# How the consumer influences a commercial breeding program

Supplying top genetics for pork production at the lowest cost is at the core of Hypor's business.

Hypor achieves her breeding goal of producing pigs that thrive under all conditions to support pork production at least cost by balanced breeding. Balanced breeding means an increase of total system profitability in the entire value chain.

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Future breeding goals therefore are focused on measuring more novel phenotypes within the whole pork value chain. The addition of novel traits makes pig breeding more complex; more and more traits can be monitored and the possible configurations are endless. Hypor is convinced that there are serious downsides to focusing on just one or a few traits.

The relationships between the different traits are critical to increase total system profitability. Hypor's breeding goal is improving the output of kilograms of pork produced per sow per year with an easy to manage, robust sow in integrated systems.

## Pork value chain

Hypor has been selecting for multiple important traits and shows consistent improvement over many targets. They seek to improve the overall performance of sow and finishing pigs by creating a balance in both the sow and her piglets.

Within the breeding program Hypor links the factors that influence total system profitability. It focuses on maximising the bottom line instead of focusing on maximising performance in a single trait or phase.

Everything is connected. Performance in one phase has connections upstream and downstream. Cost, revenue and performance are also interconnected. For simplicity, the pork value chain can be divided into six layers: the piglet producers, the finisher farms, the packer, the processor, the distributor and the consumer. Each layer has its own needs, and within each layer genetics can create added value.

## Piglet producers

The needs of the piglet producers are maximising the capacity to produce uniform, heavy and good quantity pigs in one litter. This consists of a solid sow performance, proven sow efficiency and enhanced productivity.



A solid sow performance means that a sow is built to last; that she is productive and in the herd until you decide to replace her. By maximising the number of full potential pigs she weans in a lifetime, Hypor help minimise the cost per pig marketed.

When we talk about proven sow efficiency we are focusing on management factors like how easy is the breeding process? How efficiently does the sow herd convert feed into quality pigs? And how does labour contribute to the cost of a weaned pig? Enhanced productivity is more than just the quantity of piglets a sow produces; the quality of these piglets is equally important. Litters should be large, but the piglets must also be large, uniform and robust in order to maximise their profit-earning potential.

## Finisher farms

The finisher farms are taking high quality weaned piglets and finishing them efficiently, consistently and quickly. The needs of the finisher farms consist of improved cost efficiency, easy to manage production and high throughput efficiency.

There are many ways to improve cost efficiency and increase margins. Improving feed efficiency, increasing the proportion of full potential pigs fitting in the local slaughterhouse grid and increasing the proportion of low-maintenance pigs are the main drivers to achieve this.

There is something to be said for easy to manage, low-maintenance pigs that are robust and durable. Pigs that can thrive in challenging environments can save producers a lot of money.

By the time animals reach finishing there is already a lot invested in them. What is the true cost of animals falling out at heavy weights? How much extra are we spending to get weaker animals to market?

High efficiency and high performance – you can have both! Fast growing, uniform pigs with predictable performance and throughput efficiency help optimise pig flow and maximise facility turnover.

## Packers, processors and distributors

The needs of the packer, processor, and distributor can be summarised by evaluating the different production and marketing options and choosing the combination which results in the most profit, while meeting the expectations of the processor, the consumer and society.

Their needs consist of a secure and high quality supply of carcases, food safety, uniformity within each concept, and optimal carcase and meat quality.

Carcase yield and meat quality are highly influenced by genetics, by health, by nutrition and by management.

On the topic of optimising yield we explore the importance of carcase yield as well as lean yield, and then investigate the economics of kilograms of pork produced per sow during her productive life.

## Consumer

The needs of the consumer consist of good, uniform and consistent meat quality with a good taste.

How can genetics answer some of these questions? Meat quality traits, like low drip loss, pH, meat colour and intra muscular fat, are essential in today's pig breeding program.

Convenience and variety in concepts are also important needs for the consumer. How do we keep consumers reaching for pork in the retail shelves? What can we do to make the consumer choose pork more often? It is not as complicated as one might think – by consistent and consequent delivery of uniform, high quality and value products.

Hypor offers different boars for different markets to satisfy these needs. Consumers are also increasingly interested in the Who, Where, Why and How of pork production when it comes to the environment, animal welfare, food safety and sustainability.

Hypor's balanced breeding goals help advance the sustainability of pig production through robust animals with the enhanced ability to perform in challenging environments. More tools and identification of new predictive biomarkers for animal health are being developed to select for improved robustness of animals.

Hypor upholds a unique responsibility to ensure animal welfare. They breed sows with sufficient teats for their piglets and with an excellent weaning capacity.

Group behaviour is one of the traits Hypor selects for. It has an impact on feed efficiency, growth and on the well being of each individual sow, piglet and finisher.

Food safety can be ensured by maintaining a high level of biosecurity. This requires high health nucleus farms, back up of genetic lines and frequent health monitoring. Responsible use of antibiotics and breeding for disease resilience are the tip of the iceberg. They continuously monitor and measure animals to ensure progress on many biosecurity levels.

Sustainability is an important driver in setting new industry standards and stimulating innovation.

To breed for efficiency, animals that consume less feed and water are selected in the breeding program. In addition, animals can be selected on the basis of their residual feed intake or utilisation of lower quality feed ingredients. By applying genomic selection we can reduce the environmental footprint of pork production drastically in the coming 50 years.

Reductions of up to 27% in greenhouse gases, up to 44% less acidification and almost 58% less eutrophication are achievable.

Code-EFABAR is a voluntary code of good practice for responsible farm animal breeding. An important part of a sustainable and healthy food supply chain. By adhering to this Code-EFABAR, Hypor is demonstrating that they are committed to supporting a sustainable future.

## Genomic selection

Hypor is the first to implement genomic selection within existing breeding programs. They have opened up a doorway into genetic development that integrates BLUP and a greater understanding into DNA composition.

Now great grandparent (GGP) piglets of one litter will no longer be anonymous piglets which have an equal expected breeding value. Randomly picking the best pig or an average pig will no longer be common practice. Future pigs will have their own genomic breeding value based on their own unique pattern of DNA-markers. This genomic breeding value will predict with a quite high accuracy what this pig's genes are worth for breeding in the total pork value chain.

## The choice of pig genetics

Supplying top genetics for pork production at the least cost is at the core of Hypor's business.

The genetic program is based on large populations that consist of two dam lines: Hypor Landrace and Hypor Large White. Together, they parent the most balanced sow in the world; Hypor Libra.

The four sire lines: Hypor Maxter, Hypor Magnus, Hypor Kanto and Hypor Myrus ensure that you get the best meat or the most meat at least cost.

Hypor also have more to offer. Creating value is a key priority by formulating solutions that support production and increase total system profitability.

Producing consistent innovations requires continual investment in research, technologies and people.

Hypor's approach and sound science have helped advance global pig production. Their research will enable new traits to be added to the genetic targets of selection, to be able to make progress in the most important pork value chain traits. ∎