Research shows the newly reformulated UltraCare® pig starter program delivers:

- **Increased Early Intake:**
  Up to + 15%\(^1\)

- **Improved Early Gain:**
  Up to + 24.3%\(^1\)

- **Enhanced Feed Efficiency:**
  - Early: Up to 11.8%\(^1\)
  - Late Nursery: Up to 4.6%\(^2\)

- **Greater Nursery Exit Weight:**
  Up to 2.7 lbs more (3.4%) at 50 days\(^3\)

*All trials in 2011-2012 compared pigs fed the current UltraCare® pig starter feed program to the new UltraCare® pig starter feed program, which includes an improved exclusive MpD®-class Palatant, exclusive nutraceuticals and original NEWtration™ feed and yucca schidigera technologies.

Contact your Purina Animal Nutrition Representative today!
**WHAT'S INSIDE...**

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*All rights reserved. Editorial materials are copyrighted. Permission to reprint may be granted upon request.*
Welcome to the eighth edition of Benchmark, published by PigCHAMP and Farms.com. We have been very pleased with the on-going response from industry professionals who look forward to getting this annual magazine so they can “see the data” from the past year.

But we also realize that although comparing how one farm or organization is doing compared to others in key production attributes is helpful and interesting; it doesn’t necessarily solve problems, save money, improve efficiency or maximize profits.

So this year we wanted to feature production operations, consultants and other industry partners who are using this data in innovative ways to help make better decisions. We asked them to provide first-hand examples of how problems are solved and/or performance improved by collecting the right data, understanding where the opportunities for improvement are and taking actions to improve the situation.

We believe they delivered some excellent real-world examples of how this is being done, which can stimulate the thinking of others with the same problems and opportunities.

And, of course, you’ll find the data from our 2012 Benchmarking participants. This is a free service to PigCHAMP customers who receive quarterly reports on how their operations compare to the database averages.

Our sincere thanks go out to our contributors for their work and for sharing their insight in these articles, and to our sponsors for their support. Without them this publication would not be possible.

We hope you find this year’s Benchmark publication helpful in making decisions for your operation, and we welcome the opportunity to discuss how we can work with you in the future.

Graham Dyer  
President & CEO  
Farms.com Ltd.  
www.Farms.com

Bob Breka  
General Manager  
PigCHAMP, Inc.  
www.PigCHAMP.com

The PigCHAMP Benchmarking program is open to pork producers who share their production information. Participants receive free quarterly updates of how their operations compare to the Benchmark averages. PigCHAMP also offers in-depth customized reports for a modest fee. PigCHAMP is part of the Farms.com family of companies which strives to provide innovative information products and services to the global agriculture and food industries.
From parity to parity, Merck Animal Health provides solutions to improve the productivity of your operation. We combine the industry’s most complete product line with decades of on-farm expertise to improve your animals’ reproduction efficiency and health. For more information, talk to your Merck Animal Health representative, or visit merck-animal-health-usa.com.
With uncomfortably high production costs, and slim to negative margins, it is imperative to pay attention to Non Productive Days (NPD) in the sow farm.

By Blaine Tully DVM

Opportunity costs can be defined as the opportunities forgone in the choice of one expenditure over others. We have the opportunity to work with farms ranging from 80 sows to 7,000 sows at our veterinary practice in Manitoba, Canada. No matter the farm size, shape or product, hog farms in 2013 cannot afford to leave dollars on the table at the end of the day.

With uncomfortably high production costs, and slim to negative margins, it is imperative to pay attention to Non Productive Days (NPD) in the sow farm. NPDs quickly build extra cost into all pigs produced, in addition to creating opportunity cost by missing the mark on pigs sold. The cost of NPD is a parameter that we are looking more closely at, benchmarking over time and between farms to continue to improve and look for production efficiencies.

Let’s look a little closer at the NPD in a sow farm. Defined as any day in the production cycle of a sow that she is not pregnant or lactating. All farms, no matter the ranking in a database, will have some NPD. WSI (wean-service-interval) automatically creates NPD as sows do not breed back the day after weaning. There will be repeat sows on every farm, leading to farrowing rates of less than 100% (obviously), and therefore creating additional NPD.

The 4 main categories of NPD include (Koketsu 2005)

1. Unmated weaning-to-culling interval
2. Weaning-to-first-service interval
3. Sow first service-to-neg pregnancy interval (including repeat sows)
4. Sow first service-to-culling

We need to be careful when benchmarking NPD within one farm over time, or between different farms to ensure we use similar metrics. PigCHAMP will report NPD including the gilt pool, and excluding the gilt pool. If we are only comparing NPD within a farm, I like to include the gilt pool. Although there has been much emphasis on the benefits of optimizing gilt age/weight at first mating on lifetime female productivity, we need to remember there is a cost to house and feed the gilt. For example, if we target gilts to be bred at 210 days, but have gilts not bred until 240 days, we require up to $24/gilt in extra feed costs for the additional 30 days. (Riek 2010) Many strategies work to reduce the potential for additional NPD in the gilt pool, avoiding breeding gilts too much beyond the target age/weight. These can include both management tools like good boar exposure, and hormonal manipulation using PG 600® and Regumate® (Merck Animal Health, Kirkland, QC, Canada). By removing the gilt pool, we can easily benchmark farms with each other.

Let’s look at why NPD are important to consider. If you have a non-productive sow (remember, not pregnant or lactating) she still requires feed, water, housing, heat, care, etc. In the 12 years I have worked in the swine industry in Canada, the old adage of $2/day for cost of NPD has not changed…but several things have changed in 12 years. For instance, cost of production has risen year over year (feed, energy, nutrient management, insurance, staffing cost, etc).

So based on actual cost of NPD (dollars spent) we should be using a value 40% higher than the old adage of 2 bucks a day! Let’s change perspective and look at the opportunity cost of having an empty sow parked in a gestation space, rather than a pregnant sow.
For each day a sow is not productive, there is 1 less day in a year that she can be productive (obviously) so, in other words, the number of litters she is capable of having this year is reduced. In fact, if you do the math, her litters/year are reduced by 0.0074 litters for each NPD. This becomes the opportunity lost for that sow. What is the significance? That depends on what revenue you could make from the sale of her litter, and the productivity of the farm.

If the market price for an iso-wean (21 day old piglet) is $54 (as I write this article in late-January, USDA reported price in IA is $54.57)

$$0.0074 \text{ l/day} \times 11 \text{ pw/l} \times \$54.57/\text{pig} = \$4.44$$

opportunity lost/NPD

As you can see, the opportunity cost (or loss) for a NPD will change, as the productivity of the sow changes and the revenue/pig changes. The higher producing herds will have more to lose when sows are non-productive.

<table>
<thead>
<tr>
<th>Pigs sold/litter</th>
<th>$25</th>
<th>$30</th>
<th>$35</th>
<th>$40</th>
<th>$45</th>
<th>$50</th>
<th>$55</th>
<th>$60</th>
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<tbody>
<tr>
<td>10</td>
<td>1.85</td>
<td>2.22</td>
<td>2.59</td>
<td>2.96</td>
<td>3.33</td>
<td>3.70</td>
<td>4.07</td>
<td>4.44</td>
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<td>10.5</td>
<td>1.94</td>
<td>2.33</td>
<td>2.72</td>
<td>3.11</td>
<td>3.50</td>
<td>3.89</td>
<td>4.27</td>
<td>4.66</td>
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<tr>
<td>11</td>
<td>2.04</td>
<td>2.44</td>
<td>2.85</td>
<td>3.26</td>
<td>3.66</td>
<td>4.07</td>
<td>4.48</td>
<td>4.88</td>
</tr>
<tr>
<td>11.5</td>
<td>2.13</td>
<td>2.55</td>
<td>2.98</td>
<td>3.40</td>
<td>3.83</td>
<td>4.26</td>
<td>4.68</td>
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<td>2.22</td>
<td>2.66</td>
<td>3.11</td>
<td>3.55</td>
<td>4.00</td>
<td>4.44</td>
<td>4.88</td>
<td>5.33</td>
</tr>
</tbody>
</table>

( Opportunity cost based on productivity and revenue/iso-wean pig)

Based on the above formula and chart, a sow herd producing (and selling) 11.5 pigs/litter must really focus on getting sows pregnant in September and October, heading into good iso-wean returns in December/January. As much as $5.11 per day could be left behind if sows are not productive.

Knowing is half the battle. Now that we have put a cost to NPD, one needs to understand where in their herd there is opportunity to reduce NPD. A detailed records analysis is required to identify key areas for improvement. Remember, there are 4 areas to address NPD:

1) Unmated weaning-to-culling interval

If a farm plans to cull a sow, without breeding her, the NPD will accumulate until she is on the truck. A sow culled in PigCHAMP still has a cost, until she walks off the cull truck! Detailed analysis of the Return-Estrous-report is important.

If a sow fails to show signs of heat after weaning, one should review:

- Lactation management (feeding, fostering, etc)
- Post-weaning feeding program (is there opportunity to increase feed intake in the weaned sow?)
- Breeding technician management (training, fatigue, task prioritization, etc)
- Appropriate boar exposure and heat detection immediately following weaning.
- Is there a place for P.G.600® (Merck Animal Health, Kirkland, QC, Canada) to induce estrus in the weaned sow?

2) Weaning-to-first-service interval

Similar to above, close analysis of the Return to Estrous report will help determine if there is opportunity to reduce NPD in the post-weaning period. All of the above factors with respect to Unmated-weaning-culling interval apply to Wean-to-first-service interval. A few more considerations include:

- What is the average WSI and the variation? Are there NPD being accrued with management strategies like HNS (heat-no-service, skip-a-heat programs, etc). Remember, a skipped heat costs $58.80. Is there opportunity to extend WSI in thin sows, but not skip an entire heat cycle using Regumate®? (Consult your veterinarian before considering this extra-label Regumate® use.)
- Running the in-active Sow report weekly, to ensure there are no sows sneaking through the system without a pre-determined plan.

3) Sow first service-to-negative pregnancy interval

(including repeat sows)

One should consider the cost of repeat sows. When a breeding technician finds a regular-repeat sow (open sow in the 21 day heat check group) that non-pregnant sow will cost the farm 21 NPD; $58.80 (based on COP of $2.80/day) or $93.24 (based on opportunity cost of $4.44/day). A sow that manages to evade a breeding technician, and re-enters a farrowing crate not in pig will cost the farm 115 NPD; $322 or an opportunity loss of $510.60. There are really no excuses for NIPs in the farrowing crate!

In the 12 years I have worked in the swine industry in Canada, the old adage of $2/day for cost of NPD has not changed...but several things have changed in 12 years.
4) Sow first service-to-culling
• When is the culling decision made?
• Is the culling decision made for the right reason? If a pregnant sow is culled for lameness, could there have been earlier medical intervention to prevent the culling?
• Are optional culls mated in order to reach breeding target before culling decisions are made?

These are a few considerations when trouble shooting the reasons for NPD on swine farms. One should work closely with the herd veterinarian to analyze performance records to identify what dollars are left on your table.

Let’s look at 2 examples of recapturing NPD.

<table>
<thead>
<tr>
<th>FARM A</th>
<th>FARM B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sow Inventory</td>
<td>1500</td>
</tr>
<tr>
<td>Repeat rate</td>
<td>4.7</td>
</tr>
<tr>
<td>WSI</td>
<td>8.1</td>
</tr>
<tr>
<td>% sows bred by 7 days</td>
<td>82.5</td>
</tr>
<tr>
<td>Conception rate</td>
<td>91.7</td>
</tr>
<tr>
<td>Farrowing rate</td>
<td>87.0</td>
</tr>
<tr>
<td>Pigs weaned /sow/yr</td>
<td>24.4</td>
</tr>
<tr>
<td>NPD (per sow)</td>
<td>34.3</td>
</tr>
<tr>
<td>Cost of NPD*</td>
<td>$152.30</td>
</tr>
<tr>
<td>Cost for herd**</td>
<td>$228,423</td>
</tr>
</tbody>
</table>

DIFFERENCE $181,833

* Opportunity cost calculated at $4.44/day
** Opportunity cost calculated over entire sow inventory

Although productivity is similar between farms (both weaning approximately 24 psy), Farm B has an opportunity cost $181,833 higher than Farm A. In other words, Farm B left $181,833 on the table at the end of the year. At a glance, the production parameters that really stand out are the WSI and % of sows bred by 7 days. Both farms have room for improvement, but Farm B really needs to look more closely at which sows are not breeding back within 7 days of weaning, and why.

Regardless of how the cost of NPD are calculated, put a figure down on paper for your NPD, drill down into your production records and reduce your NPD. Survival in modern day hog production requires vigilant attention to inefficiencies, reduction in opportunity costs and continual improvement.

References:

DR. BLAINE TULLY
Dr. Blaine Tully is a partner at Swine Health Professionals Ltd., in Manitoba, Canada. As a swine practitioner for more than 12 years, Dr. Tully has been involved in providing health and production services to various hog producers in Manitoba including small family farms, large iso-wean facilities, AI centres, genetic suppliers and many farrow-to-finish farms. Dr. Tully also provides veterinary technical consultation for Merck Animal Health in Western Canada.
The brand you’ve trusted is now approved for the treatment and control of swine respiratory disease (SRD) associated with *M. hyopneumoniae* and *B. bronchiseptica*.

Baytril 100 treats and controls all six of these major SRD-causing pathogens:

- ✔ *Bordetella bronchiseptica* – NEW
- ✔ *Mycoplasma hyopneumoniae* – NEW
- ✔ *Actinobacillus pleuropneumoniae*
- ✔ *Pasteurella multocida*
- ✔ *Haemophilus parasuis*
- ✔ *Streptococcus suis*

For use by or on the order of a licensed veterinarian. Extra-label use in food-producing animals is prohibited. Swine intended for human consumption must not be slaughtered within 5 days of receiving a single-injection dose.
As a whole, PigCHAMP continues to see opportunities, particularly for those farms in the lower percentiles of specific productivity measures. 2012 has brought another year of improved productivity and a continued wide range of performance across farms.

The use of these benchmarking reports provides the opportunity for a retrospective review of industry performance and helps identify trends that deviate from expected productivity. The use of benchmarking on your farm can produce real opportunities for improvement.

This data is comprised of information collected in the PigCHAMP Reproductive software program and summarizes the results to allow benchmarking and characterization of the industry as a whole. Our endeavor is to allow producers to identify methods for potential improvement and to allow allied industries to identify opportunities as well.

When you look at the 2012 summary charts for the USA and Canada, keep in mind the “Upper 10 percentile” which means the upper range for the production variable, not the upper percentile of farms. In other words, for variables such as Repeat Services (%), Stillbirths (%), Annualized Culling Rate (%) and Annualized Mortality Rate (%), the lower the number the more favorable it is.

For variables such as Pigs/mated female/year, Farrowing Rate (%), Born alive/litter, etc. the higher the number, the better.

Of course, benchmarking productivity is not the only area for improvement. It is part of a set of tools and opportunities for progress within this industry. Benchmarking is an efficient method of analysis and can allow producers to prioritize and identify new opportunities for improvement.

Please keep in mind, the PigCHAMP Benchmarking program is open to all pork producers who share their production information. Participants receive FREE quarterly updates on how their operations compare to the averages of Benchmark participants. There are a number of past editions of Benchmark magazine complete with articles and annual summary data available online at http://Benchmark.Farms.com

### Summary of the 2012 Benchmarking Data

By Susan Olson
Knowledge Center Manager
PigCHAMP

100 mg/mL, Oral Injectable Solution
For Subcutaneous Use In Beef Cattle, Non-Lactating Dairy Cattle And Swine Only
Not For Use In Female Dairy Cattle 20 Months Of Age Or Older Or In Cerves To Be Processed For Veal

**BRIEF SUMMARY:**
Before using Baytril® 100, please consult the product insert, a summary of which follows.

**CAUTION:**
Federal (U.S.A.) law restricts this drug to use by or on the order of a licensed veterinarian.

**PRODUCT DESCRIPTION:**
Each ml of Baytril® 100 contains 100 mg of enrofloxacin. Equestrians are L-arginine base 200 mg, In-lactose 100 mg, benzoic acid (as a preservative) 20 mg and water for injection q.s.

**INDICATIONS:**

- **Cattle - Single-Dose Therapy:** Baytril® 100 is indicated for the treatment of bovine respiratory disease (BRD) associated with Mannheimia haemolytica, Pasteurella multocida, Haemophilus somni and Mycoplasma bovis (in non-lactating dairy cattle) and for the control of HRV in beef and non-lactating dairy cattle at high risk of developing BVD associated with M. haemolytica, P. multocida, H. somni and M. bovis.

- **Cattle - Multiple-Dose Therapy:** Baytril® 100 is indicated for the treatment of bovine respiratory disease (BRD) associated with Actinobacillus pleuropneumoniae, Pasteurella multocida, Haemophilus somni and Mycoplasma bovis in non-lactating dairy cattle.

- **Swine:** Baytril® 100 is indicated for the treatment and control of swine respiratory disease (SRD) associated with Actinobacillus pleuropneumoniae, Pasteurella multocida, Haemophilus somni and Mycoplasma hyopneumoniae.

**RESIDUE WARNINGS:**
Cattle: Animals intended for human consumption must not be slaughtered within 24 days from the last treatment. This product is not approved for female dairy cattle 30 months of age or older, including dry dairy cows. Use in such cattle may cause drug residues in milk and/or in calves born to those cows. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.

Swine: Animals intended for human consumption must not be slaughtered within 5 days of receiving a single-injection dose.

**HUMAN WARNINGS:**
For use in animals only. Keep out of the reach of children. Avoid contact with eyes. In case of contact, immediately flush eyes with copious amounts of water for 15 minutes. In case of dermal contact, wash skin with soap and water. Consult a physician if irritation persists following ocular or dermal exposure. Methotrexate, a known inhibitor of 7,8-dihydrofolate reductase, is a toxic metabolite of trimethoprim. It is possible that this drug may cause methotrexate toxicity in the presence of trimethoprim. Use in pregnant females could result in fetal harm. Use in ruminants could result in increased drug levels in milk.

**PRECAUTIONS:**
The drug is a potent inhibitor of DNA polymerase and should not be used in pregnant animals.

**ADVERSE REACTIONS:**
No adverse reactions were observed during clinical trials.

**ANIMAL SAFETY:**
In studies on ruminants, clinical signs of depression, incoordination and muscle fasciculation were observed in calves when dosed at 15 or 25 mg/kg were administered for 10 to 15 days. Clinical signs of depression, incoordination and muscle fasciculation were observed when a dose of 50 mg/kg was administered for 3 days. In injection site studies conducted in feeder calves demonstrated that the formulation may induce a transient reaction in the subcutaneous tissue and underlying muscle. In studies on ruminants, clinical signs of depression, incoordination and muscle fasciculation were observed in calves when dosed at 15 or 25 mg/kg were administered for 10 to 15 days. Clinical signs of depression, incoordination and muscle fasciculation were observed when a dose of 50 mg/kg was administered for 3 days. In injection site studies conducted in feeder calves demonstrated that the formulation may induce a transient reaction in the subcutaneous tissue and underlying muscle. In studies on ruminants, clinical signs of depression, incoordination and muscle fasciculation were observed in calves when dosed at 15 or 25 mg/kg were administered for 10 to 15 days. Clinical signs of depression, incoordination and muscle fasciculation were observed when a dose of 50 mg/kg was administered for 3 days. In injection site studies conducted in feeder calves demonstrated that the formulation may induce a transient reaction in the subcutaneous tissue and underlying muscle.

**PRODUCT DERIVED FROM:**
Baytril® 100, the Bayer Cargas, and Baytril®-registered trademarks of Bayer.

**NADA 141-064, Approved by FDA**
Bayer Healthcare LLC, Animal Health Division
Shrewsbury, Massachusetts, Kansas 64201 U.S.A.

_Bayer_
### CARE3000 Variables

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<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>Upper 10%</th>
<th>Lower 10%</th>
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<td>275.275</td>
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<td>1101.00</td>
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<td>862.00</td>
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<td>6.470</td>
<td>84.10</td>
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<td>46221.820</td>
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<td>Total Mummified</td>
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<td>37381.30</td>
<td>34634.510</td>
<td>23120.00</td>
<td>78483.00</td>
<td>8660.00</td>
</tr>
<tr>
<td>Piglets Weaned Per Litter</td>
<td>10.52</td>
<td>0.622</td>
<td>10.56</td>
<td>11.21</td>
<td>9.76</td>
</tr>
<tr>
<td>% Total Losses of Liveborn</td>
<td>12.80</td>
<td>3.311</td>
<td>12.65</td>
<td>17.00</td>
<td>8.73</td>
</tr>
<tr>
<td>Average Weaned Weight</td>
<td>126.52</td>
<td>43.261</td>
<td>136.15</td>
<td>161.20</td>
<td>37.90</td>
</tr>
<tr>
<td>Piglets Age At Weaning</td>
<td>20.51</td>
<td>1.661</td>
<td>20.55</td>
<td>22.09</td>
<td>18.74</td>
</tr>
<tr>
<td>Piglets Weaned/Sow/Year</td>
<td>23.83</td>
<td>2.898</td>
<td>24.18</td>
<td>26.78</td>
<td>20.47</td>
</tr>
<tr>
<td>Piglets Weaned/Female/Year</td>
<td>22.70</td>
<td>3.018</td>
<td>23.16</td>
<td>25.83</td>
<td>19.57</td>
</tr>
<tr>
<td>Total Boars</td>
<td>8.74</td>
<td>57.595</td>
<td>3.00</td>
<td>12.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Sows Added</td>
<td>0.75</td>
<td>10.295</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Sows Culled or Sold</td>
<td>760.65</td>
<td>818.778</td>
<td>420.00</td>
<td>1744.00</td>
<td>175.00</td>
</tr>
<tr>
<td>% Cull Per Year</td>
<td>45.43</td>
<td>12.350</td>
<td>44.49</td>
<td>68.38</td>
<td>31.40</td>
</tr>
<tr>
<td>Sows Died</td>
<td>134.42</td>
<td>143.260</td>
<td>74.00</td>
<td>312.00</td>
<td>26.00</td>
</tr>
<tr>
<td>% Sow Deaths Per Year</td>
<td>8.12</td>
<td>3.130</td>
<td>7.83</td>
<td>11.90</td>
<td>4.67</td>
</tr>
<tr>
<td>Total Sows</td>
<td>1534.59</td>
<td>1396.710</td>
<td>954.00</td>
<td>3130.00</td>
<td>392.00</td>
</tr>
</tbody>
</table>
Feed costs have obviously skyrocketed in the last several years; these costs can account for a significant amount of the differences in breakeven costs between producers.

By Larry Himmelberg

Benchmarking is an extremely useful and important tool to measure a producer’s competitiveness in today’s pork industry. There remains significant variation in production and economic parameters between producers. Accurate benchmarking helps producers verify competitiveness and/or prioritize efforts to become more competitive.

Feed costs have obviously skyrocketed in the last several years; they remain one of the largest influences on producers’ bottom line costs of production and still account for a significant amount of the differences in breakeven costs between producers. As a nutritionist, these increased costs and the increased availability and emphasis on alternative ingredients, traditionally not as important or widely utilized in swine diets, served as a huge incentive to enhance my ability to benchmark not only production numbers, but an expanded range of feed productivity and economic parameters as well.

In the Midwest, no ingredient has had more influence on changes in swine ration formulation in the last several years than the explosion of Distiller Dried Grains (DDG) availability. The use of DDGs, brought with it a whole host of questions, such as; how much can we use in various stages of production, what is the nutritional value of the product, what influence does it have on production, etc. In addition to those general questions, we know that continuing changes in ethanol plant production practices changes the nutrient value of the product not only within a plant, but from plant to plant.

Sows...

Several years ago my initial incentive to expand ‘feed’ benchmarking in sow units was to simply measure overall feed usage differences and help establish usage targets. Benchmarking these numbers was very helpful in early identification of potential sow condition issues, whether caused by over or under feeding. For example, if a monthly feed usage benchmark report, comparing units, revealed either a significantly lower or higher usage rate than expected, it would serve as a red flag to question the manager and/or make a visit to the unit to visually appraise the sows.

Later, as DDGs became more available and represented a larger and larger potential savings in sow diets, I expanded my feed benchmarking capabilities to include a more comprehensive review of additional feed usage and nutritional efficiency measurements. Many of these benchmark measurements were designed to help answer two basic questions regarding DDG usage in both sow gestation and lactation diets; those being, how much could be added to the diets and verification of nutritional values being utilized in formulation.

As additional customers started using more and more DDGs in gestation and lactation, benchmarking was used for both production numbers and economic costs to answer those questions. As an individual customer would increase their DDG usage we would compare these numbers both before and after, to verify if higher inclusion rates were truly production neutral and economically advantageous. In addition to looking at individual producer results, benchmarking was used to compare across other producers in the database. Probably nothing worked better to incentivize producers to keep increasing DDG usage when it was cost advantageous, than being able to benchmark with other producers who were adding the same or higher levels of DDGs than they were.

Some of the feed benchmark numbers I watch closest in sow herds, in addition to the production numbers we are used to in the industry include: feed usage per sow per year, per pig weaned and per pound of weaned pig. I like to look at the feed usage per pig weaned because I believe benchmarking would support that feed usage per sow tends to gravitate higher as productivity increases. Because of this, I would not necessarily target the same overall sow feed usage in a herd with 20 pigs/sow/year as I would with a herd with 30 pigs/sow/year. Assuming the weaning age and weight are similar however, I would target a similar amount of feed per pig weaned.

The feed usage number I personally pay most attention to when benchmarking sow herds, is per pound weaned. I believe this takes the feed efficiency of a sow herd one step further in benchmarking, to account for, and measure differences between producer’s feed management, weaning ages and success of the sows milking ability. For example, I would generally not look negatively at a sow herd having a higher feed usage per pig, in a benchmark

The goal of most producers is to balance the desire for excellent production with the desire for decreased cost of the feed program.

LARRY Himmelberg
After completing his degree in swine nutrition at the University of Nebraska, Larry Himmelberg has worked in the swine industry since 1982 performing swine nutrition and production services with Land O’ Lakes, Akey, Danbred Genetics, Nebraska Pork Partners and UFC. Larry started HlyMtn Consulting LLC based in Lincoln, Nebraska in 2004 where he provides producers independent nutrition and production consulting.

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comparison, if that herd had a lower feed usage per pound of weaning weight.

To help with standardization between herds, in sow feed efficiency benchmarking, I try to include only feed eaten by ‘inventoried sows’; i.e. not feed eaten by gilts in the gilt pool. I then use the sow inventory only to divide into that feed usage. The feed usage targets per sow, I would have for herds measuring those numbers would be 2200 or less for herds with lower than 24 PSY and 2,300 or less for herds with greater than 24 PSY. The general target for feed per pig would be 80 pounds or less and the most emphasized target would be less than 6 pounds of feed for every pound of viable weaning weight.

The next very important step is to benchmark the economics of any sow feeding program. The goal of most producers is to balance the desire for excellent production with the desire for decreased cost of the feed program. In nursery thru finishing the most common measurement we use for this is, of course, cost per pound of gain. I like to measure sow feed efficiency in the same manner; in the case of a sow herd I measure it as sow feed cost per pound of weaned pig. I also benchmark feed cost per sow per year and cost per pig weaned. It is helpful to measure these numbers both with standardized feed costs across the sow herds in the benchmark report as well as actual costs incurred by each individual producer. Being able to utilize and change standardized ingredient costs and then benchmark with those costs also helps determine the best ration strategies to utilize as actual ingredient costs change over time.

Nursery...
As with sow herd benchmarking, doing so in the nursery can be very important to determine an individual producer’s competitive status within the industry. The rising costs of feeding a pig in the nursery, was also my biggest incentive for enhancing my ability to benchmark both nursery performance numbers as well as feed numbers. The nursery phase is arguably where you will find the widest discrepancy regarding feed costs, between high and low cost producers. There are numerous different feed ingredients and feeding strategies utilized in today’s nursery programs.

Using benchmarking to compare producer results with varying inclusion rates of alternative ingredients for example, can be very helpful in keeping feed costs down. Where possible, I also like to benchmark the influence of nursery feeding programs, on the overall production and economic results of the entire feeding period from weaning to market; regardless of whether the pigs are fed in separate nursery and grow-finish facilities or a wean to finish facility.

Grow-Finish....
Perhaps nowhere has benchmarking influenced what I do as a nutritionist more than the grow-finish phase of production. Without question, the biggest influence to more involvement in benchmarking, especially feed related benchmarking, is rising feed costs and the use of more alternative ingredients, especially DDGs.

For example, several years ago when DDG usage first started increasing significantly, the limited research we had available suggested that the energy value of DDGs was similar to or higher than corn. I began to doubt this, however, as weekly benchmark close out data indicated a consistent worsening in feed to gain ratios, even with relatively lower inclusion rates. Although feed costs were lower per ton, the cost per pound of gain was actually higher. The knowledge gained in benchmarking has obviously been very valuable both in terms of formulating rations and in determining the economic value of DDGs.

Benchmarking has also been very instrumental in determining the optimal level of DDG usage in rations and it’s expected influence on production and economic parameters. On-going benchmarking of grow-finish close out data continues to be helpful in verification of net energy and digestible amino acid calculations of ingredients used in formulation.

Today, I continue to use benchmarking extensively in grow-finish to monitor and compare everything from predicted vs actual production numbers based on ration formulation, to amino acid efficiency of a close out group. Numbers I use most to monitor and compare group close outs, include carcass ADG and carcass caloric feed efficiency, death loss, production and cost by ingredient usage (especially related to DDG usage), paylean usage, packer related results, amino acid efficiency related to carcass gain, standardized ingredient cost, etc.

Specific examples of how benchmarking can be utilized with different parameters include the following; with developed equations, I predict what carcass ADG and caloric performance on a specific group of grow-finish pigs is going to be based on ration formulation. These predictions are then benchmarked against what the group actually achieves via close-out data. Over time, verification of accuracy of predictions can be monitored. Target amino acid levels in formulation are determined via ratios to energy and ratios to each other. By monitoring amino acid and caloric efficiency related to carcass gain you can get a sense as to the accuracy of the values utilized in formulation. Benchmarking digestible amino acid net energy caloric efficiencies also serves to help verify ongoing calculated nutrient values based on lab data, for ingredients as they change from crop year to crop year and in the case of DDGs, from different ethanol plants.

We have a lot of ingredients and products available to the swine industry which are not well researched. Utilizing general benchmarking is one of the better ways we have to evaluate some of these products regarding production influence and economic effectiveness and value.

With benchmarking, having the capability to standardize and do ‘what-if’ analysis with varying ingredient costs across close outs, makes it possible to re-rank economic performance according to different formulations under differing ingredient costs scenarios.

Without the use of benchmarking it would be much more difficult to accurately formulate and predict economic influences of ingredients, etc.
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Alberta Pilots Traceability Project using PigCHAMP® Mobile

A forward step in the challenging business of modern food production.
By Susan Joyal, M.Sc.

Over the past 3 years, PigCHAMP has been actively involved in several government-funded projects in Canada to help provide efficient, low cost solutions for producers to help comply with animal traceability regulations. The following article, prepared with the cooperation of The Alberta Ministry of Agriculture and Rural Affairs, provides the results of one of these projects. It shows that traceability compliance does not have to be costly and time consuming, and that with the right technology, you can actually provide better efficiency and time savings throughout a farm’s operation.

To help preserve markets and sustain consumer confidence, Canada continues to develop and enhance food traceability initiatives. Growing Forward is a federal-provincial-territorial initiative that co-sponsors programs to achieve common national and provincial goals. One such program was the Traceability Pilot Project, which urged prospective applicants “to evaluate and recommend ideal traceability technologies for key links in the supply chain that are practical and cost effective.”

Verus Swine Management Services, which currently manages large-scale investor-owned hog operations totalling 18,000 sows in Western Canada, submitted a proposal to do exactly that. With the financial support of Growing Forward and the commitment of their technology partner, PigCHAMP, 9,000 sows were dedicated to the project. Pinnacle Swine Inc., one of the investor-owned hog operations in the Verus system, led the pilot project, which got underway September 2011 and ended October 2012. Highlights are reported in this article.

PROJECT OBJECTIVES
ALBERTA SWINE TRACEABILITY

1. Evaluate the practicability of using existing electronic data capture and transfer technologies (RFID tags and readers, companion software).

2. Understand and report on the costs and potential benefits of using electronic data capture and transfer technologies (RFID tags and readers, companion software).

ACTIVITIES

1. Characterize Current Record Keeping System – For the month of September 2011, staff at each 3,000-sow barn tracked the minutes spent recording data on-farm, correcting data mistakes and faxing data sheets to a remote bureau service for data entry. To determine the impact of electronic data capture on recording time, the exercise was repeated near the project end-date for a seven-day period.

At the start of the pilot project, each of three farms reported a weekly average of 25.4 hours (Dynaporc 1), 14.4 hours (Pinnacle 1) and 12.3 hours (Pinnacle 2) on data recording, correcting and faxing. Dynaporc 1, a gilt multiplication farm, took longer because it records more detail than the other two commercial farms. Depending on the farm, between 9% and 23% of the time was spent correcting mistakes and faxing data sheets.

Six months after PigCHAMP Mobile had been installed and in use, farms spent about one-third fewer hours each week on data recording. With few exceptions, it took less time to record all data event types on-farm; also, there were now very few corrections to make and no longer any need to fax data sheets. Those saved hours were valued at just over $16,000 annually, which was more than the additional cost of operating electronic data capture for all three farms, estimated at $12,820 per year in this 9,000-sow system.

2. Implement Electronic Capture and Transfer System
a. Tag breeding herd sows and gilts with RFID tags
In less than a month, and averaging just over one minute per sow, a total of 9,142 breeding herd females had an RFID tag in one ear. Install software and tracking systems
Hardware and companion software were installed on all three farms in March 2012. In the 9,000-sow system, the initial cost was $8.54 per sow, which included equipment, RFIDs and companion software. Annual operating cost thereafter was estimated at $1.42 per sow (replacement RFIDs, companion software.)

Several months into the project, farm managers asked if it would be possible to extend the reach of handheld readers so that they could read an RFID ear tag while carrying out work at the back end of the sow (e.g. A.I., pregnancy checking.) An external antenna ($370) that plugged into the handheld reader and extended its reach proved to be a great remedy.

b. Conduct employee training
On each of three farms, a PigCHAMP trainer spent one day instructing farm staff in the use of PigCHAMP Mobile. Workers were excited about trying out a new system that would allow them instant access to a sow’s information and to make decisions while staying in the barn.
3. Electronic data capture - on-going
   a. Record RFID tag failures
   RFID ear tags proved very reliable. Each farm reported a dozen (or fewer) problems reading RFID tags (~0.25%) over the term of the project.
   
   b. Random subset of RFIDs
   A validation exercise was conducted to ascertain that data captured and stored electronically was, in fact, accurate and true. Farm managers were asked to verify that real-life information on a subset of 180 randomly selected sow IDs (from a pool of 14,000+ IDs) matched what was stored in PigCHAMP. It did, each and every time.

   c. Producer / suppliers work with Alberta’s Swine Movement Database: Currently, the province is still developing capabilities that will allow Alberta’s Swine Movement Database to accept e-manifests documenting livestock movements. That said, an Alberta Swine Movement Database representative confirmed, “It appears that they (PigCHAMP) would be able to provide all the required information from their system.”

KEY ADVANTAGES
PigCHAMP Mobile proved a practical and cost effective traceability technology for large-scale hog operations. Demonstrated advantages included:

   ✓ Improved capability and capacity for animal identification
   ✓ Improved capability and capacity to quickly conduct age verification
   ✓ Improved ability to track livestock movements
   ✓ Improved accuracy and ease of inventory management
   ✓ Improved decision making capabilities owing to quick access of real-time data
   ✓ Compliance with Alberta Swine Movement Database traceability requirements

POSITIVE FEEDBACK
Twenty-three (23) farm workers, all of whom had worked directly with the handhelds, were asked how they’d rate this new system of electronic data capture. Their ratings ranged from OK (26%), through to GOOD (52.5%) and VERY GOOD (22%).

The best testimony likely comes from Martin Bowman (Director of Production, Verus Swine Management Services), who added, “in the next year or so, we are considering converting another 6,000 sows to PigCHAMP Mobile.”

CLOSING REMARKS
In the event of a possible disease outbreak or food recall, traceability can help sort through the chaos, identify the source of a problem and help to restore consumer confidence, both at home and abroad. In Canada, mandatory traceability systems are already in place for cattle, bison and sheep and the process is underway for pigs.

This pilot project demonstrated that it is possible to complement existing traceability initiatives by adopting modern technologies such as PigCHAMP Mobile to enhance data management capabilities and comply with Alberta’s Swine Movement Database requirements, and ultimately, Canada’s. It’s a forward step in this challenging business of modern food production.

SUSAN JOYAL
Susan Joyal earned her bachelor’s degree in 1982 and a master’s degree in 1985 from the University of Guelph and has worked in the livestock industry since. Susan has worked as a research associate (4 years) and geneticist (17 years) with National Pig Development (Canada), Smithfield Foods (USA) and GAP Genetics. Most recently, Susan has worked as an independent consultant and is based in Cochrane, Alberta.

Six months after PigCHAMP Mobile had been installed and in use, farms spent about one-third fewer hours each week on data recording.

This project was sponsored by Growing Forward, a federal-provincial-territorial initiative.
The swine industry is plagued with a negative stereotype that job opportunities are unrewarding and labor intensive. However, as industry professionals we know that this is untrue and that careers in the industry can be gratifying and encompass much more than most think.

Changing this perception is critical to the future success of the industry. The National Pork Board enlisted AgCareers.com to assist with a research project to help dispel this myth through a targeted survey outreach. AgCareers.com conducted ‘The Compensation and HR Practices for the Swine Industry’ survey from November to December 2011.

The survey was conducted to provide an accurate reflection of compensation and human resources practices that can be used by pork producers to help recruit talent and ensure that current practices are in line with the competition.

Two customized surveys were created for two specific target audiences. For the purpose of this survey, the ‘large operations’ audience represents farms with 25,000 or more sows in production. The second audience, ‘mid-size operations,’ represents producers of a significant size that employ full-time employees other than family members. Mid-size operations are defined as those operations with less than 25,000 sows in production or over 1,000 head finishing.

The following article provides key findings from the combined analysis in regards to the compensation portion of the report. Compensation information was only one of six areas discussed within the survey. The survey covered additional questions in areas such as, benefits, human resources management, recruiting, part-time staff, and safety. For a copy of the full 50-page report, which includes combined responses as well as an analysis of the large and mid-size responses, visit the Market Research page on AgCareers.com or the National Pork Board website, or email agcareers@agcareers.com.

**Incentive Plans**

Beyond average salary, participants were also asked about incentive/bonus plans. Most organizations had offered a bonus or incentive plan to farm employees during the last three years. When combining the two audiences, 62% of organizations responding offered a bonus. When looking at the two audiences separately, more large operations have a bonus plan for farm employees; 87% of the large operations and 59% of the mid-sized operations – a difference of 28%. This was one area within the survey that there was a significant difference between mid-size and large operations.

Bonus (incentive) plans were primarily based on performance measures for both audiences. Of all respondents of both surveys, 51% measured on pigs weaned/sow/year and 34% on financial benchmarks – i.e. profitability, revenue. Mid-size operations alone were similar with 48% using pigs weaned/sow/year and 36% using financial benchmarks. Large operations also used these measurement criteria, but included additional measurements – 65% pigs weaned/sow/year; 40% pigs farrowed/sow/year; 40% mortality rate (death loss); 30% farrowing rate; and 25% financial benchmarks.

**Conclusion**

One way that the industry can help to develop a plentiful pipeline of talent is to pay attention and benchmark their compensation plans amongst others within the industry sector as well as competing industry sectors. Often the skill sets we seek in an employee are the same skills that someone in another area of production agriculture or outside industry is looking for. If we are not competitive in regards to compensation, those talented job seekers will seek employment in one of those competitive fields.

This report provides a resource for the swine industry to benchmark salaries within the industry. Using this information, organizations large or mid-size can identify and play to their strengths and help to elevate any short comings. Beyond the salary information provided in the full report, there are other very beneficial insights on HR management practices, benefits, recruiting, part-time staff and safety that can assist with developing a compelling recruitment story. To request a copy of the full ‘The Compensation and HR Practices for the Swine Industry’ please email agcareers@agcareers.com.

View statistical analysis on the following page.
Elevating the Image of Careers in the Swine Industry (cont’d)

Large and mid-size combined response of the majority range for farm positions.
(This includes responses for only those positions that were included for both large and mid-sized operations.)

<table>
<thead>
<tr>
<th>FARM POSITIONS - COMBINED</th>
<th>MAJORITY RANGE</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sow Farm Dept or Assistant Manager</td>
<td>$30,001 - $35,000</td>
<td>38.54</td>
</tr>
<tr>
<td>Sow Farm Manager (one farm)</td>
<td>$40,001 - $50,000</td>
<td>35.46</td>
</tr>
<tr>
<td>Sow Farm Area Manager (multiple sow farms)</td>
<td>$50,001 - $60,000</td>
<td>30.61</td>
</tr>
<tr>
<td>Grower Finisher Area Manager (multiple finishing sites)</td>
<td>$40,001 - $50,000</td>
<td>31.87</td>
</tr>
<tr>
<td>Question Respondents:</td>
<td>214</td>
<td>214</td>
</tr>
</tbody>
</table>

Responses by large and mid-sized operations for farm positions.
(Those listed as N/A were not provided that particular role to report on.) 
Note: positions with an asterisk (*) indicate that a broader range was reported.

<table>
<thead>
<tr>
<th>FARM POSITIONS</th>
<th>MAJORITY RANGE</th>
<th>LARGE, %</th>
<th>MAJORITY RANGE</th>
<th>MID, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sow Farm Dept or Assistant Manager</td>
<td>$30,001 - $35,000</td>
<td>50.00</td>
<td>$30,001 - $35,000</td>
<td>35.90</td>
</tr>
<tr>
<td>Sow Farm Manager (one farm)</td>
<td>$40,001 - $50,000</td>
<td>54.55</td>
<td>$40,001 - $50,000</td>
<td>31.93</td>
</tr>
<tr>
<td>Sow Farm Area Manager (multiple sow farms)</td>
<td>$50,001 - $60,000</td>
<td>43.75</td>
<td>$60,001 - $70,000</td>
<td>27.27</td>
</tr>
<tr>
<td>Sow Farm Division (all sow farms)</td>
<td>$80,001 +</td>
<td>33.33</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Grower Finisher Area Manager (multiple finishing sites)</td>
<td>*$40,001 - $60,000</td>
<td>*84.22</td>
<td>$40,001 - $50,000</td>
<td>29.17</td>
</tr>
<tr>
<td>Grower Finisher Division Manager (all finishing sites)</td>
<td>$80,001 +</td>
<td>36.84</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Office Manager</td>
<td>N/A</td>
<td>N/A</td>
<td>$35,001 - $40,000</td>
<td>21.88</td>
</tr>
<tr>
<td>Question Respondents:</td>
<td>23</td>
<td>23</td>
<td>191</td>
<td>191</td>
</tr>
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</table>

Combined response of the majority range for program support positions.
(This includes responses for only those positions that were included for both large and mid-sized operations.)
For the purpose of this survey, production support positions were defined as positions within the business that involve work other than direct pig care.

<table>
<thead>
<tr>
<th>PROGRAM SUPPORT POSITIONS - COMBINED</th>
<th>MAJORITY RANGE</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck Driver</td>
<td>$12.01-$14.00</td>
<td>23.91</td>
</tr>
<tr>
<td>Mechanic</td>
<td>$12.01-$14.00</td>
<td>31.58</td>
</tr>
<tr>
<td>Maintenance</td>
<td>$14.01-$16.00</td>
<td>31.00</td>
</tr>
<tr>
<td>Administrative support</td>
<td>$10.01-$12.00</td>
<td>33.33</td>
</tr>
<tr>
<td>Question Respondents:</td>
<td>214</td>
<td>214</td>
</tr>
</tbody>
</table>

Responses by large and mid-sized operations for farm positions.
(Those listed as N/A were not provided that particular role to report on.)

<table>
<thead>
<tr>
<th>DO YOU HAVE ANY OF THE FOLLOWING PROGRAM SUPPORT POSITIONS?</th>
<th>RESPONSES LARGE</th>
<th>LARGE, %</th>
<th>RESPONSES MID</th>
<th>MID, %</th>
<th>COMBINED, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Technician</td>
<td>12</td>
<td>52.17</td>
<td>N/A</td>
<td>NA</td>
<td>N/A</td>
</tr>
<tr>
<td>Truck Driver</td>
<td>18</td>
<td>78.26</td>
<td>74</td>
<td>38.74</td>
<td>42.99</td>
</tr>
<tr>
<td>Mechanic</td>
<td>11</td>
<td>47.83</td>
<td>27</td>
<td>14.14</td>
<td>17.76</td>
</tr>
<tr>
<td>Truck Wash</td>
<td>12</td>
<td>52.17</td>
<td>N/A</td>
<td>N/A</td>
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*Percentages do not total 100; respondents were allowed to select multiple responses. Results are calculated dividing the number of responses by respondents.

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<th>IF YES, ON WHAT PERFORMANCE MEASURE IS THE BONUS (INCENTIVE) PLAN BASED? (CHECK ALL THAT APPLY)</th>
<th>RESPONSES LARGE</th>
<th>LARGE, %</th>
<th>RESPONSES MID</th>
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A Lenders View of the US Pork Industry

The “Profile” of a Successful Producer
By Mark Greenwood, AgStar

At AgStar, we are very fortunate to work with some of the best producers in the United States. We are often asked about our perspective on the industry. I’d first like to share the current “profile” of a successful producer and then I’ll focus on the future, from an overview of the US pork industry.

The “Profile” of a Successful Producer
First, it’s important to note that you can be successful in the industry regardless of your size; size is really immaterial. There are several traits that we have seen through the past years that give producers a greater chance at profitability and success.

1. They know their cost of production – The very good producers know their costs of production and it is updated every month. For example, in the month of March most producers will know their costs of production for the month and their corresponding profit and loss by no later than April 15. It’s important to know what is happening from an operational stand point in a timely manner. We believe it’s hard to make good decisions on your operation if you don’t have a handle on this and have the ability to get accurate numbers on how you are performing. Good accurate financial information is critical to success.

2. They own the sow – Consistently we’ve said that to be competitive long term, owning your sows instead of buying weaned pigs on a matrix gives you a greater chance of success. There are some exceptions to this rule, but, when we look at the financial strength of producers that are farrow to finish, compared to producers that buy weaned pigs on a matrix, the data shows the farrow to finish producer has been more profitable in the past.

3. Production matters – The level of productivity that we are seeing today is amazing. We have operations today that are weaning over 30 pigs per sow per year and their mortality from a wean to finish is under 3%. It’s important to have benchmarks:
   - Pigs weaned per sow per year > 25 PSY
   - Nursery Mortality < 2.5%
   - Finishing Mortality < 3%
   - % Grade A Pigs Sold (Pigs sold as non cull pigs from wean to finish) – 92%

While we see systems above and below these numbers that are still profitable, the producers that are above these benchmarks on average are more profitable than the ones below.

4. Working Capital is King – Working capital, your current assets less your current liabilities, is a key ratio that we measure at AgStar. Producers that have a lot of liquidity have a greater amount of flexibility in making decisions about their business. Anybody that went through 2009 and saw liquidity being drained experienced this firsthand. Having adequate liquidity during times of volatility (that is the new norm) is critical to success. You may be asking how much should I have? While I would love to give a general rule of thumb, it truly depends on many factors for the type of production model you have. For example, if you have livestock with no facilities; you should have more liquidity than someone who owns land, facilities and livestock. In 2009, we had production systems that were just livestock that went from 70% equity in June to below 30% equity in October; these were operational losses. The bottom line is to work towards having more working capital in your operation.

5. Risk Management/Margin Management is as important as production management – In our opinion, the days of risk management by selling hogs every day is gone. Due to the volatility in the marketplace, successful producers have implemented a strong margin management focus on their operation. Producers are using the CME to lock up acceptable margins for their business. Iowa State University recently stated that the average swine...
producer in 2012 lost $10-$12 a head. But we’re seeing data from producers that used a sound risk management strategy in 2012 that made over $10 a head in 2012; that’s an incredible $20 a head difference. Moreover, if you are losing $10 a head and someone is making $10 a head, the bigger question is how do you catch up to them? That’s very difficult to do.

A Look to the Future

Exports are Critical

The US pork industry, in our opinion, is the most competitive place in the world to raise swine. This is true for both the producer and processor as the industry has a competitive advantage when comparing to others globally. That being said, we have been on a rapid growth of exports in the last 10 years, and we are exporting close to 25% of our production. The recent decision by Russia and China to ban pork with ractopamine has curtailed pork exports to both of these countries and we have seen cash hogs drop over $20 per head since these announcements were made. In addition, the weakening Japanese Yen to the US dollar is potentially hurting our pork exports to Japan. The US pork industry is currently at a point of a strong reliance on exports so any drawback has serious economic consequences to the US pork industry.

Do we need more sows in the US?

This answer is very simple: no, but we do need more productive sows and systems to remain competitive. From a lenders standpoint this is probably the most difficult decision we face. There are producers that want to grow and financially are able to, but any significant growth is not good economically for the industry. The consideration we ask our clients during this process is if they are making their business more valuable. Producers need to look at their business and determine the best long-term model for their operation. Our perspective for the industry is the total number of sows will not increase, but rather decrease with increased productivity of the sows.

Technology & Information

Dating myself somewhat, when I grew up, our family had a party telephone line with three other families. Today, not only does every adult have a cell phone, but even most children over the age of 16 do too. We always have to think about the next technological breakthrough that will enhance our value to our customers globally.

The speed of which information travels is amazing and as an industry we must be cognizant of this and use technology to our advantage, to help sell our product. It will be very interesting to see how the evolution of technology continues to change the industry over the next five to ten years.

Advocacy
A Lenders View of the US Pork Industry (cont’d)

The percent of people involved in agriculture in the US is now under 2%, with the number only decreasing. The people that are involved in agriculture must help educate the public on the “how” and “why” of agriculture production. You can’t afford to just sit on the sidelines and not be involved. We have seen producers that are bringing people from major metropolitan areas out to the farm to show production practices. They are advocates; helping people not involved in agriculture understand how food is produced. Going forward in our industry, this will be as important as risk management.

Who will be the New Leaders of the Swine Industry?
Maybe I think more about this as I have become a grandparent and my hair grays by the day. But as I look at the industry, many companies that we work with are owned by folks in their 50s who now have children coming back to the operation. While this is encouraging, this comes with education and a transition. We need the next generation of leaders to start emerging and providing direction for the future. I have been fortunate to be involved in helping steer the swine industry and I am committed to ensuring we have the next generation of leaders guiding the US pork industry so it remains the best in the world.

Moreover, if you are losing $10 a head and someone is making $10 a head, the bigger question is how do you catch up to them?

MARK GREENWOOD
Mark Greenwood is the Senior Vice President for Relationship Management at AgStar. He is responsible for overseeing the industry expert group at AgStar, which consists of Lookout Ridge Consulting, large grain, dairy, renewable fuels and the swine industry. He has been with the company since 1997. In addition to managing these groups at AgStar, he has given presentations in the U.S., South America, Europe and Canada on economic issues in the protein sector. He was born and raised on a farm in southern Minnesota and has been involved in the Ag industry for his entire business career. Mark received his bachelor’s degree in Business Administration and a minor in Economics from Minnesota State University, Mankato in 1980.
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Impact of Gilt Breeding Condition on Lifetime Productivity and Performance

Age range and sow body are still key factors
By Dan Bussieres, Groupe Ceres Inc.

As most swine producers know, gilts are the foundation of all sow herds, and thus all aspects related to gilt development prior to entrance into the herd are important.

Many different recommendations are found in swine literature and in the field regarding the “ideal” stage of first breeding. It is not clear whether this comes from different characteristics of the genetic lines or from the fact that age, body weight and degree of fatness (measured by the back fat thickness) are interrelated. A number of parameters need to be taken into account and the interactions between each of them and the gilt performance and longevity need to be determined. Besides the genetic component of the female, the plane of nutrition and growth pattern is suspected to be a major contributor that will influence those parameters.

HyLife is Canada’s largest swine producer. HyLife conducted a thorough analysis of the impact on breeding age, weight at breeding, and back fat at breeding on gilt lifetime performance. The analysis was conducted on the Fast Genetic 276 female line, from a 1200 sows unit within the HyLife production system.

All Fast Genetic 276 gilts that entered the sow barn between June 2005 and June 2010 were included in this data set. Monitoring was done throughout the Q-Barn period and during the whole productive life until the female was either cull or died. Sows that were still in production were not included in the data set. On total, over 2000 sow lifetime records were collected.

At breeding, all gilts had their back fat measured using an Ultra Scan Noveko device with a lineal probe. The back fat was measured and the P2 site (last rib and 2.5 inches from the median line). At the same time, gilt weight was recorded by weighing the gilt individually and the age of the gilt was noted.

Data for all gilts was entered into PigCHAMP software. Data was extracted and imported into an excel file for data analysis and statistical analysis were done using the Statistix software model.

Results
For each of the body condition traits, we looked at the impact on litter size (total born) average over each parity and also at the average number of parities completed during the female life cycle. Using both litter size and the average parity per traits class, we calculated the lifetime female productivity. For the needs of this article we will only present the lifetime productivity data for each of the breeding traits.

Effect of back fat at first breeding
The gilts were divided in five back fat categories. Extremely thinner and fatter sows -- representing a low percentage of the gilt in the data-set were excluded from the analysis.

Back fat versus lifetime productivity as total born

Overall results showed an average of 58.99 piglets total born lifetime. Back fat class positively influences (P<0.01) lifetime TB piglets. One class difference (+3 mm) improves lifetime TB by 3.7 piglets. The low correlation coefficient (R² = 0.14) indicates that BF may not be the only contributing factor of the overall sow productivity.

Back fat at breeding vs. age

Data for all gilts was entered into PigCHAMP software. Data were extracted and imported into an excel file for data analysis and statistical analysis were done using the Statistix software model.
Increasing age at first breeding increased back fat thickness (P<0.01). Within each BF class, large differences in age of females at first breeding exists, as shown by the low correlation coefficient between BF at breeding and age (R2 = 0.22). This means that as back fat at first breeding has an impact on lifetime performance, it does not necessarily mean a swine producer needs to raise a heavier and older gilt in order to achieve a higher back fat level. As within each age category, there is variation in gilt back fat level. When breeding gilt to an older age and heavier weight it is important to consider the significant consequences on their production as you will see in the following part of the article.

Effect of age at first breeding

Age at breeding was divided in six different age class categories, each spanning a 14-days age spread.

Age versus lifetime productivity as total born

The analysis of variance shows a non-significant effect of age class at first breeding on lifetime TB (P<0.60). The graph shows that productivity is maximum for the 229-243 day class, and nearly as good for the 215-229 day class as for the 243-257 day class. Regressed linearly over all age classes (from less than 201 up more than 284 days), age class affects negatively TB by 0.92 per each age class (P<0.07).

Effect of body weight at first breeding

For the body weight at breeding, we divided the weight classes into five different weight categories each of them within a 15 kg weight range.

BW at first breeding versus lifetime productivity as total born

The influence of body weight class at first breeding on lifetime TB is significant (P<0.04) when calculated across all BW classes. Gilts in the 145-160kg class perform the best, though not significantly as per the Tukey test results; those of the two extreme classes show a numerically lower productivity level.

Age at first breeding versus bodyweight

Revisiting breeding age and breeding weight impact on lifetime productivity considerations, we should consider whether best age at breeding for lifetime productivity matches with the best weight at breeding.

The graph below shows that for the targeted age class at breeding of 229-243 days, the average breeding weight should be about 156 kg. This is, therefore, in line with the observed lifetime performance that were optimized when gilt were bred in the 145-160 kg weight range.

DISCUSSION AND CONCLUSIONS

The major findings of this evaluation are as follows.

Adiposity level (as estimated by the back fat thickness) at first breeding has a major influence on lifetime productivity expressed as total born. A positive influence is seen up to the 20-23 mm class. This finding is contrary to the common recommendation specifying a maximum level of back fat, which would suggest a detrimental effect of a certain degree of adiposity. On the other hand, although back fat will increase as weight and age of the gilt increase, there are still large variations in back fat levels within female of each age and weight class categories.

Age at first breeding was not found to influence any major productivity parameter. Too young an age of gilts (as in the 201-215 day class) is linked to smaller litters than older ages of females. Longevity does not differ between age classes except for gilts older than 243-257 days. Productivity is maximized for the 229-243 day class.

Adiposity level at first breeding has a major influence on lifetime productivity expressed as total born...This finding is contrary to the common recommendation specifying a maximum level of back fat, which would suggest a detrimental effect of a certain degree of adiposity.
Body weight at first breeding maximizes lifetime productivity for the 145-160 kg classes although no major differences were found when looking at the previous weight classes (130-145 kg).

Following this evaluation, practical recommendations on ideal stage at first breeding for Fast 276 gilt have been identified.

- Age range: minimum 210 with ideally an average breeding age of 225-250 days
- Sow body weight should be then in the 145-160 kg range with a minimum weight at breeding of 135 kg.
- In terms of lifetime average daily gain, at the targeted breeding weight and age, we would expect the gilt to present a lifetime ADG of 600 to 700 g/day. This would represent for the gilt developer period from 28 kg and above, an ADG of 700 to 850 g/day.
- For the back fat level, we recommend selecting the fatter sow within the appropriate age and weight group. With the current Fast sow female and with proper nutrition and growth during the gilt development, average back fat at breeding should be in the 14-20 mm range with an average of 15-16 mm.

This study was vital for HyLife in determining the impact on breeding age, weight at breeding, and back fat at breeding on gilt lifetime performance.

**Age at first breeding was not found to influence any major productivity parameter**
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Using Production Data to Make Decisions

By Ron Ketchem and Mark Rix

Swine Management Services, LLC (SMS) is owned by Ron Ketchem and Mark Rix. The company is involved in production analysis, financial analysis, employee training, farm consulting, bookkeeping and has a data entry bureau using PigCHAMP. They currently work with producers, primarily in the USA and Canada. Their mission statement is to provide “information solutions” for the swine industry.

SMS has developed a proprietary Farm Benchmarking database of over 1.4 million sows from farms ranging in size from 200 to 10,000+ sows. This information was used to provide the following analysis which was first presented at the 2013 Banff Swine Seminar.

Using Production Data to Make Decisions

Tables 1 and 2 are summaries of data ending 2012. It is very interesting to see the variation in production levels with farms less than 15 pigs weaned / mated female / year to 30+. There were 16 farms at 30+ pigs weaned / mated female / year the last 52 weeks. We have been tracking production numbers since 2005 with pigs weaned / mated female / year average going from 21.28 to 24.31 pigs for an increase of +3.03 increase, and with the Top 10% going from 24.72 to 28.60. Pigs weaned / female farrowed from 9.17 to 10.55 pigs with the Top 10% weaning 11.77 pigs.

What is the trend line for the SMS data base has been a drop in average days for wean to 1st service interval starting in early 2011. We feel this is probably due to more farms increasing feed intake in lactation with more farms going to automated feed drop systems or feeding females more times per day.

What can you do to lower Wean to 1st Service Interval? Top 10% farms had farrowing rate in 2012 at 90.4%. Farms starting at 79.7% in 2005 and going to 90.1% in 2012. The Top 10% farms weaned 26.10 pigs / mated female / year versus <75% at 20.40 pigs. The trend line for the SMS data base has been a drop in average days for Wean to 1st service interval starting in early 2011. We feel this is probably due to more farms increasing feed intake in lactation with more farms going to automated feed drop systems or feeding females more times per day.

Farrowing rate is a three part triangle: Female - Semen - Breeder. What influence does Farrowing Rate have on production? Farrowing rate is a three part triangle: Female - Semen - Breeder (AI Technician). If each variable is at 90%, the farrowing rate will be about 73%. If you improve farrowing rate by 4%, production will improve by about 1.35 pigs / mated female / year. In Table 4 a set of 602 farms was sorted by farrowing rate to see if farrowing rate is a key indicator. You see farms with farrowing rate at 90+% weaned 26.10 pigs / mated female / year versus <75% at 20.40 pigs. The trend lines for improvement in farrowing rate for all farms was 5.4% starting in 2005 at 79.7% and going to 85.1% in 2012. The Top 10% farms had farrowing rate in 2012 at 90.4%.

What are some of the Key Indicators that drive increases in Pigs Weaned / Mated Female / Year? We feel they are: wean to 1st service days, farrowing rate %, total pigs born, piglet survival is 100% minus (% stillborns and % pre-weaning death loss), female death loss %, and mated female non-productive days.

What can you do to lower Wean to 1st Service Interval? Table 3 is data from 602 farms that weaned over 20 pigs / mated female / year. The farms are sorted by Wean to 1st service interval. As you see in table 3 (page 29), the lower Wean to 1st Service Interval influences pigs weaned / mated female / year, percent bred by day 7, percent repeats, farrowing rate and total pigs born. The trend line for the SMS data base has been a drop in average days for Wean to 1st service interval starting in early 2011. We feel this is probably due to more farms increasing feed intake in lactation with more farms going to automated feed drop systems or feeding females more times per day.

TABLE 1: SMS Performance data 52 weeks average 2012 summary

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<tr>
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<th>Top 10%</th>
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<td>Litters / mf / yr</td>
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<td>2.47</td>
<td>2.37</td>
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<tr>
<td>Wean to lst service interval</td>
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<td>5.85</td>
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<td>Served by day 7 %</td>
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<td>Repeat services %</td>
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<td>Farrowing rate %</td>
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<td>Female death loss %</td>
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<td>Replacement rate %</td>
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TABLE 2: SMS Performance data 52 weeks average-2012 summary

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<td>Pig born live / female farrowed</td>
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<td>Pig weaned / female farrowed</td>
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<td>Piglet Survival %</td>
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<td>81.4</td>
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<td>Stillborn %</td>
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<td>Average gestation length</td>
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<td>Average parity</td>
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<td>Average parity of cull female</td>
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Our suggestions on what should be done to improve performance of Breeder (AI Technician) are to provide training and supervision over the AI Technicians, take planned breaks to prevent fatigue, spend at least 14+ days in gestation crate pre-breeding. In farms we work with, we see farms that wean the first litter having 0.20 to 1.0+ more pigs on their first litter.

Our suggestions on how to increase Total Pigs Born are to use F1 females, develop gilts on proper rations, record at least one skip heat, expose to crate, grow to 300+ pounds, increase feed intake in lactation, increase feed intake from weaning till breeding (+2.0 lb. / day) and increase stimulation of female by Breeders (AI technicians).

What can you do to improve Piglet Survival in farrowing? At SMS we created a new measuring term a few years ago to more accurately measure performance in farrowing. Instead of looking at stillborn % and pre-weaning death loss % separately, we combined them into one calculation called PILOT SURVIVAL = 100% - (stillborn % + pre-weaning death loss %). We look at stillborns as potential live pigs. There are farms for a 52 week period at less than 67% Piglet Survival and a few farms over 90%.

In Table 5 you see the farms at 30+ pigs have figured out how to save the extra pigs in farrowing, with stillborns at 4.50% and pre-weaning mortality at 7.30% putting them at 88.2% Piglet Survival. For the last 8 years the SMS data base showed Piglet Survival percent peaked in 2007 at ALL at 80.2% and Top 10% at 84.5%. Since then total born has improved and Piglet Survival has declined or been flat, the average in 2012 at 79.9% and the Top 10% average at 82.0%. 13 farms have figured out how to keep the extra pigs alive with Piglet Survival over 90%.

What can you do to lower Female Death Loss? In the SMS data base, 2012 sow death loss has averaged 7.5% with the Top 10% farms at 5.4% and the Bottom 25% farms at 8.3%. We sometimes do not see the effect of female death loss on production numbers. A change of 1% in female death loss can influence pigs / mated female / year by 0.25 pigs. So lowering female death loss by 4% does not see the effect of female death loss on production numbers. To get P1 females off to a good start, replacement gilts need to have at least 1 recorded skip heat before breeding and, if possible, spend at least 14+ days in gestation crate pre-breeding. In farms we work with, we see farms with at least 1 skip heat having 0.20 to 1.0+ more pigs on their first litter.

![Table 3: 602 Farms over 20 Pigs Weaned / Mated Female / Year – Ranked by Wean to 1st Service Interval](image)

<table>
<thead>
<tr>
<th>Wean to 1st service interval</th>
<th>Top 10%</th>
<th>Top 25%</th>
<th>Top 50%</th>
<th>Total Farms</th>
<th>Bottom 50%</th>
<th>Bottom 25%</th>
<th>Bottom 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wean to 1st service interval</td>
<td>5.2</td>
<td>5.5</td>
<td>5.9</td>
<td>6.9</td>
<td>7.9</td>
<td>8.8</td>
<td>10.1</td>
</tr>
<tr>
<td>Pigs weaned / mf / yr</td>
<td>25.91</td>
<td>25.45</td>
<td>25.17</td>
<td>24.47</td>
<td>23.82</td>
<td>23.69</td>
<td>23.53</td>
</tr>
<tr>
<td>Bred by 7 days %</td>
<td>93.6</td>
<td>92.5</td>
<td>90.3</td>
<td>89.5</td>
<td>81.8</td>
<td>78.7</td>
<td>75.0</td>
</tr>
<tr>
<td>Repeat services %</td>
<td>6.8</td>
<td>6.6</td>
<td>7.4</td>
<td>8.0</td>
<td>8.5</td>
<td>8.6</td>
<td>9.5</td>
</tr>
<tr>
<td>Farrowing rate %</td>
<td>86.7</td>
<td>86.1</td>
<td>85.4</td>
<td>85.1</td>
<td>84.8</td>
<td>85.3</td>
<td>84.6</td>
</tr>
<tr>
<td>Total born</td>
<td>13.48</td>
<td>13.29</td>
<td>13.22</td>
<td>13.09</td>
<td>12.97</td>
<td>13.00</td>
<td>12.95</td>
</tr>
<tr>
<td>Piglet survival %</td>
<td>79.9</td>
<td>80.1</td>
<td>80.2</td>
<td>79.8</td>
<td>79.5</td>
<td>79.0</td>
<td>79.4</td>
</tr>
<tr>
<td>Weaning age</td>
<td>19.8</td>
<td>19.9</td>
<td>19.7</td>
<td>19.8</td>
<td>19.9</td>
<td>20.0</td>
<td>19.8</td>
</tr>
</tbody>
</table>

![Table 4: Farms Sorted by Farrowing Rate (%)](image)

<table>
<thead>
<tr>
<th>Mated female non-productive days</th>
<th>&gt;90</th>
<th>85-90</th>
<th>80-85</th>
<th>75-80</th>
<th>&lt;75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average farrowing rate %</td>
<td>91.6</td>
<td>87.2</td>
<td>82.5</td>
<td>77.8</td>
<td>73.0</td>
</tr>
<tr>
<td>Repeat services %</td>
<td>3.5</td>
<td>6.3</td>
<td>9.4</td>
<td>12.8</td>
<td>17.3</td>
</tr>
<tr>
<td>Pigs weaned / mf / yr</td>
<td>26.10</td>
<td>24.96</td>
<td>23.14</td>
<td>21.06</td>
<td>20.4</td>
</tr>
<tr>
<td>Litter / mated female / yr</td>
<td>2.48</td>
<td>2.42</td>
<td>2.35</td>
<td>2.26</td>
<td>2.19</td>
</tr>
<tr>
<td>Mated female inventory average</td>
<td>1.447</td>
<td>1.962</td>
<td>2.064</td>
<td>1.742</td>
<td>1.294</td>
</tr>
<tr>
<td>Litter / crate / year</td>
<td>14.8</td>
<td>14.4</td>
<td>14.3</td>
<td>13.8</td>
<td>12.9</td>
</tr>
<tr>
<td>Pigs weaned / crate / year</td>
<td>155.4</td>
<td>147.0</td>
<td>140.9</td>
<td>128.3</td>
<td>120.4</td>
</tr>
</tbody>
</table>

![Table 5: SMS Performance data from 493 farms for the last 52 weeks - 2012 summary of farms with minimum of 20 Pigs Weaned per Mated Female per Year](image)

<table>
<thead>
<tr>
<th>Number of Farms</th>
<th>&gt;30</th>
<th>&gt;28 to &lt;30</th>
<th>&gt;26 to &gt;28</th>
<th>&gt;24 to &gt;26</th>
<th>&gt;22 to &gt;24</th>
<th>&gt;20 to &gt;22</th>
<th>Total / Ave.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Farms</td>
<td>13</td>
<td>61</td>
<td>104</td>
<td>164</td>
<td>117</td>
<td>34</td>
<td>493</td>
</tr>
<tr>
<td>Pigs weaned / mf / yr</td>
<td>36.26</td>
<td>35.22</td>
<td>33.88</td>
<td>31.79</td>
<td>29.20</td>
<td>27.22</td>
<td>25.4</td>
</tr>
<tr>
<td>Piglet Survival %</td>
<td>88.2</td>
<td>82.7</td>
<td>80.8</td>
<td>80.2</td>
<td>80.8</td>
<td>79.9</td>
<td>81.0</td>
</tr>
<tr>
<td>Stillborn %</td>
<td>4.5</td>
<td>6.3</td>
<td>6.9</td>
<td>6.8</td>
<td>7.2</td>
<td>7.3</td>
<td>7.0</td>
</tr>
<tr>
<td>Pre-weaning mortality %</td>
<td>7.3</td>
<td>11.0</td>
<td>12.3</td>
<td>13.0</td>
<td>12.0</td>
<td>12.8</td>
<td>12.0</td>
</tr>
</tbody>
</table>
Our suggestions on what you can do to lower Female Death Loss are to improve training of crew on how to spot sick or lame females, have written SOPs for how to treat sick and lame females, have your farm veterinarian provide a list of treatment procedures for sick females, keep for 12 months detailed information on each treated female (PQA Plus+) and have someone accountable for euthanizing problem females.

What needs to be done to lower Mated Female Non-productive Days? When you look at female non-productive days, we feel there are some issues with how some farms enter gilt information. With some of the new sow software programs charging on female inventory, farms are entering gilts at breeding. So at SMS we use mated female non-productive days in our records. In a study of 66 farms in the USA and Canada, the average for mated female non-productive days was 32.8 days with range of individual farms from 19 to 49 days. If you use $2.25 per day for open mated female the cost is an average of $73.80 / mated female / year.

Swine Management Services analyzes data from approximately 20% of the USA and Canada swine industry and we are committed to sharing that information with the swine industry. How does your farm compare to the information shared in the article and what can you do to improve your farm? Most of the suggestions we have laid out in this article to increase productivity will cost nothing or very little to implement and they can have a significant impact on increasing pigs weaned. One more pig weaned / mated female / year can lower the cost to produce all weaned pigs by $1.00 to $2.00.

**It is very interesting to see the variation in production levels with farms less than 15 pigs weaned / mated female / year to 30+.

Mark Rix graduated from Iowa State University in 1973 and worked for Wilson Foods in Oklahoma City for six years. Mark joined Purina Mills in 1979 as a salesman in Nebraska and became a Swine Consultant in 1984. He then moved to North Carolina for Purina Mills as Swine Business Manager in 1998. Mark moved to Fremont, Nebraska in 1994 and helped build Swine Management Services into a full line management company that built 40 sow farms and managed 80,000+ sows.

Ronald Ketchem graduated from the University of Missouri with BS in Animal Science and masters studies in Reproductive Physiology and Animal Breeding. Ron began his career with a genetics company and was there for 12 years. He then spent 15 years with a major feed company as the Area Swine Consultant providing technical support and training.

**MARK RIX / RON KETCHEM**

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Keys to Successful Benchmarking

What is it going to take to be competitive in 2013 and beyond?
By Darwin Hall, Hintzsche Pork

It’s a perfect time to reflect on the business side of things and plans to make an operation even more competitive. From a production standpoint, what is it going to take to be competitive in 2013 and beyond? What type of improvement did we make in 2012? How do we know if we’re moving forward or backward in the different segments of production? What method is used to get the information to employees, owners and decision-makers?

Benchmarking is one of the most valuable tools available to assist producers in answering those and many other questions. The Webster dictionary defines benchmarking as “a standardized test that serves as a basis for evaluation or comparison.” Why “standardized” is a logical question. The answer is, if we don’t do the best we can to gather and compare standardized information the variables involved will likely lead us to make decisions that can be very costly to our operations.

Determining what item(s) you want to benchmark is the first step to developing a solid program. Benchmarking within a system can take some of the variability of genetics, nutrition, building design, etc. out of the equation. As with many things in life, it is often better to start simple, develop a solid foundation and then add to it as you work towards your ideal benchmarking program.

At Hintzsche Pork, we benchmark rooms, barns, sites, stages of production, growers, employees, against each other, and among other things. The benchmarks are developed for monthly, year-to-date (YTD), and trailing twelve month (T12M) periods. Monthly data shows what happened recently. YTD data ties to budgets for the fiscal year and gives a running total look. T12M data contains all the information within the previous twelve month period. There is much less variability in the T12M data which means it’s a good indicator of trends. If the item being benchmarked is showing steady improvement the T12M number will be worse than the YTD number, and the monthly number will be the best of the three. (See example below)

We have found it extremely valuable to have employees involved in establishing the benchmarks for the coming year as part of the budgeting process. The Hintzsche Organization utilizes The Great Game of Business, developed by Jack Stack, which has become the most celebrated approach to Open-Book Management, a unique and well-proven approach to running a company, based on a simple, yet powerful belief; “When employees think, act and feel like owners...everybody wins.”

In its simplest form, The Great Game of Business is a way of running a company that gets everyone focused on helping the business be successful. Employee goals and accountabilities are tied directly to the success of the company. It teaches all employees the critical numbers of the company and how they can make a difference – both individually and as part of a team.

Utilizing PigCHAMP Mobile record keeping software, handheld devices, and radio-frequency identification (RFID tags) technology improves the accuracy, timeliness and cost of data collection. This system integrates nicely with the Managerial Accounting package Hintzsche Pork utilizes from Farm Business Systems (FBS). Managerial accounting is a proven practice widely used by systems to make reliable and timely marketing, purchasing and investment decisions. The importance of gathering accurate data for the benchmarking process cannot be overemphasized. Both PigCHAMP and FBS play a vital role in this area.

According to Dr. Stephanie Rutten, University of Minnesota, “Benchmarking is commonly used by corporations to improve productivity and efficiency and to gain a competitive edge”. This can only happen if a strategy is developed and implemented to improve the benchmark area identified as needing improvement. Once benchmark categories are identified, Hintzsche utilizes a “stop light” system to draw attention to each area when reviewing data. Green means that the area is at, or above expectations; yellow means that the area needs to be monitored; red means that the area has entered the intervention point and immediate action needs to take place.
Both the benchmark and intervention levels are established by the management team. Each member of the team is instrumental in the success of the benchmarking process. They feel committed to the program since they helped to develop it and monitor it on a regular basis.

So what happens if a benchmarking area drops into the intervention category?

1. The key person responsible for the area develops the strategy to improve performance.

2. There is a time table developed for implementation of the strategy.

3. The leader and the members of the team are identified.

4. The plan is laid out to everyone involved with questions asked, and answered, openly.

5. Implementation of the strategy takes place.

6. Results are monitored.

7. Feedback is given to everyone involved.

It is important to remember to break things down into bite-size pieces. This allows everyone to understand what needs to be done and see progress being made each step of the way. If we’re not careful we can get caught looking at the forest and forgetting to take care of each individual tree. The same is true for our pork operations. The smallest denominator – system, phase of production, site, barn, pen, pig – for which we can get accurate information, will allow us to implement the best strategies to improve our benchmarking process.

KEYS TO A SUCCESSFUL BENCHMARKING SYSTEM

1. Employ the right people.

2. Provide proper training. You might have excellent production people who could improve their value to your team if they had training in budgeting, financial statements, computer skills, etc. Make it your goal to assist your employees in personal growth.

3. Involve key personnel in the process of establishing benchmarks and intervention point. Each stage of production will likely have a different group of key people. These are the groups that know and understand the stage of production.

4. Empower your employees to make changes. Set parameters so that everyone understands them and then allows employees to make changes to achieve and exceed the benchmark targets.

5. Monitor the results regularly. Regular feedback is essential to the success of any program. Keep everyone involved in the program informed on a regular basis. Some results may be supplied on a daily basis while others may be provided weekly, monthly or even quarterly depending on the benchmark. Just remember, the more frequently feedback is given the quicker plans can be put in place if intervention points are triggered.

6. Hold people accountable. With empowerment comes accountability. If employees are making decisions that are impacting the production and financial status of a system they need to be held accountable for those decisions. They need to understand that from the very beginning. Once people understand that they are going to be held accountable for the benchmark traits being targeted, communication seems to improve between all parties involved. Everyone wants to know how things are going and they are willing to ask questions to gain a thorough understanding of the situation and then develop a plan to garner buy-in from all necessary participants.
7. Reward positive results. Make sure you acknowledge what is happening. This can range from simply showing gratitude verbally to financial rewards in the form of bonuses for improving production and the financial status of the pork enterprise. Show employees the impact their involvement has and share a percentage of the results with them.

Benchmarking is one of the most valuable tools available to assist producers, but it is how you utilize that tool that will determine its success. Utilizing benchmark traits, production and financial numbers within your own system, ask yourself, “What can we do to improve the bottom “x” percent to bring it up to average?” Also seek out comparative numbers from other producers and production systems that allow you to look for areas to improve in during the next year. How do your numbers compare to the PigCHAMP Benchmark numbers for 2012 on page 10 of this magazine?

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