

Swine Solutions

"We Bring MORE To The Table®"

HUBBARD FEEDS INC.

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Productivity Boosts

Attention to details is the key to superior pig quality.

Set high goals and strive for continuous improvement.

Top swine producers consistently market more than 93% of weaned pigs at full value. How do they do it?

That was the subject of a recent seminar for Hubbard Feeds sales staff, presented by PIC technical services production expert Cliff Jones. Top farm managers "never stop improving pigs marketed," Jones says.

The swine industry is making genetic advances every year, says nutritionist Casey Neill, another member of PIC's technical services team. "That's why we keep pushing better performance," he says. "That's why we keep raising our goals."

Among the quality improvement strategies Jones and Neill recommend:

- Select the best genetics for your farm.
- Boost piglet quality.
- Give weaned pigs a healthy start in the nursery.
- Carefully control growing pigs' environment.

In this issue of Swine Solutions, we bring you some highlights from PIC's continuous improvement seminar. Your Hubbard Feeds representatives can expand on these ideas to help you fine-tune nutrition and production.

Focus on farrowing

Good nursing management improves piglet quality

You know what you want from your sows: piglets of superior genetic potential, free from defects, healthy, robust, and thrifty.

Cliff Jones, a production expert for PIC technical services, outlined some of the goals you should aim for in your farrowing operation. These targets include:

- 85% of total piglets born weaned.
- Maximum of one stillborn per litter (8%).
- Post weaning mortality under 8%.
- Weaning weight (20 days) over 13 lbs.
- 11 full-value piglets weaned per litter.

What are some of the things you can do to meet these quality goals?

Increase piglet birth weights. Piglets weighing less than 2.0 lbs. at birth grow more slowly, have poorer feed conversion and average daily gain rates and have mortality rates over 30%, Jones says.

Your goal should be to keep the number of low birth weight piglets less than 2 lbs under 4%, Jones says. See the nearby box for suggestions on how to get the best birth weights.

Avoid inducing birth early. Each day that gestation is cut shorter than 115 days may reduce average birth weight by 26 grams per piglet and double mortality, Jones says. Side effects of premature inducement include reduced colostrum, more difficult farrowing and more splay leg.

Don't induce gilts. "Let Mother Nature take her course with first litters," Jones says.

Schedule adequate manpower during farrowing. Assisted farrowing produces more viable piglets. So, "make it your top priority to assist the sows," Jones says.

You should have one trained worker in the room for every 15 sows farrowing. Establish a formal monitoring procedure, checking high risk sows every 20 minutes and checking the rest of the females every 30 minutes.

Give all newborn pigs a chance at colostrum from their birth mother. Colostrum provides both dietary energy and antibodies from the sow. (No antibodies are transferred from the sow to her pigs through the placenta before birth.) "Every sow's colostrum is different," Jones says, "and her colostrum is perfectly matched to her piglets." That's why you should not cross foster piglets for the first 24 hours.

To make sure that every piglet gets colostrum from its birth mother, start split nursing procedures within 12 hours of birth, he says. Take the first four piglets born off the sow and put them in a heated box for about 90 minutes. "This gives the later-born piglets a better opportunity to suckle," Jones says. Always leave the smaller piglets with the sow.

Keep litters intact. "Our goal is for 80% of piglets to stay with the original mother," Jones says. He recommends cross fostering only when there are more pigs than teats on the sow, or when there is a lot of size variation within the litter.

"People tend to move piglets too much," says PIC nutritionist Casey Neill. If you have to cross foster, move the pig only once after the first 24 hours, he says. Moving pigs more than that "disrupts the litter and causes milk production to go down." And never put an older pig with a younger litter, he adds. *(Article continued. See insert.)*

Ways to increase piglet birth weight

- Avoid early induction — no less than 115 days gestation.
- Minimize number of sows above parity 5.
- Increase parity 1 and parity 2 retention rates to have more parity 3, 4 and 5 litters.
- Manage sow body condition during gestation so that more than 90% of sows score normal. Fat sows have a higher risk of stillborn piglets than normal-weight sows.
- Avoid genetic line selection based only on total piglets born. The number of pigs per litter weighing less than 2.0 lbs. rises with the total number of pigs born. And litters of more than 12 piglets have triple the risk of stillborn piglets.
- Increase feeding during the last two weeks of gestation for thin and normal sows.

Source: PIC technical services



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Make mama comfortable. "Sow comfort is the most important part of day-to-day management after Day 1," Jones says. Comfortable sows eat more in lactation which leads to increased milk yield, higher wean weights, decreased wean-to-service intervals and bigger subsequent litter size, he says.

During farrowing, the room should be 72 degrees F., Jones says. Once the majority of sows in the room have farrowed, begin dropping the room temperature one degree per day. "The goal is to have the room at 66 degrees F. six days after farrowing," Jones says.

Use mats and heat lamps to keep piglets warm and comfortable.

Feed for optimum milk production.

There are many different lactation feed curves but Jones and Neil suggest:

- Day 1 = 4 lbs. feed
- Day 2 = 6 lbs. feed
- Day 3 = 6 lbs. feed
- Day 4 until wean = full feed

You should aim to achieve 14 lbs. of feed per sow by Day 20 of lactation, Jones says. PIC research shows that first-litter gilts require higher lysine during lactation to prevent a parity 2 dip, Neill says.

Wean at 20 to 22 days of age. Weaning at a younger age hurts post-weaning performance, Jones says. Pigs weaned before 20 days have reduced average daily gain, increased back fat depth, more variability and higher post-weaning mortality, he says. For example, weaning at day 18, instead of day 21, increases mortality by 3 percentage points and cuts pounds sold per pig weaned by about 8%, according to a 2002 study. Weaning before 17 days of age is not advisable, Neill adds.

Aim for heavier weaning weights.

Heavier weaning weights reduce feed costs, mortality and days to market. Your target weaning weight should be 13 to 14 lbs., Jones says. Minimum weaning weight should be 8 lbs. Each additional pound of weaning weight cuts the days to market by an average of 3.1, according to PIC data.

Supporting Information

Two-step nurse sow method cuts mortality

On sow farms with consistently large litters, more sows are required to nurse the surplus piglets. Using a two-step nurse sow system will produce better results than a one-step nurse sow system, says PIC production expert Cliff Jones.

Under this protocol, a healthy litter of piglets is weaned after 20 to 22 days, and the sow is moved to a litter of seven-day-old pigs, where she becomes the intermediate nurse sow. The sow giving away the 7-day-old piglets is moved to a crate of surplus newborn piglets, where she becomes the two-step nurse sow.

Two-step nurse sows more readily accept a foster litter. In a 2006 study, two-step fostering cut mortality by two-thirds, compared to one-step fostering.

Select healthy nurse sows in good body condition, nursing a heavy litter and consuming feed well. Don't use a weaned sow or cull candidate to nurse newborn piglets, Jones says. Prepare for two-step fostering by leaving one crate open for every 30 crates filled.

Cross fostering don'ts

- Don't begin cross fostering before colostrum intake.
- Don't foster after teat order is established.
- Don't use parity 1 sows to foster runt litters or small litters.
- Don't equalize litters for size at any age.
- Don't move piglets between farrowing rooms after Day 1.

Pitfalls to avoid at weaning

- Don't vaccinate on weaning day.
- Don't place piglets weaned on different days in the same pen.
- Don't leave fall behind piglets in the room on weaning day.
- Don't make a fall behind litter at weaning day.
- Don't keep moving fall behind piglets around to different sows or rooms.

Nursing management tips

- Before farrowing starts, count the number of functional teats in the room. Record the number of available teats on each sow's identification card.
- Make sure sows are nursing no more piglets than functional teats.
- Load gilts with 12 to 14 good piglets.
- Identify the best parity 2 or parity 3 sow for small piglet management.
- Clearly mark cull candidates.
- For every 30 crates filled, leave one crate open for a nurse sow.

Source: PIC technical services

Comparison of one-step and two-step fostering

Group	Control	One-step Fostering	Two-step Fostering
# piglets	220	110	110
Starting wt., lbs.	3.3	3.3	3.3
Weaning wt., lbs.	13.9	12.1	14.1
Post wean mortality, %	6.4	18.2	5.5

Source: PIC technical services, from Thorup and Sorensen, 2006

Using two-step nurse sows cut post wean mortality by about two-thirds.

Influence of weaning age on pounds marketed

Weaning age, days	12	15	18	21
Weight IN, lbs.	7.5	9.4	10.8	12.7
Weight OUT, lbs.	229	241	247	259
Mortality, %	9.4	7.9	6.8	3.7
Pounds sold/pig weaned	208	222	230	249

Source: PIC technical services, from independent research using PIC progeny

Weaning after Day 20 lowers mortality and increases pounds sold.

Influence of farrowing assistance on number of viable piglets

	Unsupervised	Supervised
Number of sows	127	124
Total born/litter	11.3	11.1
Live born/litter	10.4	10.7
Stillbirths, %	6.2%	3.2%
% deaths by 3 days	7.0%	3.0%
Total weaned/litter	9.4	10.2
% of total piglets born that were weaned	83%	91%

Source: PIC technical services, from Holyoake et al, 1995

Farrowing assistance yields more piglets.

{THE HUB}



Hubbard Feeds experts discuss the issues that impact swine nutrition.

Podcast brought to you by Hubbard Feeds

Hubbard Feeds has been doing a monthly podcast called The Hub. Last month our speaker, Dr. John Lawrence from ISU discussed the current economic challenges facing pork producers.

A reprint of that podcast is on the following page. If you would like to receive the Hub monthly, please go to www.hubbardswine.com and register.



Dr. Lawrence got his education before he went to college: He was raised on an Iowa farm, which he also operated. He was then a herdsman on a 300-sow feeder pig operation. He earned his undergraduate degree in Animal Science and masters in Economics from ISU, then a Ph.D. in Agricultural Economics from the University of Missouri.

His primary responsibilities now include cattle and hog price outlooks, producer marketing and management decision-making, meat supply chain economics, environmental management and livestock regulations. He has written many professional papers and trade journal and extension articles. He's participated in more than \$2 million in research and education grants. Dr. Lawrence has delivered more than 700 presentations in 24 states and 5 Canadian provinces, Mexico, Korea, The Netherlands and Australia. He also consults with producers, policy makers and industry leaders on livestock issues.

Better Bottom Lines in Tough Times

“The Hub Podcast – Better bottom lines in tough times”

Welcome again to The Hub, a monthly swine podcast from Hubbard Feeds. I'm Dr. Stewart Galloway, Swine Nutritionist at Hubbard and joining me for June is Dr. John Lawrence, Professor in the Department of Economics at Iowa State University.

Dr. Lawrence, the swine industry is going through some very challenging times, from over a year of unprofitable returns and the recent concern caused by the H1N1 virus. What are you hearing from pork producers?

It has been a difficult time for pork producers. Red ink and losses started flowing back in October of 2007 and with exception of brief periods in May and August last summer, we have had losses throughout. In fact, we saw some of our largest losses in over a decade occur last winter. There was hope and I think still is hope of positive returns during the summer, but just at a time when we would expect prices to seasonally increase from April to May to June, we saw the H1N1 influenza impact the market and prices collapsed. So just as we thought we were going to get back to a time of profitability, we're back at losses again. So this had not only had an economic shock for producers but a psychological one as well. Just as they thought they were ready for recovery, the rug was pulled out from underneath them.

I've noticed an increased interest from producers to make changes and look for ways to improve or save money in their operation. What recommendations do you have to pork producers to help improve their bottom line?

Here are 2 or 3 suggestions from a marketing and risk management standpoint that I think are important for producers to understand.

First, given what the government is doing with financial stimulus package and the move to reduce interest rates to try to stimulate the economy, we are looking at some of the lowest interest rates we've seen in a long, long time. Because many of our pork producers have accumulated a large amount of debt, line of credit that's exploded on them due to recent losses, now would be a good time to refinance that debt, spread that into a term note over a 3-5 year period and get back their line of credit. At times like this cash is king, and they need to have an operating line of credit.

Secondly, the biofuel policy that increased demand for corn is still in place. The late planting season that we saw last year is happening again this year, particularly in the eastern corn belt, so there is a risk of higher prices of grain. I don't think we will see \$7 corn this summer, but we could see higher feed costs. Pork producers need to have a plan in place to manage that risk.

Third, the big problem across the entire meat complex is the Recession, and this is a global recession and pork producers in particular have depended upon exports really to support their prices. As this global economy has spread, it has hurt our exports, as well as the domestic demand. Couple that with the fact we have seen actually US sow slaughter decline; we are not really seeing a cut back from the US as of yet. Now, maybe the recent collapse from the April 24th in the market will trigger some liquidation, but it looks like once we come out of this, it may not be the typical hog cycle where we see an extended period of very profitable prices. So I think as producers look forward, they need to have a plan in place for a long term view towards a recovery.

Dr. Lawrence, what advice do you have for pork producers as we look to the future?

Well I think it is important to take a long term perspective with your operation. It's easy to be depressed and discouraged given the last 18-20 months that we have been through and particularly the last 18-20 days with the H1N1 influenza, but at the end of the day, this is a great place to raise hogs. The recession we are in is global, all markets are impacted, and all producers are impacted. The higher feed costs we have seen, because of in part from biofuel policy is global - there is over 40 countries pursuing renewable fuels and we deal in a world grain market so everyone is impacted by the higher feed costs. At the end of the day, the US and particularly the Midwest is a great place to raise hogs. The challenge is how do you get yourself mentally and financially positioned to survive for the long run.

Dr. Lawrence, I always appreciate your comments on the swine industry and overall economy. As always, we appreciate our pork producers for taking time to listen to The Hub. If you would like more information on Hubbard Feeds swine products and programs, please visit us at our website at www.hubbardfeeds.com or give us a call at 1-800-869-7219 and join us next month, for another edition of The Hub.



Miss an issue? Visit our website:

<http://www.hubbardfeeds.com/swine/tools.aspx>

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Products and Answers that WORK*

Hubbard Feeds Introduces New OptiSow EXP Premix

Incorporating the latest technology to help producers save money, Hubbard Feeds recently introduced its newest swine product OptiSow EXP. This new premix has higher levels of phytase which reduces the amount of phosphate needed in the premix. Higher levels of synthetic amino acids also decrease the use of soybean meal. Overall producers should see a \$3-4 savings per ton of complete feed over the current OptiSow EXP 100 program.

To help meet the demands of the high producing sow, we've added natural vitamin E, which is more available to the sow. Because good corn quality is essential to sow productivity; Hubbard Feeds has also added Integral to OptiSow EXP.

"Our goal with OptiSow EXP remains the same", says Rachel Howdysshell, Research Coordinator with Hubbard Feeds. "We want to help that sow optimize the number of pigs weaned per lifetime. It's a combination of longevity and productivity that helps accomplish that goal and nutrition plays a large role."

For more information on the new OptiSow EXP, contact your Hubbard Feeds Representative.



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EXP