Breeding values for auction prices - a total merit index in dairy cattle?

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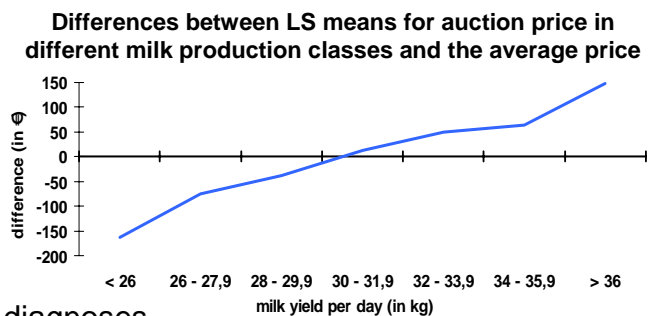
Questions

- Which traits have an impact on auction prices?

- Is it possible to utilize auction prices for the derivation of economic weights for type traits in a combined breeding goal?

Material and Methods

- 1565 Holstein cows marketed after first calving

- 6 auctions between 08/2005 and 01/2006

- SAS-GLM including:

  - Auction prices

  - Production and pedigree data, veterinary diagnoses

  - Scores for 4 type composites (dairy character, body, feet & legs and udder)

- Stepwise regression to identify the linear type traits with the highest impact on auction prices

Differences between LS means for auction price in different milk production classes and the average price

Differences between LS means for auction price in different type composite classes and the average price
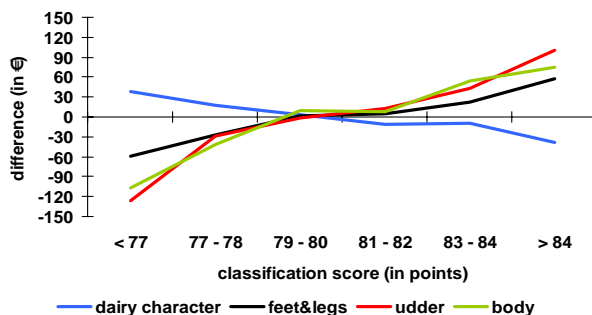
Results

- Production records, veterinary diagnoses, days in milk, SCS and all type composites had significant impact on auction prices

- Rear udder height, body depth and rear legs rear view were the most important linear traits

- **h²** for auction price was **0.27**

Conclusions

- Auction prices are influenced by a variety of traits which makes them comparable to a total merit index for dairy cattle

- Economic values for type traits in a combined breeding goal can be derived based on their influence on auction prices

- h² would allow a direct selection on high auction prices

- Information on auction prices can support the estimation of breeding values for conformation traits

Type composite	r_g to auction price
Dairy character	0.10
Body	0.21
Feet & Legs	0.55
Udder	0.55
Conformation	0.38