Efficiency Checklist

Efficiency:

- What is efficient?
  - Record Keeping
    - No such thing as too much data
    - You cannot manage what you do not measure
    - Standardize across system/farms

Efficiency

- What is efficient?
  - Benchmarking
    - Companies specialize in this
    - Create your own farmer groups to share information
    - Use Extension services

Efficiency

- Dangers of using research as a benchmark
  - Research settings are often quite different than actual commercial settings.
  - Not all information is published
    - Ask questions – most people love to talk about their work
    - Genotypes/Diets – anything that may be different from what you are doing
    - It is hard for you to duplicate results if you are not regulating the same outside factors.

Efficiency

- Research that the industry does not act on
  - There is a wealth of research over the last 10 years to show ways to be more efficient both from a production side & also in regards to the environment.

Efficiency

- Research that the industry does not act on
  - Farmers are creatures of habit
    - "My father did it that way and it worked for him, so why should I change"
    - Usually need to see someone doing better than they themselves – using different methods before they try to implement them on their own operations.

Hytek's Role in Research

- The Need to Participate
  - Currently participating in 3 different studies with U of M and SPADA
- Study #1
- U of M study analyzing the effects of manure application on forage species within a pasture system. This study is analyzing soil profile changes, groundwater contamination, pathogen transfer, and Greenhouse Gas Emission levels coming from the pasturing cattle as a result of consuming manure fertilized forages.

Hytek's Role in Research

- Study #2
- SPADA trial analyzing the effects of manure application on forages in sensitive soils. Analysis includes forage species composition, deep soil testing, groundwater monitoring, and manure leeching analysis (monitors manures movement throughout the soil profile).

Hytek's Role in Research

- Study #3
- U of M case study on the long-term impacts of manure application on soil phosphorus levels.

Other Initiatives

- Using Phytase to increase Phosphorous availability to the pig and in turn reducing P levels in manure.
- Over 90% of our land is in Forage Production.
  - Reduced Erosion
  - Increased Soil carbon levels
  - Decreased potential for groundwater contamination due to high nutrient demand.

Advantages of Participating

- Extensive knowledge, both detailed scientific for the university and practical on-the-ground for Hytek, will be the ultimate product of this research and demonstration project.
- When we use this data it will be tailor made for our situations.

Gaining Efficiency

- Areas to study / measure over time
  - FCR
    - Simply put Feed conversion ratio is a measure of how much nutrients were bypassed through the pig and ended up contributing to the high nutrient levels in the manure.
  - ADG and $/Unit Gain
    - These two numbers when looked at together can tell you a great deal about how efficiently you are producing pork.

Other Statistics

- 2 other areas to measure with regard to Energy Efficiency
  - Energy Costs (Hydro/Propane/Gas)
  - Water Usage (Pig Consumption / Total Use)

In the Barn

- Record Events
- Manual Records vs. Data Logging
  - Ventilation
  - Feed Usage / Wastage
  - Run your own trials

Feeder Barn Checklist

	Very Good	Good	Fair	Needs Attention
Office / Shower / Yard Cleanliness		X		
Laundry	X			
Vermin Control / Biosecurity				X
Keeping loading area clean after every load		X		
Organization of Barn Materials / Ordering of Supplies			X	
Barn Preparation / Proper Pit Pulling		X		
CQA Paperwork		X		
Weekly Mortality / Monthly Inventory / Sensaphone		X		
Dead stock removal / Garbage Removal		X		
Prioritizes work / Communication to Others / Does Minor Maintenance			X	

Hytek

Feeder Barn Checklist

	Very Good	Good	Fair	Needs Attention
Feeder Adjustment / Water Nipples	X			
Feed Production		X		
Ventilation/Fan Covers/ Winter Covers		X		
Adjusts ventilation / Monitors Temperature		X		

Feeder Barn Checklist

	Very Good	Good	Fair	Needs Attention
Recognition of Health Problems			X	
Treatment of Health Problems		X		
Isolation of sick pigs / Euthanization			X	
Sharps Container/Proper Storage of Medication			X	

Feeder Barn Checklist

	Very Good	Good	Fair	Needs Attention
Pig sorting / Density Control		X		
Marketing/Sorting/Barn Flow	X			
Follows drug withdrawals		X		
Shipping Efficiency		X		

Conclusion

- Whether you are trying to improve efficiency for the sale of Carbon Credits or just trying to improve your bottom line, it comes down to one thing.
- **Record Keeping**