved efficiency. However, this objective is accompanied by genetic correlations that pose challenges. A strong unfavourable genetic correlation of 0.71 exists between cow maintenance (live weight) and carcass weight of offspring. Furthermore, breeding for lower maintenance cows is unfavourably correlated (-0.62) with progeny age at slaughter. This emphasis on lower maintenance cows also adversely affects the carcass conformation of the progeny, as indicated by a weak unfavourable genetic correlation of 0.25. Thus, breeding for lighter cows results in lighter, less conformed progeny that take longer to finish for slaughter.

### **Conclusion**

Nevertheless, by incorporating beef traits into the breeding objectives and implementing appropriate breeding strategies, it is possible to improve beef production while also reducing the maintenance of dairy cows.