



Using Technology - What do I measure, How do I measure it, and Why?

**Andrew Sankey - Crosemere Pig Unit
Angela H Cliff – BPEX Knowledge Transfer**





The Unit

- Indoor: Farrow to Finish
- Fully slatted, environmentally controlled environment.
- Installed Dicam units and signed up for the Barn Report. Why?
- *Barn Report* is a production site data capture, distribution, viewing and analysis tool





HANNING




The Unit

- Was invited by Farmex to participate in the Technical Strategy Board's, now Innovate UK, sustainable protein production SPP initiative.
- Installed the new Farmex Growth Sensor- Why?
- New software to be developed - Guardian Action.





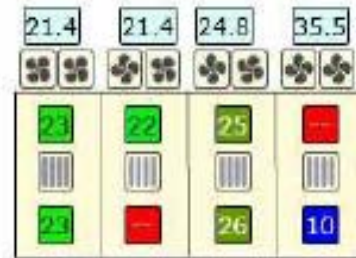
Guardian Action

-  is the new overall **real-time** data capture and processing system. Produces alarm messages highlighting deviations from normality which require immediate investigation.
 - These would include *catastrophic* events such as feed, water or ventilation failure, significant deviations
 - Also include and *more subtle* events such as changes in patterns of feed or water use, or deviations from expected growth curves, which would indicate possible health or management problems needing on-site attention.

2:56:58 pm

10

Flat Decks



1 2 3 4

Weaner / Grower



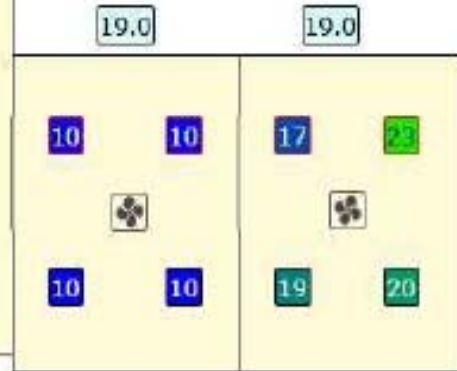
1 2 3 4 5 6

— kW

Sow Van



Farrowing



0 0 0 D C B A

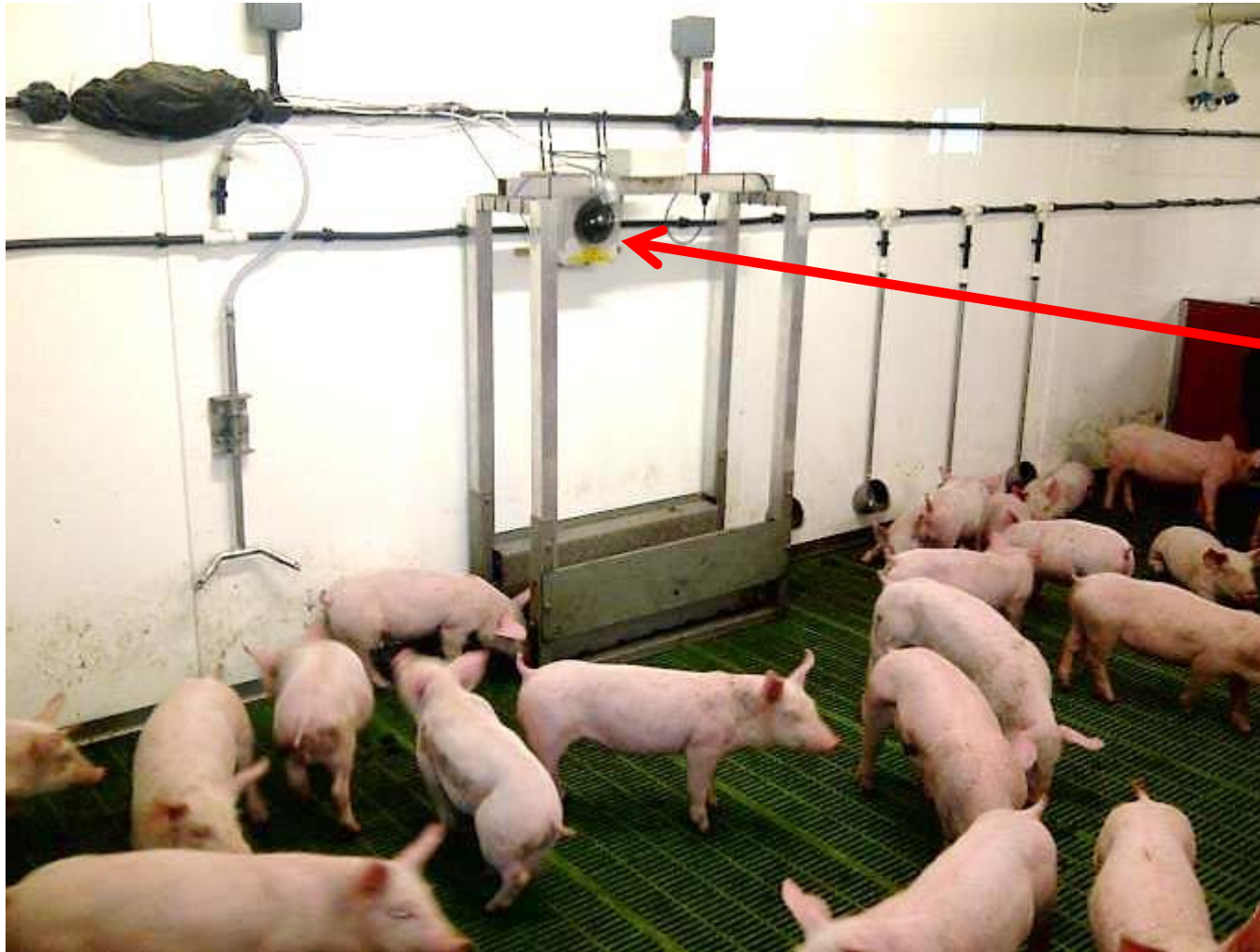
35.28 kg

Real-time pig weight data from Growth Sensor





Growth Sensor



camera



**Takes photo of each
weighing**





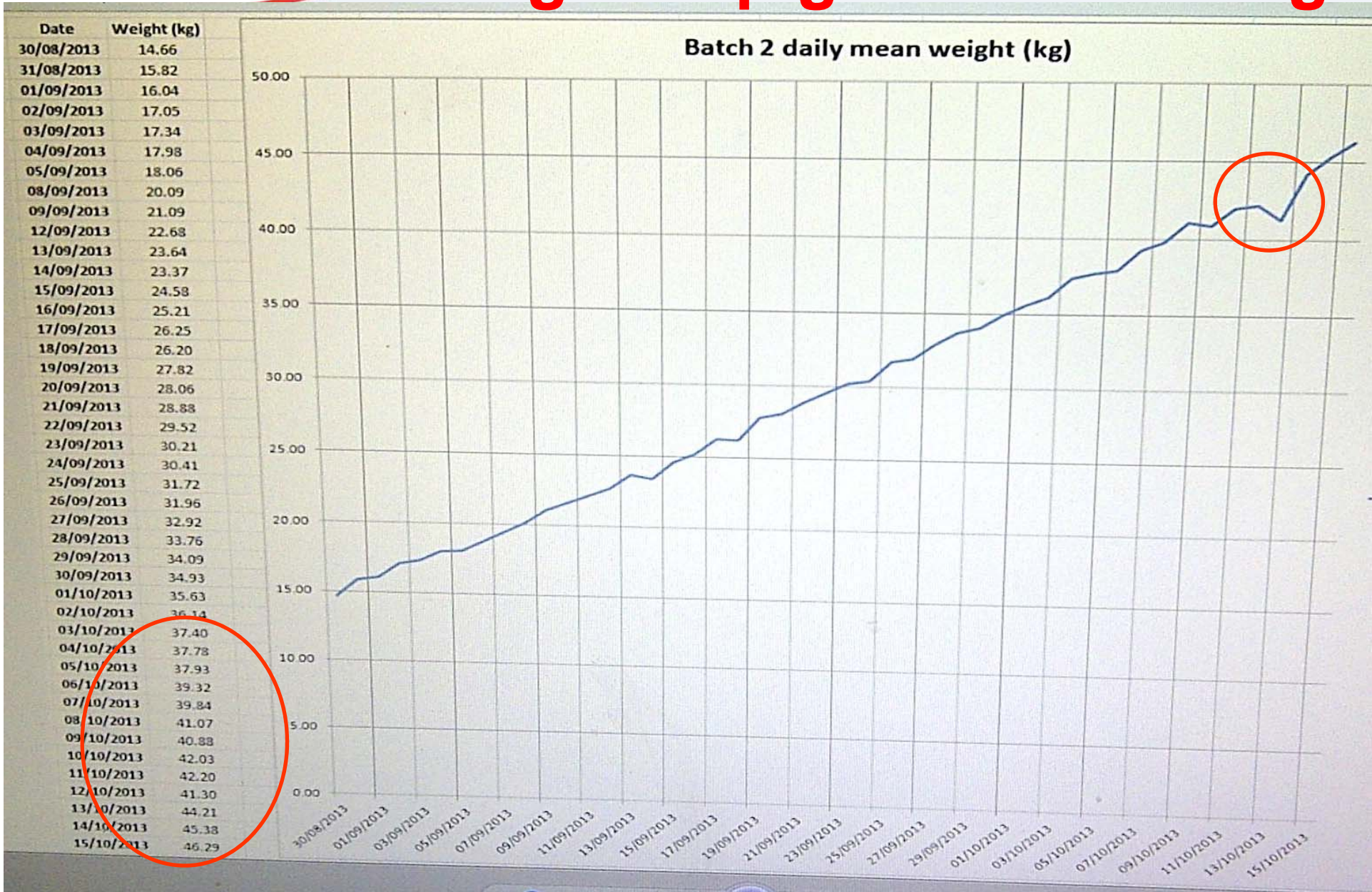
Only takes reading when one pig is being weighed



Records 80 to 120 weighings per day from pen of 60 pigs.



Produces real time ave daily weight of pigs and so adlwg





Has the growth sensor been useful?

1. Yes – provides a real time measure of daily growth
2. Have daily record to monitor the pigs progress
3. Facilitates a timely intervention if a deviation from the normal pattern is detected.



BetterScore

The current scores for Croesmere are:

Zone	Feed	Water	Temp
Site			
FAA			
FAB			
FAC			
FAD			
FAF			
FD1			
FD2			
FD3			
FD4			
SV			
W			
W1			
W2			
W3			
W4			
W5			
W6			

Alarms

The following alarms are currently active.

Current Alarms

High	0 alarms	Off	7 alarms	
Med	0 alarms	Suspend	0 alarms	
Low	1 alarms	Total	8 alarms	

Pig Weights

The following information is available for pig weights.

Min Weight	0.00 Kg
Max Weight	0.00 Kg
Avg Weight	0.00 Kg

(05/05/2015 - 12/05/2015)

[View/Manage Batches](#)



Alarms

The following alarms are currently active.

Current Alarms

High	0 alarms	Off	7 alarms	⚠
Med	0 alarms	Suspend	0 alarms	
Low	1 alarms	Total	8 alarms	⚠

Croesmere

Alarms

Current Alarms

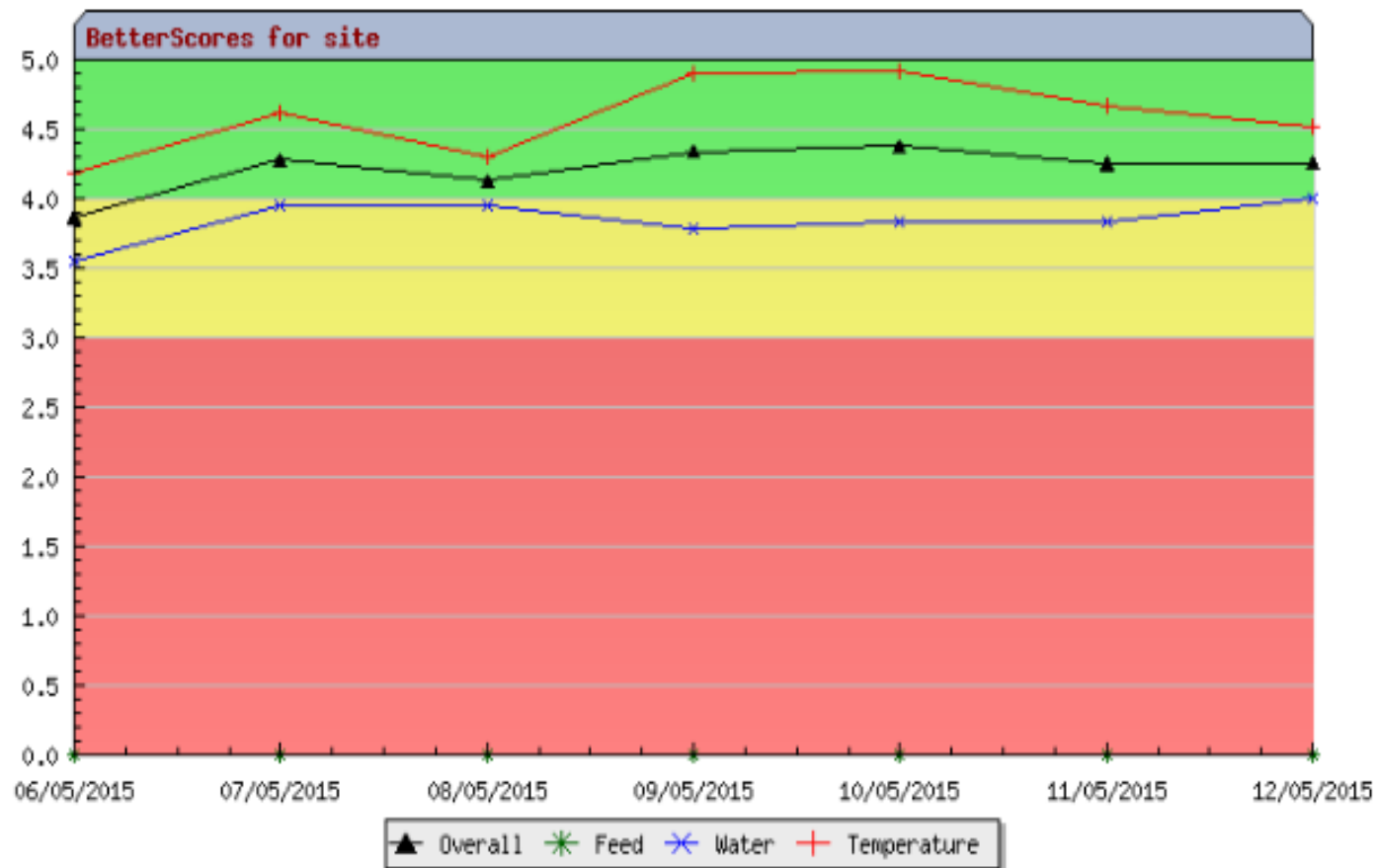
[Suspend](#) [View all](#) [Clear hard alarms](#)

Room	Alarm	Time
crsm	Netmon Connection Failure	May 12th, 18:20
FD1	Temperature Range	May 12th, 09:00
FD1	Temperature Changes	May 12th, 09:00
FAC	Temperature Changes	May 11th, 09:00
FAC	Temperature Range	May 11th, 09:00
W3	Water Trend	Apr 28th, 09:00
W1	Water Trend	Mar 22nd, 08:00
W5	Water Trend	Mar 1st, 08:00



BetterScore is a data analysis system which applies a set of rules to temperature, feed flow and water flow data captured in **Barn Report** and turns a week's worth of data into a single figure score 0-100 for each measured parameter.

BetterScore Graphs





What is next?

Following on from a trial at 2013 at Newcastle University where they measured water and feed consumption, adlwg and pig health, they concluded:-

“This study demonstrates the potential of water consumption patterns as a powerful tool to monitor pig health”

With the development of the sophisticated software Guardian Action, *we can establish if a fall in water usage can be reliably detected, and if this predicts a health challenge, reduced feed intake and reduced growth.*





**Watch this
space.....**

Thank You.

