



What Can We Learn from the 3 Point Hitch

Prior to the 1940's individual tractor manufacturers had their own hitching system to attach implements, tying farmers to purchasing implements from the manufacturer who provided the tractor. In the 1960's tractor and implement manufacturers developed one standard system for attaching implements – the 3-point hitch - by standardizing this essential link between the tractor and implement it opened the door to an increased number of manufacturers (competition), leading to lower prices for implements and easier operation.

What can the swine industry take from this? One of the research projects funded through the Canadian Swine Research and Development Cluster (Swine Innovation Porc) focuses on the "Evaluation and Development of Standards for Swine Production Systems", lead by Lee Whittington and Bernardo Predicala at the Prairie Swine Centre. In particular the project focuses on: determining the value of existing standards in other industries, benchmarking existing systems in swine operations, evaluating codes and standards, and determining what new standards/codes for optimization are required for the swine industry.

One of the benefits that standardization of operating systems may yield; large financial returns can be seen in recent benchmarking studies. Bilbrey 2009 showed benchmarking the top 25% of pork producers against the average yielded \$8.44 per hog marketed advantage. The project will also use benchmarking techniques to identify heating and ventilation systems operating standards. A previous study suggested a range of 4-fold in energy costs between the most and least efficient operations.

Swine facilities are composed of many interrelated systems that vary widely across facilities however it is the efficient design and function of these interrelated systems that have a significant impact on the cost of production. Optimization is important because typical annual expenditures attributed to facilities, equipment, utilities, and labour can be in excess of one-third of operating costs.

What are the main areas of focus within swine facilities?

1. Physical building – space allocation, animal housing, penning, flooring, 2. Mechanical systems – feed storage, distribution, water treatment, heating/ventilation, 3. Animal handling – hallways, handling/loading facilities, 4. Electrical systems – lighting, ventilation, pumps and motors, 5. Waste Systems – manure, mortalities

While these five major systems vary in size and complexity across facilities it is the efficient operation and maintenance that ultimately determines the outcomes in six key areas: animal productivity, animal welfare, meat quality, environmental sustainability, effect on stock person, and cost of production.

Benefit to the Producer

By establishing evaluation criteria that can be applied to system standardization/optimization in swine facilities, producers will be able to accurately estimate the cost savings from having standards for various systems within their operation.

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<http://www.prairieswine.com/energy-efficiencies-strategies-for-reducing-utility-cost-in-the-barn/>

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Reducing Water Consumption in Swine Barns: Alternatives for Animal Drinking and Barn Cleaning

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Your Input is Valued

Part of the project includes a producer survey that was sent to the industry in July 2012. If you have received the survey, and have not yet completed it – please take the time to fill it out as your input is valuable. If you have not received the survey, but would like more information on how to participate please contact the Prairie Swine Centre.