

The Impact of Trained and Untrained Personnel on Product Implementation and Subsequent Pig Health

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Introduction

It takes people to make pork™ and impact healthy swine in our industry. The desire to successfully impact change in human behavior has influenced AgCreate Solutions, Inc's (AgC) subsequent educational development approach. It has been the mission of AgC to create innovative learning experiences that respect the science of how adults learn. As a result, over 100 lessons covering all aspects of pork production are delivered in English and Spanish in AgCreate's sister company, AgriSchool Pty Ltd¹.

We are starting to see the results of applied educational science in our industry. This is the first study in a series looking at the impact of trained and untrained personnel on product implementation and subsequent pig health. In this observational study, farm owners were expanding and wanted to implement products associated with Day 1 Pig Care on a start-up farm. This case study looks at the training strategy as relates to those Day 1 Pig Care products and tasks as well as subsequent results as benchmarked by Swine Management Services (SMS). SMS's benchmarking database contains 986 farms with 1,751,400 mated females².

Materials and Methods

Production parameter goals were set and success of training was measured against these benchmarked goals. The goal set was to be in the top 10% of farms regarding piglet survival (100%-SB%-PWM) the first year and the top 10% of farms in pigs per sows per year. Training impact on health of pigs was measured by piglet survival as compares back to the SMS benchmark. The SMS database contains 1,751,400 mated females on 986 farms across the global industry.

This case study allowed new personnel to be trained in Farm A prior to movement to Farm B which was scheduled to begin farrowing in a newly built facility in. Personnel went through lessons relating to their anticipated role at Farm B. Personnel were mentored on these tasks and verified as physically capable of these tasks on Farm A prior to application on Farm B. SMS and on-farm leadership monitored lesson assignment and record of completion.

Lessons administered related to this subject and products used in Day 1 Pig Care1 were as follows:

- Day 1 Pig Care: Intro to Midwifery
- Day 1 Pig Care: Monitoring sows as they farrow
- Day 1 Pig Care: Colostrum Management
- Day 1 Pig Care: Fostering
- Take 5: Rupture Repair
- Treatment Management: Identification and Treatment of Sick Piglets
- Treatment Management: Identification and Treatment of Sick Sows

NOTE: Other lessons were administered to breeding and gestation and farrowing staff related to breeding and gestation management and gilt management that impacted the PSY numbers. Full lesson list available here: www.porkavenuetraining.com

The Day 1 Pig Care program implemented included monitoring sows as they farrowed, warming baby pigs, split suckling qualifying litters, strategic minimal fostering, as well as identification and treatment of sick piglets throughout farrowing. Products used in this process included iron, drying agent, warming boxes, split suckle boxes and treatments for sows and piglets as prescribed by the farm veterinarian.

Results

Farm B achieved a 96% ranking in the SMS database achieving their goal to be in the top 10% of farms in the database. Only 40 farms ranked above Farm B in this category. The average piglet survival of the SMS top 10% is 82.5% survivability, and the entire system survivability averages 78.8%. Farm B achieved 89.2% survivability (Table 1)².

Benchmarking Results of Trained Personnel on Piglet Survivability

Farm B Survivability Benchmarking Percentile	96.0%
Farm B	89.2%
# of farms above	40
System top 10% results	82.5%
System All	80.0%
SMS All	78.8%

In regards to the goal of achieving the top 10% of pigs per sow per year, records over the past 13 weeks of production as well as the past 52 weeks of production were charted against the benchmark. The past 13 weeks achieved this goal with the result of 30.16 pigs weaned per mated female per year giving Farm B a 94% ranking in the SMS Benchmarking System (Table 2)².

Benchmarking Results of Trained Personnel on PW/MF/Y

Week Ending November 5, 2016	Past 13 week performance	Benchmark	Benchmark %	Past 52 weeks performance	Benchmark	Benchmark %
Pigs weaned/mated female/year	30.16	25.41	94%	26.94	25.28	68%
Pre-weaning mortality	9.4	14.1	87%	8	13.8	94%
Stillborns	3.2	6.5	87%	2.8	6.2	98%
Survivability	87.3	79.4	94%	89.2	80	98%

Discussion

An excellent training program is one of many factors that influence a strong start up. In addition to the Pork Avenue Training Program, Farm A and B were blessed with engaged experienced managers, hands-on owners, veterinary consult as well as production consulting from Swine Management Services. Additionally, a training program is only successful with aforementioned veterinary and consultant implementation leadership as well as top-down buy in of on-farm leadership. This farm had an extremely competent and committed veterinarian, production consultants, and leadership team members to guide training and subsequent product implementation on farm.

References

1. Pork Avenue Training Portal. AgriSchool Pty Ltd. 2016 Available at <http://www.porkavenuetraining.com/>
2. Swine Management Services Benchmarking Tools. Swine Management Services. November 5, 2016. Available at <http://www.swinems.com/>