

THE INSIDER

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Happy, healthy TN Tempo sired grower pigs

TOPIGS NORSVIN CCPS PROGRAM IN MANITOBA (BUT FOR THE WORLD)

In the Topigs Norsvin breeding program, a key component of improving predictability in breeding lines is the use of a Combined Crossbred Purebred Selection (CCPS). Topigs Norsvin has several CCPS farms around the world where they test product performance under multiple environmental and management conditions.

The objectives of a CCPS farm are:

- To gather individual information on crossbred finishers, which contributes to the breeding value estimation of the pure line nucleus animals.
- To objectively compare terminal sire lines in multiple environments.
- To evaluate product performance under (anticipated) market conditions of the future.
- To gather technical information for marketing purposes.
- To function as a model for evaluating total production economics.

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Topigs Norsvin CCPS program in Manitoba continued...

At CCPS test farms, finishers with known pedigrees are produced and identified using RFID transponder tags. Once identified, all activity (especially growth and mortality), at any stage of production, can be recorded easily using a hand-held RFID reader. At 22 weeks of age, all CCPS candidates are off tested. A quick scan of the RFID tag can retrieve all information pertaining to the individual animal including its ID, pedigree, and weight. Back fat and loin depth are measured using an Aloka SSD-500V scanner and recorded in the individual pig's unique database. Individual animals may also be tracked through slaughter to gather data on carcass composition and meat quality traits.

Topigs Norsvin Canada is proud to have one of the top CCPS farms in the world. Blumengart Colony in Manitoba is a modern 600-sow farrow to finish production unit. Using the Topigs Norsvin InGene program, all Great Grandparent, Grandparent and Parent replacements are produced internally (only maternal and terminal semen enters the farm). The Z-line GGP and TN70 females are produced internally using the InGene program and mating advice. Daniel Waldner, along with his production team, have been key components in making this program successful in Canada and by contributing data to the global CCPS program.

Pedigreed TN Tempo x TN70 market hogs are produced for the CCPS program. Typical Canadian commercial barn designs are used to grow the pigs from weaning to slaughter. Blumengart receives semen from the very newest and highest TSI (Topigs Norsvin Selection Index) TN Tempo boars at the same time the TN Tempo nucleus farms receive the same semen. This allows us to have complete commercial data from sires at the same time the boars from the nucleus farms are ready to be selected and moved to AI stations.

TN Tempo boars are tested, and CT scanned at Delta Canada. In Manitoba, Topigs Norsvin has the advantage of a dedicated stud at Carlo Unit 2 and a CFIA approved quarantine at Delta Canada. This allows the entry of new Z-line & TN Tempo boars into Carlo Unit 2 every two weeks, resulting in rapid genetic turnover and faster genetic improvement.



ProSort scale with RFID reader panels



Sorting in the food courts

Since tested boars from Delta Canada were made available in 2019, Blumengart along with many customers have realized the benefits of the program. "Growth of the TN Tempo pigs has increased dramatically since 2019" Daniel commented. "In 2016 our Lifetime Daily Gain was 756 grams and in 2020 the Lifetime Daily Gain was 791 grams. Two factors contribute to this improvement of gain: The genetic improvement of the TN Tempo boars coming from Delta Canada as well as transitioning to the TN70 female. She will reduce days to market 3-5 days minimum. That allows us to ship heavier pigs to market sooner. Our days from birth to market with a 110 kg carcass (138kg live weight) is 176 days. Our growth, grading and Feed Conversion have never been better, and it continues to improve." In 2020 over 30 pigs/sow were marketed to the Maple Leaf plant in Brandon, local hog sales and InGene gilts kept as replacements.

Each year, Maple Leaf Foods awards the top producers in various categories. The excellent growth allowed Blumengart to market heavy hogs and they were awarded first place with the heaviest average carcass weighing in at 111.12 kg. They placed second in the Overall Signature Award, just behind Springfield Colony, also using the TN Tempo boar. Of the 9 awards categories and 45 producers recognized, Topigs Norsvin customers held 24 positions or 53% of those categories.

"We're not only doing well in grow/finish and carcass results, but weaning 31.69 pigs/sow in 2020," added Daniel. "We are always striving to do better in all areas, and in 2021 we will really focus on weaning more pigs that are of the consistent quality like we have now. The CCPS and InGene programs are working, as we see the results first-hand. Our genetic lag is minimal, and performance is trending upward. In 2020 our CCPS pigs averaged 128.5kg off test at 162.4 days of age. That's 791 grams lifetime daily gain."

It is not only Topigs Norsvin customers in Canada that will reap the benefits of the data collected at Blumengart and from CCPS farms around the world; TN Tempo boars from Delta Canada are exported to many countries. Accurate and high volumes of performance data including the CT scanning is resulting in superior performance at the commercial level for Topigs Norsvin customers around the world.

TN TEMPO FEEDING TIPS FROM CHRIS OPSCHOOR



Chris Opschoor

Chris Opschoor is Manager Global Nutrition Services of Topigs Norsvin Feed Group International, and provides advice to feed producers, advisors, and our customers. The advice of his team is focused on the best feeding quantity and quality to unlock the maximum potential of Topigs Norsvin genetics. In the last years, TN Tempo has drastically changed into a boar that is known for achieving amazing results. The nutrient requirements of TN Tempo offspring have changed particularly due to improved efficiency and higher growth rates, especially in the last part of the finishing period.

1. TN Tempo offspring have a good daily feed intake. To determine the adequate levels of nutrients like energy and SID lysine per kilo of feed is monitoring of the feed intake key to achieve the best results in technical as in economical way. For example, we see differences in feed intake between the corn soy and the wheat barley markets between the 200 – 300 grams per day! In general, lower intake per day needs different specs than animals that eat more.

2. Ensure proper intake of lysine per day at the end of the finishing phase to unlock the genetic potential. Due to the fast progress in daily gain in the TN Tempo over the last 5 years and the combination with the TN70, support of a higher protein deposition is required, particularly after 80 kg live bodyweight. In the end growth stage, there is more to gain! In the graph it is clearly shown how the growth curves differ when TN Tempo is combined with F1's other than the TN70.

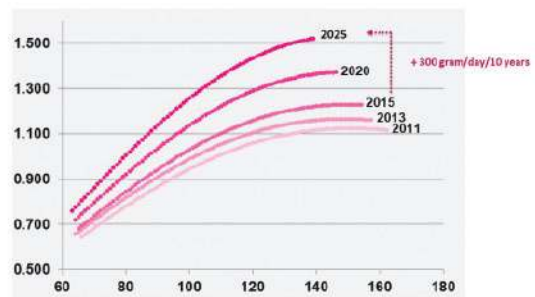
3. Check the levels of vitamins and minerals to support the high daily gain of the TN Tempo offspring. Due to the improved feed conversion, daily intake of these nutrients is even more crucial than

in the past. From data of the Research and Development farm of Global Nutrition Services we see an average feed conversion ratio below 2.30 over a one-year period. This means that daily intake of vitamins and minerals need to be adjusted per kilo feed to support this fast growing, lean animal!

4. The use of functional fiber is preferred to support gut health in combination with the advantage of the high daily intake capacity of TN Tempo offspring. Adding fiber, i.e., sunflower, soy hulls, bakery by-products, and wheat middling's can help to increase satiety, aid digestion and limit negative impact of rapid hind gut fermentation in older finishing pigs. It is also important to use different type of fibers, fermentable and un-fermentable.

5. Keep TN Tempo offspring in their comfort zone of room temperature to ensure maximum growth rates. TN Tempo sired pigs are high performing with high feed intake levels. Take increased body heat production and stocking densities into consideration (>68kg use 16 degrees Celsius set point). Ensure proper ventilation rates. Please do not be too kind with warm temperatures ...save energy and support maximum gain!!!

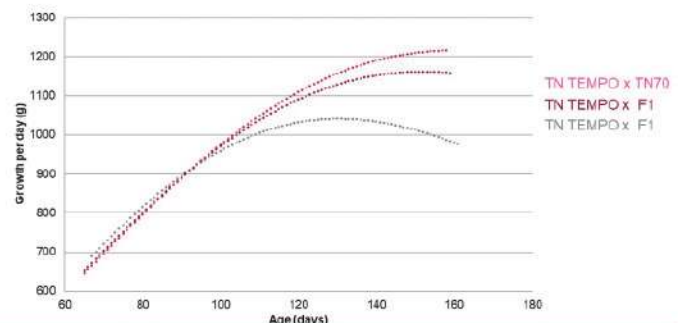
Genetic Trend



4 Topigs Norsvin

Topigs Norsvin

Comparison growth TN Tempo 2020 (TN70) x TN Tempo 2015 (F1)



3 Topigs Norsvin

Topigs Norsvin

PRODUCER PROFILE - SUMMER LAND FARMING CO.



Summer Land Feed Mill

Summer Land Farming Co. is a new colony being built on the southern edge of Vulcan County in southern Alberta. This is the first ever “daughter colony” being established from Clear Lake Colony and is located approximately 8 miles northwest of the new colony site.

Clear Lake Colony currently operates and manages various enterprises. These include a 550-sow farrow to finish operation with 140 farrowing crates, a chicken layer operation, and growing various crops on the arable farmland surrounding the colony.

In the construction phase of the new colony, they have already completed a poultry production barn, a farm shop, and storage for all their field equipment. Currently, their focus is on completing the swine production barn, complete with a feed mill to produce the livestock feed from the crops they grow.

This new swine barn site is being built using a combination of contractors and colony workers. Biosecurity will be of the utmost importance with Danish entries and showers being used to access the clean side of barn. Once completed the barn will have the capacity to house 575

sows. With 140 farrowing crates and 28-day weaning, 28 sows per week will be weaned. Gestating sows will be housed in groups using the Nedap electronic feeding stations. The use of RFID tags allows for precise feeding and management of each sow individually. Sows will be grouped within 5 days of breeding. In the finisher barn large groups of pigs will also be sorted by weight using Nedap automatic sorter stations. To date, the sewer system, pit walls and floors have been completed in the gestation, breeding and farrowing areas. The barn structure will use prefabricated concrete walls with a traditional steel truss roof. Although areas of the farrowing, nursery and finishing barn may still be under construction, their goal is to begin populating the barn in late fall of 2021.

Summer Land Farming Co. has decided to populate their new barn using 100% Topigs Norsvin genetics. The herd will be populated with TN70 gilts and Norsvin Duroc boars. This decision was an easy one, having used the TN70 female at Clear Lake for some time. The combination of a new “state of the art” barn and Topigs Norsvin genetics will help get this barn off to a flying start.



Breeding, Gestation & Farrowing Footprints



Summer Land Feed Mill Interior

SHOWING OUR COMMITMENT TO ETHICAL AND RESPONSIBLE BREEDING. WE FOLLOW CODE EFABAR.

Our society is increasingly interested in the health, welfare, and environmental aspects of pork production. It demands that the pork production chain works with respect for the pig, the environment, natural resources, and the final consumer. Topigs Norsvin follows Code EFABAR. This code shows that we comply with society's demands.

Just like all other chain partners in pork production, we are responsible for delivering safe and healthy food in a sustainable manner. We take this responsibility seriously. That is why we choose to follow Code EFABAR. By embracing this code, Topigs Norsvin underlines its commitment to a balanced breeding approach, which is essential for a pork production accepted by society.

Code EFABAR is a hallmark for responsibility, just as it is for trust. This makes it an important asset in communication with our customers and stakeholders.

Wherever they are located, our customers are increasingly confronted with the demand from consumers and society to show that pork is produced sustainably. Reducing the impact on the environment, high animal welfare, and guaranteed high food safety are non-tangible but essential quality aspects of pork.

To comply, our customers need to show that their suppliers also work in this way. Topigs Norsvin can unequivocally demonstrate that by referring to Code EFABAR. It shows our customers, and their customers, that they can count on a way of breeding that complies with and even excels European Union legislation.

However, Code EFABAR does more than helping you to help your customers. It also has considerable value when we talk to financiers, NGOs, and governments. It proves that we are responsible, trustworthy, transparent, and comply with high standards. This underlines the fact that Topigs Norsvin is a committed and prudent company, which is aware of society's concerns and takes these seriously.

Finally, it is also a clear signal to current and potential employees that Topigs Norsvin is a company that treats animals in an ethically responsible manner. This is an important factor in people's choice to work for a company like ours.

What is Code-EFABAR

Code EFABAR is a code of good practice. It certifies that an organization selects and breeds farm animals in a responsible manner. The code addresses the following topics:

- *Animal health and welfare:*
Improving animal health and welfare is essential to meet society's demands for ethical food production.

- *Food:*

Breeding organizations work to reduce the risk of diseases being transmitted from animals to humans. They improve resistance to diseases, reduce the use of antimicrobials, and reduce food waste to minimize antimicrobial resistance.

- *Environment:*

Reducing the environmental footprint of food production is a key aspect of breeding best practice.

- *Product quality:*

Product quality is a key focus for breeding organizations. The most appropriate animals in a population are selected for key traits like leanness of meat.

- *Genetic diversity:*

Ensuring a high level of genetic diversity within populations is a prerequisite for responsible breeding programs.

- *Better use of resources:*

Better use of resources is central to Code EFABAR, and can be achieved through techniques like breeding animals with optimal feed use.

Code EFABAR is an initiative of the European Forum of Farm Animal Breeders (EFFAB) and is designed to promote sustainability and responsibility. The code is based on Europe's highly respected legislative framework for food standards and its underlying principles. Breeding organizations who adopt the code commit to practicing responsible breeding.

Code EFABAR's objectives include:

- defining and promoting sustainable and responsible standards for farm animal breeding
- promoting transparency;
- setting standards that first match and then exceed current national and EU legislation;
- a commitment to the continuous improvement of environmental and social responsibility;
- working to meet the United Nations Sustainable Development Goals.

Learn more about the code at www.responsiblebreeding.eu



PIG OF THE MONTH



APRIL

April's Pig of the Month was awarded to sow 1413 from Hihojo who is a Topigs Norsvin Canada multiplier. Sow 1413 is a purebred Z-line sow who was born in December of 2014 and is on her 15th parity! At Hihojo, age is certainly an important factor for culling, but ultimately performance is most important. Over her 14 litters, sow 1413 has averaged 16.9 total born, 15.6 born alive, 9.5% pre-weaning mortality, and 35.5 weaned/year. She has never repeated and always cycles on day four or five. On her 14th litter, she farrowed 16 piglets at 1.4 kg and weaned 13 at 6.7 kg in 21 days.



MAY

May's Pig of the Month was awarded to sow 5304CD from Kingdom Farms Leshier. She is a purebred Z-line sow with 17 functional teats and was born October 14, 2016 at our maternal Genetic Nucleus, Paradise Valley. She has just weaned her tenth litter this month; producing 18 TB, 18 TA and weaned 18, that's a triple 18! Her lifetime averages are 18.3 TB, 16.0 BA and 14.6 weaned per litter. She has been a great producer and looks excited to do another round.

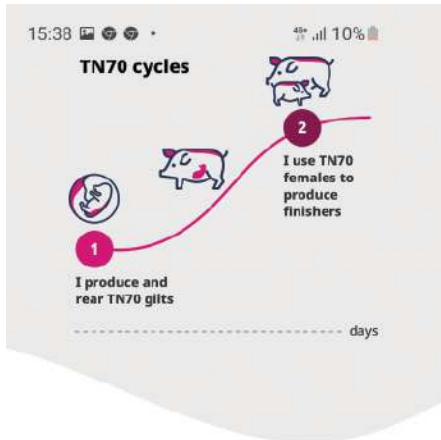
CIPQ INC.

To better serve Quebec producers, Topigs Norsvin Canada Inc. is proud to announce that in the early days of July, the first Norsvin Duroc boars will enter the quarantine at the CIPQ Inc. boar stud. These boars should be available for semen sales sometime in August 2021. For more information, contact our Quebec representative at 418-551-1142 or at andre.lavergne@topignorsvin.ca.



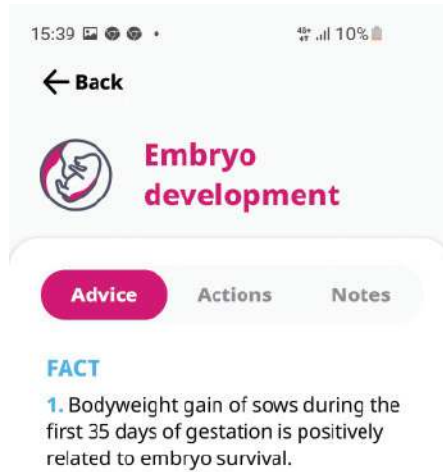
TN70 APP

Something Innovative is coming soon. Stay tuned...



Welcome,
Choose your interest

- 1 I produce and rear TN70 gilts >
- 2 I use TN70 females to produce finishers >



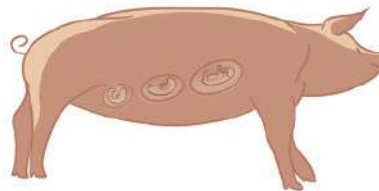
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Embryo development

Advice Actions Notes

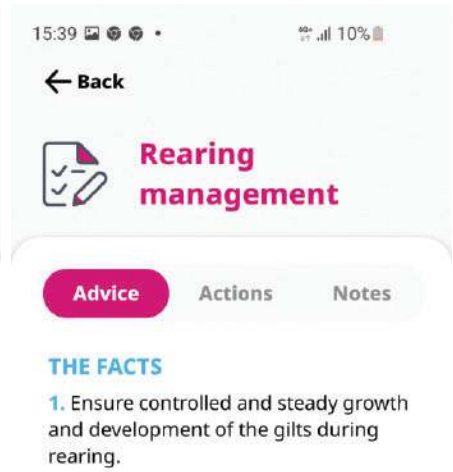
FACT

1. Bodyweight gain of sows during the first 35 days of gestation is positively related to embryo survival.



ADVICE

1. Ensure maximal embryo survival by focusing on the sow's weight gain between insemination and day 35 of



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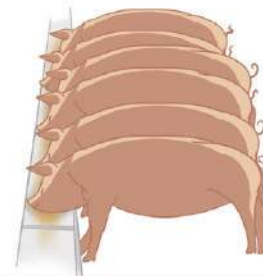
Rearing management

Advice Actions Notes

THE FACTS

1. Ensure controlled and steady growth and development of the gilts during rearing.

2. Optimize the animals' reproductive performance and longevity by improving bone and leg quality.



ADVICE

1. Check weight development of TN70 gilts (see table 1).

2. Feeding management

The TN70 gilt can be fed ad libitum during the rearing period, as long as the following conditions are met:

- A minimum of three specially developed gilt rearing diets are fed (see tables 2 & 3).

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Amherst, NS
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Carlo Genetics Inc.
Ste. Anne, MB
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(204) 371-0411

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

CIPQ Inc.
Saint-Lambert de Lauzon, Québec
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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 **August 31, 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.

- How many sows will Summer Land Farming Co. be able to house?
- What is used to support TN Tempo sired pigs gut health?
- What does CCPS stand for?
- How many days does it take market hogs to reach 138kg live weight at Blumengart Colony?

Name:

Address:

Phone #: Fax #: Email:

Topigs Norsvin INSIDER Quiz Winners

Winners from the March 2021 Winter issue will receive a \$20.00 gift card. Paul Mandel, Armada Colony, AB; Gabriel Hofer, New York Colony, AB; John K Albrecht, Albrecht, ON; Leon Weber, Listowel, ON; Ken Hofer, Beechy Colony, SK; Travis Wipf, Vanguard Colony, SK; Paul Wollmann, Poplar Point Colony, MB; Jayce Waldner, Tri Leaf Colony, MB; Mark J Kleinsasser, Kingsbury Colony, USA MT; Eli Wipf, Elk Creek Colony, USA MT. The Topigs Norsvin rep in your area will deliver your prize. Congratulations!