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Happy Thanksgiving!



Have we finally rounded the corner of what has been one of them most impactful times in a generation? Well, as business thinker Peter Drucker put it, "Trying to predict the future is like trying to drive down a country road at night with no lights while looking out the back window." Granted, some of you know your local backroads so well, you could perform such a feat (though please don't). Experience and knowledge goes a long way, but still can't predict surprises like one of your neighbour's loose cows crossing the road!

Looking back, it's obvious now that our industry isn't immune to the COVID-19 pandemic. Periodic shut-downs and reduced capacity at packing plants wreaked havoc on our just-in-time pork supply chain. Restrictions on large gatherings essentially eliminated the milk-fed and BBQ pig market. Conferences and trade shows, who many value for their social aspect, were cancelled. Through it all, many pork producers not only persevered, but did commendable acts by donating more to food banks and thanking pork processing workers with free lunches.

In addition to COVID-19, our industry continues to remain vigilant for ASF and other pathogens. The general public now has a sense of what biosecurity

is and it remains as one of our best defenses. Hats off to Ontario pork producers and the provincial government for enacting Bill 156, Security from Trespass and Protecting Food Safety Act. The last thing we need are a bunch of yahoos terrorizing farm families and truckers. A special shout out to those truckers who have to endure all that nonsense (and unfortunately tragedy) in Burlington. Thank you!

This year has had its challenges, but these are also the times we look out for one another. For those of you with crops to harvest, we wish you well. It's been a great growing season and this fall is off to a good start. We are proud to call Canada our home and grateful to be your supplier of Canadian swine genetics. Happy Thanksgiving from all of us at AGC!

Sincerely,



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Fundamental Rethink in Genetic Selection?

There was a recent article in the online magazine, PigProgress, called [4 good reasons to rethink genetic selection](#). The author, Marcello Marchesi, an international consultant on pig production, opens by marveling at the genetic progress the industry has made over the past few decades. However, while many breeding companies, particularly European ones, were pursuing ever larger litters and leaner hogs, other important factors in pig production were overlooked. The author questions whether it is time for a fundamental rethink and highlights four aspects that genetic companies need to refocus on.

AGC has always taken a balanced approach to genetic selection and hasn't overlooked what others may have:

1. Pre-weaning mortality

As litter sizes have increased, so has pre-wean mortality. Smaller birth weights, due to uterine crowding, leads to less viable piglets at birth with increased chances of chilling, starvation, and crushing. For those that survive, a small birth weight leads to a small wean weight. Generally, pigs weighing 0.1kg less than the litter average at weaning will weigh 1kg less out of the nursery. This difference will then compound to 10-15kg less by market age.

AGC F1 sows have large litters, but not extreme, making them manageable with heavy birth and wean weights. An important trait within our selection program is piglet survival within the 1st 24hrs of life. Sows and their relatives that tend to have low birth weight piglets and poor mothering abilities are selected against. Focusing on pre-wean mortality is good for both animal welfare and the bottom line.

2. Back fat and pork flavour

Where fat goes, so does flavour. When pork was marketed as “the other white meat” to compete against chicken, it made sense to breed for leanness as fat was thought to be the culprit behind many human health concerns.

Unfortunately, very lean pigs will nearly always produce tough and almost tasteless pork. The pendulum has shifted to where fat is no longer frowned upon and can actually provide health benefits.



(Photo: Canada Pork International)

The goal now is to get some fat back into pork, not necessarily on the back, but within the muscle – intramuscular fat (IMF). A more appropriate and efficient grading system would need to be implemented within packing plants so producers can be paid accordingly. AGC is well positioned as our Duroc breed is gaining in popularity due to higher levels of IMF in addition to superior production traits. IMF is in fact measured in all three AGC breeds.

In addition to more flavour, fat is also associated with robustness. Ultra-lean pigs do OK in perfect environments, but can have high morbidity and mortality when under stress. AGC's genetic

program selects for both feed efficiency and appetite while maintaining appropriate back fat levels on the maternal breeds. This ensures efficient and robust animals with high survivability and long lifetime production.

3. The cost of lameness

Much has been said about the importance of feet and legs and overall structure of sows particularly in group housing systems. AGC genetics are built on a firm foundation. They are not paper pigs and are not selected on numbers alone. Our breeders know what good conformation looks like and select accordingly.

Lameness can't be overlooked on the terminal side either. Marchesi indicated that in a study of 44 North American boar studs, 81% of the studs rated feet and legs as a primary reason for culling. By the time these boars are culled, each will have already sired thousands of progeny. Most market hogs may be shipped before the full extent of their poor structure is realized, but some will become lame and unthrifty before then.

The primary reason for culling AGC AI boars is genetic turnover – as it should be. AGC boars are assessed and monitored multiple times before and upon arrival at the boar studs to ensure only those with good conformation contribute to the next generation.

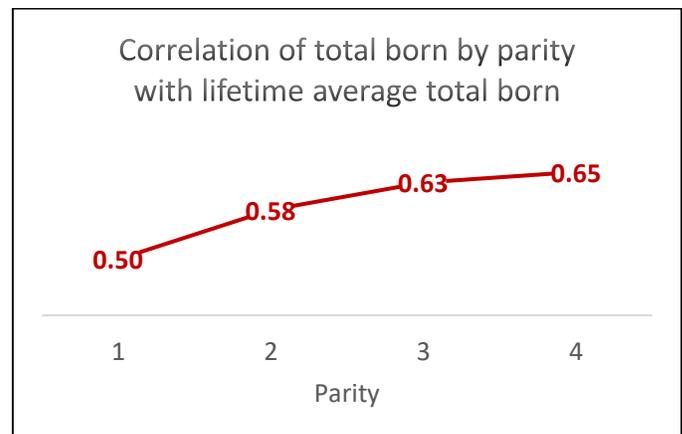
4. Hernias and other genetic defects

AGC recently reviewed internal protocols regarding genetic defects. Much has stayed the same: Cull the entire litter if a genetic defect is present. This includes ridglings, scrotal hernias, numerous splay legs, and other defects. Boars and sows that appear to contribute to genetic defects are also identified and culled. These are drastic measures, but they help to minimize the transmission of defects that are otherwise difficult to trace because of complex genetic and environmental interactions.

Marchesi suggests that “All genetic companies are obsessed with the highest possible test numbers to improve their famous ‘immature-to-total’ (I/T) ratio, a measure of genetic progress.” Culling an entire litter due to a defect will reduce that number. AGC is OK with that, for we are not like other genetic companies. AGC breeders are farmers too and we will do what's right for both animal welfare and for our customer's bottom line by minimizing the incidence of genetic defects.

Predictor of Lifetime Performance

Proper gilt development is critical for lifetime performance. First parity performance, however, isn't the best predictor of future lifetime performance. Litter size data from a variety of commercial herds using AGC F1 sows was used in a study to compare performance by parity to average lifetime performance. Sows had to have at least four parities to be included in the dataset.

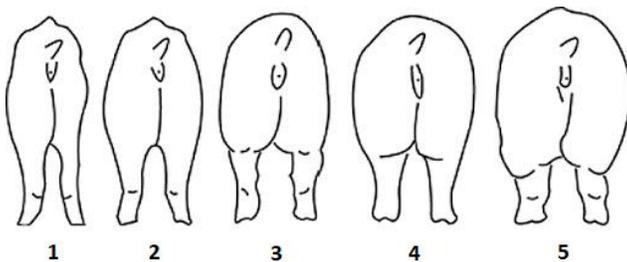


The correlation between total born in the 1st parity and average total born across all parities averaged 0.50. The range across herds was 0.41 to 0.57. Remember that a correlation of 0 indicates no association, whereas a correlation of 1 indicates a perfect match. Second parity performance had a higher correlation with average lifetime performance at 0.58 with a range of 0.51 to 0.66. By 3rd parity, the correlation increased to 0.63 and then 0.65 for 4th parity.

These results show that a sow's 1st parity litter size will give some indication as to her litter size in future parities. However, her 2nd, and especially 3rd parity litter sizes are the better predictors of average lifetime performance. This implies that culling decisions on litter size alone should not be made after only one parity. Give that sow another chance, as some can bounce back quite well and have a long life of producing lots of piglets. Others, however, that underperform after two and especially three litters should be on the short list for the cull truck.

Monitoring Back Fat on Sows

Most producers have a good eye for body condition scoring on their sows and feed accordingly. However, sometimes our eyes need a recalibration. This can be as simple as a referring to the familiar scoring guide:



Body condition scoring is essentially a simple, albeit crude way to estimate back fat. Actual back fat measurements provide a more accurate picture of whether or not feeding levels are where they should be. Some sows that fall into the ideal body condition score of 3 may actually have too little or too much back fat and thus may not perform to their potential.

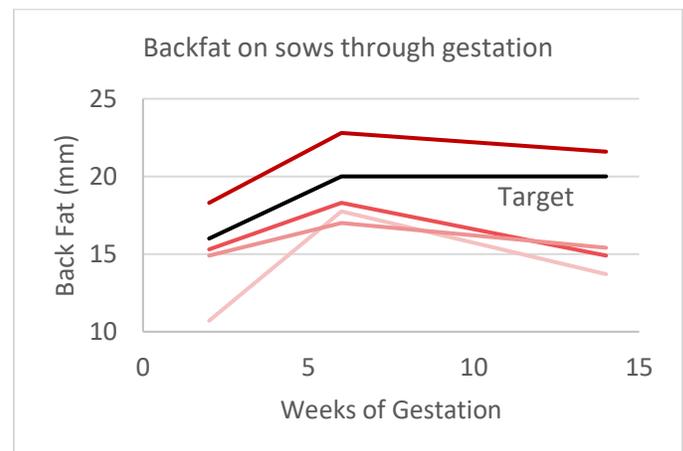
Sow back fat levels can have a significant impact on performance. If too high late in gestation, there's an increased risk of:

- Farrowing complications
- Laziness and piglet crushings
- Lack of appetite
- Low milk production
- Low wean weights

This can all lead to a large drop in back fat with poor breed back and performance in the next parity. Alternatively, if back fat is too low late in gestation, there's an increased risk of:

- Gorging and vomiting once on ad lib feed
- Restlessness and piglet crushings
- Inability to consume enough feed
- Drop in milk production
- Low wean weights

This can then lead to weak estruses and/or low conception rates. A nasty cycle of high-low back fat levels may also develop. The key is to keep back fat levels within target through gestation and minimize the drop while nursing.



The above chart shows average back fat levels at three points in gestation for four sow herds (red). The black line is a target. These producers were good at getting back fat up in early gestation, but then underfed later in gestation. Three of the four herds maintained sows on the lean side for fear of over conditioning. Unfortunately, this led to some nursing and breeding performance issues. AGC has the ability to provide complimentary back fat testing on sows to help producers establish a baseline and periodically monitor. Contact us if you're interested.

Find us on social media:

