



DMRI Pork Sorting

Maximize Profitability through Optimal Carcass Usage

Unlock the full potential of your grading tools with DMRI Pork Sorting, a unique service and software solution designed to maximize your yields and profitability through optimal carcass utilization

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→ www.dti.dk/pork-sorting



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VALUE IN THE VARIABILITY

Why the Pork Industry is Unique

Every pig is unique, even within the same breed, showing variations in size, weight, and body composition. Meanwhile, meat plants encounter a wide range of products that must meet specific requirements. These specifications define not only the overall characteristics of the products, such as bone-in or boneless and skin-on or skin-off options, but also set limits on size, weight, and fat levels.

In this context, when we choose a particular product combination at given market prices, different pigs would yield different economic results. Additionally, some pigs may not even meet the required specifications, which means they cannot be utilized. This means that certain pigs maximize profit for specific product combinations, while others are suboptimal or may not be suitable.

Alternatively, if we were to explore all possible product combinations using a single pig, we would discover a specific combination that maximizes profitability for that particular pig. However, it is important to note that the optimal combination would differ for each unique pig.

Therefore, given certain market demands, there is a theoretical ideal utilization of the available carcasses to produce the different products that meet quality specifications and maximize profitability.

CARCASS AND PRIMARY CUT SORTING

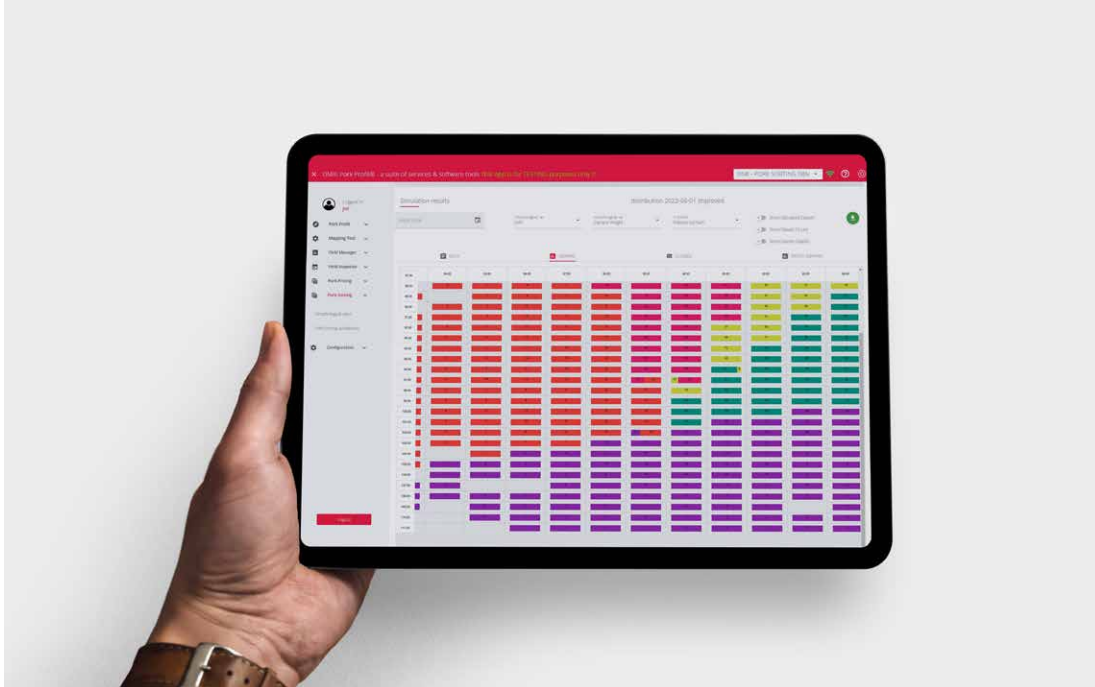
Uncover the Real Potential of your Grading Tools

Grading systems offer a powerful tool to calculate the optimal solution for carcass utilization, connecting the expected profit of each product with the variations in traits found in pigs through objective measurements.

A Yield Model comprises a series of equations that establish the cutting yields based on the measured variables in the carcasses, considering the limitations imposed by the specifications.

The available pig population, along with the Yield Model equations, production planning, and quality specifications, collectively form a Mixed-Integer Programming problem where profit is the objective to be maximized.

To effectively implement the optimal utilization of the carcasses, a sorting procedure is utilized in which groups of similar carcasses are sorted according to several criteria based on the measured variables. In some cases, further sorting of primary cuts is possible following the initial cutting stage.



Nevertheless, assuming that we know the theoretical solution to the problem, limitations in the company's infrastructure pose significant challenges for the practical implementation of a sorting system:

- Which variables should be considered when sorting the carcasses?
- What criteria should be used to define sorting groups?
- How to take into account that the theoretical optimal solution changes when prices or the pig population fluctuates?
- How do we determine the ideal number of sorting groups?
- How can the sorting groups be used to produce different products?
- Is it worthwhile to sort the primary cuts?
- What is the economic impact of these decisions?

INTRODUCING DMRI PORK SORTING

Optimal Carcass Usage through Advanced Software Tools and Expert Consultancy

The DMRI Pork Sorting service starts by gathering and analyzing all the necessary information to define the Yield Model. This, along with production costs, allows us to solve the optimization problem for each primary cut, considering the pig population and sales conditions.

Next, we translate this information into criteria for defining the sorting groups for carcasses and/or primary cuts. Our software provides a powerful simulation tool that explores various possibilities and calculates the economic impact of the decisions made.

The sorting solution chosen can follow a traditional approach with static sorting groups or an advanced approach where the criteria are dynamic based on available carcasses and sales needs. In either case, the software provides detailed guidance on using the classification groups to produce different products in the cutting and deboning room according to the planning for a specific day.

DMRI – Your Shortcut to Best Practice

Maximize profitability and efficiency with DMRI Pork Sorting, the comprehensive solution for optimizing carcass utilization in your meat processing plant. Our practical approach ensures that every carcass is utilized to its fullest potential while adhering to the physical constraints of the plant.

Benefits that Drive Success:

1. **Increased Profitability:** By identifying the most suitable carcasses for each product, our service maximizes your returns through increased cutting and deboning yields.
2. **Streamlined Operations:** Proper sorting methods allow for homogeneous groups based on product specifications. This optimizes your cutting and deboning lines, enhancing productivity and efficiency (OEE).
3. **Consistent Quality:** Accurate grading and sorting based on objective measurements contribute to the production of articles with consistent characteristics and maintain customer satisfaction by meeting the standards.

Our team of experienced DMRI specialists are here to accompany you on your journey. We provide expert guidance and implement practical solutions tailored to your specific needs. Benefit from our years of industry knowledge and let us help you unlock the hidden potential within your meat business. Take the next step towards success by contacting us today.

DMRI —
Food innovation for the future



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