

Monitoring

By:

Bill Bennett

Asia Technical Service manager

Jamesway Incubator Company

Monitoring of the Jamesway Multi Stage Incubation System

Jamesway Multi Stage Incubation
System Affords You the Opportunity to
Monitor and Correct Incubation
Concerns Before You Actually See
Them in the Chicks

Four Tools Available to Monitor The Jamesway Multi Stage Machine

- Ç 1. Entrance End Temperature 24 Hours
After Transfer**
- Ç 2. Internal Infertile Egg Temperature**
- Ç 3. Internal Incubator Pressure**
- Ç 4. Chicks Hatched 12 Hours Prior to Pull**

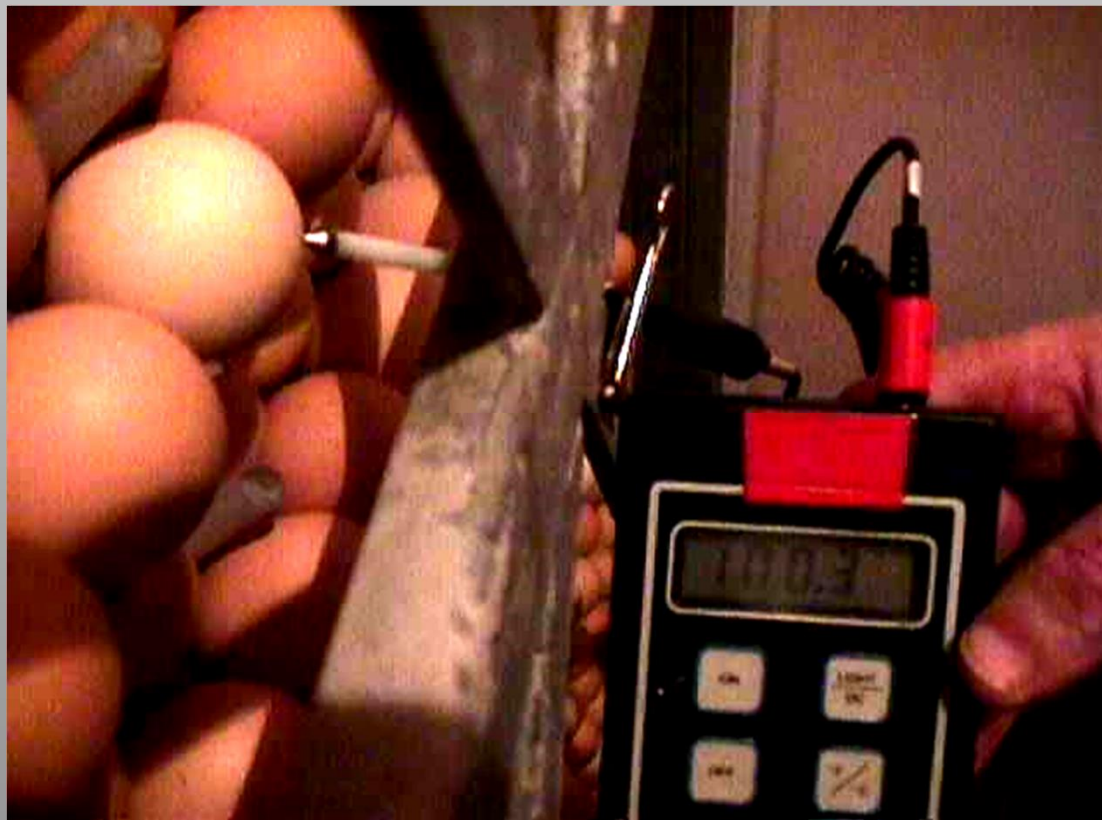


Entrance End Temperature 24 Hours After Transfer

98.8F Set Point (100.3 Degrees F. Super J)

99.0F Set Point (100.5 Degrees F. Big J)

(Both Right and Left Side)



**Side to Side
Variations Indicates
Maintenance or Egg
Pack Concerns
High or Low
Temperatures
Indicates Need For Set
Time Adjustment**

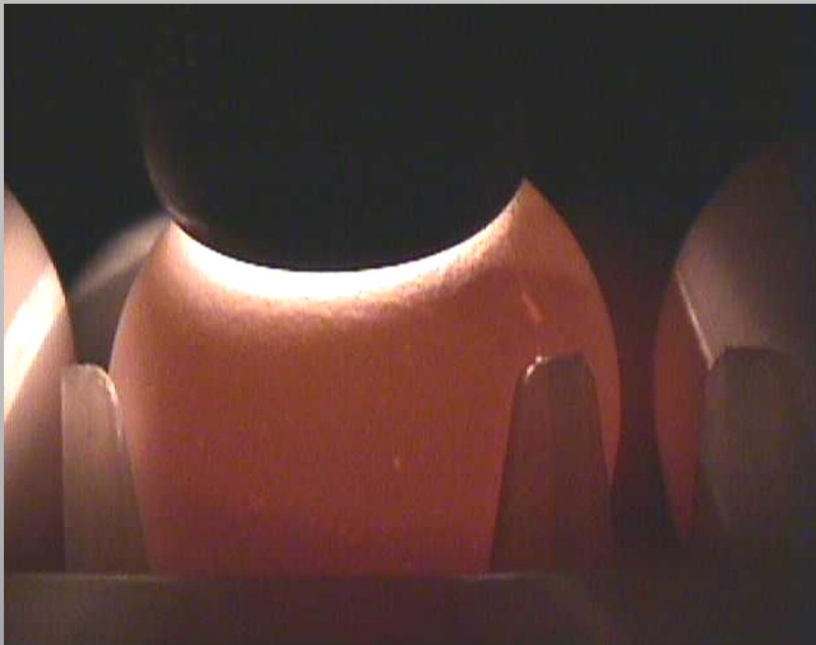
Very Important:

**This check must be done 24
hours after transfer with 5
positions per side**

Super J Internal Infertile Egg Temperature (5th or 6th Position)



1. Top ----- 98.8 F.
2. Middle -- 98.9 - 99.0 F. (Both Right and Left Sides)
3. Bottom - 98.8 F.



How to Use This Check

- Higher Temperature @ Top and Lower @ Bottom Indicates Water Concerns
- Lower Temperature Top or Middle and Higher @ Bottom Indicates Airflow Concerns

Hatch Observation 15 Hrs. Before Pull

7 - 8 Tray Hatcher

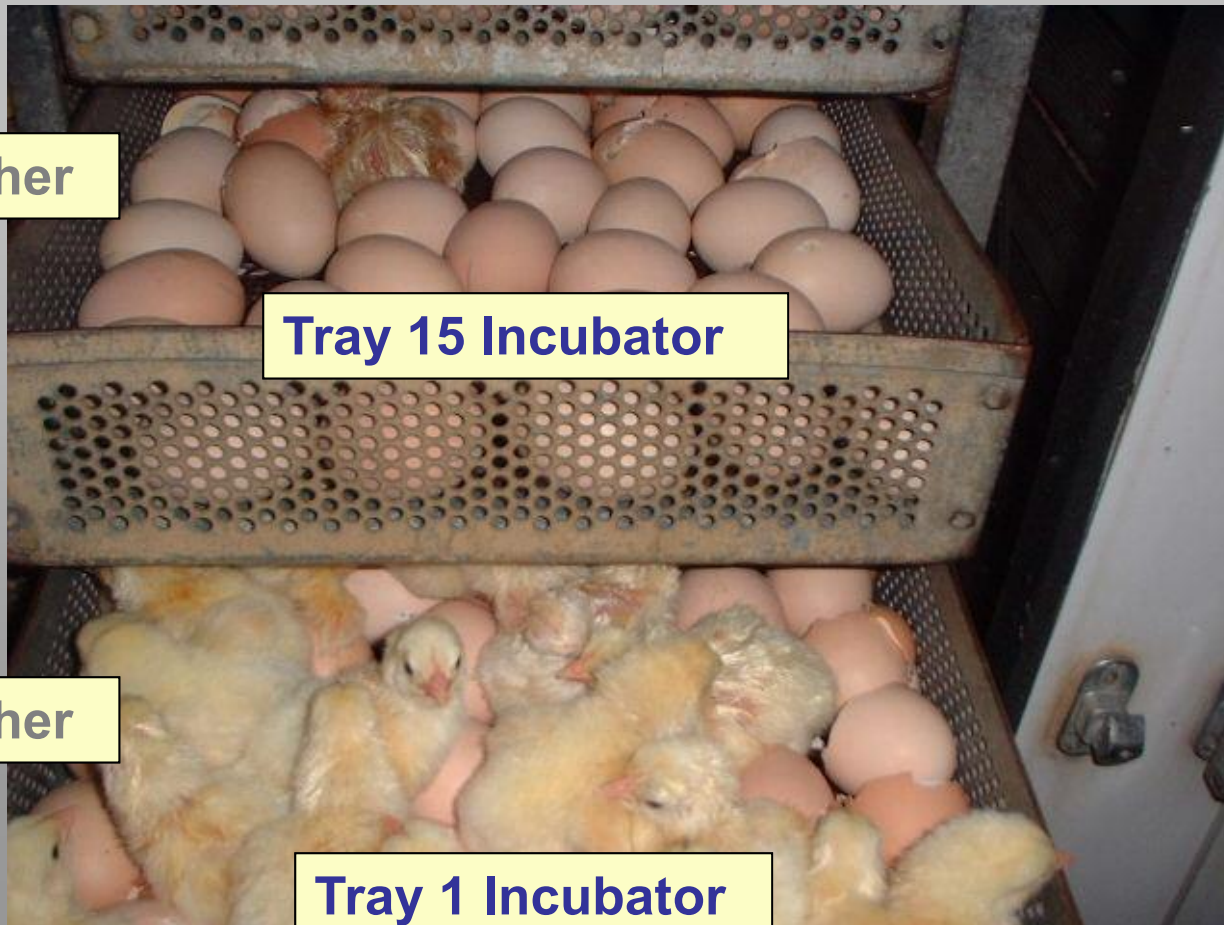
Tray 1 and 15 Incubator

Tray 7 Hatcher

Tray 15 Incubator

Tray 8 Hatcher

Tray 1 Incubator



Actual Temperatures Water and Airflow Concerns

Airflow Concerns

Water Concerns

Internal Infertile Egg Temperature (5th and 6th position)

Right Side					Left Side			
Machine Number	Position	Top	Middle	Bottom	XXXX	Top	Middle	Bottom
2	6th	99.2F	98.8F	98.6F	XXXX	99.2F	99.2F	99.4F
9	5th	98.7F	98.3F	98.1F	XXXX	98.4F	98.2F	98.1F

Internal Infertile Egg Temperature (5th and 6th position)

Right Side					Left Side			
Machine Number	Position	Top	Middle	Bottom	XXXX	Top	Middle	Bottom
5	6 th	98.6F	98.3F	97.9F	XXXX	98.7F	98.1F	97.9F
9	6 th	98.8F	99.1F	98.5F	XXXX	98.7F	98.4F	98.3F
11	6 th	98.7F	98.7F	98.8F	XXXX	98.8F	98.5F	98.3F
21	5 th	98.8F	98.5F	98.3F	XXXX	98.7F	98.6F	98.0F



Internal Incubator Pressure (.50 - .55 inches w.g. Super J) (.40 - .45 inches w.g. Big J)



Indicates Resistance Created by the Egg Pack in Regard to
Airflow

Multi-Stage Incubator Air Flow

Entrance End Negative Pressure

<-.3 inches W.G.>

Air Temperature That
Comes Through at Fans

98.8F and 59 - 60%R.H.

Blue Denotes
Positive Pressure
Influence

Red Denotes
Negative Pressure
Influence

Internal Incubator Pressure Differential

.5 inches W.G.

Exit End Positive Pressure

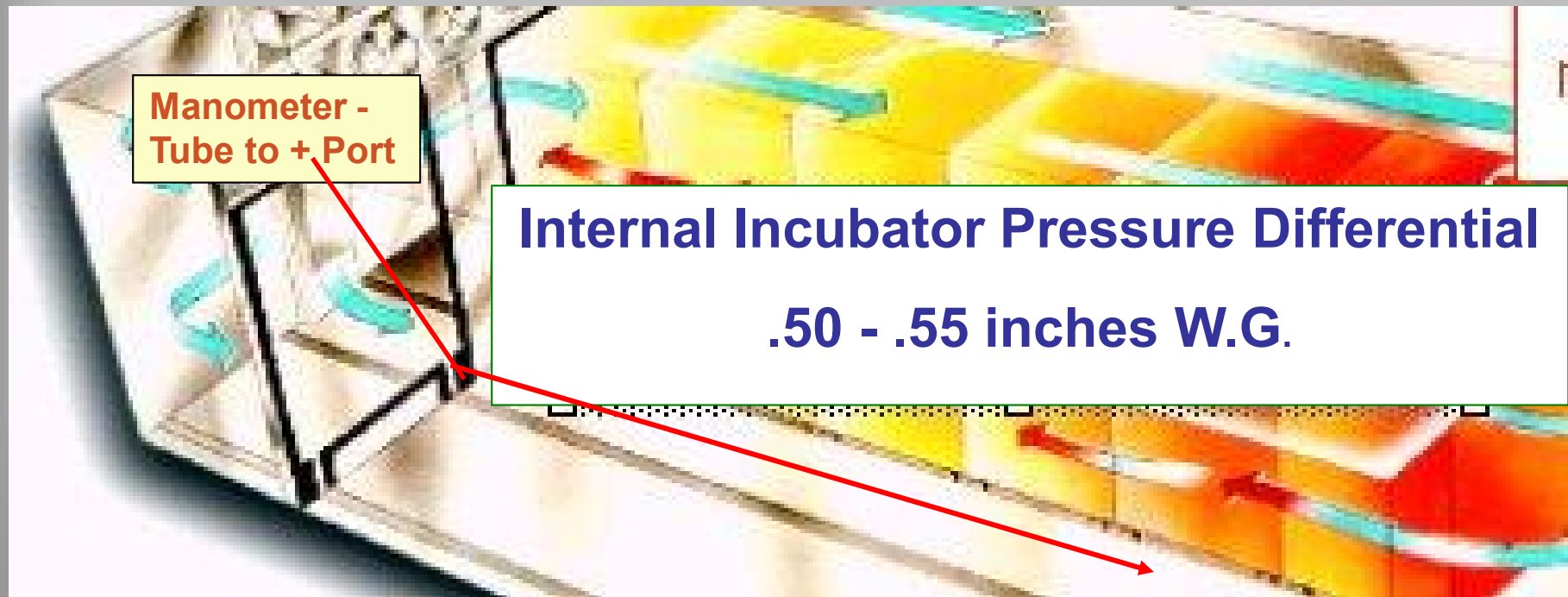
+.2 inches W.G.

6 Positions - Only 36 Hrs. per wk

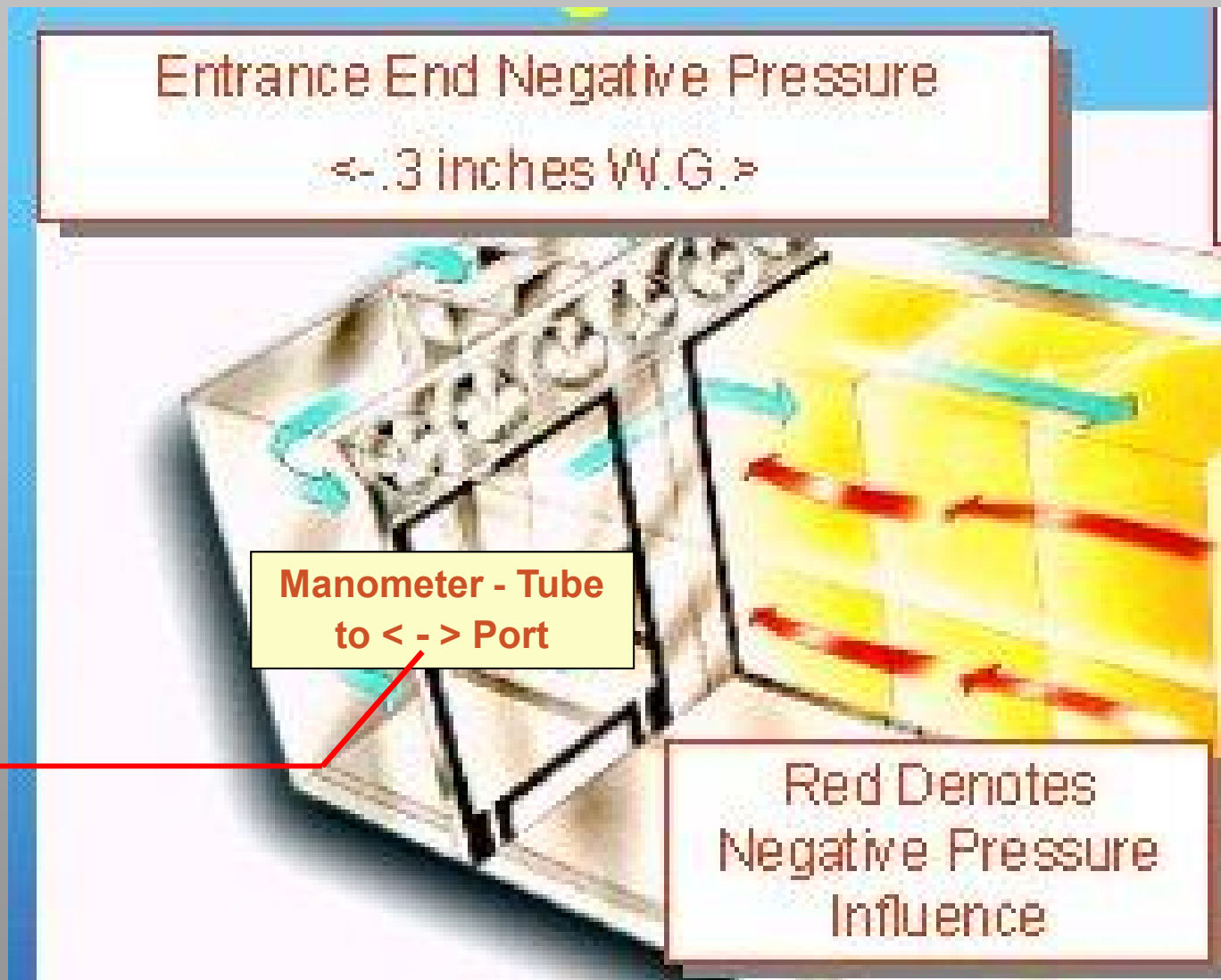
Must Maintain 5 Positions Per Side For Proper Air
Flow Through The Egg Pack (132 Hrs. per wk.)

JAMESWAY

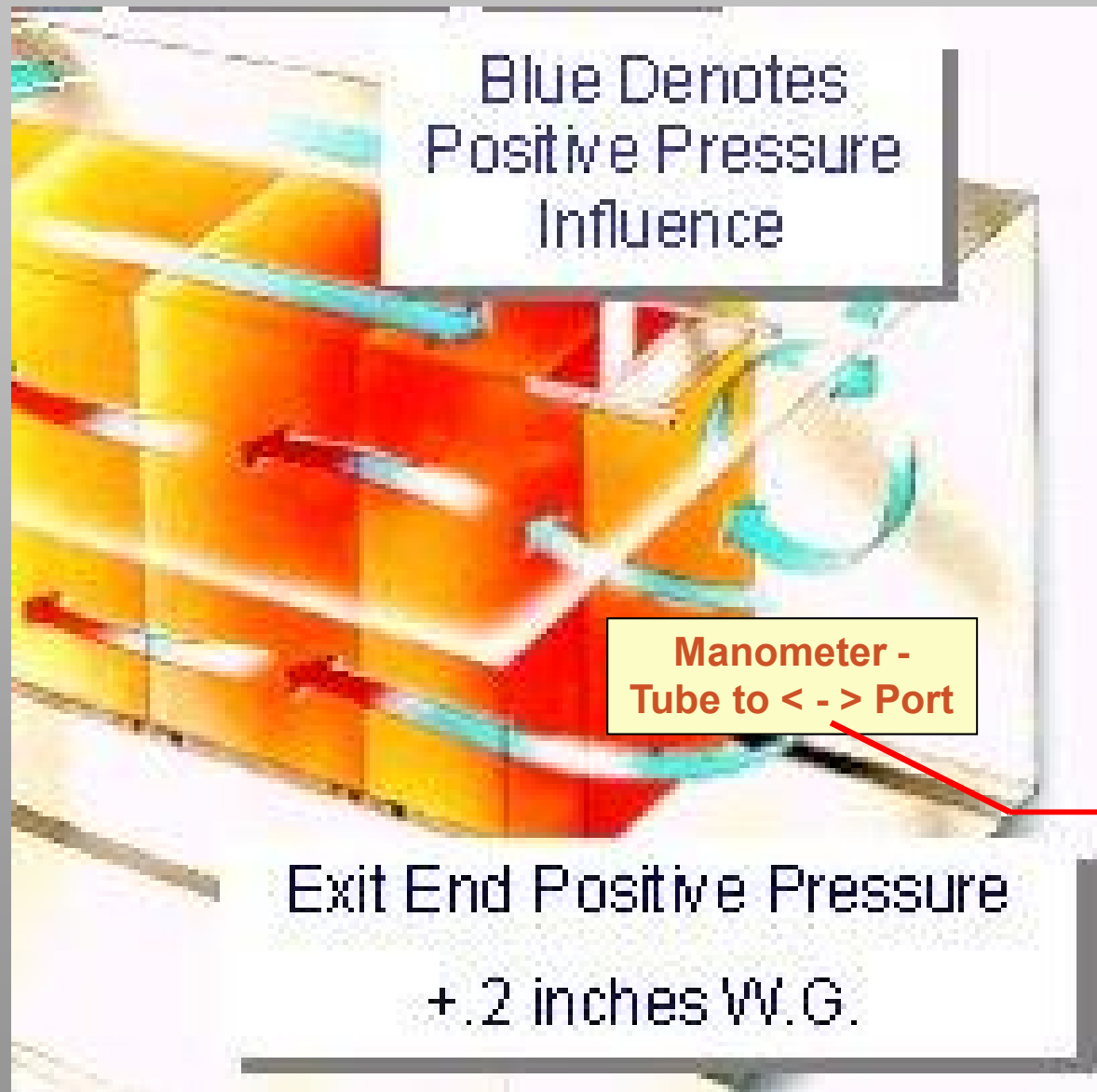
Total Pressure Differential - Created By The Egg Mass Input Egg Size Influences Embryonic Heat Fertility Influences Embryonic Heat



Entrance End - Negative Pressure Influence



Exit End - Positive Pressure Influence



Chicks Hatched 12 Hours Prior to Pull

1.60 - 70 % With 10% Just Hatched

2. % Hatch of Estimated Hatch

**Monitors Proper Incubation in Regard
to Hatch Window and Evenness**



Each Major Issue or Problem When Properly Identified and Appropriate Corrective Action is Applied Become a Solved Issue (Problem) and Allows Us to Move on to the Next Issue (Problem) Which is Then the Major Issue or Problem

If You Choose To Skip or Neglect a Major Issue or Problem It Will Not Just Disappear or Solve Itself and You Will Not Have Success Especially With Today's High Yield Advanced Genetic Breeds

New Approach for Today's High Yield Breeds by Altering Set Points Super J

Set Point	Entrance End Temperature	18 Day Embryo Temperature	Total Incubation Time
98.8F	100.3F	100.2F – 100.4F	504 – 506 Hours
98.7F	100.2F	100.1F – 100.3F	506 – 508 Hours
98.6F	100.1F	100.0F – 100.2F	508 – 510 Hours
98.5F	100.0F	99.9F – 100.1F	510 – 512 Hours
98.4F	99.9F	99.8F – 100.0F	512 – 514 Hours
98.3F	99.8F	99.7F – 99.9F	514 – 516 Hours
98.2F	99.7F	99.6F – 99.8F	516 – 518 Hours

Humidity at 84F – 85F Depending on Room Humidity



A Very Useful Tool

Hatch Residue Breakout

Hatch Residue Breakout Sheet

[illegible]

Master Sheet1 Sheet2 Sheet3 Sheet4 Sheet5 Sheet6 Sheet7 Sheet8 Sheet9 Sheet10 Sheet11 Sheet12 Sheet13

Weighed Average

[illegible]

Residue Breakout Standards

Cobb																					Cull					Dead				
Age	% Fert.	% Hat.	Dev.	HOF	Est. Hat	Inf	3d	6d	10d	12d	16d	18d	19d	21d	Con t.	Crz .	SE U	Pip s	Mol d		Egg s	Chi z	Earl y	Mi d	Lat e					
25	90.75	77.65	13.10	85.56	78.65	9.25		5.97				4.72			0.50	0.50	0.25	0.50	0.00		0.25	0.25	4.75	1.22	4.72	99.34				
26	93.26	82.25	11.01	88.19	83.25	6.74		5.17				4.75			0.50	0.50	0.25	0.50	0.00		0.25	0.25	4.62	0.55	4.75	100.66				
27	94.76	84.21	10.55	88.87	85.21	5.24		5.54				4.11			0.50	0.50	0.25	0.50	0.00		0.25	0.25	4.95	0.59	4.11	100.85				
28	95.29	85.82	9.47	90.06	86.82	4.71		4.85				3.51			0.50	0.50	0.25	0.50	0.00		0.25	0.25	4.28	0.57	3.51	100.64				
29	95.76	87.09	8.67	90.95	88.09	4.24		4.57				3.33			0.50	0.50	0.25	0.50	0.00		0.25	0.25	4.11	0.46	3.33	100.98				
30	96.26	88.11	8.15	91.53	89.11	3.74		4.47				3.38			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.92	0.55	3.38	101.45				
31	96.62	88.69	7.93	91.79	89.69	3.38		3.87				2.88			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.42	0.45	2.88	100.57				
32	96.61	89.28	7.33	92.41	90.28	3.39		3.88				2.86			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.40	0.48	2.86	101.16				
33	96.71	89.76	6.95	92.81	90.76	3.29		3.75				3.00			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.40	0.35	3.00	102.05				
34	96.71	89.82	6.89	92.88	90.82	3.29		3.51				2.77			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.99	0.52	2.77	101.64				
35	96.76	89.97	6.79	92.98	90.97	3.24		3.48				2.62			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.97	0.51	2.62	101.56				
36	96.74	90.25	6.49	93.29	91.25	3.28		3.57				2.62			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.10	0.47	2.62	101.97				
37	96.50	90.14	6.36	93.41	91.14	3.50		3.39				2.75			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.94	0.45	2.75	102.03				
38	96.64	89.95	6.69	93.08	90.95	3.36		3.38				2.77			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.00	0.38	2.77	101.71				
39	96.61	89.93	6.68	93.09	90.93	3.39		3.29				2.85			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.96	0.33	2.85	101.71				
40	96.54	89.97	6.57	93.19	90.97	3.46		3.18				2.96			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.71	0.47	2.96	101.82				
41	96.42	89.81	6.61	93.14	90.81	3.58		3.31				2.60			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.88	0.43	2.60	101.55				
42	96.18	89.80	6.38	93.37	90.80	3.82		3.36				2.77			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.86	0.50	2.77	102.00				
43	96.24	89.64	6.60	93.14	90.64	3.76		3.39				2.93			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.98	0.41	2.93	101.97				
44	96.19	89.47	6.72	93.01	90.47	3.81		3.39				3.12			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.99	0.40	3.12	102.04				
45	96.20	89.27	6.93	92.80	90.27	3.80		3.25				2.78			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.92	0.33	2.78	101.35				
46	95.87	89.23	6.64	93.07	90.23	4.13		3.29				2.73			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.96	0.33	2.73	101.63				
47	95.57	88.86	6.71	92.98	89.86	4.43		3.39				2.75			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.99	0.40	2.75	101.68				
48	95.32	88.17	7.15	92.50	89.17	4.68		3.48				3.19			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.07	0.41	3.19	101.77				
49	94.79	88.07	6.72	92.91	89.07	5.21		3.28				3.11			0.50	0.50	0.25	0.50	0.00		0.25	0.25	2.90	0.38	3.11	101.92				
50	94.58	87.28	7.30	92.28	88.28	5.42		3.54				3.52			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.09	0.45	3.52	102.01				
51	94.68	87.08	7.60	91.97	88.08	5.32		3.54				3.13			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.14	0.40	3.13	101.32				
52	93.98	86.58	7.40	92.13	87.58	6.02		3.44				3.50			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.01	0.43	3.50	101.79				
53	93.85	86.23	7.62	91.88	87.23	6.15		3.72				3.46			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.11	0.61	3.46	101.81				
54	93.88	85.76	8.12	91.35	86.76	6.12		3.71				3.44			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.19	0.52	3.44	101.28				
55	93.12	84.55	8.57	90.80	85.55	6.88		3.87				3.63			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.44	0.43	3.63	101.18				
56	92.48	84.47	8.01	91.34	85.47	7.52		3.85				3.66			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.25	0.60	3.66	101.75				
57	92.32	83.69	8.63	90.65	84.69	7.68		4.08				3.86			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.60	0.48	3.86	101.56				
58	91.60	82.45	9.15	90.01	83.45	8.40		4.05				4.17			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.60	0.45	4.17	101.32				
59	91.39	82.06	9.33	89.79	83.06	8.61		4.44				4.24			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.94	0.50	4.24	101.60				
60	90.38	80.97	9.41	89.59	81.97	9.62		4.34				4.22			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.93	0.41	4.22	101.40				
61	90.25	80.51	9.74	89.21	81.51	9.75		4.32				4.26			0.50	0.50	0.25	0.50	0.00		0.25	0.25	3.79	0.53	4.26	101.09				
62	89.04	79.30	9.74	89.06	80.30	10.96		4.87				4.07			0.50	0.50	0.25	0.50	0.00		0.25	0.25	4.21	0.66	4.07	101.45				
63	88.97	78.41	10.56	88.13	79.41	11.03		4.74				4.43			0.50	0.50	0.25	0.50	0.00		0.25	0.25	4.10	0.64	4.43	100.86				
64	87.91	77.15	10.76	87.76	78.15	12.09		4.87				4.16			0.50	0.50	0.25	0.50	0.00		0.25	0.25	4.33	0.54	4.16	100.52				
65	87.00	76.15	10.85	87.53	77.15	13.50		4.85				4.27			0.50	0.50	0.25	0.50	0.00		0.25	0.25	4.18	0.67	4.27	101.02				

Actual Breakout Data

Hatch – Tuesday, July 1, 2008 @ Henagar, AL.

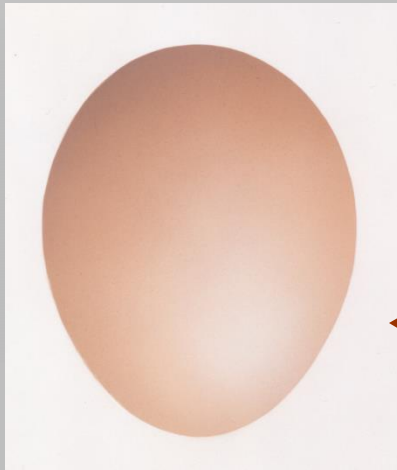
Flk #	Age	%Fert.	%Hat.	HOF	Est. Hat	Inf	3d	6d	10d	12d	16d	18d	19d	21d	Cont.	Crx.	SEU	Pips	Mold
719	42	96.23	90.53	94.07	90.87	3.77	2.38	0.99	0.00	0.00	0.20	0.60	0.99	0.20	0.79	0.60	0.00	0.40	0.00
713	35	95.98	88.81	92.52	89.58	4.02	2.08	1.19	0.30	0.00	0.45	1.19	1.04	0.15	1.49	0.30	0.30	0.30	0.30
711	37	95.68	88.12	92.10	90.92	4.32	1.79	0.45	0.00	0.15	0.00	1.34	0.74	0.30	0.45	0.00	0.45	0.30	0.00
708	38	95.83	91.15	95.11	92.26	4.17	1.79	0.30	0.00	0.00	0.30	0.00	0.89	0.30	0.30	0.00	0.00	0.30	0.00
706	39	94.05	91.15	96.91	87.50	5.95	1.19	1.79	1.19	0.60	0.00	0.60	0.60	0.60	0.60	0.60	0.00	0.60	0.00
700	39	95.54	90.77	95.02	90.03	4.46	2.38	0.30	0.30	0.30	0.30	0.60	1.04	0.30	1.19	0.30	0.00	0.60	0.00
658	32	92.86	83.08	89.47	85.32	7.14	2.58	0.99	0.00	0.00	0.60	1.19	1.59	0.60	0.00	0.40	0.20	0.60	0.00
Avg	38	95.32	88.91	93.28	89.50	4.68	2.13	0.77	0.17	0.11	0.28	0.88	1.02	0.31	0.77	0.28	0.17	0.43	0.06
		6.41					3.17				2.49								
Std	38	96.64	89.95	93.08	90.95	3.36	3.38				2.77				0.50	0.50	0.25	0.50	0.00
		6.69																	
Deviation		0.28		0.20	1.45	-1.32	0.21				0.28				-0.27	0.22	0.08	0.07	-0.06

Note: Flock # 713 had 2016 eggs broke in Incubator and Flock # 658 had 840 eggs broke in Incubator - Taken off total set

		Flock #	Eggs Set	Chicks Hatched	Hatchability	Adj est. hatch	Adj Chicks		
		719	32256	29200	90.53%	89.87%	28989		
		713	62496	55500	88.81%	88.58%	55361		
		711	43008	37900	88.12%	89.92%	38674		
		708	26880	24500	91.15%	91.26%	24531		
		706	5376	4900	91.15%	86.50%	4650		
		700	53760	48800	90.77%	89.03%	47862		
		658	31416	26100	83.08%	84.32%	26489		
			255192	226900	88.91%	88.78%	226557		

On behalf of Jamesway...

Thank you!



From the Egg...



To the Chick...

PLATINUM