Meeting your sows genetic potential: How to maximize your total born to maximize your profits

Written By: Dr. Chris Deegan

There are many areas to work on to help maximize the number of pigs out the door of your sow farm; decreasing prewean mortality, increasing farrowing rate, decreasing stillborns or maximizing your total borns. This article will be focused on ideas and tips on how to make sure you are meeting your females potential and maximizing her total born.

Gilts:

When it comes to getting the most pigs out of your females, it all starts with two key areas in developing your gilts. The first is keeping the average genetic index of your heard high and the second is proper development of gilts before they are bred.

Genetic development in our industry happens at a very quick pace. To make sure your farm is keeping ahead of the times, having an appropriate sow turnover and bringing in new breeding stock routinely is very important for maximizing your totalborn. If you can maintain a average herd turnover of around 55% that will help assure you are maintaining a high index level in your farm. It is also important to keep in contact with your genetic partners to see what work they are doing on developing their genetic lines as well as any new production strategies they have for their genetics to maximize their productivity.

As important as bringing in new stock, is correctly developing the gilts you have. When it comes to gilt development there are 3 key areas; health, maturity and feeding. When it comes to health, the most important area is proper acclimation of your gilts to your farms “bugs”. This can be done in many ways but is broken down into either direct exposure or vaccination, and most gilt acclimation protocols have a mixture of both. When considering how to approach exposure it is best to weigh the pros and cons of natural exposure versus vaccination. Natural exposure through exposing to cull sows or biological material from your farm does a good job of guaranteeing exposure to all bugs as well as getting immunity to the exact strains on the farm, but exposing them can lead to lasting damage from disease. By implementing use of vaccines before exposure or in place of exposure, it can help mitigate these negative affects. With vaccine technology developing very quickly, especially in the autogenous field, working with your vet to implement new vaccine strategies can help mitigate effects of direct exposure and still get you great protective immunity in your gilts before bringing them onto the farm.

Another key area is making sure your gilts are at the correct age and maturity for their first breeding. First is making sure you have a high level of heat no services (HNS) in your gilts before breeding. We recommend at least 80% of your gilts having a HNS before they are bred, but the closer you can get to 100% the better. As always, it is also very important to be working with your genetics partners and being aware of their recommendations for days of age at first breeding, and working back through your isolation/exposure protocols as well as a HNS and two weeks of crate breaking to determine what age gilts you should be purchasing.

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Our Philosophy

To provide our clients with the highest professional service. To achieve this we invest in our employees and instill in each of them a strong sense of customer service and commitment. We believe this personal relationship allows us to work with our clients to the best of our abilities, and is the foundation of Suidae Health and Production.

Last focus area for gilts would be proper feeding and body condition score (BCS) control before breeding. Feeding gilts can be a juggling act when you are trying to find a balance between keeping their BCS controlled but also not limit feeding them while they are still growing as well as developing eggs for ovulation before breeding. It all comes down to proper timing of each. While most gilts are free fed in a pen GDU set up, this can lead to an overconditioned gilt. So working with your genetic partner and veterinarian to get creative with the facilities you have to prevent overconditioning before having a HNS is key to maximzing your gilt production.

Now that we talked about not overconditioning your gilts before their HNS, I am going to now tell you to feed the gilts as much as they can eat between their HNS and their first breeding. This is the period of time that we are creating the flush ovulation in the gilt in hopes she will ovulate as many eggs as possible to maximize her total born in her first litter. This amount usually ranges from eight to ten pounds of feed a day per gilt.

Sows:

To increase your total born in your sows, probably the most important aspects to look at are your semen quality and age being used as well as how the sows are being fed.

The semen you use on your farm is very important for maximizing the productivity of your sows, and this comes down to proper handling of the semen, and making sure you have good quality and fresh semen being delivered and used on your farm. While most semen is stored in 7 day semen extender, there is evidence showing that semen used after 4 days of collection, can have a negative effect on your total born. I would recommend using semen 2-3 days post collection as much as possible and 4 days post collection being your target for the oldest semen used. Working with your boar stud to arrange doses delivered and delivery dates around your breed heavy days can help to keep your semen as fresh as possible and maximize your total born. Proper handling of semen is just as important as the semen being used. Make sure you are storing the semen in a specific semen cooler and tracking temperatures daily. Always transporting semen in a cooler or insulated lunch box to maintain that temperature can help maintain higher quality semen for longer as well.

Feeding your sows through lactation and in their wean to first service interval plays a very important role in your total born. It has been shown that sows who lose a fair amount of body condition in lactation have been shown to have a lower totalborn average on their subsequent litter. Working with your genetic partners and veterinarian to maximize the amount of feed you can get into your lactating sows if a very important step to increase the overall productivity out of your farm. Just like in lactation, feeding sows in their wean to first service as much as they can eat will help insure you are creating a flush and maximizing your total born. In this time frame, we have also implemented the use of top dressing dextrose (a sugar) to these sows to not only boost their total born, but also to limit the amount of hard heads, or sows who don't come into heat, as well and had very good results with this.

While there are many different areas to look at to improve your total born and it may seem overwhelming, by working with your veterinarian as well as your genetic partners to improve some of these areas, you can quickly work your way up to maximum production and profitability!

Employee Spotlight

Meet Jennifer Wolf

Hi everyone! My name is Jennifer Wolf. I joined the Suidae team as the Director of Customer Service in December 2014. Prior to joining the Suidae team, I worked for Kemna Auto Center first in Service and then as Finance Manager. As my background shows, I had absolutely no knowledge of the Swine industry and wondered, what the heck I was getting myself into. Since 2014, I have acquired so much knowledge about the industry, product sales and the importance of building relationships with clients, potential clients and co-workers.

A little about me: I am an Algona native, graduating quite some time ago from Algona High School. I continued my education at Briar Cliff University where I received both my BA and MAHRM. I have 2 children who keep me very busy, Sienna (23) and Jasmine (13).

When I am not busy running to Tumbling meets or school functions, I enjoy golfing, spending time with friends and family or just plain relaxing.

Leman Conference Highlites

Several members of the Suidae team attended the 2021 Allen D. Leman swine conference September 20-21st. In addition to attending, Dr. Brandi Burton presented a poster detailing a research 'Evaluating the effect of mixing and half dosing Prevacent PRRS when administered with various other vaccines' the details of which are highlighted in this newsletter. Dr. Burton also participated in a Pig Health Today round-table discussing elimination and control of Mycoplasma hyopneumoniae.

Watch for publication of the highlites from this round table on the Pig Health today app or visit www.pighealthtoday.com

Suidae's summer intern, Madison Durflinger was a finalist for the Morrison Swine Innovator Prize for her project, "Evaluating the efficacy of CURIS Decontamination fogger in a truck cab and in a mock C&D room against PRRSV 1-4-4 L1C variant".

A few of the take homes from the meeting:

PRRS:

The highest risk period for new PRRS introductions is 15-30 days after manure management activities on farms. The rate at which farms are breaking during this time period is much higher than the rate at which farms break outside this time period. The incidence ratio is similar between lagoons and deep pits and across seasons.

Influenza:

There appears to be a benefit to boosting pigs with a heterologous prime-boost over using a single flu vaccine. Autogenous vaccine followed by a prime-boost with FluSure XP provided an advantage in protection over two doses of an autogenous vaccine alone.

Human-like H3N2 responds best to an autogenous vaccine.

Protective titers were observed with up to a 12-week interval between priming and boosting doses of FluSure XP supporting quarterly vaccination against influenza, a commone strategy in US swine herds.

Pre-weaning mortality:

Cross-fostering by birth weight category is beneficial for low birth weight piglets but detrimental for heavy piglets.

Mark Schwartz gave an update on his multi-suckle, common creep method whereby he allows up to 24 sows to nurse pigs as a group and piglets are allowed a common creep area. This method has not yet been statistically proven to improve pre-weaning mortality or wean weights but there is some evidence it improves nursery mortality due to homogenization of the piglets in farrowing prior to weaning. Employee attitudes towards this method of farrowing house management was described as 'incredible' due to the ease of labor. He was also able to show success in eliminating PRRS on a sow farm that was utilitzing the MSCC method.

Research Update

Evaluating the effect of mixing and half dosing Prevacent PRRS when administered with various other vaccines

1 Introduction

It is common to administer multiple injections to piglets around the time of weaning as handling frequency increases. Multiple injections cause extra stress on the piglets and can make it more difficult for those administering the products. Being able to mix vaccines without sacrificing the pig's ability to elicit an immune response to vaccines would make the process more efficient.

The goal of this study was to evaluate PRRS antibody response in pigs when administering Prevacent PRRS separately or mixed with FosteraGold PCVMH, Circumvent G2-PCVM, Circo/MycoGard, Circo/MycoFLEX, and ParvoShield L5E. Additionally, the difference between a full dose and a half dose of Prevacent PRRS was assessed in the same manner.

2 Materials and Methods

The study was conducted in a wean-to-finish barn located in north-central Iowa. Five vaccines were selected to be administered with Prevacent PRRS: Fostera Gold PCVMH, Circumvent G2-PCVM, Circo/MycoGard, Circo/MycoFLEX, and ParvoShield L5E. Within each vaccine group, there were 5 treatment groups: saline, full and half dose Prevacent administered separately, and full and half dose Prevacent mixed with treatment vaccine. A full dose of the selected vaccines was administered per label.

There was a total of 25 treatment groups and 450 total pigs enrolled in the study. On day 0, serum was collected from each pig, the pig was tagged, and vaccinated according to its treatment group. Serum was collected from each pig 9 days and 2, 3, and 5 weeks post-vaccination. Serum samples were analyzed for PRRS antibody response by PRRSV X3 ELISA. Oral fluid samples were collected at each time point and tested for PRRS PCR and, if positive, ORF5 sequencing was requested. All samples were sent to ISU-VDL.

3 Results

There were no consistent differences between mixing and half dosing Prevacent in vaccine groups except Circo/MycoGard group. Pigs administered Prevacent mixed with Circo/MycoGard had 0% PRRS ELISA positives at 2 weeks post-vaccination, whereas the other 4 vaccines and their respective Prevacent treatment subgroups were all above 80% positive. At 3 weeks post-vaccination, Circo/MycoGard groups 3 and 5 (mixed groups) were 35-40% PRRS ELISA positive; however, this is consistent with group 1 (saline) so those results are likely attributed to shedding of Prevacent PRRS within the pen. All other vaccines and their treatment subgroups were above 95% (except in saline groups). At 5 weeks post-vaccination, oral fluids were positive and ORF5 sequence revealed a lateral wild-type PRRSV, so results were not analyzed.

4 Conclusions

This study shows that there was an appropriate antibody response elicited when mixing Prevacent PRRS with various other vaccines that are commonly given at the same time; however, results indicate Prevacent PRRS should not be mixed with Circo/MycoGard. Even though antibody response does not necessarily equate to protection against wild-type PRRS, this study shows the body is able to respond to vaccine in these conditions.

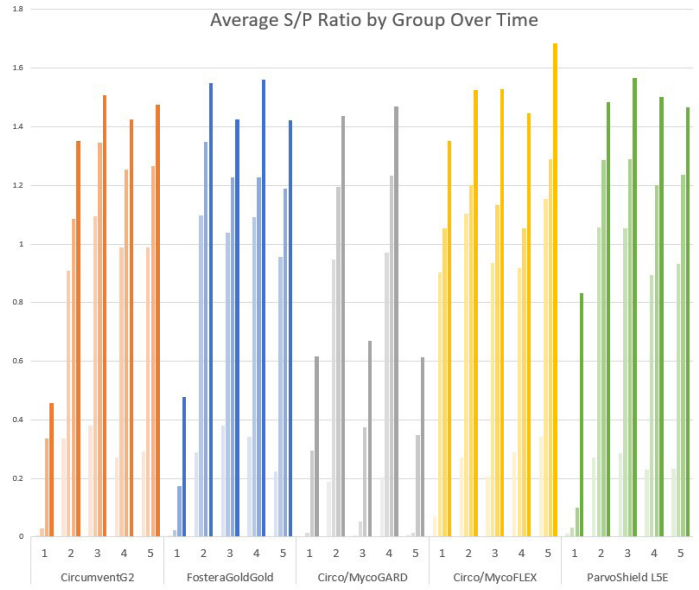

Figure 1

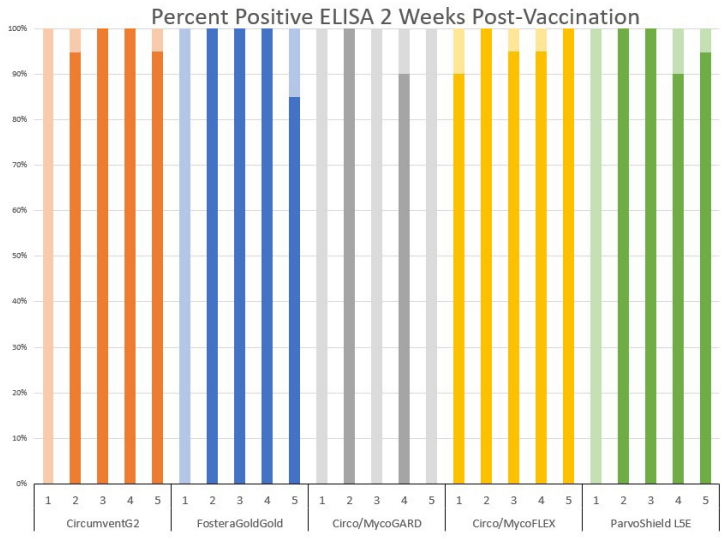

Figure 2

Our Morris office crew grilling their mouth watering pork chops at the Steven's County Pork Producers booth at this year's Steven's County Fair!

Left to Right: *Mick Ekren, Dr. Chris Deegan, Dr. Todd Distad, Nicki Distad, Michelle Corey-Sperr*

Make-Ahead Freezer Breakfast Sandwiches

Prep: 10 minutes | Cook: 10 minutesTotal: 25 minutes | Servings: 12 sandwiches

Ingredients:

18 large eggs

⅓ cup milk of choice

12 English muffins, toasted if desired (use gluten-free if desired)

12 slices bacon, cooked as desired, or 12 ounces sliced ham

12 slices cheddar cheese (omit for dairy-free)

Salt and black pepper

Optional for serving: *Fresh spinach, sliced tomatoes and/or red onion, sliced or mashed avocado, hot sauce, red pepper flakes, etc.*

Instructions:

1. Preheat oven to 350ºF
2. Grease a large, rimmed baking sheet with butter. Set aside.
3. In a large bowl, whisk together eggs and milk. Season with salt and pepper.
4. Pour whisked egg mixture into the prepared baking sheet and bake for 10-12 minutes or until the egg is set and slightly puffed no longer jiggly in the center.
5. While the eggs are baking, place 12 English muffin halves face-up on another large baking sheet. Top each with 1 slice of bacon (cut into 2 pieces) or a slice of ham. Top each muffin with a slice of cheese.
6. Using a knife to cut the eggs into 12 equal portions. Top each muffin with an egg patty and the other half of the English muffin. Allow egg sandwiches to cool for 20 minutes before wrapping each one with foil. Place wrapped sandwiches back on the baking sheet and freeze until solid. Transfer sandwiches to a large plastic zip-top bag or another freezer-safe container for storage.
7. Store up to 3 months in the freezer.

To Reheat:

From Thawed: Place the desired number of foil-wrapped sandwiches in the refrigerator to thaw overnight before reheating. In a preheated 350ºF oven or toaster oven, heat the foiled-wrapped sandwiches for 20 minutes or until heated through.

To Reheat in the Microwave: Remove foil from the thawed sandwich(es). Wrap sandwich lightly in a paper towel and microwave for 1 ½ – 2 minutes or until heated through.

From Frozen: Place foil-wrapped breakfast sandwich(es) in a preheated 350ºF oven or toaster oven for 30-35 minutes or until heated through.

To Reheat in the Microwave: Remove foil from the frozen sandwich(es). Wrap sandwich lightly in a paper towel and microwave for 3 minutes or until heated through.

Serve with fresh spinach, sliced tomatoes and/or red onion, sliced or mashed avocado and/or hot sauce if desired.

This and other great recipes can be found at: www.therealfooddietitians.com