Utilizing dairy farmers’ stated and realized preferences in AI bull selection

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In the Nordic Total Merit index (NTM) the traits are weighted according to their economic importance in the Nordic production environment. Farms may deviate from this in their production system and trait genetic levels. Hence customizing the total merit index to better reflect herd’s characteristics and farmers’ preferences could result in a faster economic response at the herd level. Dairy farmers’ stated selection preferences in AI bull selection have been analysed increasingly in recent years. Taking the stated preferences into consideration in bull selection could improve customer satisfaction and increase the adoption of a coordinated breeding program at herd level; however, it is poorly known how farmers’ stated preferences relate to their real choices. We compared the Finnish Ayrshire (AY) and Holstein (HOL) farmers’ stated and realized preferences for bull selection. An Analytic Hierarchy Process (AHP) based online survey was conducted to find out farmers’ stated preferences. The realized preferences were derived from the herds’ insemination data. We found substantial differences between stated and realized preferences. Yield was the most important (AY) and the second most important (HOL) trait in realized selection but showed low relevance in the stated selection preferences analysis. Also conformation was more favoured in realized selection. Health and fertility were quite poorly favoured in realized selection considering that health had the highest stated preference and fertility had also high stated preference. There was, however, much consistency for longevity, it was the second most important trait in stated and most (HOL) or second most important (AY) trait in realized selection. We propose a recommendation system which is jointly using the information on both farmers’ past realized and recent stated preferences in bull selection. This allows the modification of trait assessment to be compared to past selection preferences. The genetic merit of recommended AI bulls is compared to the expected NTM value.