Sorting of pig carcasses in order to maximise marginal return

- DMRI offers to assist in order to realise the potential of sorting

Variations in weight, product yield and product quality occur as pigs for slaughter represent variations according to genetics, feeding, housing and age.

For instance, the ham can vary from slim to round, and the percentage of ham of the whole carcass varies accordingly. Similarly, the quality of ham varies, for example the thickness of the fat layer, intramuscular fat, colour and the water holding capacity of the meat.

Often, value of hams varies depending on the different attributes characterizing the hams. Consequently, an effective production plan includes sorting the carcasses according to the characteristics demanded. This will allow batches of hams of uniform quality and at the same time maximise the marginal return for the whole production.

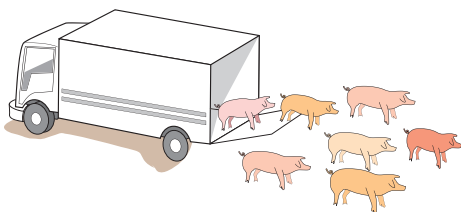## Preconditions for sorting

- Product assortment and its specifications according to market demands
- On-line measurements
- Data registration and data communication in-house
- Logistics and capacities
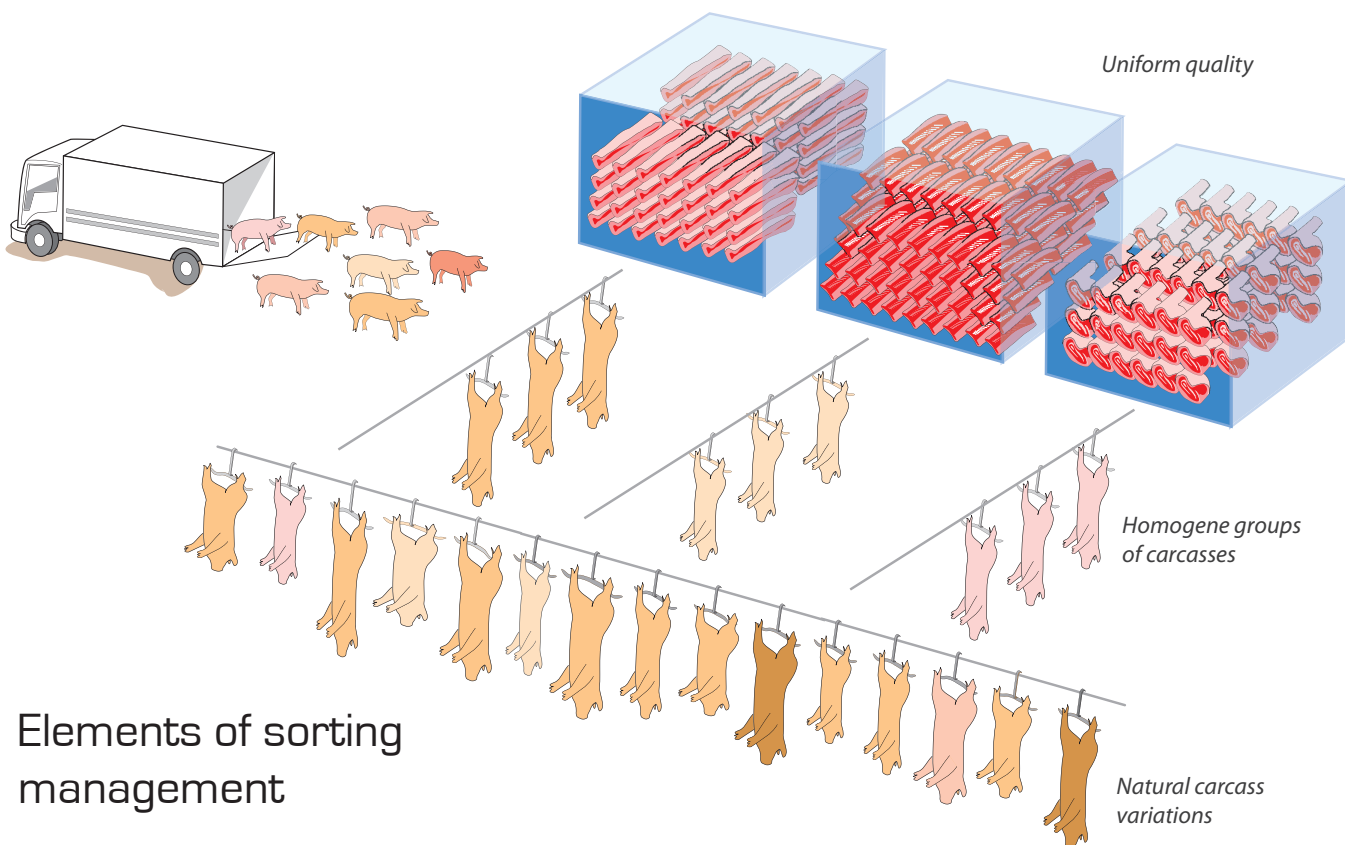- Cost specifications related to cutting, deboning and packing

Pre-analysis

A preliminary analysis is based on a description of the preconditions and results in:
- A preliminary evaluation of the economic potential of sorting
- Estimation of necessary investments to realise the potential benefits of sorting
- Proposal for a Plan of Action for further progress in sorting
- Definition of the success criteria for the customer concerning sorting

Provided a net benefit of sorting is obtainable, and the customer will take advantage of it, DMRI can offer to assist the customer in the further process. ▶

Uniform quality

*Homogene groups
of carcasses*

Elements of sorting management

*Natural carcass
variations*

Sorting parameters

Relations between carcass variations, yield, and quality parameters are established resulting in:

- Product weight
- Product cost
- Product quality

as functions of carcass variation regarding carcass weight, Lean Meat Content and other measurements for the total product assortment

Sorting programme

- Economic optimisation model (sorting strategies and sensitivity analysis)
- Production planning assistant - practical tool for dynamic definition of sorting limits
- Implementation of sorting system including data capture, data network and specific tools
- Education of personnel at the customer

Logistics and operational management

- Design of necessary changes in chilling rooms, cutting department and transportation of cuts
- Design of necessary changes regarding traceability, planning and operation control

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Profile

DMRI offers consultancy and innovation to the meat industry based on research into:

- Improving efficiency
- Managing product quality
- Maximizing food safety

Key services

- Animal welfare – transportation, lairage and stunning
- Optimisation of byproduct handling
- Design and optimisation of chilling facilities
- Improvement of meat quality
- Improvement of food safety and hygiene

- Improvement of efficiency through automation and methods
- Optimized raw material utilisation through sorting and management
- Odour abatement
- Waste water treatment
- Reduction of water and energy consumption