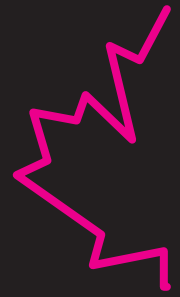


THE INSIDER

FALL 2021 EDITION

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WWW.TOPIGSNORSVIN.CA



TOPIGS NORSVIN INVESTS IN A NEW NUCLEUS FARM IN CANADA

Topigs Norsvin's latest investment is a new nucleus farm in Manitoba, Canada. This will be the single largest investment in the history of Topigs Norsvin. The new nucleus farm will be part of a bigger plan to upgrade and expand the nucleus capacity in Canada. The overall project also includes renovations and expansions of several existing nucleus locations. With this investment, Topigs Norsvin will further accelerate the genetic progress of the Z-line and E-line as well as increase the production capacity of the D-line. The new farm will become operational in the summer of 2022.

One of the innovations of the new nucleus is to implement group gestation and loose farrowing. The objective is to be completely in line with future Canadian animal welfare legislations. This also means the genetic lines will be selected for this type of housing. A high level of biosecurity will be another important aspect of this project. The new nucleus is located in an area with low pig density. In combination with high biosecurity protocols, strict transportation rules, and rigorous levels of health monitoring, the highest health status will be maintained ensuring a continuity of supply for the world.

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Unlock the potential

Topigs Norsvin invests in new nucleus in Canada continued...

TIPS TO OPTIMIZE FERTILITY RESULTS

by Julia Linck Moroni

Fertility rate is one of the key drivers for herd efficiency. However, it is not easily managed as it is influenced by a wide variety of factors. Nevertheless, understanding and respecting basic management practices can lead to highly productive herds.

Gilt rearing is the first crucial point to be considered.

Gilts are the foundation of efficient breeding herds. Proper gilt development and management have a significant impact on the lifetime performance of all females. Therefore, a few factors should be considered.

1. Puberty stimulation: Puberty stimulation contributes to early puberty identification and, therefore, maximizes sow lifetime productivity. Invest time on exposure to mature boars twice a day for optimal results.
2. Feeding gilts during rearing: An ideal gilt development program ensures controlled and steady development of gilts. For more information and recommendations, visit our TN70 Manual.
3. Breeding goals: To unlock the maximum potential of TN70 gilts, body weight development and physiological age should be respected. The goal is to breed gilts within 160 to 170kg on their second or third estrus (skip-a-heat management).
4. Flushing period: A period of 10-14 days minimum of flushing diet before service in individual stalls must be respected to optimize follicular development and embryonic survivability.

Feed management and body condition must be optimized throughout sows' lifetime. Nutrition is one of the key components to ensure the modern sow achieves her genetic potential for reproduction. The sow feed intake directly influences sows' metabolic state, follicular development, oocyte quality, and embryonic survivability. Keeping the proper body condition during the first gestation and lactation of sows has an enormous impact on their lifetime productivity. The goal is to ensure at least 60 kg of gain during the first gestation and prevent more than 6% weight loss during the first lactation. Look for the TN70 Manual for more information on recommended sow diets.

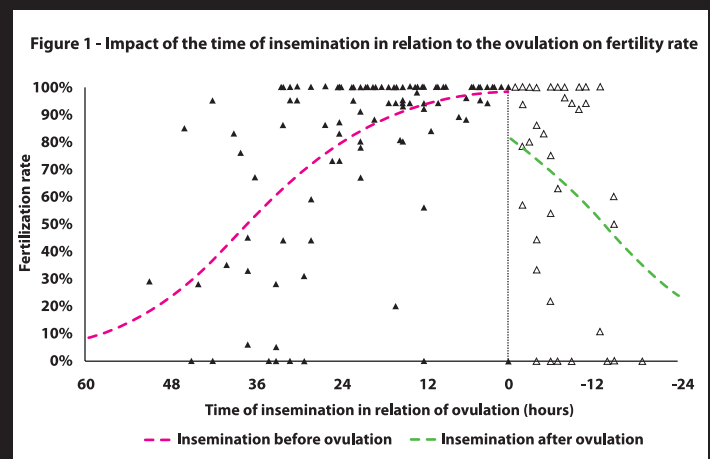
Stimulate sows with at least two quality teaser boars, preferably twice a day. The physical presence of the boar and its pheromones are extremely important in at least four stages of a sow lifetime: during puberty induction, after weaning, for estrus detection and during artificial insemination. Therefore, the boar presence not only allows estrus identification but also stimulates follicular growth and maturation. To optimize the use of boars, a few points deserve adequate attention.

1. Quality and health of the boars. Plan and establish a boar replacement program that provides a consistent supply of quality boars. For the sake of pheromone production, the boars need to be mature (older than 10 months) and in good health condition.

With the new nucleus farm and the investments in the existing farms, Topigs Norsvin expects to meet the growing demand for Topigs Norsvin genetics, particularly in North America. It will also lead to accelerated genetic progress and faster dissemination of this genetic progress to our customers worldwide.

2. Rotation and housing of the boars. Do not expose the same boar more than once a day to the sows, and do not use the same boar for more than one hour as they tend to get tired and uninterested in the sows.
3. Boar housing. Boars should be housed elsewhere in the barn but the breeding room. For optimal estrus expression, the presence of the boar should act as a surprise effect for the sows.
4. Provide a good environment for the boar to work. Keep the hallway clean and get rid of feed scraps, as it may act as a distractor.

Determine the optimal time for insemination. The closer to ovulation the breeding is performed, the better the results are. The key for successful insemination relies on good boar usage and detecting the onset of estrus. Insemination within 24 hours before ovulation results in higher fertilization rates. Insemination performed too early or too late results in low fertilization rates and may be detrimental to the reproductive tract of the sow (Figure 1.). During insemination, give careful consideration to hygiene, provide adequate stimulus and allow enough time for semen dose uptake.



Temperature control of semen doses is critical. Temperature fluctuations in storage and handling must be avoided. Establish a good management of semen doses upon receipt and guarantee the quality of storage unit. Keep doses organized in the storage unit and, preferably, doses that leave the unit and are not used during the insemination process should not return to the storage unit.

In conclusion, sow's reproductive performance and lifetime productivity depend on a wide variety of factors. To achieve optimal reproductive performance, we must ensure that all herd reproductive managements are being respected and cautiously applied on a farm's routine. After all, the difference between average and high-performing herds lies in the details.

PRODUCER PROFILE - FERME PORCINE HP INC.



New gilts



Litter in farrowing

In 2006, Dana Hafford and Sébastien Paré acquired a commercial barn, which is a 200 sows farrow to finish operation located in Compton, Québec (south of Sherbrooke). They run the farm with their three children Loic, Maélie and Naomie. The family owns 250 acres of land, 100 of which is used to generate a portion of their grain requirement on site and 150 acres is in the woods, including a small maple grove of 700 taps for their own fun during spring. They are able to produce their own feed on site as it is equipped with an on-farm mix mill.

In 2008, their excellent herd management allowed them to start producing certified RWA (raised without antibiotics) pork and fed without animal by-products (WABP) for duBreton Inc. "We figured why not produce healthier pork while improving profitability of the farm!" said Dana and Sébastien.

After 10 years of antibiotic-free production, older barns that needed renovation and a higher standard of animal welfare coming, they needed to re-evaluate their situation. In the spirit of always doing what's best for their animals they met with their buyer, duBreton Inc. to evaluate the possibility of changing their production to "duBreton Rustic pork." duBreton Rustic Pork producers need to follow their specified raised standards book. This one follows the highest standards for different public welfare program certification such as "Certified Humane Raised and Handled® and Gap 5-Step.®"

These programs are in place to allow the public to have a full understanding of how the animals are living and treated on farm. duBreton Inc. is the leader in North America on raising high level

welfare pork and selling worldwide "Niche Market Pork Meat" such as organic, and humanly raised animals which are audited by several third parties.

In 2019, they undertook a farm depopulation and a complete renovation of their buildings. The nursery building has been modified into a new gestation barn with group sow housing on bedding. The sows are fed using an electronic system, Nutri-Sow (Monitrol), which allows better control of feeding to accommodate the sows needs and body condition. A major extension of the new gestation barn allowed extra modifications to be made to create free pens for farrowing, also fed by Nutri-Sow technology. The other existing building, previously housing the sows and the finishing pigs, has been renovated to become the new wean to finish barn, each room uses an electronic sorter scale to select the pigs ready for market.

Their farm is still a farrow to finish operation but repopulated with Topigs Norsvin genetics housing 170 - TN70 sows bred with Duroc semen. Facing their new reality, Dana and Sébastien mention "we were looking for a good maternal sow requiring minimal interventions". In October 2019, the first TN70 gilts entered the barn to begin the repopulation of the farm for a perfect synergy. So far after a year and a half of production they are very satisfied with the animals. "Sows have very good conformation and do very well in our bedded loose housing gestation. They are exactly what we wanted... very maternal, calm sow, with excellent milk production. They are performing very well in our system with 30 to 35 days weaning age. Along with the loose farrowing system

CONTINUED ON PAGE 4...

Producer Profile - Ferme Porcine HP Inc. continued...

which has its own challenges, we are quite happy with sows that are weaning 11.53/litter in our startup. We can already see the potential with the TN70 when it becomes an average parity sow herd" said Dana.

We wish you all the best with your new herd and new production system. The herd startup has gone very well and Topigs Norsvin Canada is excited to work with you to help improve your production even more in the future!

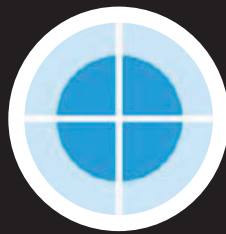
ABOUT AIM WORLDWIDE



Boar and sow fertility characteristics



Semen quality parameters



Extender



Insemination techniques



Biosecurity

AIM Worldwide stands for Artificial Insemination Management Worldwide. AIM is an international organization focused on semen production to optimize reproduction and gene transport in the swine industry. It specializes in technical reproduction support services and management support for AI and AI stations throughout the world.

AIM Worldwide provides a valuable knowledge base for Sow Systems and AI stations to access. Our mission is to improve swine reproduction with thoughtful attention to female development and reproductive performance, technically superior production of AI doses, and efficient boar management. We are directly involved in the annual production and sales of over 15 million doses of semen; all produced according to the AIM Worldwide quality standards and procedures.

customers of AI stations within the AIM Worldwide system can be confident that:

- Semen is of the highest quality on many levels. It is the best genetic and technical quality, produced with the newest technology under high biosecurity and strict hygienic semen collection protocols.
- Staff is highly educated and trained professionals. They constantly evaluate production with advanced semen assessment and work with strict quality assurance protocols.
- Semen is processed, filled, and shipped with the best materials and high-quality equipment.
- Order processing and distribution is done with great care and under constant quality control.
- After-sales service is of the highest level. Analysis of fertility parameters, employee training on the job, fine tuning of insemination protocols and fertility management are just a few examples.

- Knowledge and expertise are the spearheads of our enterprise. Specialists for semen processing and male and female reproduction guide our partners in our chain of knowledge that leads to \ improvements in the quality and efficiency of all AI aspects. This results in a higher number of live-born piglets and a higher farrowing rate.

AIM Worldwide is a sister company of Topigs Norsvin, one of the largest companies in the world in swine genetics, our leading R&D position in this field is due to our high standards in reproduction and AI that are driven by the application of economic and quality improving measures.

Thanks to our local presence, we know individual needs and circumstances. A team of local and global support specialists advise and help partners. This enables producers to capture the full potential of Topigs Norsvin genetics which makes Topigs Norsvin the natural first choice for long-term partnerships. We take pride in working together with our partners to find new solutions and to help their business thrive.

AIM Worldwide Global Swine Female Reproduction Specialist Key deliveries:

- Setup and execute plans to improve fertility performance at nucleus and customer farms.
- Provide second reproduction line support towards our local subsidiaries, distributors, and global customers.
- Support the development and introduction processes of new protocols, tools, and products.
- Contribute from a market perspective to the reproduction and fertility research platform.

TOPIGS CANADA INC. WELCOMES JETTE WENNEKES AND JULIA LINCK MORONI



Jette Wennekes

Jette Wennekes is the Junior Breeding Program Geneticist for the genetic nucleus of the TN Tempo and Z-line in Canada. Typically, her work is done from the Netherlands, but for the next seven months she will be working from the head office in Winnipeg with the Topigs Norsvin Canada team. "Even though I'm slightly worried about winter, I'm also very excited to finally be here in Canada, and of course I can now finally meet the Topigs Norsvin Canada team in person" said Jette.

The next seven months will be focused on getting to know all the details of the genetic nucleus farms and Delta Canada. There will also be a lot of farm visits and assisting with a research project at Delta Canada. Upon returning to The Netherlands, Jette will continue her duties as a Breeding Program Geneticist, with the responsibility of monitoring the breeding program of the genetic nucleus farms in Canada.



Julia Linck Moroni

Julia Linck Moroni is the Junior Global AIM Specialist and part of the Global AIM Services team. This team provides male and female reproduction support to clients worldwide. Her primary responsibility is related to female reproduction support, such as best practices for gilt rearing, artificial insemination management, data

analysis, etc. Julia obtained a doctorate in Veterinary Medicine in 2016 at the Federal University of Rio Grande do Sul, Brazil. In 2020, she concluded a Masters in Swine Reproduction at the University of Alberta, Canada. Julia is originally from Brazil, but she will be stationed at the Topigs Norsvin Canada head office in Winnipeg for the foreseeable future.

PRODUCTION EFFICIENCY IN THE FINISHER PHASE

Growth rate and feed conversion are two important traits for production efficiency. We record vast amounts of data on body weight development and individual feed intake throughout the finisher phase. Over the past five years, we have increased the genetic potential for finisher growth rate by 70 g/d and improved finisher feed conversion by 0.20. Taken together, this translates into €9/\$11 margin added per finisher.

Over the past five years, the genetic potential for growth rate has increased by 70 g/d and feed conversion improved by 0.20. This translates into €9/\$11 margin added per finisher.

Reducing losses during finishing is another important aspect of improving production efficiency. We achieve this by selecting against finisher mortality and selecting pigs with a better natural resistance against disease that continue to perform well under health-challenged conditions.

Our balanced breeding approach secures that improving production efficiency goes hand in hand with improving quality. We aim for a better feed efficiency without further reducing carcass fat content, which is important for processing efficiency and primal quality. Furthermore, selection for primal values is part of our breeding goal, which leads to higher yields of the most valuable primals, thereby increasing carcass value.

PIG OF THE MONTH



JUNE

June 2021: Pine Valley Farms

Topigs Norsvin Canada's Top Pig of the month for June is PVP1025 from Pine Valley Farms (Pine Creek Colony) in Manitoba. PVP1025 is a TN70 sow who was born in January 2020. She just farrowed her third litter with another 15 born alive! In both of her first parities, PVP1025 had 15 live born and weaned all 15 piglets in 17 days. Her predicted yearly average is 42.31 liveborn and 39.7 weaned. She is an excellent mother who is ready to wean her third great litter!



JULY

July 2021: Adare Farms

Topigs Norsvin Canada's Top Pig of the Month for July is 8300 from Adare Farms in Southwestern Ontario. This TN70 sow is on her fourth parity, and she keeps improving with age! From her first litter she had 13 born alive and weaned all 13. Her second litter had 15 born alive and she weaned 14 then on her third litter she had 16 born alive and weaned 14. She is currently on her fourth litter where she had 17 born alive and is looking to wean 15 of those piglets! Farm owner Stan Vandenberg and manager Erin White are thrilled with how 8300 is producing and are excited to see what this girl can do next!



AUG

August 2021: Delco Colony

Topigs Norsvin Canada's Top Pig of the Month for August is 4582, a TN70 sow from Delco Colony in Alberta. This beautiful sow was purchased from the Kingdom Farms multiplier unit and has just finished weaning her third parity where she produced 18 TB, 15 BA and weaned them all with her gorgeous underline. Her BA average is 12.7 and has a piglet death rate of just 0.3. This is another great TN70 producer!

FEED CONVERSION RATE AND FINISHER PRODUCTION EFFICIENCY

Over the last few months, the prices of raw materials worldwide have increased rapidly. Reasons for this are environmental and weather effects, worldwide trading, and increased demand for raw materials. These developments will speed up the discussion on efficiency in pork production and especially in the finisher part.

The major contributor to the total costs in pork meat production is feed costs. Therefore, we need to focus on feed and feed efficiency in the entire chain, especially in the finisher phase.

A small change in FCR does not seem to be significant. However, if we calculate this change for finishers produced annually, it makes a big difference in the feed costs per year. For example, we strive as Topigs Norsvin to deliver 30 finishers per sow per year, which means a decrease in FCR of 1.4% per year genetically, and so we will save more than 90 kg feed per sow per year.

LOWER MORTALITY IMPROVED PRODUCTION EFFICIENCY

By Ron Hovenier, Breeding Program Manager

Mortality has an important impact on the economics of a finishing unit as it reduces the amount of output while fixed costs and part of the variable costs have already been made. Costs made for barn space and medication, but especially the cost of the piglet and feed, are not compensated by sales.

On a global level, lowering the nursery and finishing mortality by 1% reduces the cost of production of a finishing pig by €0.40 (\$0.47) to well over €1.50 (\$1.77), depending on the moment of the loss.

A few things impact the financial loss: fixed costs of the empty space in the barn, variable costs like medication, but especially the cost of the piglet and feed. The older the pig when it dies, the more feed has been consumed, which is the main reason for the range in financial impact given above.

As Topigs Norsvin, we select against mortality, not only for economic reasons but also due to animal welfare and demands from society. And although genetic selection is not easy (heritabilities are low, accurate data collection is complicated), we still manage to make genetic progress and reduce finishing pig mortality by using all data available, including DNA information and state-of-the-art statistical software.

Information below shows the relation between FCR and cost price in the finisher phase. A better FCR, so more efficient use of feed, is linearly correlated with cost price. A lower FCR will result in lower costs per finisher and higher profit.

How it is calculated:

90 kg less feed needed

- A genetic progress of 1.4% in FCR per year equals an FCR improvement from 2.40 to 2.37 = **0.03**.
- Finisher phase is from 30 to 130 kg = **100 kg gain**.
- 0.03 FCR improvement x 100 kg gain during finishing = **3 kg** feed saved per finisher.
- With 30 finishers delivered per sow per year, this results in $30 \times 3 \text{ kg} = \mathbf{90 \text{ kg feed less}}$ needed per sow per year for her offspring in the finisher phase.



Come talk to us at Le Porc Show.

Disclaimer

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Total Swine Genetics Inc.
Tillsonburg, ON
Stuart De Vries
(800) 844-9913

Sunrise Genetics
Amherst, NS
Mike MacDonald
(902) 661-7883

Carlo Genetics Inc.
Ste. Anne, MB
Katrin Braasch
(204) 371-0411

C & M Genetics
Lucan, ON
Dr. Corneliu Oltean
(888) 259-7594

CIPQ Inc.
Saint-Lambert de Lauzon, Québec
(418) 889-9748

INSIDER QUIZ

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 to: Fax: 204-489-3152 or Email: info@topignorsvin.ca

Entries are to be received by **November 30, 2021**. The *first 10 entries drawn with the correct answers* will receive a \$20.00 gift card. The Topigs Norsvin rep in your area will deliver the prize. Employees of Topigs Norsvin and their subsidiaries are not eligible.

1. Ideally how many times a day should sows be stimulated by teasers boars?
2. What is Jette Wennekes role at Topigs Norsvin?
3. After their repopulation, how many Topigs Norsvin sows does Ferme Porcine HP Inc. have?
4. How many born alive did sow 8300 from Adare Farms have in her second litter?

Name:

Address:

Phone #: Fax #: Email:

Topigs Norsvin INSIDER Quiz Winners

Winners from the June 2021 Winter issue will receive a \$20.00 gift card. Eli Waldner, Swift Current, SK; Adam Waldner, Lauder, MB; Anna Marie Waldner, Evergreen Colony, MB; Dave J. Hofer, Hillcrest Colony, MT; Marie Hofer, Hillcrest Colony, MT; Bertha J. Hofer, New York Colony, AB; Dallas Waldner, New Rockport Colony, AB; Ben Mandel, Pennant Colony, SK; Jonas Martin, Listowel, ON; Ali Campbell, Warwick Township, ON. The Topigs Norsvin rep in your area will deliver your prize. Congratulations!