



Technology in Today's Hog Barn

Springfield, IL

2-6-2018

Jeff Schoening

Agenda

Feed Bin Scales
Data Collection
Positive Pressure
Gestation Sow Feeding



Feed Bin Scales

Load Cells
Traditional
Precision





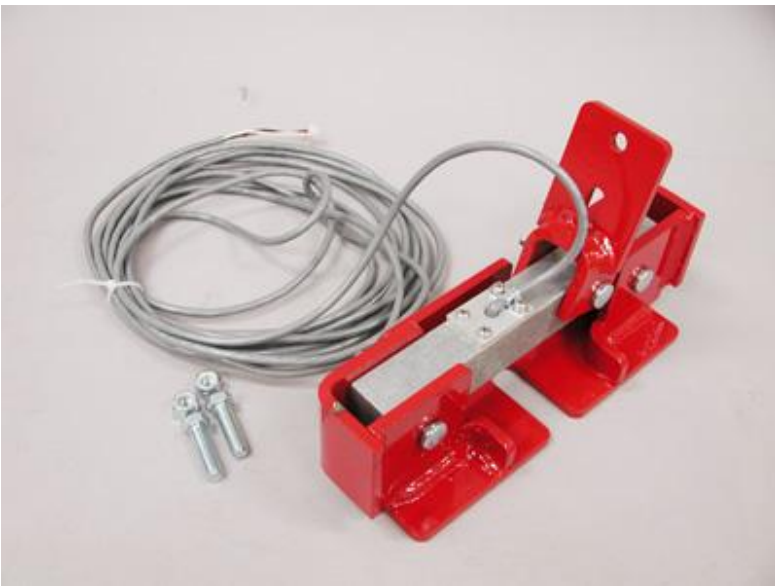
Bin Scales

- Accurate inventory
- Quick inventory access
- Bin climbing safety
- Feed ordering management
- Feed mill management
- Close out management
- Detect feed disappearance changes



Feed Bin Scales

Data Collection
Network Master
Edge



DAILY STATUS REPORTS

FeedLink Status Report

03/12/2013 6:00 AM

24 hour period: 3/11/13 12:00 AM – 3/12/13 12:00 AM

[FeedLink-Online: View your graphs](#)

Feed Consumption

Name	Weight (lbs)	Cnsmptn Yesterday	Difference	Cnsmptn Avg (5 days)	Projected Empty
North Room	19480	7860	-7%	8480	03/14/2013 1:04 PM
Bin 1	400	0	-	-	03/12/2013 1:56 AM
Bin 2	19080	7860	-	-	03/19/2013 2:19 PM
South Room	21800	8400	-4%	8740	03/14/2013 1:33 PM
Bin 3	0	2100	-	-	03/12/2013 12:00 AM
Bin 4	21800	6300	-	-	03/26/2013 8:55 AM

SmartFlex

Name	Run Time Yesterday	Difference	Run Time Avg(5 days)
North Feed Line	02:18:11	-33%	03:25:20
South Feed Line	03:10:52	+24%	02:33:36

Water Usage

Name	Usage Yesterday	Difference	Usage Avg (5 days)
North Rm. Water	2451	+14%	2159
South Rm. Water	2104	+0%	2099

Temperatures

Name	Yesterday (°F)	Range (°F)
North Room Temp	62.6 °F - 69.6 °F	7.0 °F
South Room Temp	60.9 °F - 67.0 °F	6.1 °F
Outside Temp	18.4 °F - 44.2 °F	25.8 °F

Daily Status Reports

24 hour period: 01/21/2018 12:00 AM - 01/22/2018 12:00 AM

[FeedLink-Online: View your graphs](#)

Feed Consumption					
Name	Weight (lbs)	Consumption Yesterday	Difference	Consumption Avg (5 days)	Projected Empty
North Room	46700	5180	+15%	4500	02/01/2018 1:07 PM
(F) Bin 1	29060	40	-	-	N/A
Bin 2	17640	5140	-	-	01/26/2018 1:29 AM
South Room	24320	3960	-19%	4880	01/27/2018 12:53 AM
Bin 3	20	0	-	-	01/22/2018 12:07 AM
Bin 4	24320	3960	-	-	02/14/2018 4:04 AM

SmartFlex			
Name	Run Time Yesterday	Difference	Run Time Avg(5 days)
North Feed Line	02:15:52	-7%	02:25:36
South Feed Line	01:23:09	+0%	01:23:34

Water Usage			
Name	Usage Yesterday	Difference	Usage Avg (5 days)
North Rm. Water	0	+0%	0
South Rm. Water	1801	-7%	1940

Temperatures		
Name	Yesterday (°F)	Range (°F)
North Room Temp	62.8 °F - 67.6 °F	4.8 °F
South Room Temp	63.2 °F - 67.4 °F	4.2 °F
Outside Temp	36.4 °F - 39.5 °F	3.1 °F

F: Perform FullBin

NOTIFICATIONS

Notifications

- **Email Or Text Message**
- **Stored For 1 Year Online**
- **Definable Thresholds For Notifications & Re-notifications**
- ***Temp & Water:* Hi Temp, Low Temp, Water Difference**
- ***SmartFlex II:* Run Time Difference, Max Run, Idle Time, Pressure Switch**
- ***Power Loss***
- ***Tanks:* Feed Consumption Difference, Feed Added, Low Feed, Empty Bin**

From: FeedLink Call Center [<mailto:feedlink@becs.com>]
Sent: Thursday, November 10, 2011 9:37 PM
Subject: Temperature Report - Finisher

FeedLink: Temperature Report
11/10/2011, 9:37 PM

Outside Temperature: 27.0 °F

North Room Temp
Temperature: 59.2 °F
Low: 60.0 °F High: 90.0 °F Critical: 100.0 °F

South Room Temp
Temperature: 58.7 °F
Low: 60.0 °F High: 90.0 °F Critical: 100.0 °F

From: FeedLink Call Center [<mailto:feedlink@becs.com>]
Subject: Max Run Time Report

FeedLink: Max Run Time Report
12/21/2011, 6:39 AM

North Room, N Barn East
Max Run Time: 00:40 hour:min

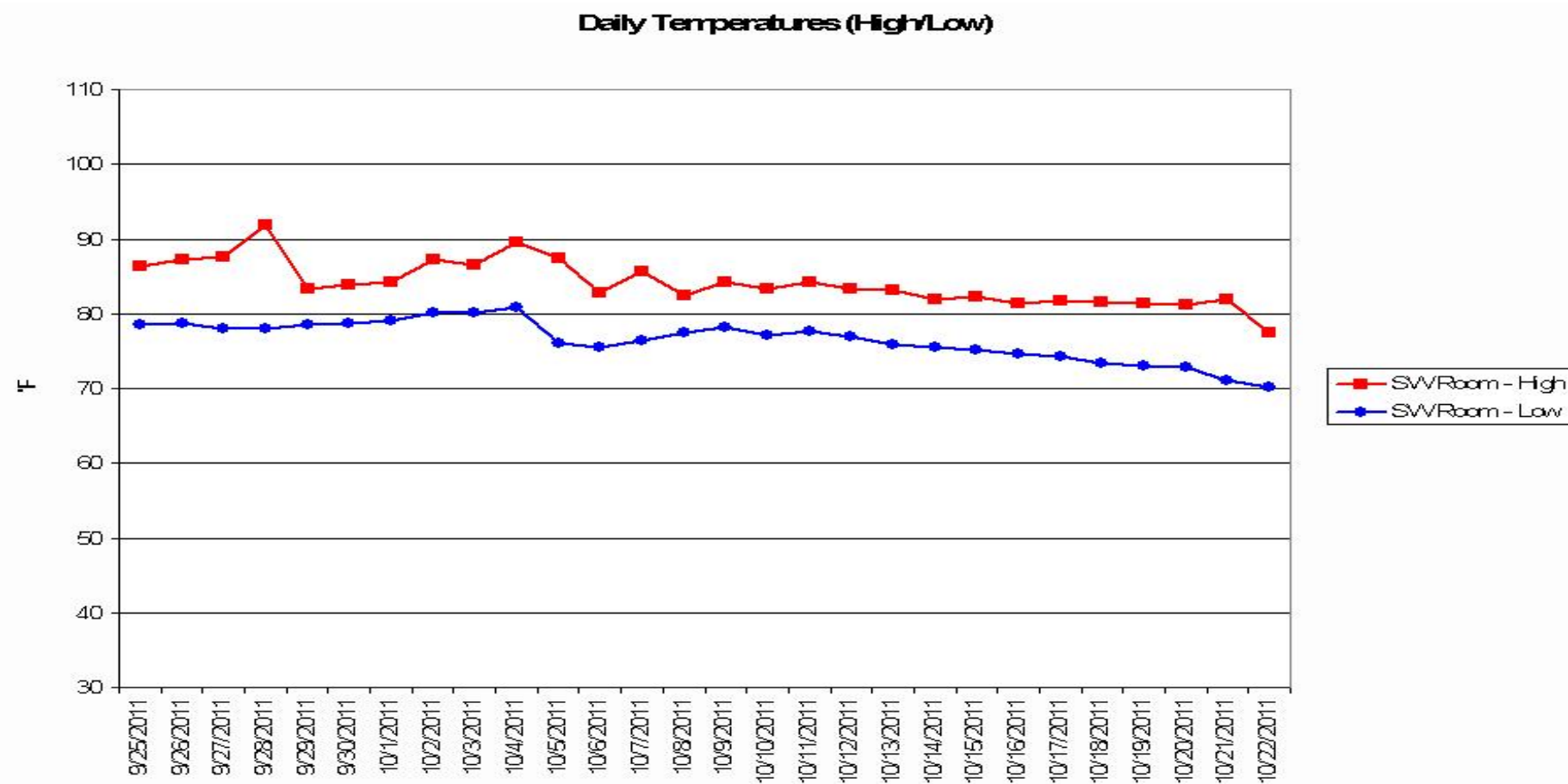
North Room, N Barn West
Max Run Time: 00:40 hour:min

From: FeedLink Call Center [<mailto:feedlink@becs.com>]
Sent: Thursday, November 17, 2011 4:26 PM
Subject: Extended Power Outage Report - Finisher

FeedLink: Extended Power Outage Report
11/17/2011, 4:25 PM

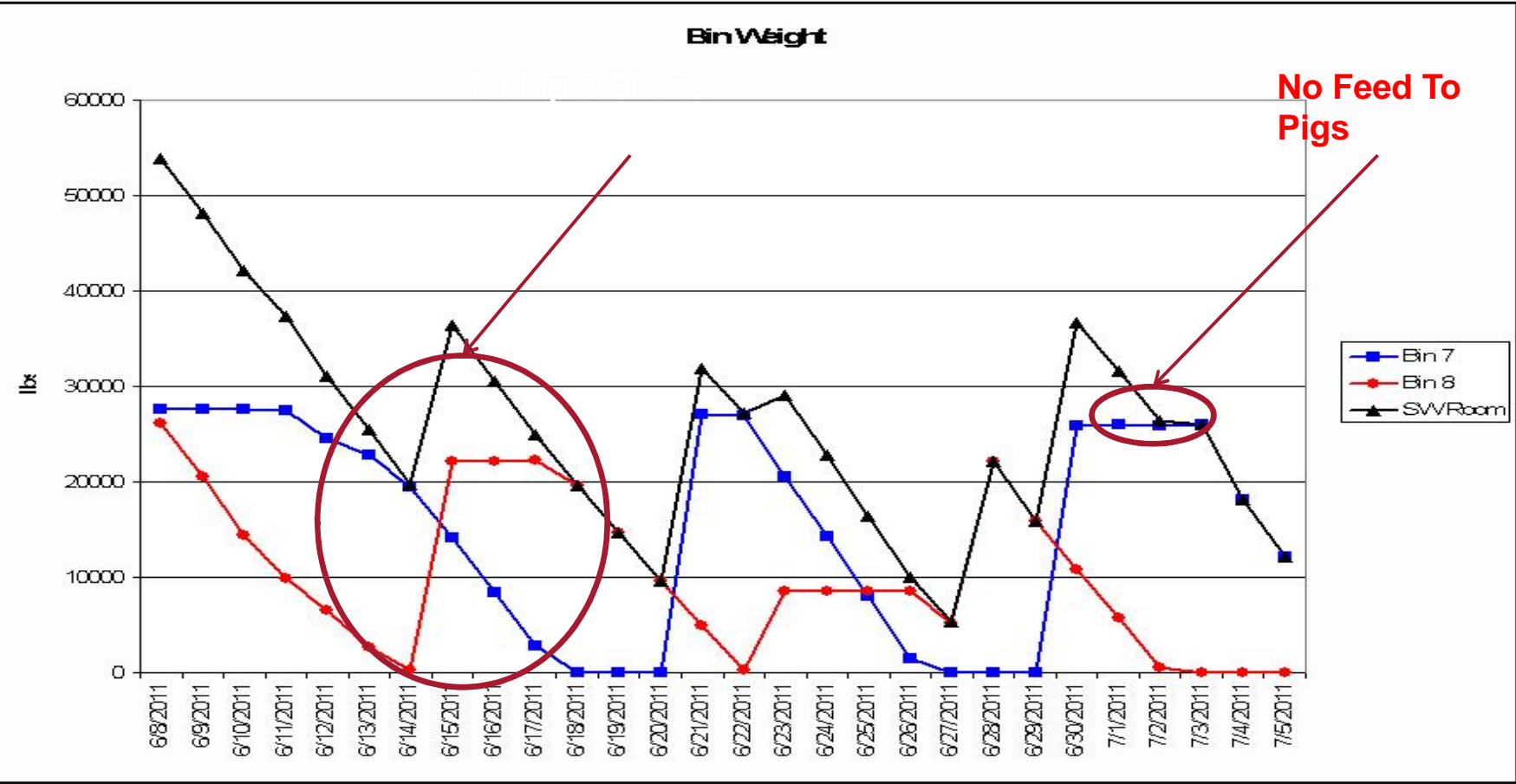
Power Off Time: 11/17/2011 4:06 PM
Power On Time: 11/17/2011 4:10 PM

TEMPERATURE CHARTS





FEED DISAPPEARANCE GRAPH





DATA COLLECTION

Server Based System

All data from the control is recorded

Dashboard

Graphs

Reports

Exceptions

Analysis

Export to Management Software

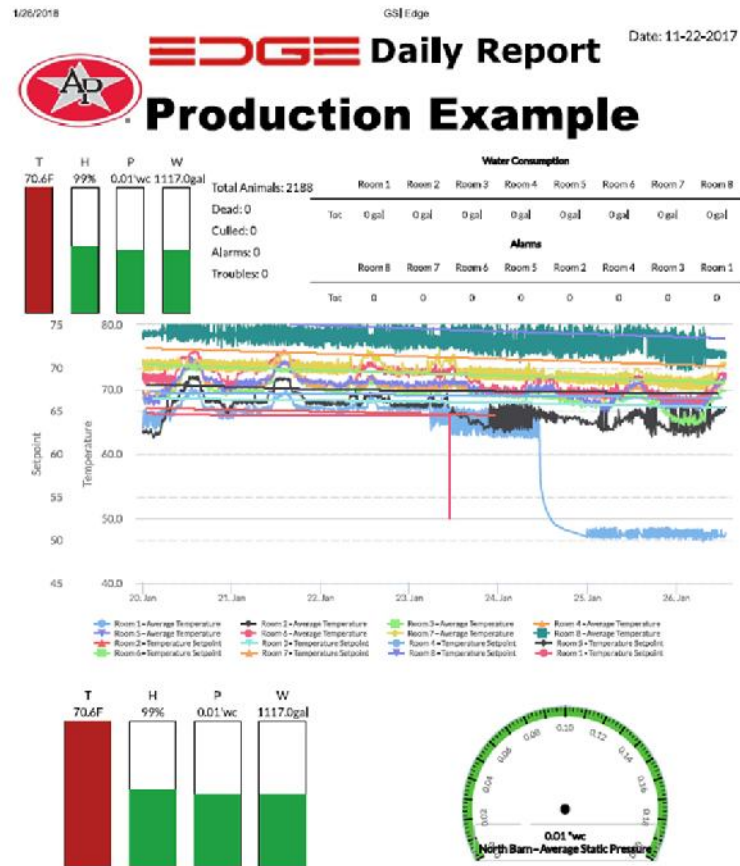
Data Management

Standard Templates
Custom Reports and graphs
Sow Units, Finishers, and Nurseries

Managing the Data

Who manages the data
How to use data and what to do with it

Daily Report for Production



Site Reports

1/26/2018

GSI Edge

Water Consumption

	North Barn	South Barn
Tot	17928 gal	18760 gal

OK

Total animal count: 4388

Deaths: 0

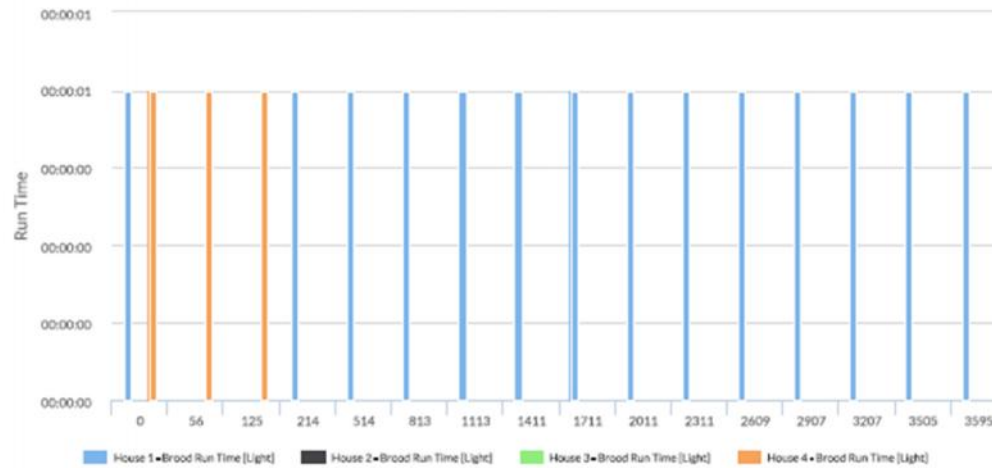
Culled: 0

Rooms in production: 2

Rooms in clean mode: 0

Rooms in pre-heat mode: 0

Heater Run Time

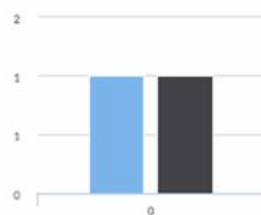


Temperature Report

1/26/2018

GSI Edge

	Temperature							
	Room 8	Room 7	Room 5	Room 6	Room 3	Room 2	Room 4	Room 1
Set	79.4 °F	75 °F	70.1 °F	72.4 °F	67.9 °F	66.6 °F	69.1 °F	65.1 °F
Avg	77.8 °F	72.9 °F	70.3 °F	71.7 °F	69.4 °F	66.9 °F	70.3 °F	60.7 °F
Min	72.7 °F	69.8 °F	66 °F	67.3 °F	64.3 °F	62.3 °F	66.7 °F	46.4 °F
Max	81.2 °F	76.5 °F	75.2 °F	76.2 °F	74.1 °F	72.2 °F	74.7 °F	70.9 °F
Range	8.4 °F	6.7 °F	9.2 °F	8.9 °F	9.8 °F	9.9 °F	8.1 °F	24.5 °F
PV	11.5 [Front Temp - Back Temp]	8.3 [Back Temp - Back Temp]	11.8 [Back Temp - Back Temp]	10.4 [Back Temp - Front Temp]	13.3 [Back Temp - Front Temp]	15.7 [Back Temp - Front Temp]	11.3 [Back Temp - Front Temp]	25.5 [Back Temp - Front Temp]
AV	6 [Back Temp]	4.4 [Back Temp]	6.4 [Back Temp]	5.6 [Back Temp]	7.5 [Back Temp]	8.5 [Back Temp]	6.7 [Back Temp]	14.6 [Front Temp]
H	83.2 °F [Front Temp]	77.8 °F [Back Temp]	76.8 °F [Back Temp]	77.4 °F [Back Temp]	77 °F [Back Temp]	75.5 °F [Back Temp]	77.1 °F [Back Temp]	71.5 °F [Back Temp]
C	71.7 °F [Back Temp]	69.5 °F [Back Temp]	65 °F [Back Temp]	67 °F [Front Temp]	63.7 °F [Front Temp]	59.8 °F [Front Temp]	65.8 °F [Front Temp]	45.9 °F [Front Temp]

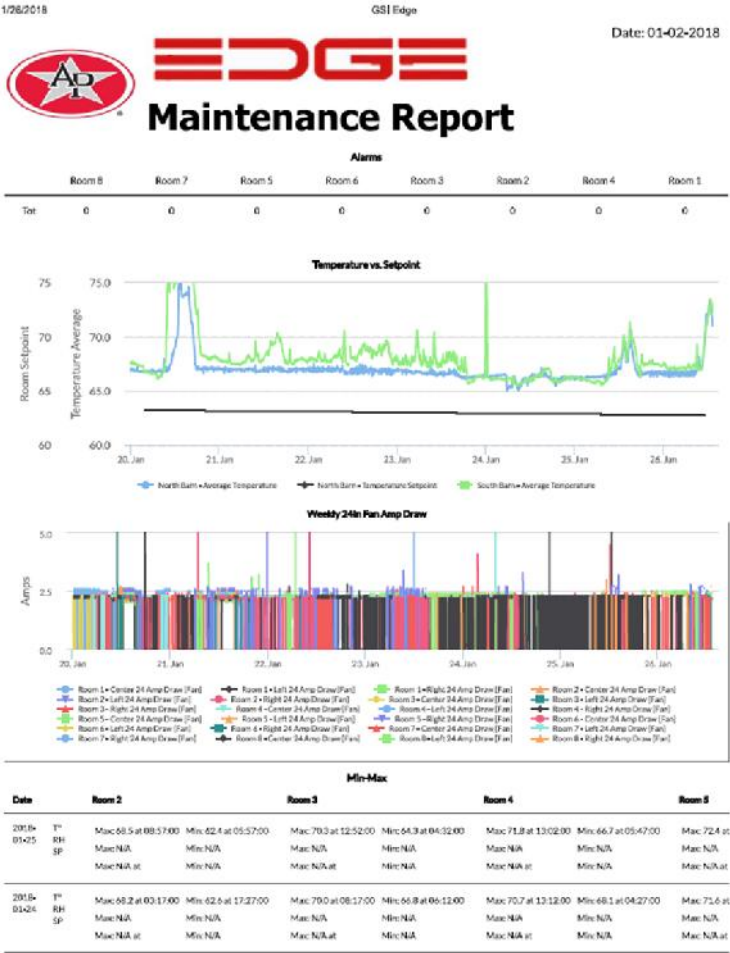


North Barn - Blue Prima Spray Volume [Inventory Total]
 North Barn - Red Prima Spray Volume [Inventory Total]



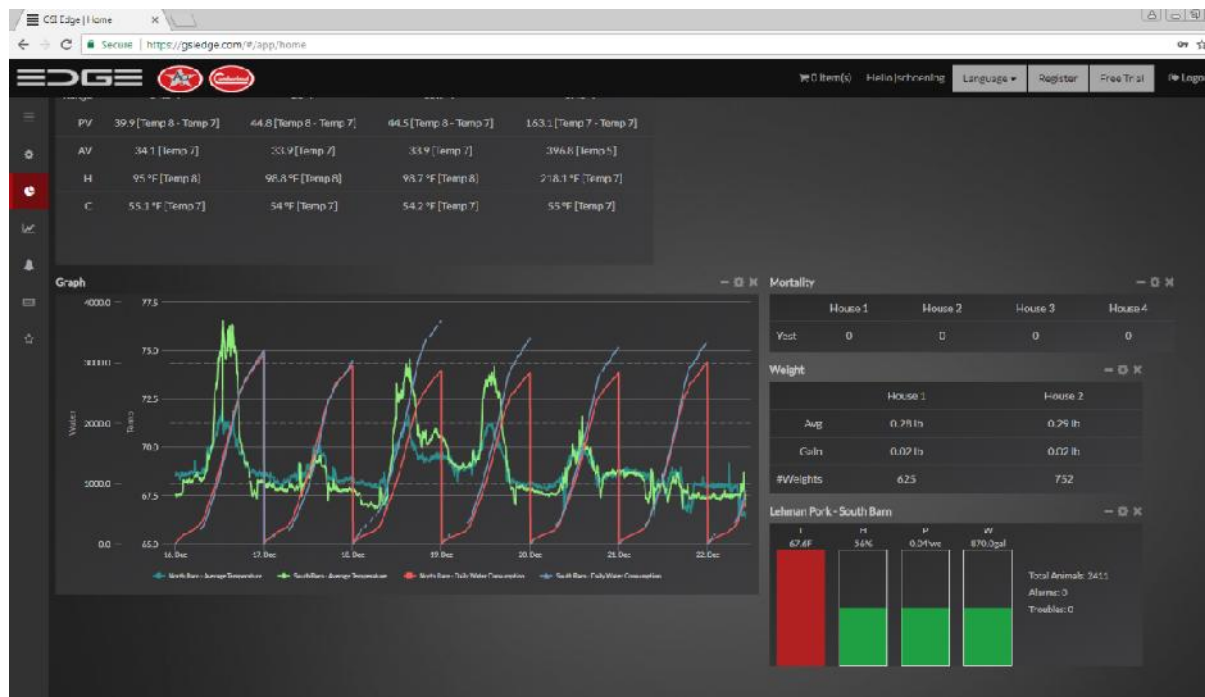
Outside Tank 2 Days Left [Feed Tank]
 Outside Tank 3 Days Left [Feed Tank]
 Outside Tank 4 Days Left [Feed Tank]
 Outside Tank 5 Days Left [Feed Tank]

Maintenance Report





Custom Graphs





Exception Reports



GSI Edge x

Secure | <https://gsiedge.com/#/app/notifications/rule/12/>

EDGE  

0 item(s) Hello Jschoening Language Register Free Trial Logout

User

Notification Rules / Water

Rule Name: Water Frequency: Daily

IF

Query North Barn - Daily Water Consum Q Avg OP > Query North Barn - Daily Water Consum Q Avg OP

+

Entire Range +

NONE

THEN

Email jeff.schoening@agcocorp.com

+

Generate Report Daily Service

+

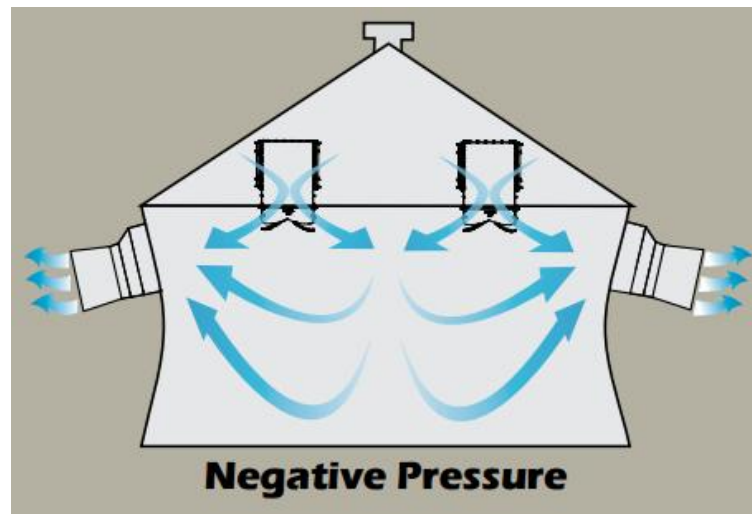
Discard Save



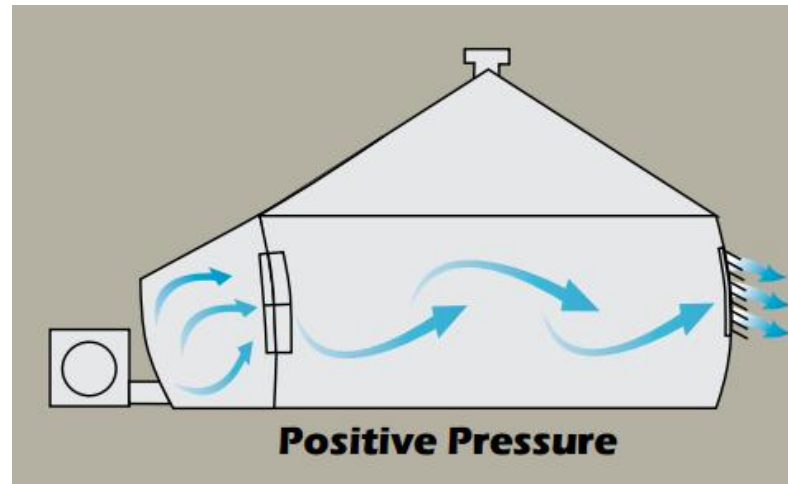
Positive Pressure and Filtered Barns

Clean Air is pushed out
Less yearly concern regarding contaminated air
Push clean air into barn and control static pressure

Negative Pressure Barn

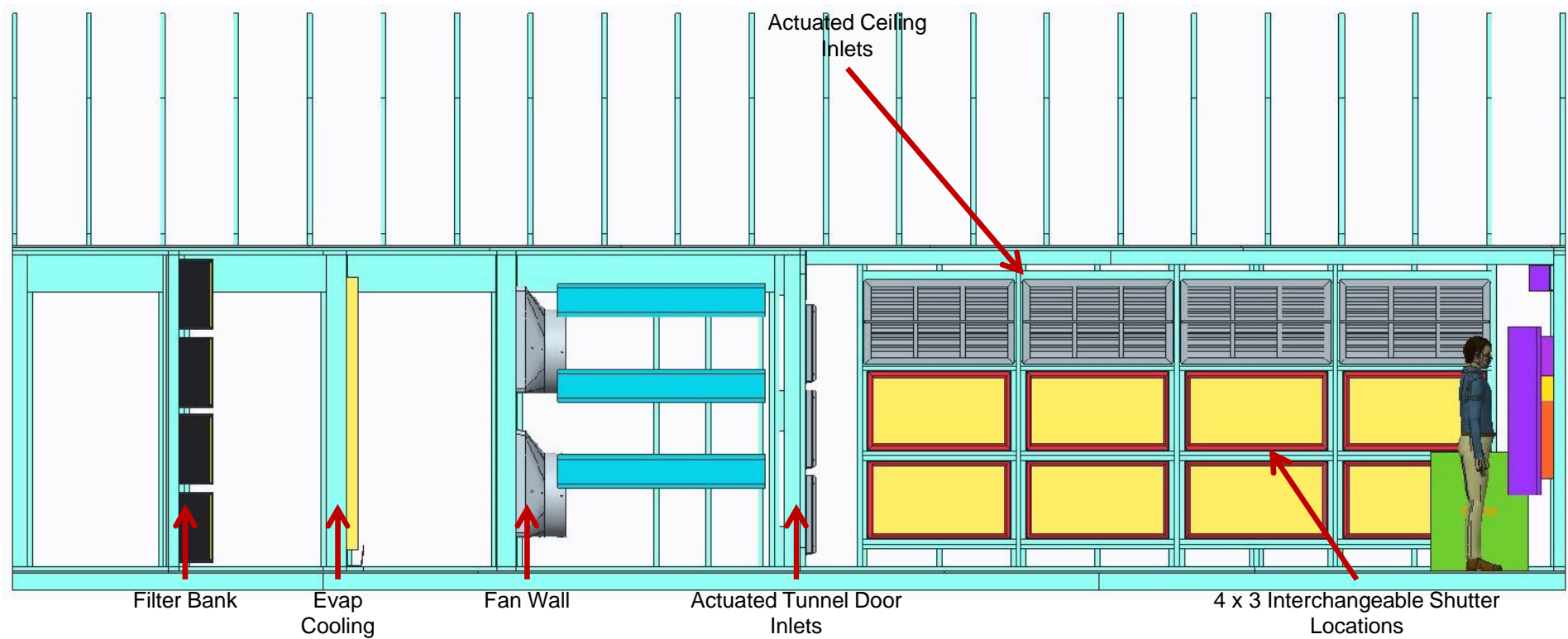


Positive Pressure Barn





EXAMPLE BUILDING LAYOUT



COMPANY CONFIDENTIAL





Positive Pressure



Positive Pressure





Pen Gestation Feeding Options

Stalls
Free Access
Stanchions
Electronic Free Access
Traditional ESF



Stalls

Moved towards for animal care
Feed and treat animals individually
Ideal for AI





Free Access

Mimics traditional stalls

Can treat animals individually if locked in

Increase building expense

Sows can choose





Stanchions

Less technology
Simple to operate
Lower Feed utilization
Competitive feeding
results in higher fall out





Electronic Free Access

Automated feeder on free access stall

Walk in / back out

Different training procedure

Lower through put than traditional ESF

Potential for renovated barns





Traditional ESF

- Higher throughput
- Multiple feed options with water
- Sorter option
- Able to add new technology
- Improved Feed Utilization
- Requires simple training procedure





ESF Training

Stage 1	“food / water court”
Stage 2	Stall Break
Stage 3	ESF feeder usage





THANK YOU