

Subjective definition of traits and economic values for selection of organic sows in Denmark

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The purpose of this study was to assess the difference between organic pig producers' preferences for the genetic make-up of sows and the breeding goal in conventional sow lines (BGconv). Differences can occur for several reasons: 1) it is not necessarily the same traits that are relevant; 2) the traits may have different relative economic importance, e.g. due to price differences of feed and product; and 3) some traits may have non-market value for the organic pig production. Organic farmers assisted in defining a group of eight traits that are potentially economically relevant, heritable, and possible to record. Subsequently, the farmers answered a questionnaire where they were asked to prioritise the eight traits relative to each other in a partial choice design. The answers were analysed using a multinomial logit model (PROC PHREG in SAS9.2), which calculates overall probabilities for prioritisation of each trait. The organic breeding goal (BGorg) included traits that were defined closer to the economically important traits, e.g. number of piglets at weaning, but also a trait like mortality of liveborn, which has no strict economic value when litter size at weaning is included. This indicates the presence of non-market values. When compared according to the relative economic value of a phenotypic standard deviation unit of the trait, litter size was less important in BGorg (29% vs. 42% in BGconv), while traits related to maternal ability (number of functional teats, early growth, and mortality of liveborn) together were more important in BGorg (42% vs. 2% in BGconv). The traits defined for the organic environment requires labour-intensive recording, so there is no straightforward implementation of the organic breeding goal derived in this study. On the other hand, it provides input for the discussion of whether to select sows for organic production from lines selected according to breeding goals for conventional production systems.