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TOPIGS Canada Inc.

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the
INSIDER

TOPIGS Research: Flushing sows gives higher piglet birth weight



In an extensive study on pig farms, TOPIGS investigated the most important management factors influencing piglet birth weight. Nineteen Dutch pig farms with a total population of more than 7000 sows were visited and the managers completed a questionnaire. Crucial factors that influence piglet birth weight were defined, based on the differences in management factors between farms. The most important conclusion of this study is that besides feeding in the gestation phase, feeding the sow during the lactation and insemination phases also has a major influence on birth weight. Therefore how a sow is fed throughout her entire productive life plays a key role in the birth weight of her piglets.

Lactation and insemination

Feed intake during the lactation phase is important for a high birth weight of the next litter, as it gives the sow the nutrients she needs to prepare her body for the subsequent reproduction. Energy intake (crude fat + starch and sugar) seems to be important for Good recovery of the sow. However, whether the higher birth weight of the piglets was caused by higher feed intake or higher energy intake is not entirely clear from the study. Feed intake during the insemination period also affects the birth weight. The TOPIGS researcher found that 1 kilo of extra feed intake per day during the insemination period results on average in a 45 gram higher birth weight of the piglets. Boosting the feed intake during this period therefore seems to be a worthwhile option. Interestingly, sows fed with lactation diets during the insemination period had piglets that were on average 51 grams heavier than those from sows fed with gestation diets during insemination period. This indicates that the nutritional composition

(energy and digestible protein levels) of the feed leads to differences in birth weight. Other factors found to influence piglet birth weight were feed intake during gestation, the type of housing, use of prostaglandins, quarantine periods for gilts, and the hygiene level. However, not all of these findings were statistically significant. See the box for further information.

442 grams Extra

Beside the effects found for intake, the research showed some other results as well. Further information about these can be found in the box. Overall it can be concluded that sows on a farm farrow heavier piglets when:

- Gilts are introduced via a quarantine procedure
- Sows are housed in groups
- There is no use of prostaglandins at farrowing
- Sows are fed with lactation diets from weaning to insemination
- Hygiene on the farm is very good

In theory, if all of these factors are combined this will result in a piglet birth weight 442 grams higher compared to a farm that:

- Does not apply quarantine
- Does not use group housing
- Uses prostaglandins at farrowing
- Feeds sows gestation feed in the insemination period
- Has an average farm hygiene

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TOPIGS Canada Exports to Japan



Z Line GGP's for Japan

TOPIGS genes are in demand around the world, including Japan. On March 20, a group of 129 Great-Grand Parent animals left the TOPIGS Manitoba quarantine for dispatch to Japan via Chicago O'Hare airport. The high health Z-Line Dutch Yorkshire and N-Line Dutch Landrace animals originated from the Green Ash nucleus, while the Tempo terminal boars originated from the TOPIGS boar nucleus at Kipling. Both of these farms are located in Saskatchewan.

After an initial importation from a high health nucleus in The Netherlands in March 2009, the Japanese have been very impressed with the type and quality of the TOPIGS lines. The 2009 importation consisted of TOPIGS 20 gilts. This importation of GGP animals from Canada will form the base of the nucleus breeding program in Japan. Health requirements are among the strictest of any country. Meeting this requirement was not an issue for the TOPIGS farms. After lengthy studies and consideration of various genetics companies, the high meat quality and productivity that is second to none, made TOPIGS a clear choice.

Some of the key points that have impressed the Japanese buyers are:

- TEMPO and TALENT boars fulfil the Japanese requirements and offer the advantage of extra vitality & litter size as well.
- TOPIGS carcasses meet requirements that are very important for the Japanese market such as the freshness, degree of fat trimming,

weight range and uniformity, amount of purge (no PSE), quality of meat and the consistency of each piece.

The importation to the Japanese farm was successful. Some comments from the buyer were:

"I would like to inform you that the imported pigs in Japan left the quarantine and arrived safe and well at the farm of destination. We are very satisfied about the quality and the care you have given during transfer from Canada to Japan. We are surprised our pigs are not stressed at all: they seem to be very relaxed and eat extremely well - something we are not used to."

Successful importations such as this will surely lead to more TOPIGS high quality genetics being supplied to the world in the future.



Loading for Japan export

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Factors that influence piglet birth weight:

- Litter size: every 1 piglet extra per litter decreases piglet birth weight by 30-50 grams
- Cycles per year: every 0.1 litter extra per year decreases piglet birth weight by 56 grams
- Feed intake during the insemination phase: 1 kilo extra feed intake per day increases piglet birth weight by 45 grams
- Gestation phase feed intake: 1 kilo extra feed intake during gestation increases piglet birth weight by 1.2 grams
- Higher levels of intake of digestible lysine during the gestation phase tends to increase piglet birth weight

- Higher levels of crude fat intake by the sow during the lactation phase increases piglet birth weight

Trends that give increased birth weight:

- Quarantine gilts (+39 grams)
- Group housing (+61 grams)

Trends that give decreased birth weight:

- Use of prostaglandins (-41 grams)

Producer Profile: Ezra Martin and Bart Claasse



Top Pi sired pigs at Bart's

Ezra Martin purchased his farm near Dundalk, Ontario and built his sow barn in 2003. He purchased his farrowing crates and dry sow stalls from Bill Claasse of Phelpston. Bill had made a decision to discontinue running a farrow to finish sow herd. With his son Bart leaving the farm for University, having a wean-to-finish enterprise required less labor and seemed more appealing. Bill and Ezra struck an agreement where Bill would purchase Ezra's weaned pigs and the arrangement carried on for several years.

In February 2006 Bart made the decision to come home and take over the farm. The arrangement with Ezra carried on until the summer of 2009. With prices being bad and the health of the sow herd pulling down production Ezra and Bart decided to depopulate both the sow barn and the wean to finish sites.

After careful consideration of several genetic lines, Ezra made the decision to go with TOPIGS 40 gilts as his sow line. The ease of management, robustness and productivity would be beneficial to his operation. Several options were available in boar lines. One of the options that was particularly appealing was the TOPIGS Top Pi boar. The Top Pi is a purebred Pietrain known for high lean yield and muscling qualities. Bart already knew about the Top Pi from talking to his Uncle and cousin. They are using the same combination of the Top Pi on the 40 line sow in Holland with good success. Ezra had a lot of trust and confidence in the total TOPIGS program and in August of 2009 his 240-sow unit was stocked along with 12 Top Pi boars.

Several things changed with the new herd, not only had the genetics and health improved, but Ezra decided to go to a batch farrowing system. He is now farrowing a group of 20 gilts every second week rather than a continuous farrowing. This gives him a larger volume of piglets to sell and saves on delivery costs, with the finishing site being an hour away.



Ezra Martin sow barn



Top Pi boars are long and lean

Ezra is happy with the TOPIGS 40 sows. They return to estrus very quickly and breed well. The Top Pi boars are excellent breeders. Gilts are weaning over 10 piglets and weights from the gilt litters have been averaging over 6 kilograms at 21 days. Growth in the nursery has been over 500 grams Average Daily Gain in 42 days. The pigs in the finishing rooms look good and will be marketed to Quality Meats in Toronto. Bart is about 3 weeks from shipping his first market hogs, and judging from the type of hogs he has, he is expecting a very good grade and yield with a high index.



Top Pi x 40 line piglets

TOPIGS Genetics: top 25% of farms wean average 30 piglets

The top 25% of farms with TOPIGS genetics weaned an average of 30 piglets per sow per year in 2009. This emerged from the technical results of 951 Dutch farms with a total of almost 409,000 sows. The top 25% of farms (238 farms) accommodate almost 112,000 sows. The average figure for all farms was 27.7 weaned piglets per sow per year.

In 2009, two farms weaned more than 33 piglets per sow per year. Seven farms achieved more than 32 piglets. Almost 100 farms (98) in the TOPIGS dataset weaned more than 30 piglets per sow per year.

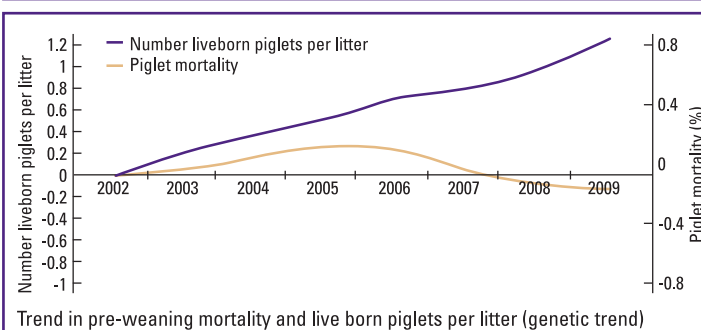
Despite the increased production per sow, piglet mortality has not risen. The average piglet mortality was 12.1%, the same as in 2008. For the top 25% of farms the mortality was even lower than the average, namely 11%.

These figures demonstrate that TOPIGS' balanced breeding is effective. Paying good attention to vigor and piglet survival in the breeding allows the sows to farrow bigger litters without an increase in piglet mortality. Together with good management on the multiplier farms, this contributes to realizing the agreements made in the covenant with the Dutch government about piglet mortality.

The results have been compiled using overviews from the sow management system submitted by Dutch sow managers. Data from farms that breed their own sows, linked to the Pigbase system of TOPIGS, were also included in the overview.

	Number of farms	Average number of sows present	Farm litter index	Weaned piglets per sow per year	Live born per litter	Pre-weaning mortality (%)	Weaned piglets per litter
Average 2009	951	430	2.39	27.7	13.3	12.1	11.6
Top 10% of farms 2009	95	489	2.46	30.8	14.0	10.6	12.5
Top 25% of farms 2009	238	469	2.46	30.0	13.7	11.0	12.2
Average 2008	1,005	412	2.39	27.3	13.1	12.1	11.4

Technical results TOPIGS sows 2009



How to Play

Please answer the questions in our Insider Quiz. All the answers are in this newsletter. Then fax, mail or email your answers along with your name, address and phone number. Entries to be received by July 31, 2010; winners will receive a pair of TOPIGS suspenders. If you win, the TOPIGS rep in your area will deliver the prize.

Employees of TOPIGS and their subsidiaries are not eligible.

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TOPIGS INSIDER Quiz

How many TOPIGS animals were exported to Japan in March 2010? _____

What boar line does Ezra Martin use on his farm? _____

How many farms weaned more than 30 pigs/sow in 2009? _____

How many Dutch pig farms participated in the piglet birth weight study? _____

Name: _____

Farm Name: _____

Address: _____

Phone #: _____

Top Ten Quiz Entries

The winners of the Quiz from the last issue are as follows: Joe Wurz, Keho Lake Colony, MB, Ryan Waldner, Rosebank Colony, MB, Levi Waldner, Blumengart Colony, MB, Ruben P. Hofer, Plain Lake Colony, AB, Nigel Waldner, Grass River Colony, MB, Levi W. Hofer, Springdale Colony, MT, Debby Entz, Roseglen Colony, AB, Tom Wurtz, Kingsbury Colony, MT, Johann J Wurz, Albion Ridge Colony, AB, Josiah Waldner, Interlake Colony, MB

Each winner will receive a TOPIGS mini Thermos or flashlight (random draw). The TOPIGS rep in your area will deliver the prize.

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