

The image features three white feathers of varying sizes and orientations scattered across a black and white checkered pattern. The pattern is a classic houndstooth or checkerboard design. The feathers are positioned in the upper left, lower left, and right-center areas of the frame. The text is centered in the lower half of the image.

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14th
EDITION

The Platinum Plan

Focus on Prevention for Optimal Health & Performance



www.canadianpoultry.ca

Stewart J Ritchie

B.Sc.(Agr.), M.S., D.V.M., Diplomate ACPV

Canadian Poultry Consultants Ltd. 1989

S.J Ritchie Research Farms Ltd. 1992



www.platinumbrooding.com

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The Platinum Plan





GORBALS BOYS
GLASGOW 1948



1958 - 1968 - 1978 - 1988 - 1998 - 2008 - 2018 -> 2028 -> 2038 -> 2048 -> 2058



S.J. Ritchie Research Farms

Sungrown® Sustainability Index

Inputs

- Electricity, Gas, Propane, Oil, Water, Feed

Outputs

- Meat or Egg Production

Metrics

- **Performance parameters**
- GJ/KG, CM of water/KG, CO2/KG

Rankings

- Compare to other commodities
- To encourage improvements



*The Canadian Society for Bioengineering The Canadian society for
engineering in agricultural, food, environmental, and biological systems.
Paper No. CSBE18-149*

What Landed On Our Roof in 2018?

Rain

– 1,742,888 liters



<https://www.watercache.com/resources/rainwater-collection-calculator>

Sunshine

– 41,184 kW



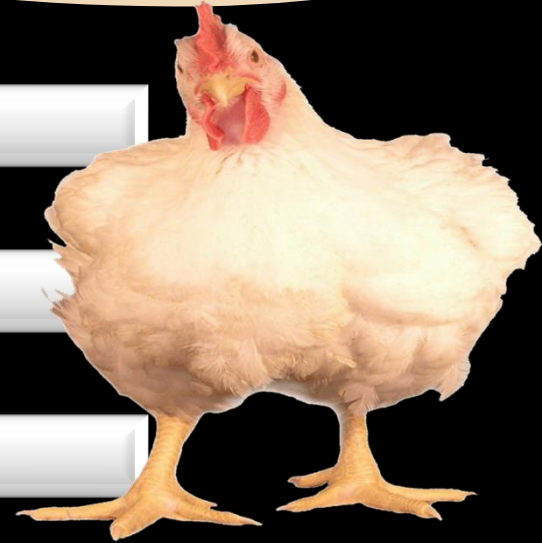
Imposed Constraints

Feed an all-vegetable diet

New litter each cycle, eh

No ionophore anticoccidials

No antibiotic treatment*



The Practical Approach

Sustainability

Knowledge of Husbandry

Improved skills

New skills

Equipped

Talent X Effort = Skill : Skill X Effort = Achievement

Welfare

Organizational Behaviour

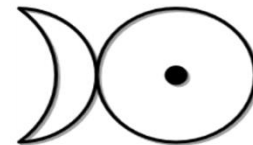
Personal Qualities

- Dedication
- Empathy
- Patience
- Affinity for Animals
- Enthusiasm



Platinum Plan was praised for its durability, it represented determination, grit, and seeing our manifestations to completion.

Platinum Plan was seen to represent high achievement.



We Are Taking Brooding Very Seriously

Platinum Brooding® Classes

- www.platinumbrooding.com

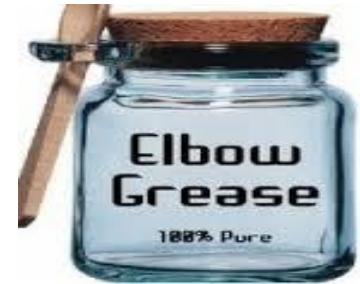
Platinum Brooding® Checklist

Platinum Brooding® APP

Platinum Brooding® Field Diagnostics

Managing Metabolic Heat©

Coccidiosis Prevention Planner©





Success Stories in Poultry Stewardship Define Stewardship

The careful and responsible management of something entrusted to one's



Stewardship



Slide from Dr. Hargis, Platinum Brooding®, U of Arkansas

Platinum Brooding® Checklist



PLATINUM BROODING® CHECKLIST

www.platinumbrooding.com

Placement Date:	Foster Identification #:				
Room Name:	# Birds/Event:				
Contract Name:	CIDV/PS#:				
Room Location:	Barn/lot:				
Feed Contractor:	Map here Check Section:				
Feed Representative:	Vet/Inmate Consultant:				
Notes:	Size in lbs. #:				
CHICKS	RECOMMENDED	MEASURED/ACTUAL	SPACE	RECOMMENDED	MEASURED/ACTUAL
Yeast Temp. at Delivery	Range 100 - 102° F Average +/- 100° F		Density in Brood Area	0.2 sq. ft./bird	
Average Weight @ Placement	Range 100-105 lbs / pen		Density in Barn	2.0 sq. ft./ch. 30.4 kg / sq. m	
Uniformity @ Placement	+ / - 10%		Dispersal (L:W)		
Crop Fill @ 24 hours	> 95% - Sample 100 chicks 100 g		BEDDING	RECOMMENDED	MEASURED/ACTUAL
Activity @ 24 hours	Rolling, Climbing Pecking Flapping Yawning		Depth / area per unit	30-40 cm 100 cm ² / kg / m ² 1000 cm ² / kg / m ²	
Distribution @ 24 hours	Full in Brooding Area Zone of Comfort		Type of Bedding Moisture level	20-30% moisture	
Health	Normal		Temperature surface of bedding	90 - 92 F 32 - 33 C	
fly dust/soil	Absent		Floor type		
FEED	RECOMMENDED	MEASURED/ACTUAL	COMFORT ZONE	RECOMMENDED	MEASURED/ACTUAL
Feeder Height (Floor to lip of feeder)	On Floor, Fixed position		Partial House Brood	None brood within brooding area (except Comfort zone)	
Accessible	Yes		Whole House Brood	When chicks spread throughout the pen area after being introduced	
Supplemental Feeder	Linear (not round - rigid) Narrow West source - Tiers		Focused Brood	When feed and attraction lighting can be used to create Zone of Comfort	
In Zone of Comfort	Yes		Thermal Soaking	Key to identifying the comfort zone, dark	
Distribution Comments	Well spread & allow way across to 25 chicks		LIGHT	RECOMMENDED	MEASURED/ACTUAL
Feed Type	Constant		Light Type		
Size of Chicks	Medium (smaller 1:3 size (measured with feed alert)		Attraction Light Brooding Area	Either dedicated brooding light or bright (not growing light)	
Crop Feed Amount (grams/black)	30 - 70 gm/24		Intensity (Lux)	100 Lux at chick height (1 m) Peak Caution	
			Even Light throughout brooding area	Light on walls of brooding area off	

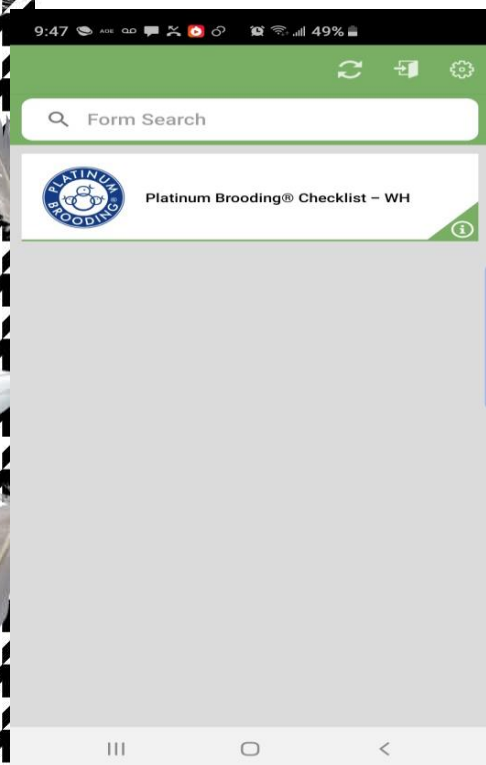
WMAE 01-13/06/2013



*The Checklist Manifesto
Atul Gawande. 2009.*

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The Platinum Brooding® App





S A L U S S Y S T E M S

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9:48 49%

← Platinum Brooding® Checklis... 🏠

Revision 2018.Nov.01-GJ



Platinum Brooding® Checklist

General

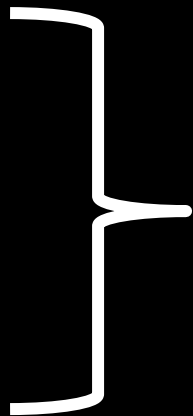
Placement Date *

 >

Farm Name *

 >

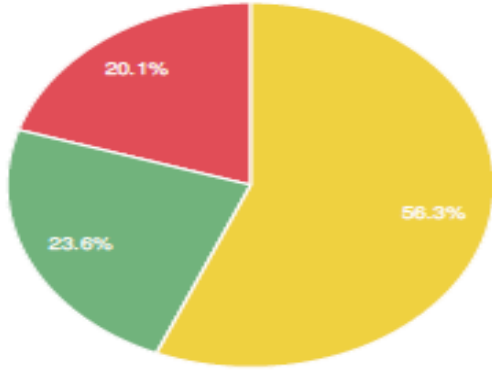
Cycle Name *

 >

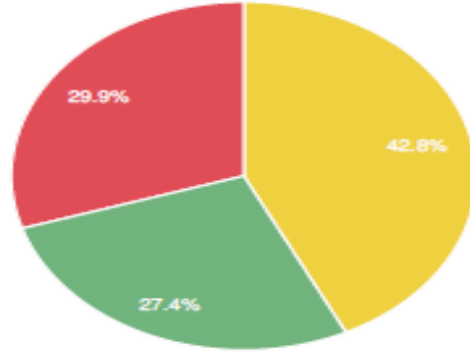
*Quick entry of
flock information*

24Hr Crop Fill (2014-2018)

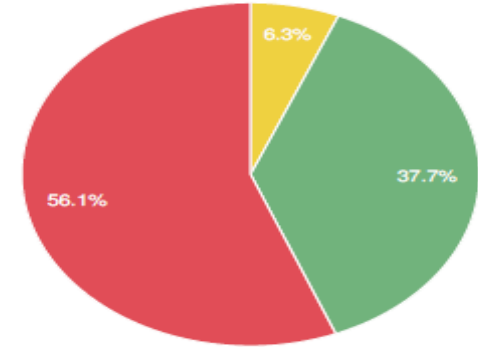
2014



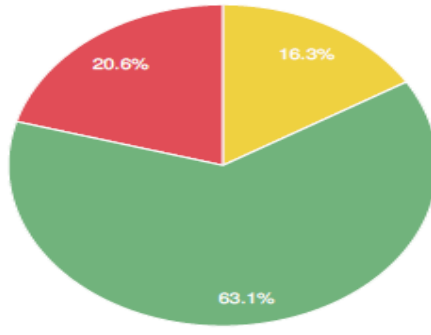
2015



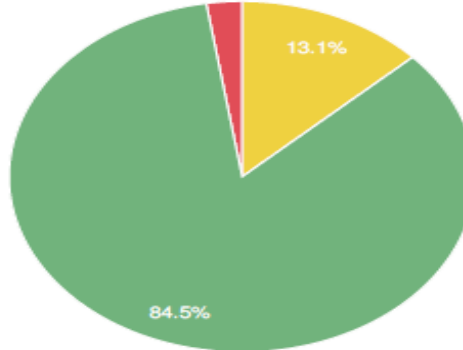
2016



2017



2018



The Platinum Brooding® Checklist: Principles



Thoroughness:

- Conscientiousness in performing all aspects of a task



Accuracy:

- Condition of being true, correct or exact



Precision:

- Ability of a measurement to be consistently reproduced



The Platinum Brooding® Checklist : Action

1. Establish Current Status

- Thorough, Accurate and Precise Completion of Checklist

2. Make The Adjustments

- Short Term/Long Term

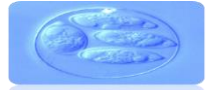
3. Monitor

- All Performance Parameters
- Motivation

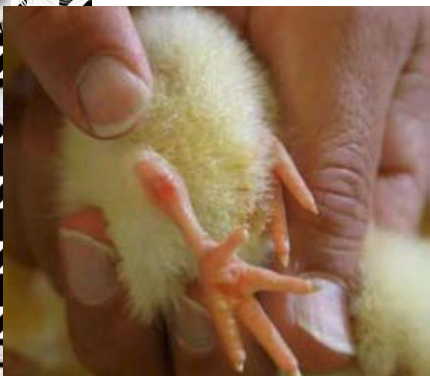
Crop Fill



- Grinding
- Bile Acids
- Digestive Enzymes



Empty Crop: Why?





12/24/2012 09:32

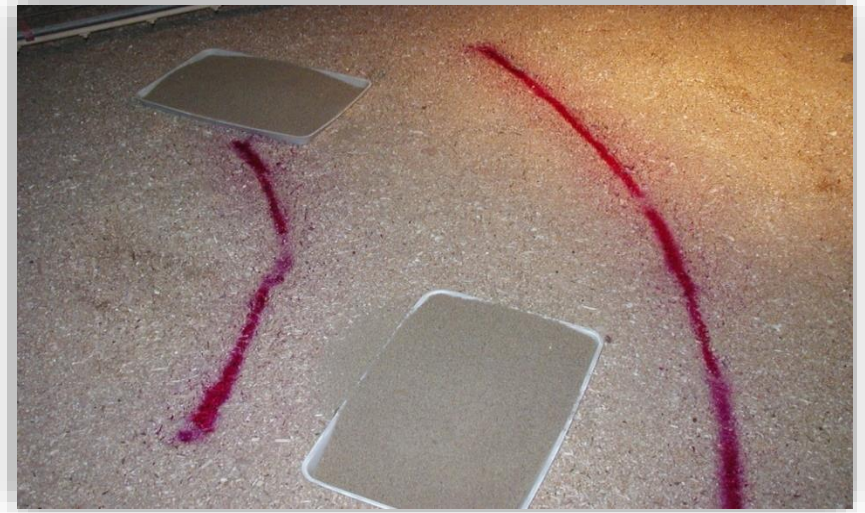
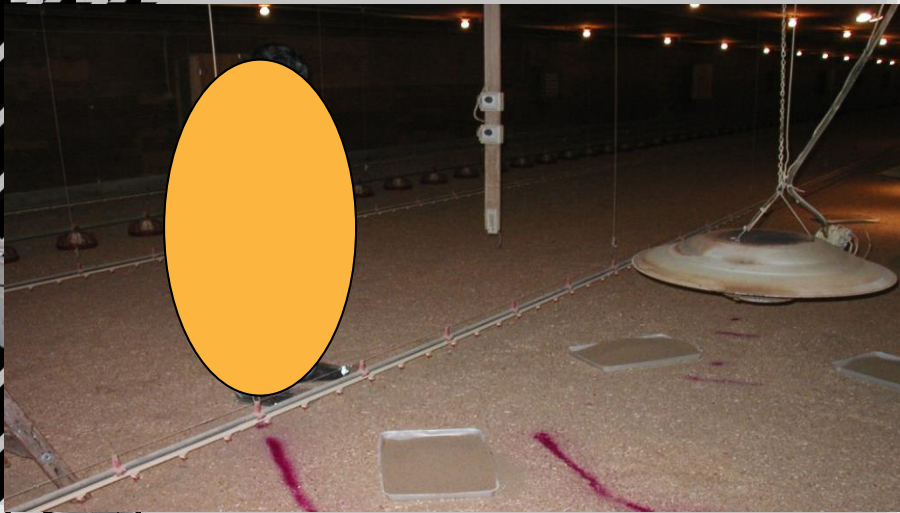


Grams Per Chick

05/14/2012

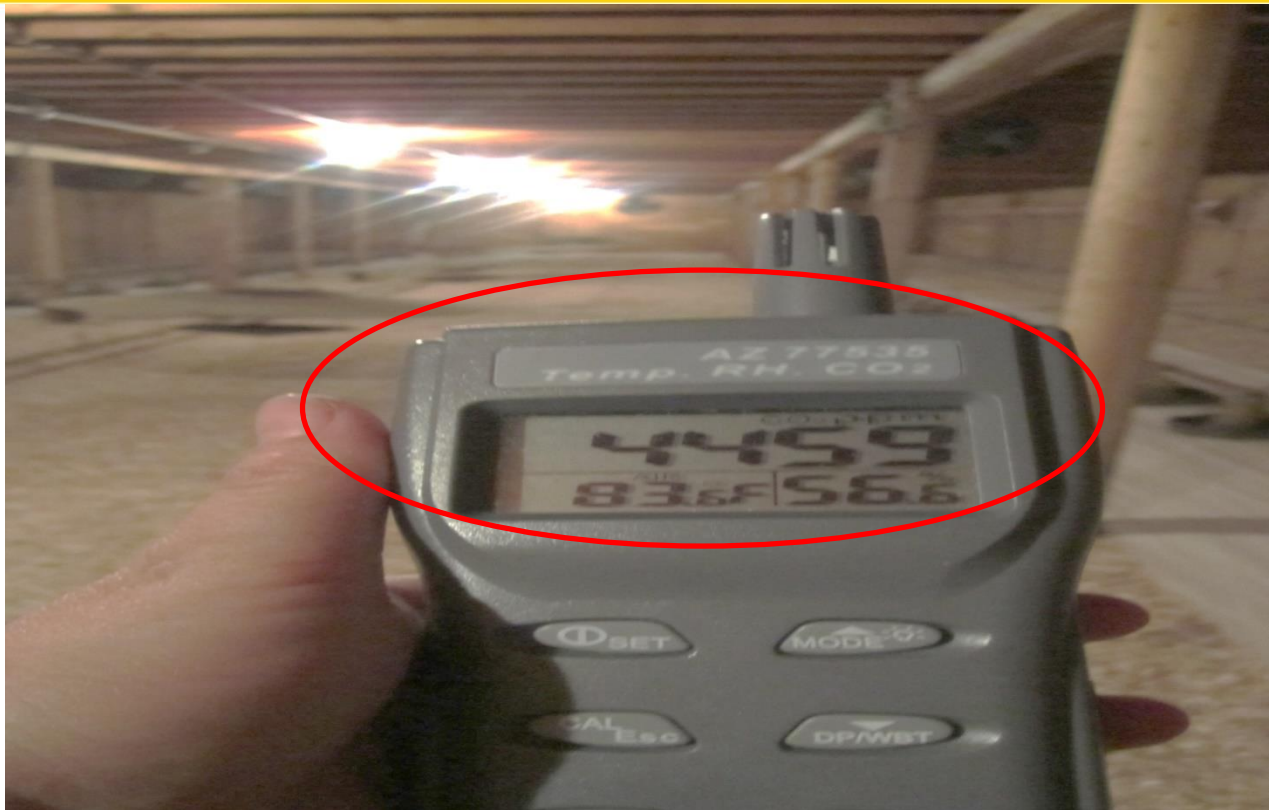


Zone of Comfort Determined Before Chicks Arrive

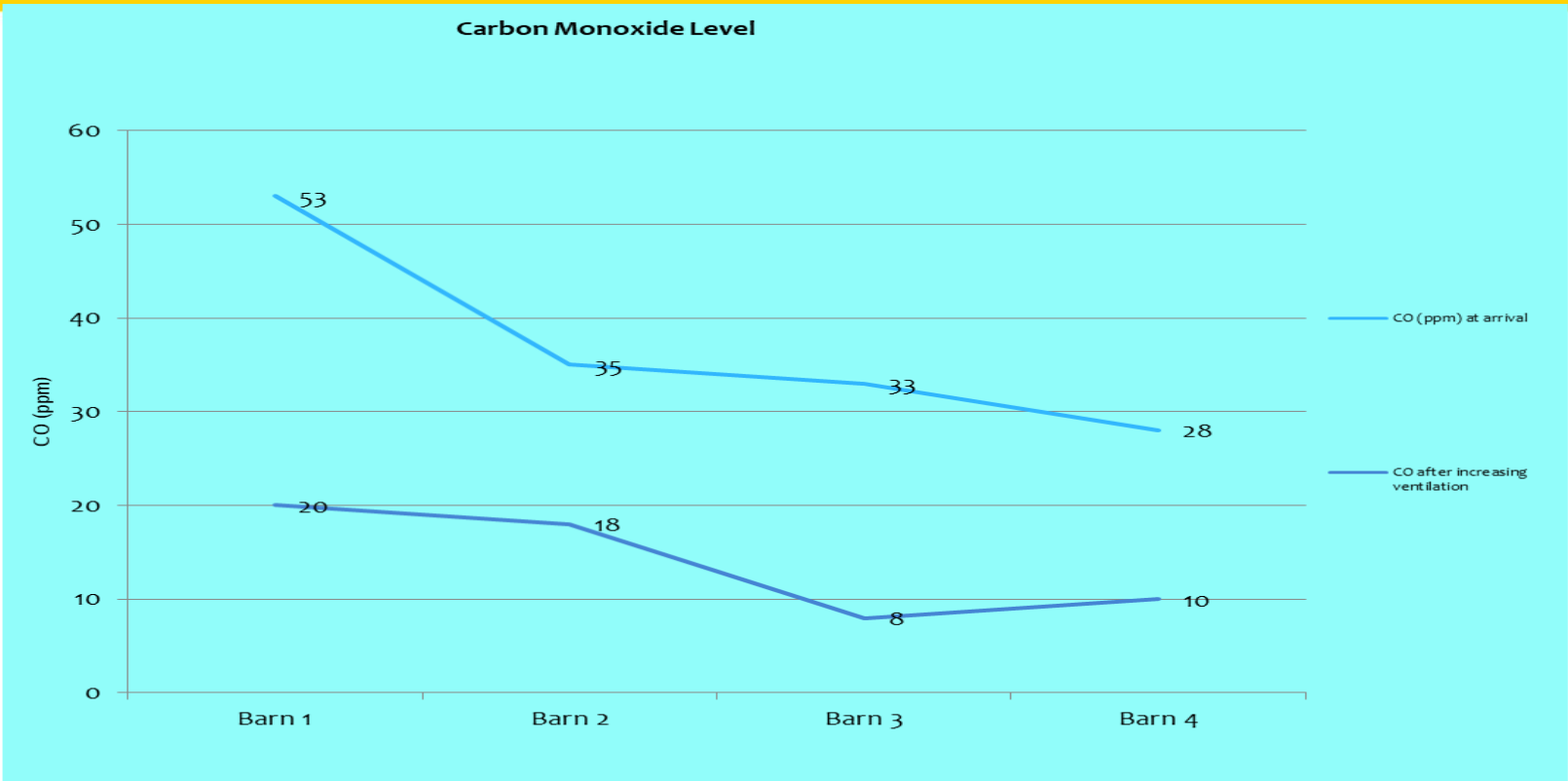


31 C – 39 C

CO2 level < 3000 PPM



Carbon Monoxide



Attention to Detail



Vent Temperatures
103 - 105 F

Moisture
Temperature
Oxygen



65%



25%

Seeking Water





Nutrition Via Water – NVW[®]

Predicted Stress

- Growth curve
- Moving
- Vaccination

Non Predicted Stress

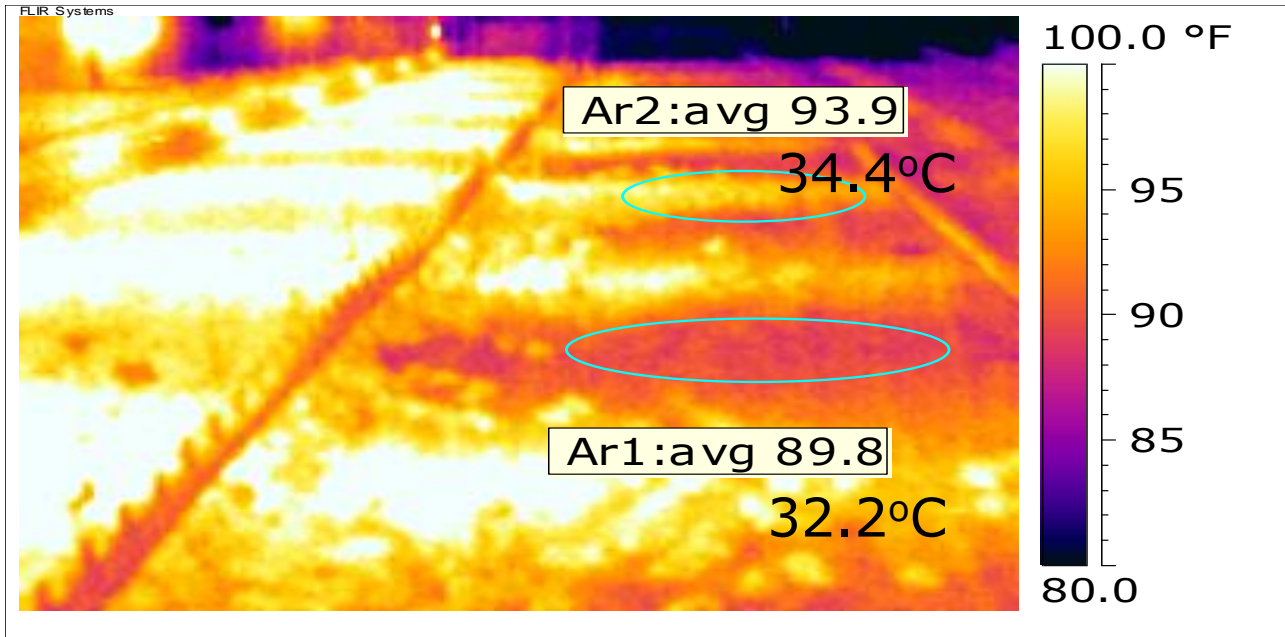
- High temperatures
- Disease
- Equipment failure



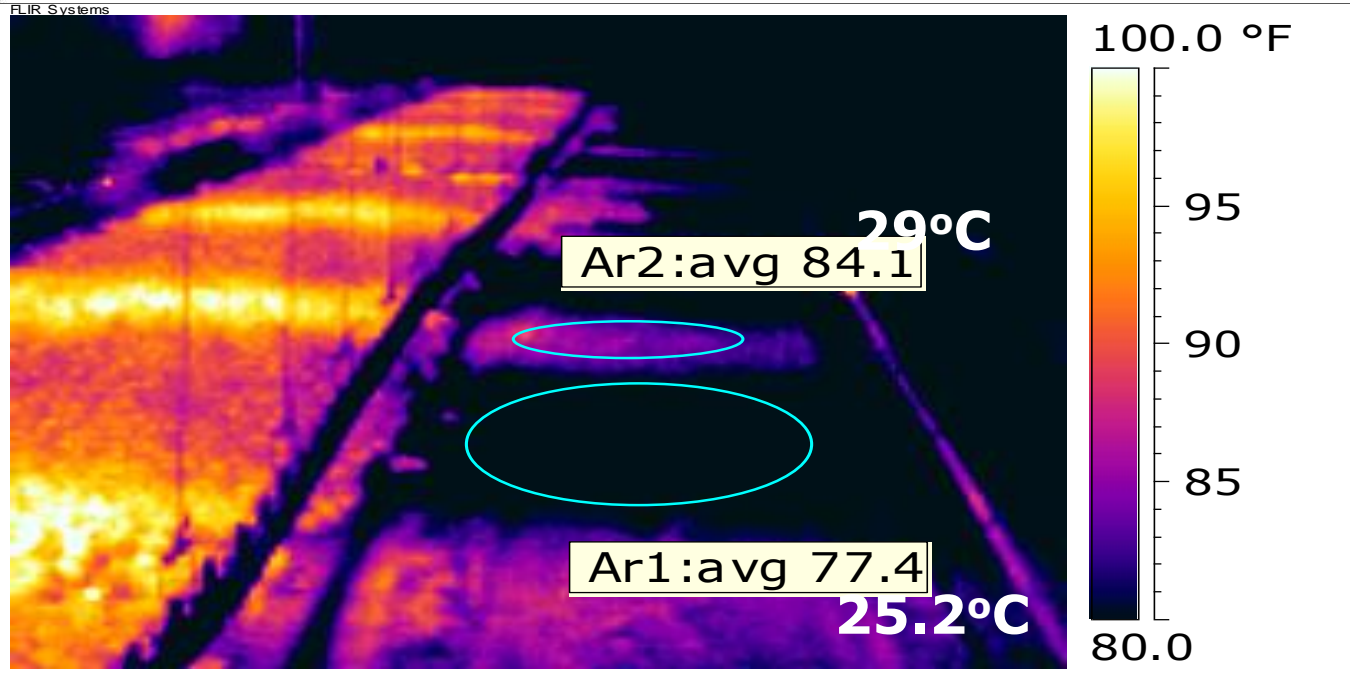
Do Not Forget to Clean the Buckets

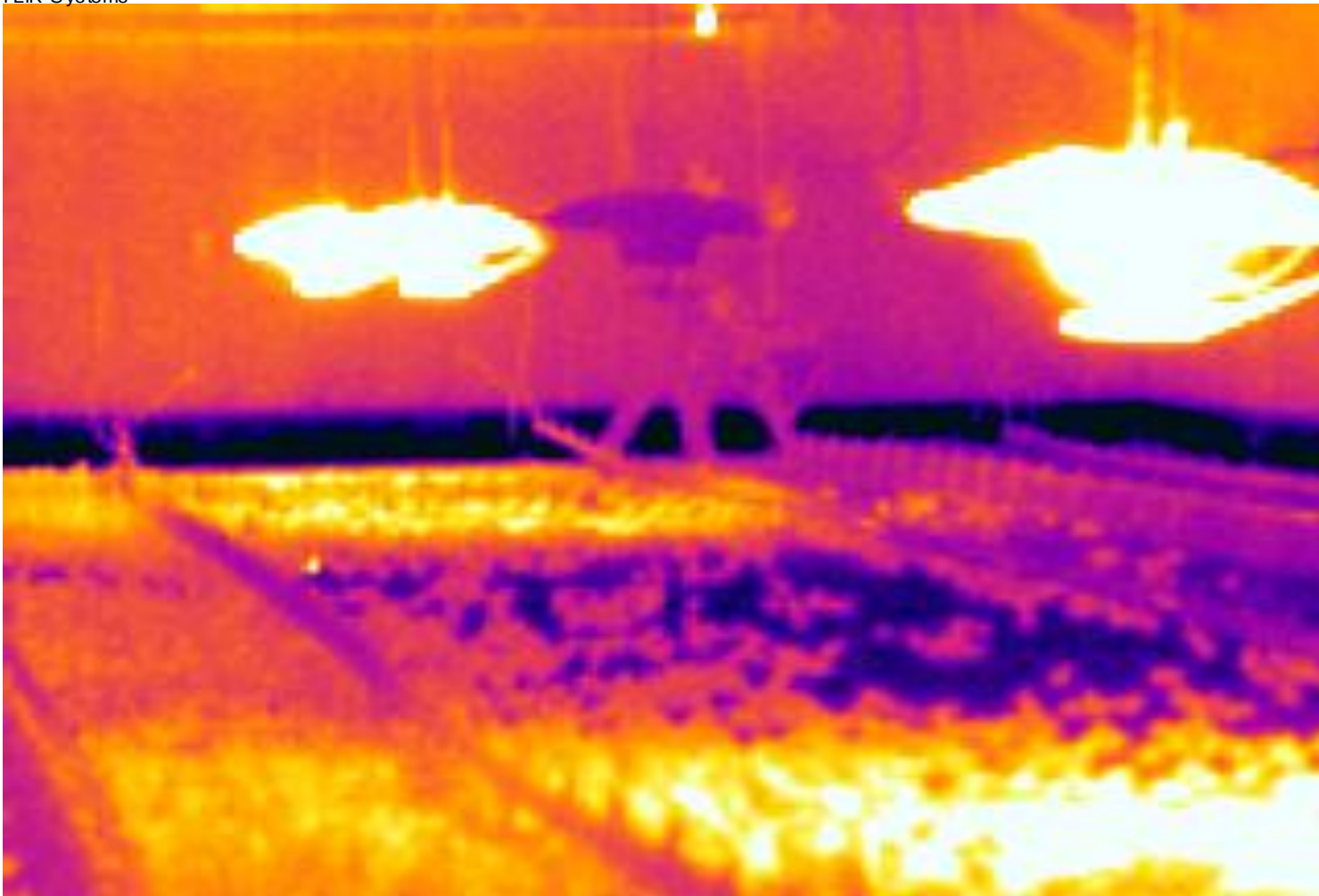


Chicks Placed on top floor (plywood)



Chicks Placed on lower floor (concrete)





110.0 °F



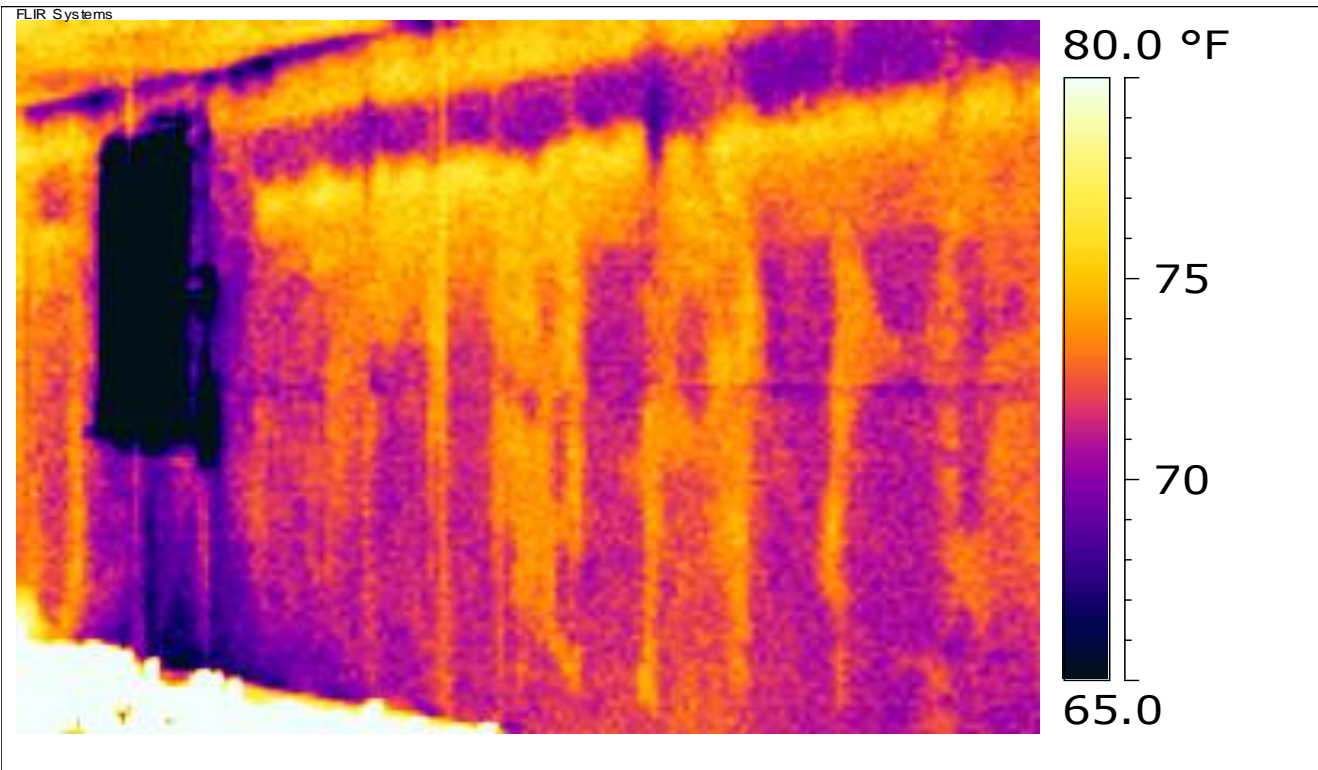
5

100

90

80.0

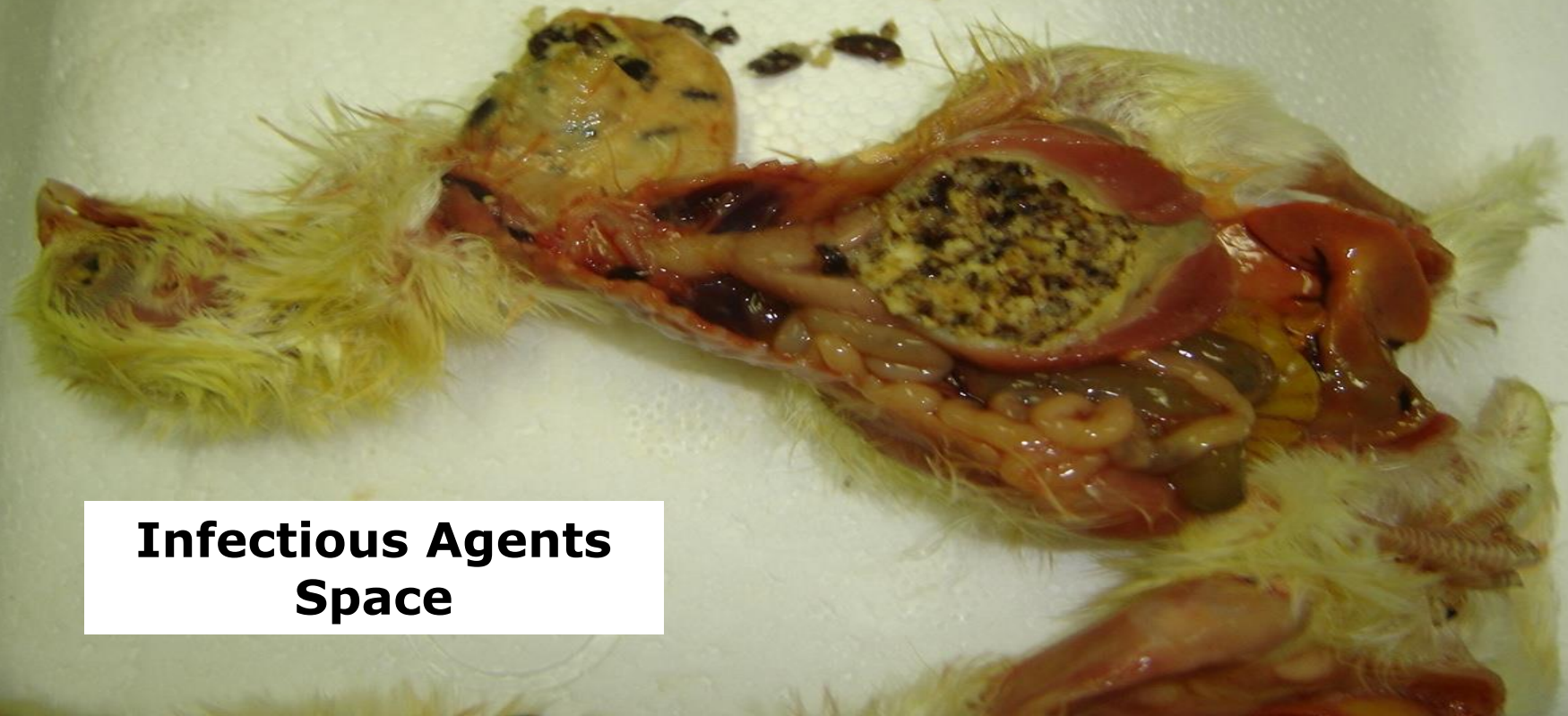
Missing insulation in barn walls





Darkling Beetles





**Infectious Agents
Space**

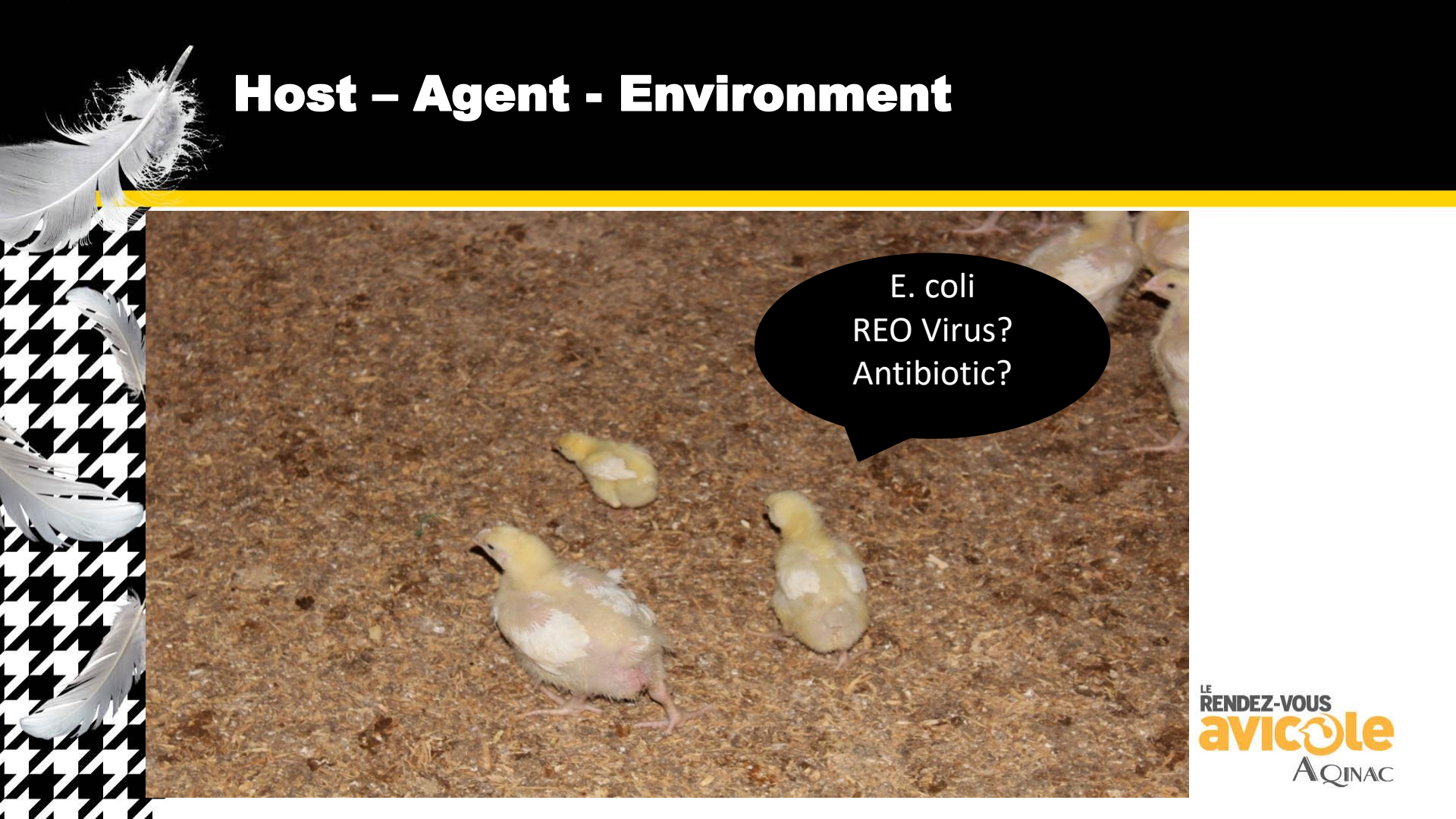


9 LUX

LEAST COST MANAGMENT

Stewardship?

Host – Agent - Environment



E. coli
REO Virus?
Antibiotic?



Picture from D. Goyne, Aviagen

Platinum Brooding [®] Class



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Platinum Brooding® in the Field





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Why pay attention to brooding conditions?

Optimum brood management will encourage normal behavior, including feed and water intake. Maintaining “steady state” is critical.



Steady State

Refers to the entire flock through 24 hours.

The average bird eats every 4 hours.

It takes an average of 4 hours to empty crop (flock must be on water).

When on feed, in steady state, 30 to 50 % of birds will have feed in crops.

Steady state critical to an effective feed withdrawal program.

Takes 5 to 7 days to return to steady state.

CHORE-TIME

Feed Out



Chick Vitality



Chick Vitality

Physical

- Weight, Length, Colour

Immunological

- Active, Passive, Innate

Microbiological

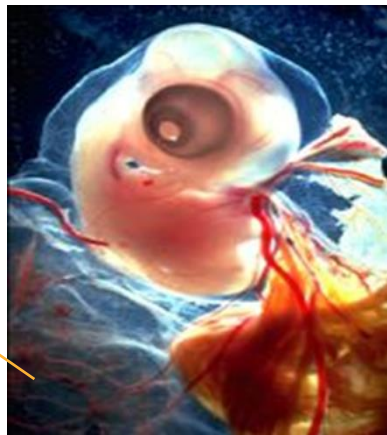
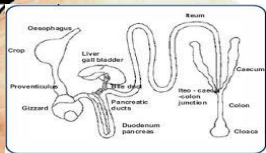
- Free from pathogens and teeming with beneficial organisms

Nutritional

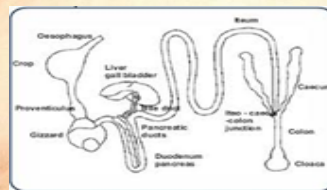
- Macro and Micro Nutrients



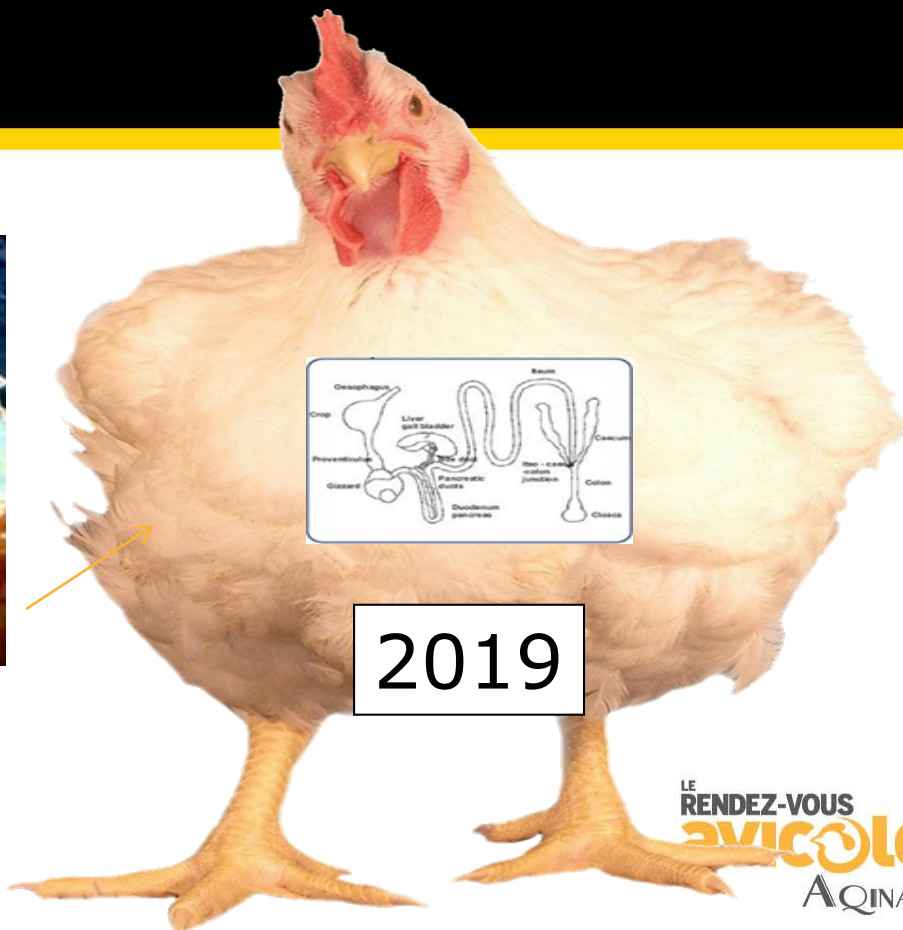
Managing Metabolic Heat©



1957



2019



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Potential Impact of Over Heating

Managing Metabolic Heat ©

Lower glycogen reserves in muscles and thinner microfibers

Increased lactic acid and increased muscle fatigue

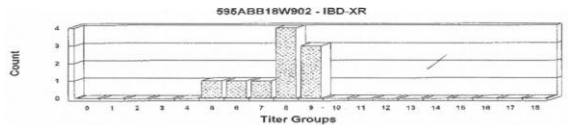
Negative affect on bone ossification

Tight junction permeability

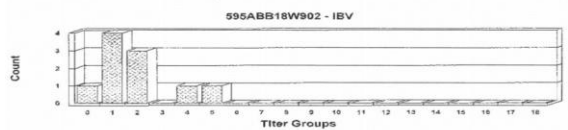


Managing Metabolic Heat©

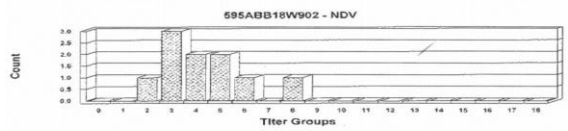




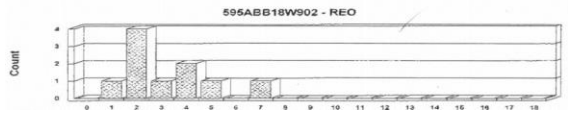
Count: 10
Mean: 10416
GMean: 10045
SD: 2595
%CV: 24.1
Min: 8188
Max: 13252
Tech: RY
Date: 29/04/14
Dil: 1:500



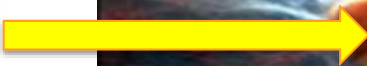
Count: 10
Mean: 1390
GMean: 875
SD: 1243
%CV: 91.4
Min: 118
Max: 4040
Tech: RY
Date: 29/04/14
Dil: 1:500



Count: 10
Mean: 4053
GMean: 3654
SD: 2116
%CV: 52.2
Min: 1536
Max: 9045
Tech: RY
Date: 29/04/14
Dil: 1:500



Count: 10
Mean: 2755
GMean: 2130
SD: 1898
%CV: 68.8
Min: 407
Max: 7095
Tech: RY
Date: 29/04/14
Dil: 1:500



Are My Eggs Sweating?

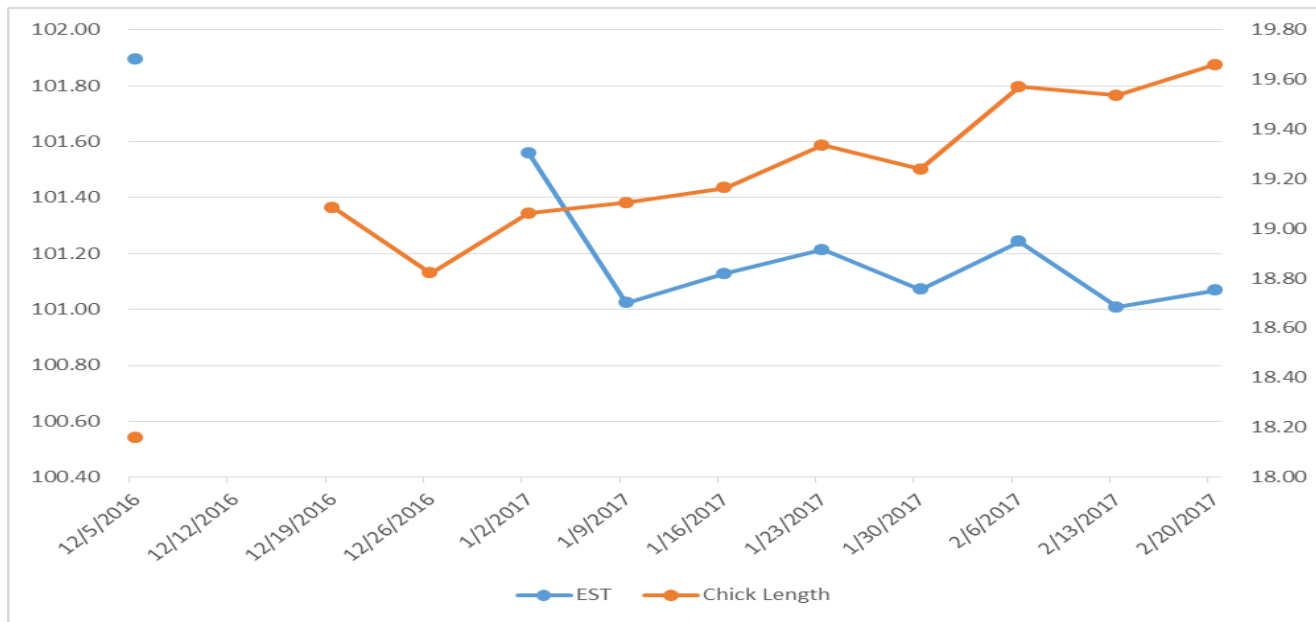


Yolk Sac Utilization

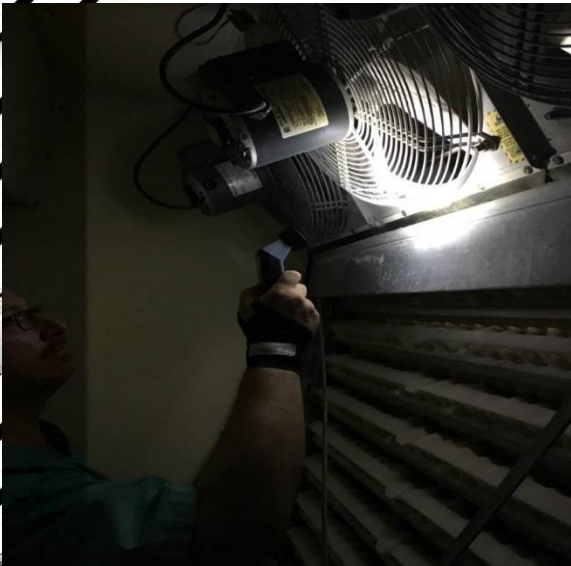


	BARN/FLOOR	CHICK WEIGHT (g)	YOLK WEIGHT (g)	YOLK-FREE BODY WEIGHT (g)	% YOLK OF BODY WEIGHT
1	DOWN	34.4	8	26.4	23.26%
1	DOWN	36.2	4	32.2	11.05%
1	DOWN	39.7	7.1	32.6	17.88%
1	DOWN	33.3	4.4	28.9	13.21%
1	DOWN	36	5.3	30.7	14.72%
1	DOWN	42	6.2	35.8	14.76%
1	DOWN	34.5	5	29.5	14.49%
1	UP	43.6	3.5	40.1	8.03%
1	UP	37.7	6.8	30.9	18.04%
1	UP	32	5.8	26.2	18.13%
1	UP	52	6.6	45.4	12.69%
1	UP	33.5	7.6	25.9	22.69%
1	UP	40.3	3.3	37	8.19%

Chick Length / Yolk Utilization Relationship to Egg Shell Temperature



Measuring Fan RPM, Airflow in Incubator



- *Measuring fan RPM using hand-held Stroboscope*

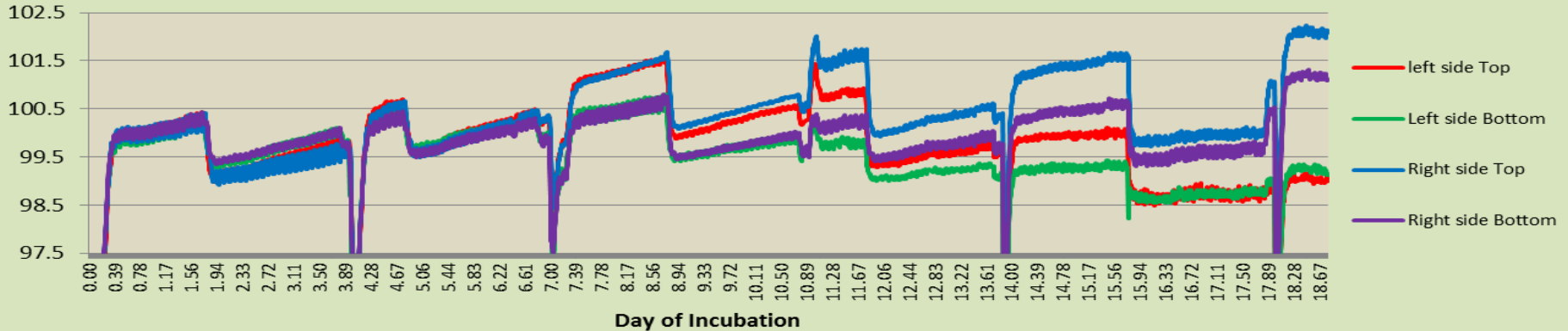


- *Measuring airflow through Egg Pack (goal >400 feet / minute)*

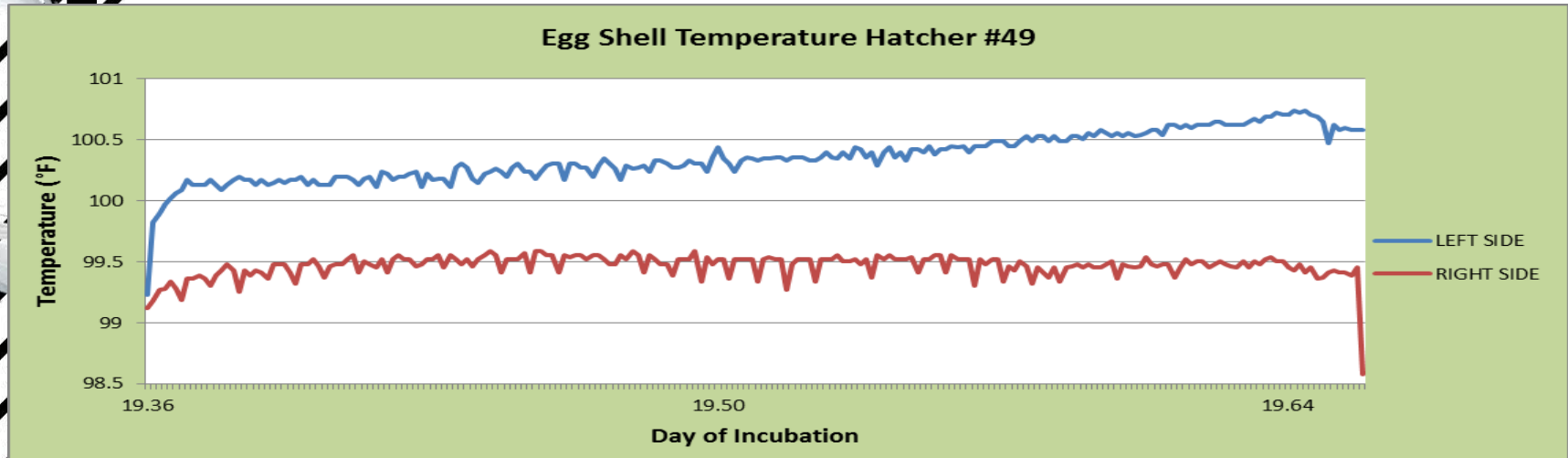


Egg Shell Temperature – Multi-Stage Incubator

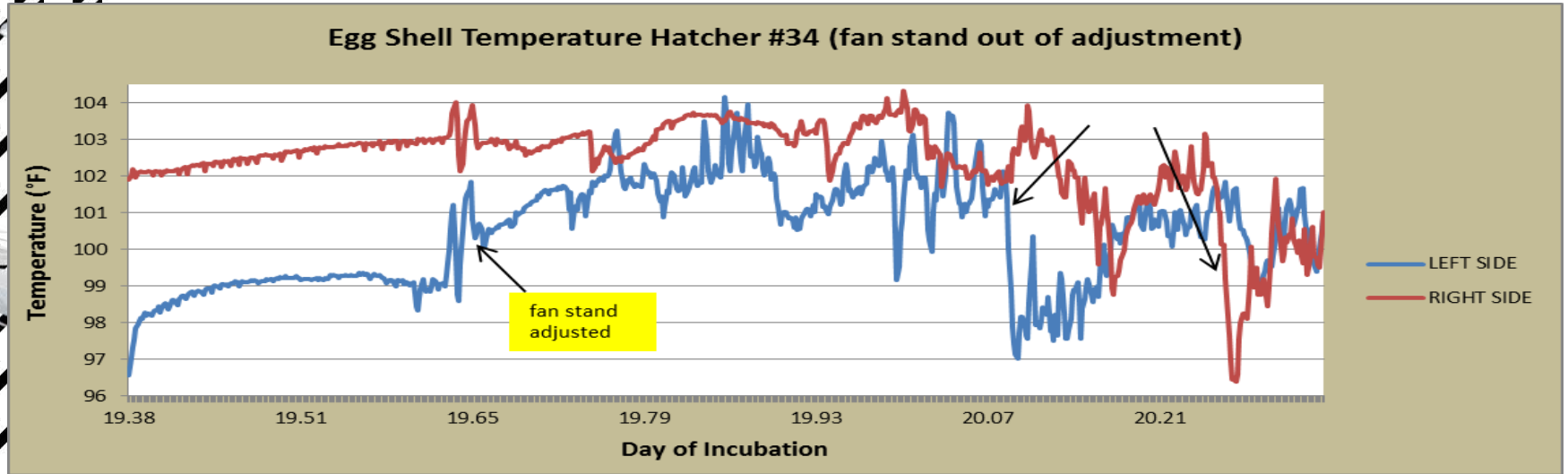
EGG SHELL TEMPERATURE COMPARISON: INCUBATOR 6 (17 March 2016 SET)



Hatcher Environment



Hatcher Environment is not optimized





- *Evaluating comfort of chicks in chick boxes from hatch through chick delivery*
- *Installing bluetooth data logger in chick box*



Neonatal Feeding at Hatchery

- Used when holding chicks for extended periods
- Long transport
- Improved hydration
- Reduced mortality



Formaldehyde Removed

Requires improved Hatchery Sanitation –
hot water, steam
Quality Control
MMH©
Automated Hatcher Disinfectant System
Platinum Biodefense
Hatch Health 18
Hatch Health 20
Surface sealing



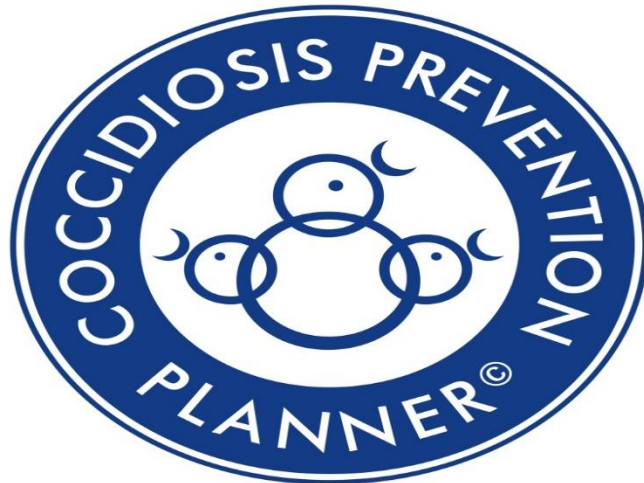
Improved Sanitation

- Sealed cracks in floors
- Epoxy coating on floors, in Hatchers
- Hatch Health 20



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CPP

A new computer based Coccidiosis Prevention Planner© designed to help guide and record medication and other decisions associated with the prevention of coccidiosis in broiler chickens.



Coccidiosis Prevention Planner©

Successful poultry coccidiosis prevention programs and strategies require thoroughness, accuracy and precision

- Multi-factorial
- Focus on husbandry
- Strict attention to rotation and shuttle strategies
- It is a journey, year after year



Coccidiosis Prevention Planner©

YOUR
COMPANY
LOGO

Default Settings

	Length	Downtime	Flock Size	No. of Flocks
Cycle	36 days	10 days	1	1
Name	Start Day	Length	Feed Intake	
Feed Stage 1 Starter	Day 0	10 days	0.000mt	
Feed Stage 2 Grower	Day 10	11 days	0.001mt	
Feed Stage 3 Finisher	Day 21	15 days	0.002mt	

Cycle	Cycle Start	Cycle Length	Cycle End	Downtime	Flock Size	Number of Flocks
	23 Sep 2014	36 days	28 Oct 2014	10 days	10,000	1

Feed Stage	Start Day	Start Date	Length	End Date	Feed Intake	Medication	Trade Name	% Conc	KG or Doses	Dosage	Cost Per KG or Dose	Total Cost
Starter	Day 0	23 Sep 2014	10 days	02 Oct 2014	2.950mt	Amprolium <input type="button" value="Add Medication..."/>	Amprol 25% Feed Mix <input type="button" value="Add Medication..."/>	50%	0.738KG	125ppm	\$5.00	\$3.69 <input type="button" value="Remove Feed Stage"/>
Grower	Day 10	03 Oct 2014	11 days	13 Oct 2014	8.870mt	<input type="button" value="Add Medication..."/>	<input type="button" value="Add Medication..."/>					<input type="button" value="Remove Feed Stage"/>
Finisher	Day 21	14 Oct 2014	15 days	28 Oct 2014	23.410mt	<input type="button" value="Add Medication..."/>	<input type="button" value="Add Medication..."/>					<input type="button" value="Remove Feed Stage"/>
						Amprolium	Amprol 25% Feed Mix	0.738KG	\$3.69			
						Total			\$3.69			





COCCIDIOSIS PREVENTION PLANNER©

COMPANY
NAME

Date: 25 Mar 2015
Case #: 12345
Client:
Vet: CPC

A129:
Cycle Start: 18 Feb 2015
Length: 36 days
Flock Size: 10,000
No. of Flocks: 1
Downtime: 7 days

A130:
Cycle Start: 2 Apr
Length: 36 days
Flock Size: 10,000
No. of Flocks: 1
Downtime: 7 days

A131:
Cycle Start: 15 May 2015
Length: 36 days
Flock Size: 10,000
No. of Flocks: 1
Downtime: 7 days

A132:
Cycle Start: 27 Jun 2015
Length: 36 days
Flock Size: 10,000
No. of Flocks: 1
Downtime: 7 days

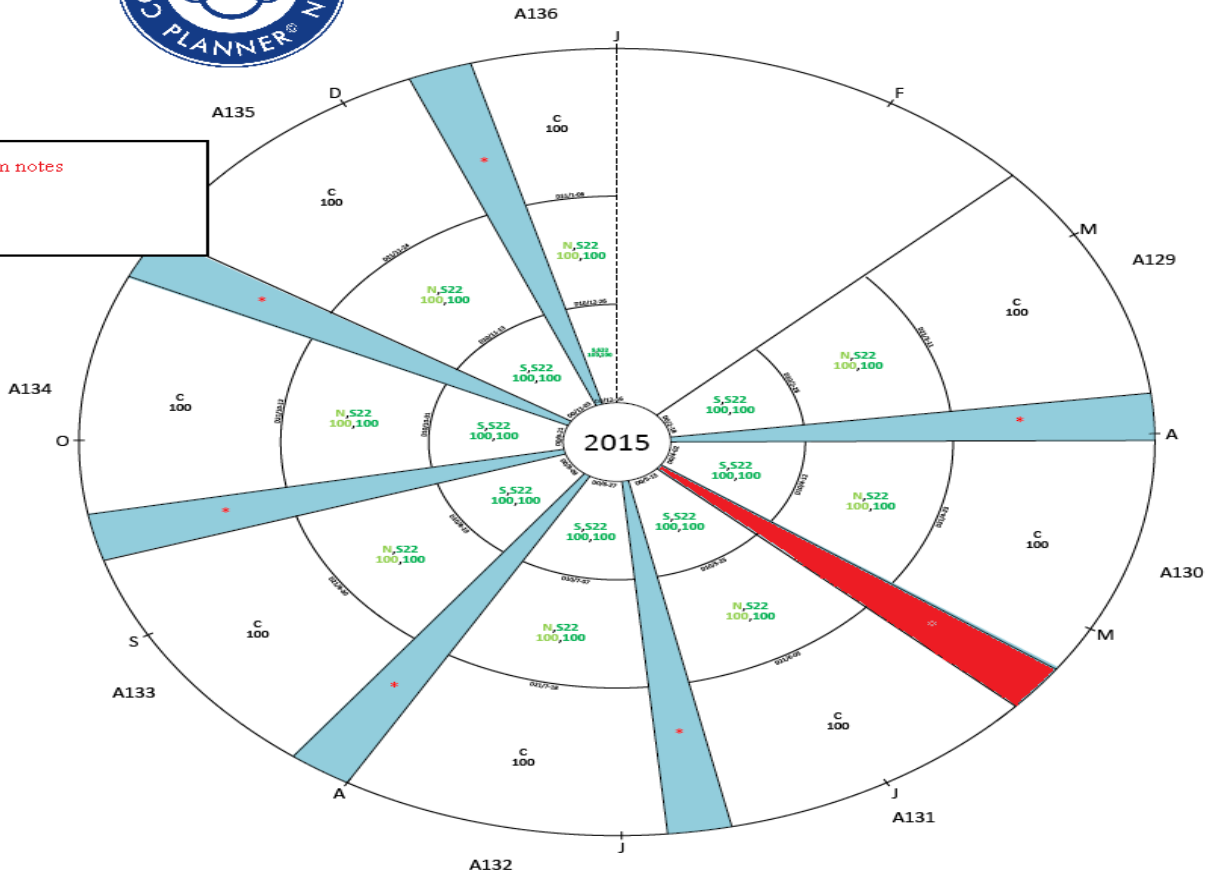
A133:
Cycle Start: 9 Aug 2015
Length: 36 days
Flock Size: 10,000
No. of Flocks: 1
Downtime: 7 days

A134:
Cycle Start: 21 Sep 2015
Length: 36 days
Flock Size: 10,000
No. of Flocks: 1
Downtime: 7 days

A135:
Cycle Start: 3 Nov 2015
Length: 36 days
Flock Size: 10,000
No. of Flocks: 1
Downtime: 7 days

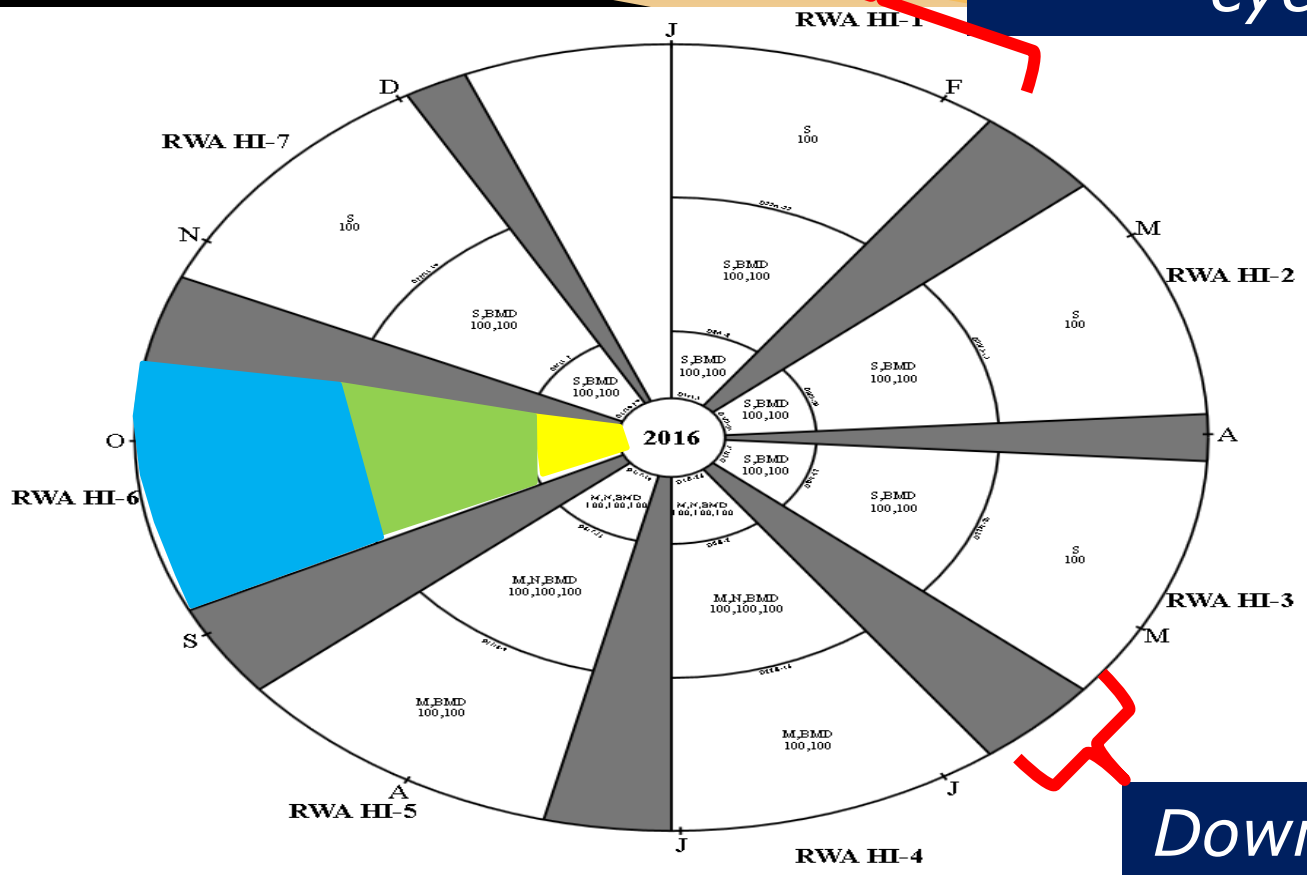
A136:
Cycle Start: 16 Dec 2015
Length: 36 days
Flock Size: 10,000
No. of Flocks: 1

Custom notes



One production cycle

S
G
F



Downtime

Application

Record decisions.

Provide product details and guides purchasing.

Calculates and tabulates important metrics.

Long term and comparative analysis.

Custom linked to internal performance indices.

More than coccidiosis prevention planning

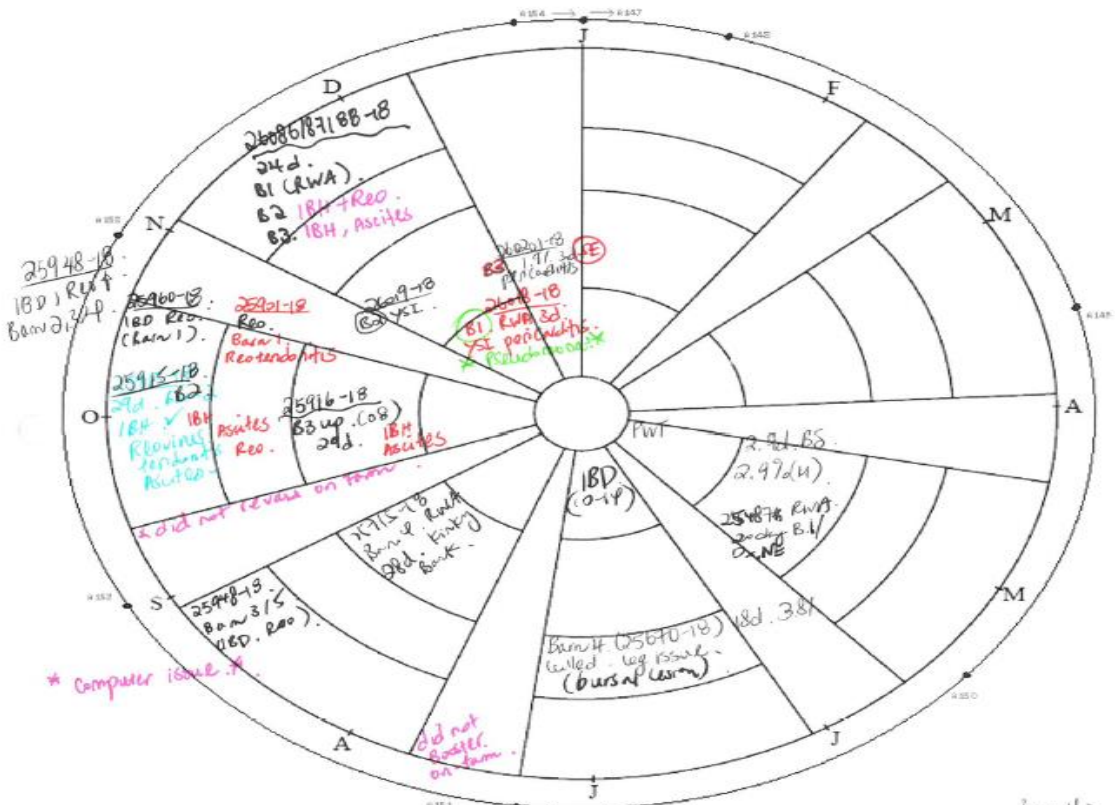
Medical & performance record - VCPR

Generate prescription template

Date: _____
 Farm: _____
 Barn: _____
 Serviced By: _____



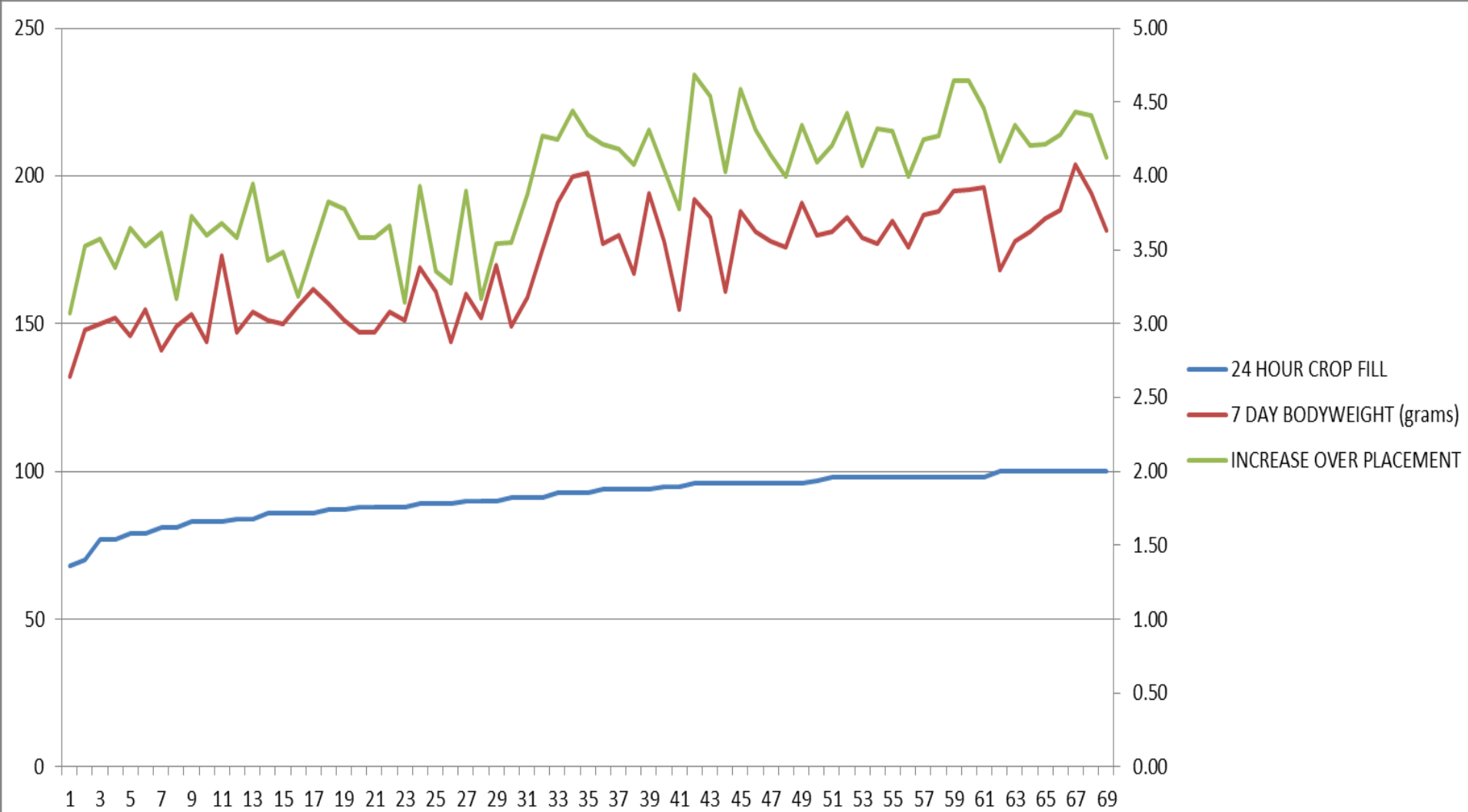
Barn near long-lived birds



* Computer issue *



Barn 4:
 Only used
 2 cycles / year
 also, 1st.



Platinum Brooding®: 2009

73 % Crop Fill

1.9 % 7 day mortality

166 g 7 day BW

95 % livability

2.08 kg @ 36 days

95 % Crop Fill

1.0 % 7 day mortality

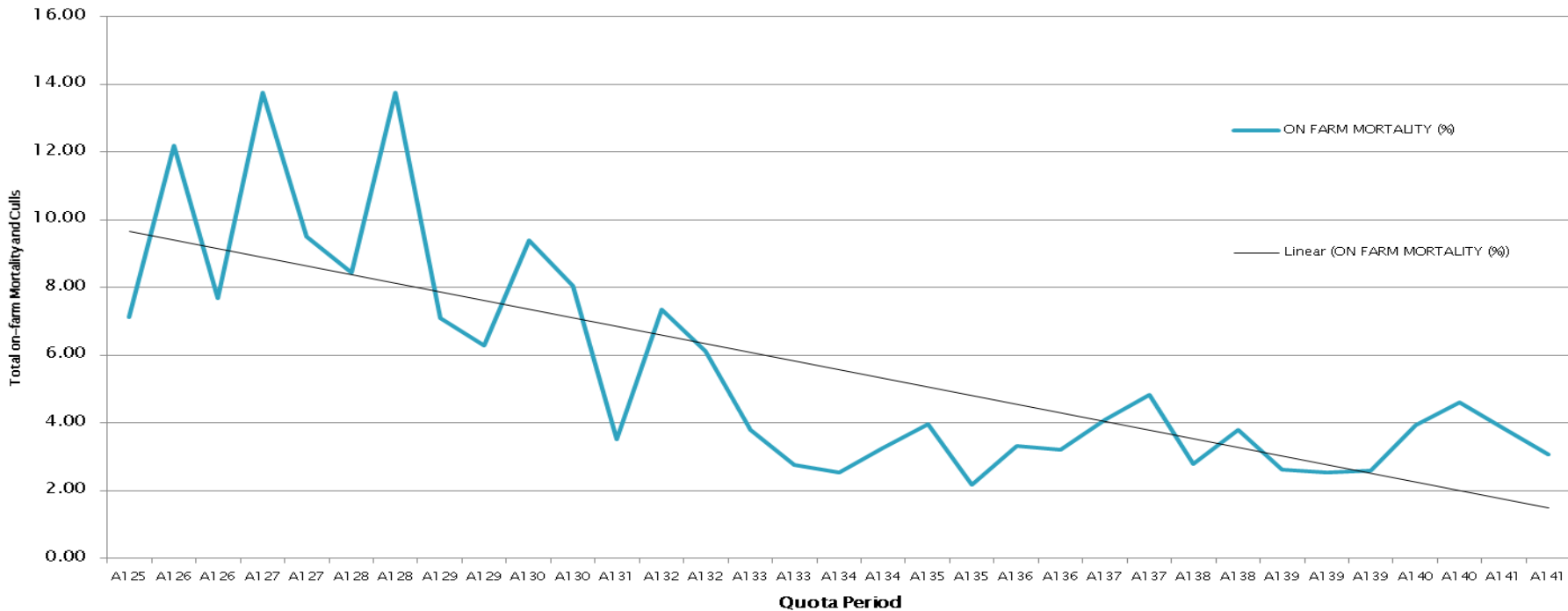
227 g 7 day BW

97 % livability

2.23 kg @ 36 days

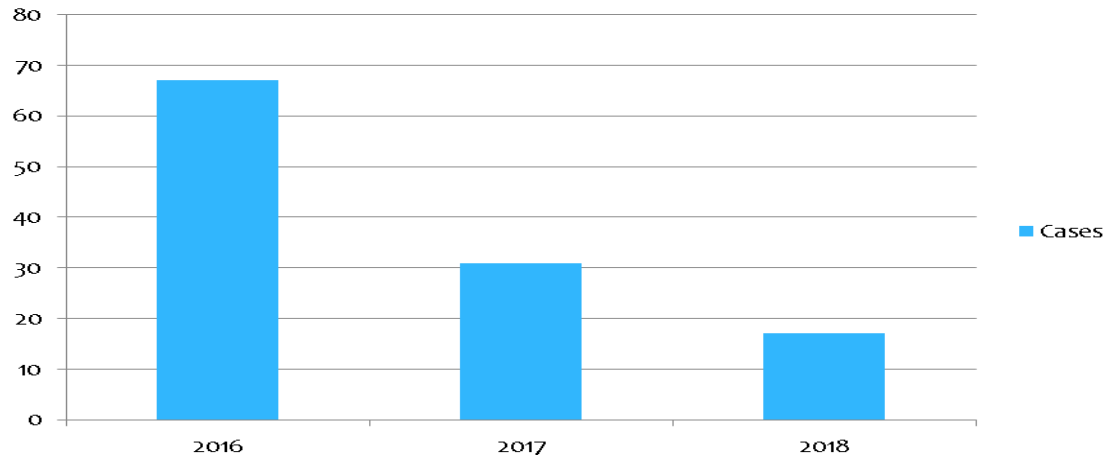


RWA SEGMENT COMMERCIAL BROILER PRODUCTION



Necrotic Enteritis

Cases



In Summary

Define Comfort Zone – FLAWS
% Crop Fill @ 24 hrs.
BWG and CV @ 7 d
Establish and Maintain Steady State
Platinum Brooding® Checklist
Precision Nutrition AND Precision Management
MEASURE, MEASURE, MEASURE





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Merci beaucoup



High River Colony, Alberta

