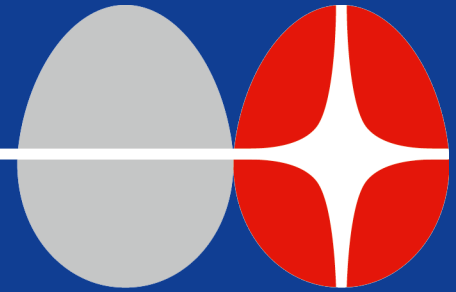


# JAMESWAY



**The Incubator Company**

# **Talking Turkey Incubation with Jamesway**

**Presented by:  
Phillip Perry  
Hatchery Consultant**





# The Turkey Hatchery

Changes over the years:

- Bio Security
- Animal Welfare
- Servicing
- Technology



# The Turkey Hatchery

## Changes over the years:

More hair and  
weighed less.

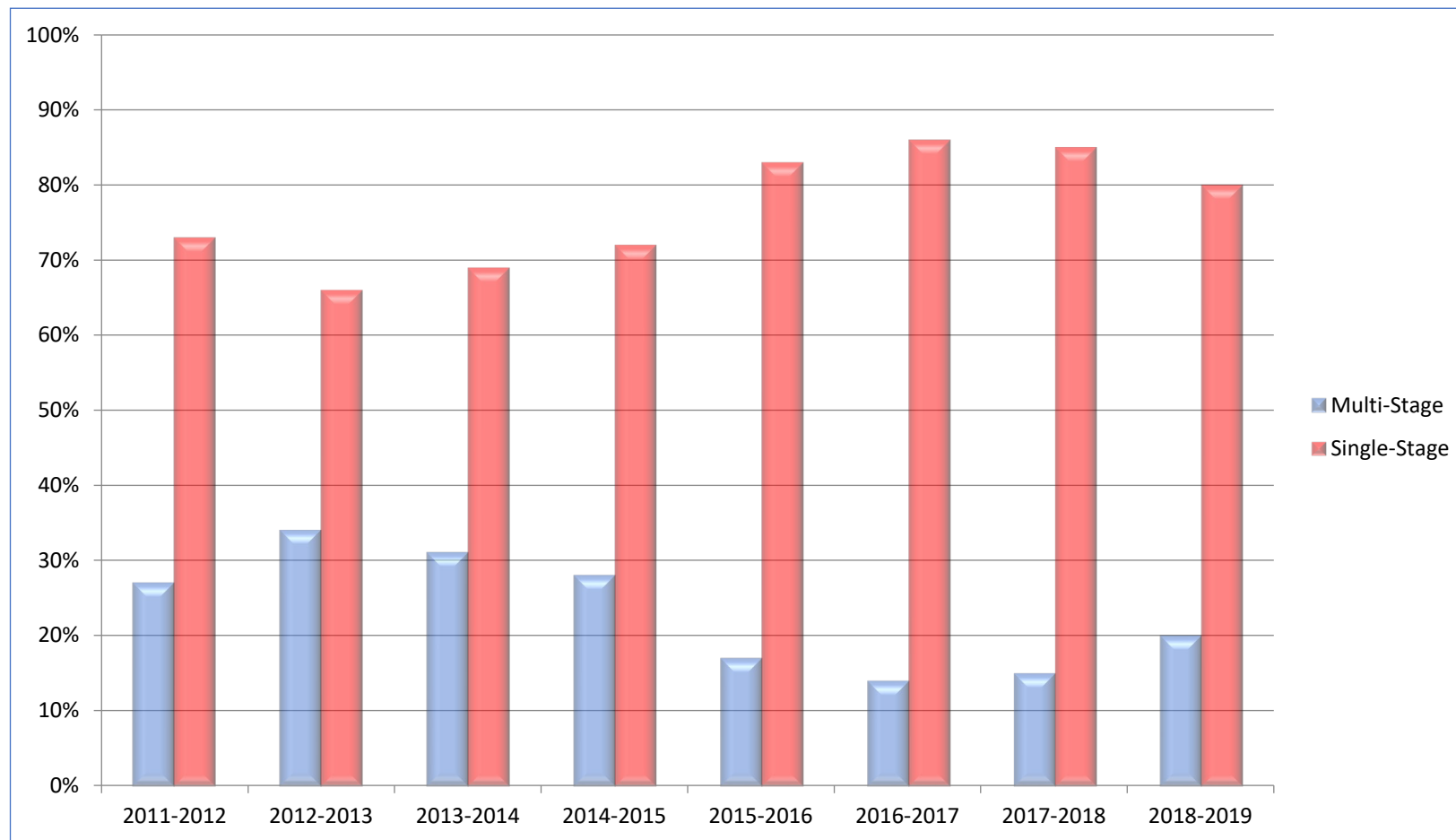




# The Poultry Industry Trend

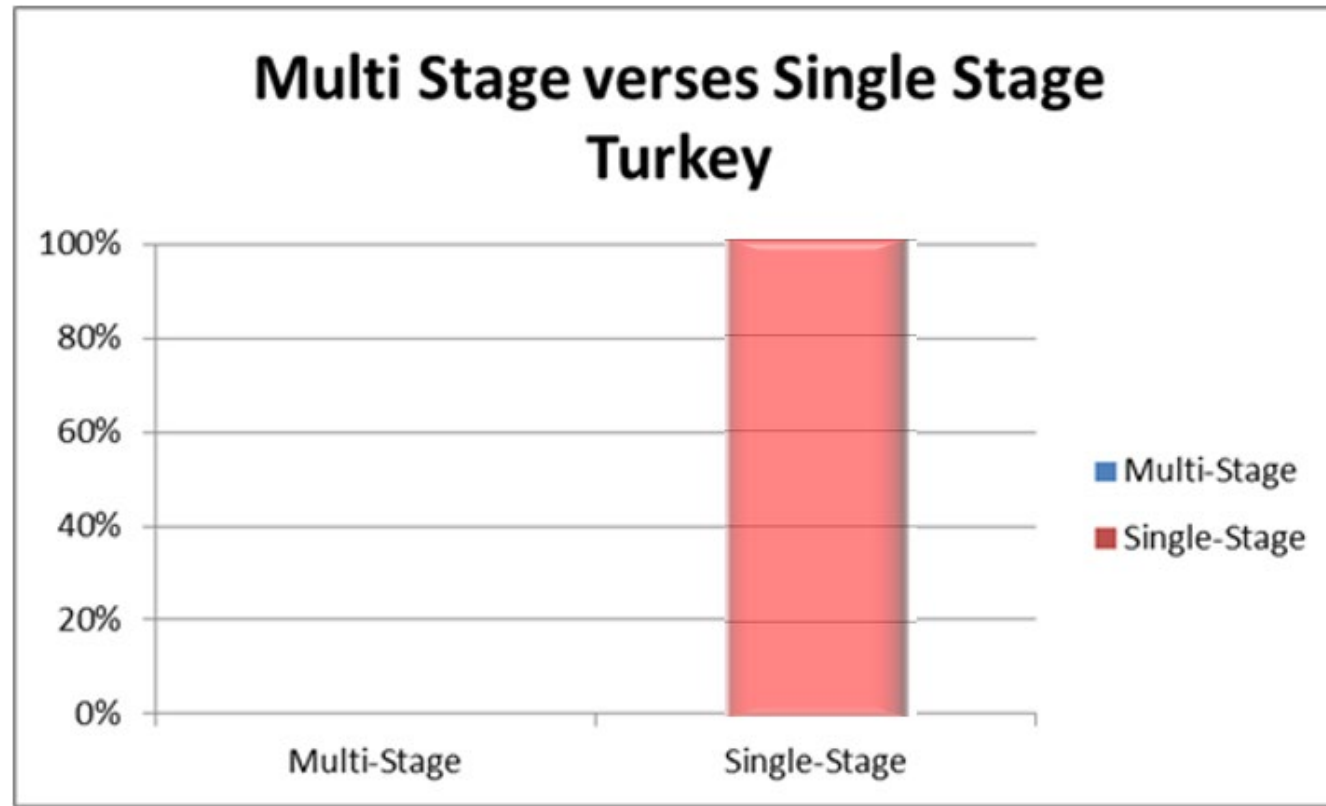
## Jamesway Sales

### Multi-Stage versus Single-Stage 2011 to Present



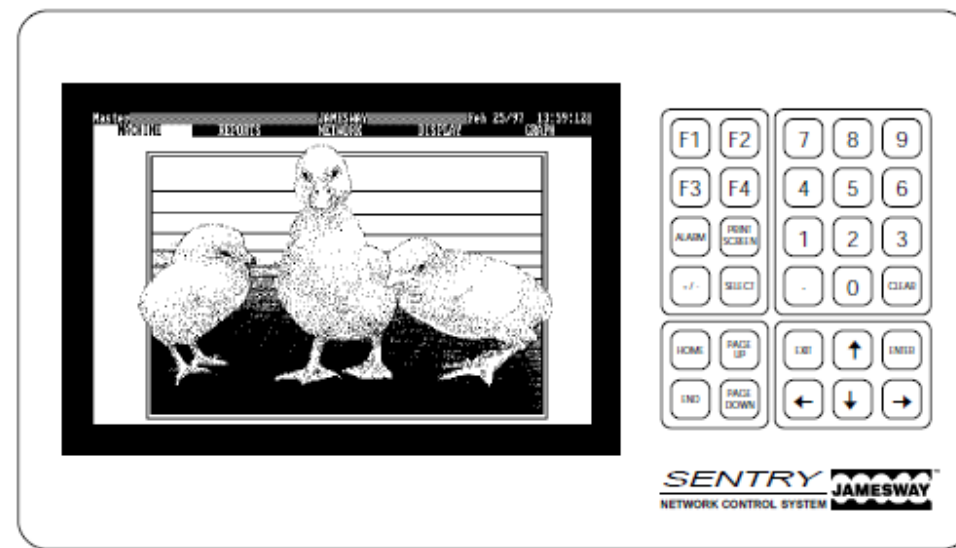
# The Incubation Concept

Jamesway has not sold a Turkey Multi-Stage Incubator since introduction of the ACI in 1992



# Jamesway Single Stage History

1st Generation ACI  
1992





# Jamesway Single Stage History

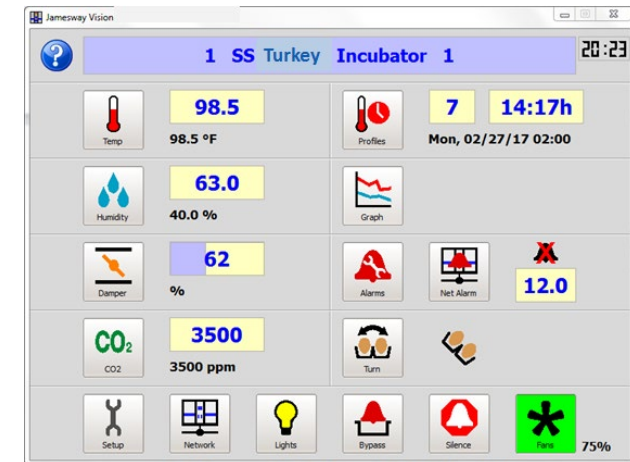
2nd Generation Platinum 1 Series - 2003





# Jamesway Single Stage History

## 3rd Generation Platinum 2.0 (24VAC) Series 2013



# Jamesway Single Stage History

4th Generation Platinum 2.1 (24VDC) Series  
2018



# Incubator Capacities

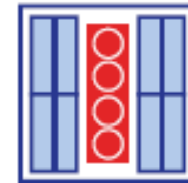
Incub. Cap.	Egg Flat Cap.	P10 Comp.	P20 Small	P40 Medium	P60 Large	P80 Double Deep	P120 Extra Large
Turkey/Duck							
13 Tier	25	5,200	10,400	20,800	31,200	N/A	N/A
	30	6,240	12,480	24,960	37,440	N/A	N/A

COMPACT  
1/2 Depth  
P10



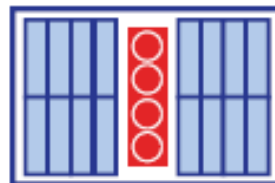
2 racks

SMALL  
Single Depth  
P20



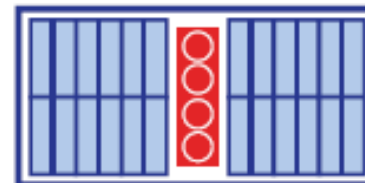
4 racks

MEDIUM  
Single Depth  
P40



8 racks

LARGE  
Single Depth  
P60



12 racks



# Hatcher Capacities

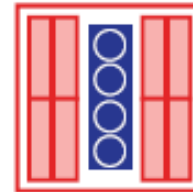
Hatcher Capacity	P10 Compact	P20 Small	P30 Medium	P40 Large
Turkey/Duck	6,240	12,480	18,720	24,960

COMPACT  
P10



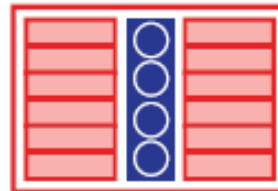
2 Double Dollies

SMALL  
P20



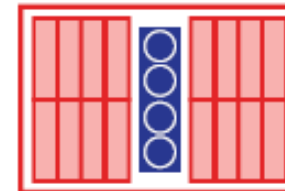
4 Double Dollies

MEDIUM  
P30



6 Double Dollies

LARGE  
P40



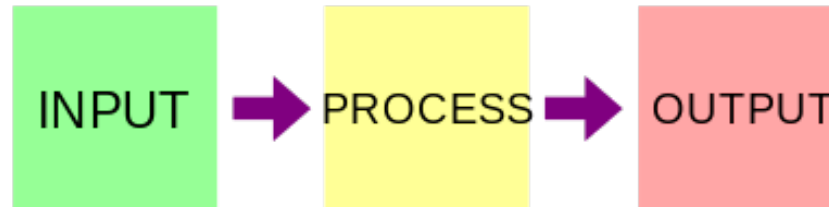
8 Double Dollies



# Incubation

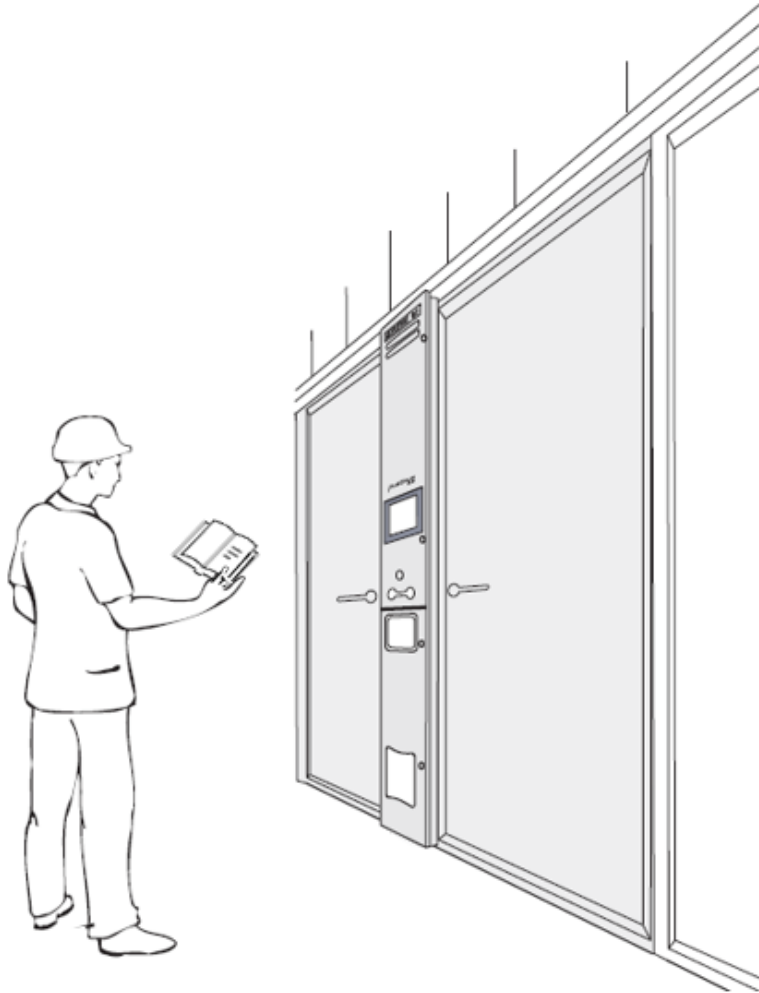
**Starts with Four Basic Requirements**

1. Electricity
2. Water
3. Compressed Air
4. Ventilation



# Tales from the Notebook:

1. Basic Requirements
  - a. Ventilation



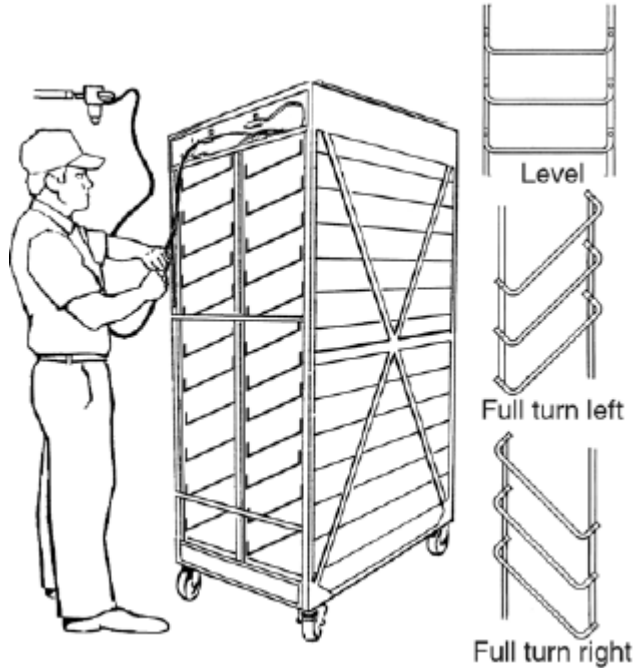
# To Achieve Quality Hatching Egg Setting Considerations

- Breed type
- Age of Flock
- Age of Eggs
- Partial Setting
  - Mixed Sets
- SPIDES Treatment
- Total Incubation Time
  - Profile





# Egg Traying and Placing on Racks



Test the racks for ease of turning in Egg Storage before placing them in the incubator. When one air line is pressurized there should be no air leakage on non pressurized line.



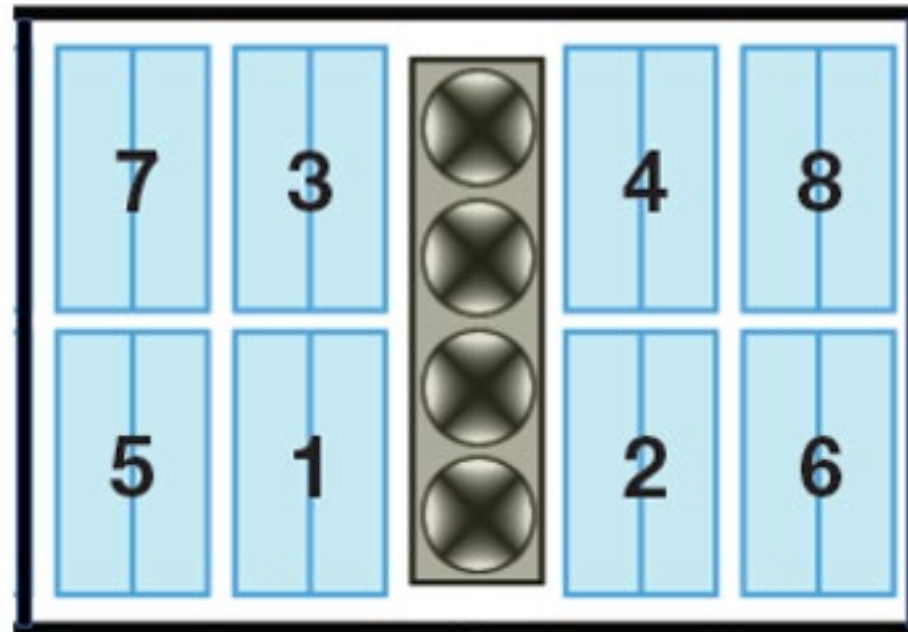
After the racks have been loaded; check that all egg trays are properly positioned in the egg tray frames.

For proper egg turn, ensure that all egg flats are pushed towards the back. The egg flat must not protrude past the front frame rail. If it does the flat will get caught on the turning bar assembly resulting in broken eggs and damaged flats.

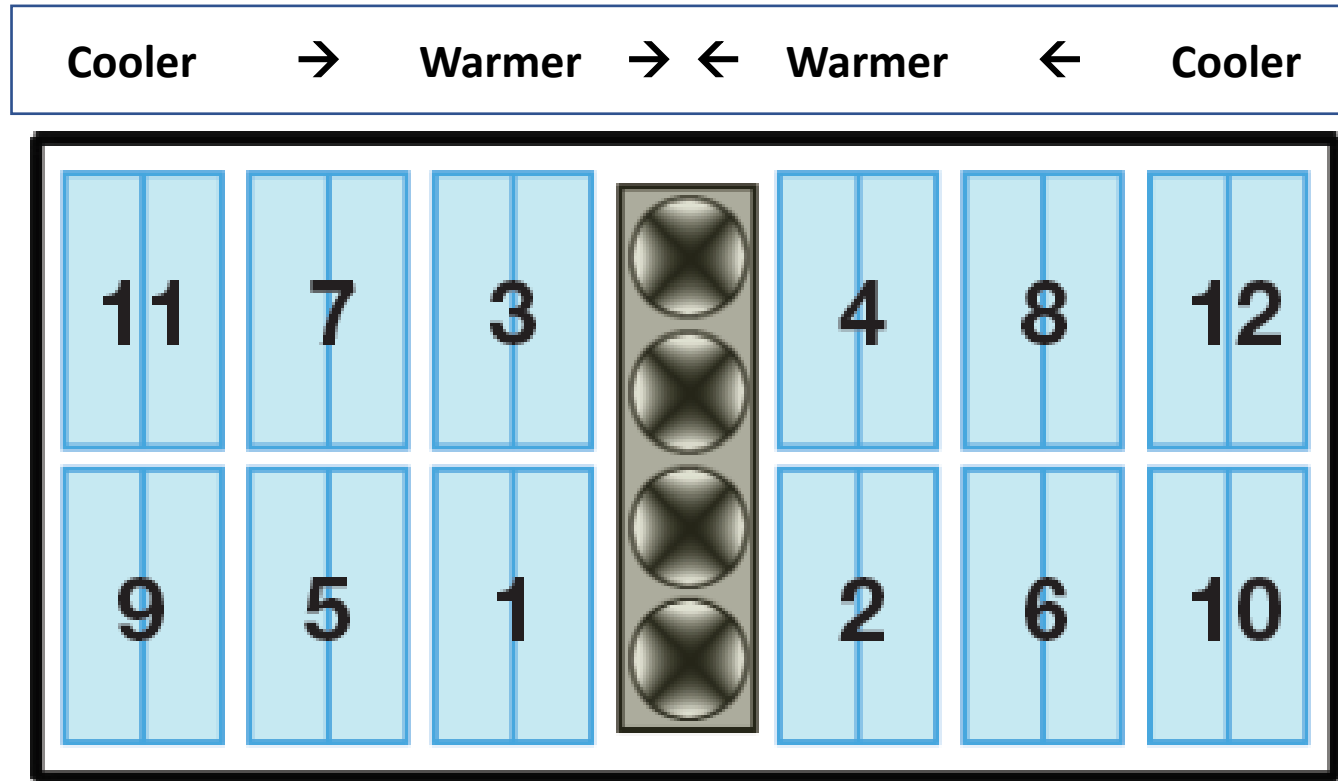


# Setting the P40 Incubator

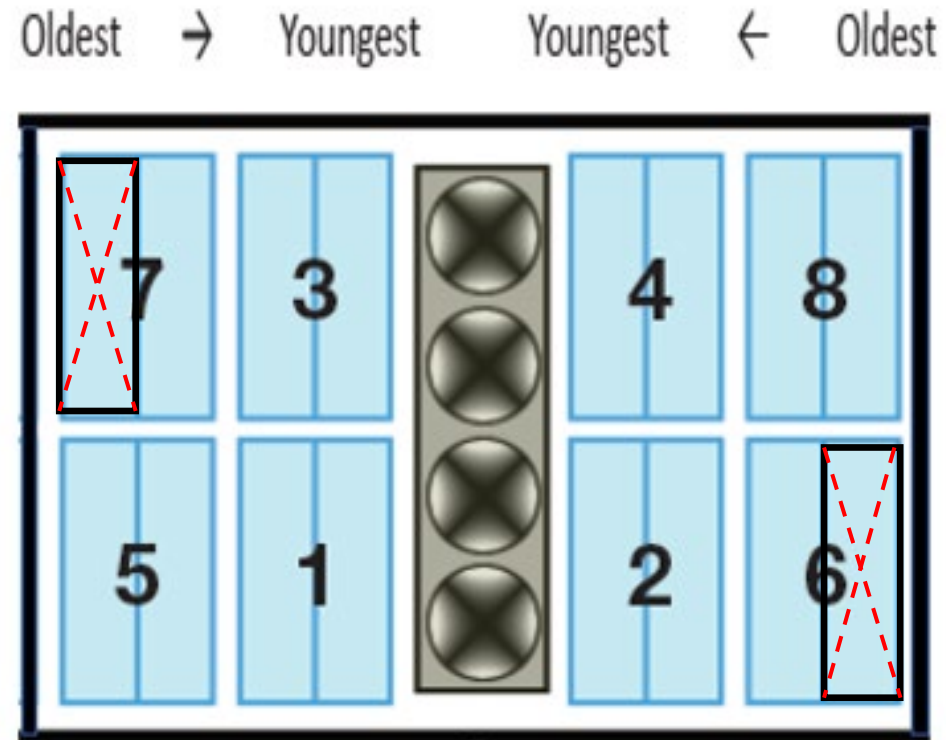
Oldest → Youngest      Youngest ← Oldest



# Setting the P60 Incubator

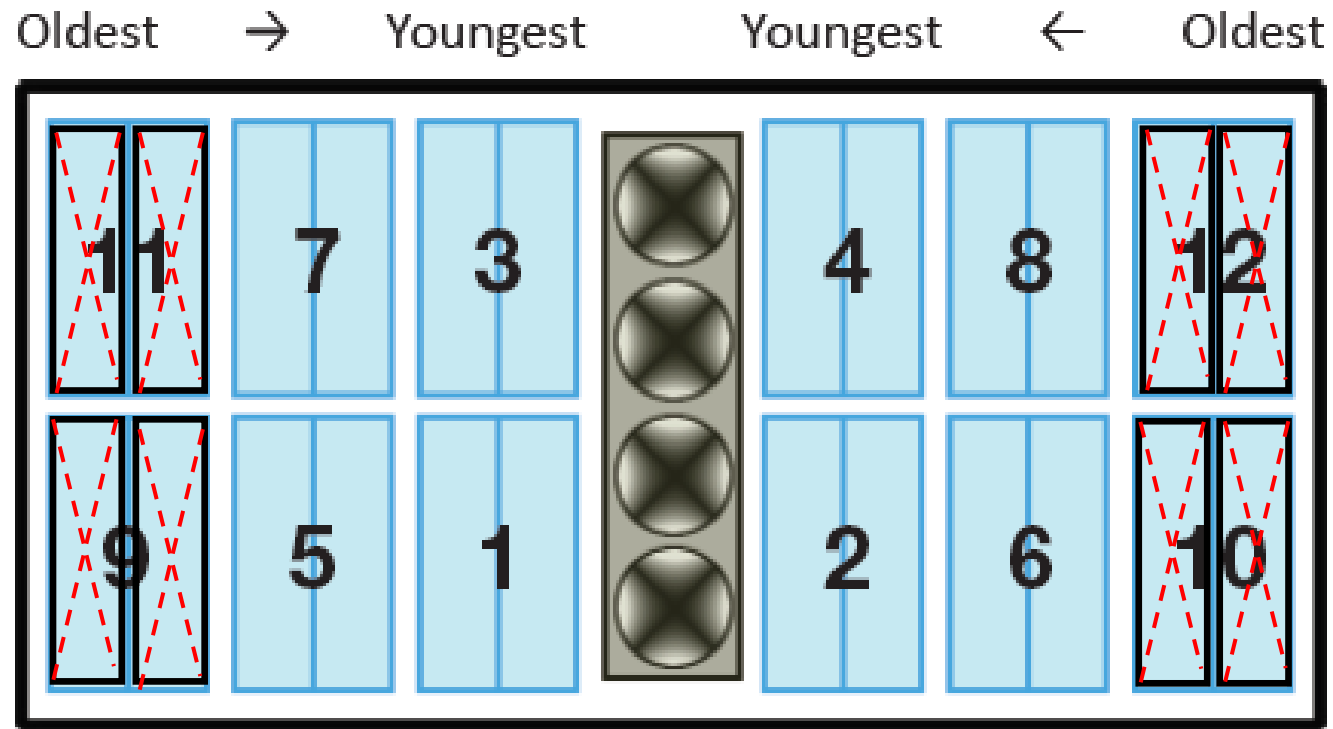


# Partial Setting the P40 Incubator



With One empty rack

# Partial Setting the P60 Incubator

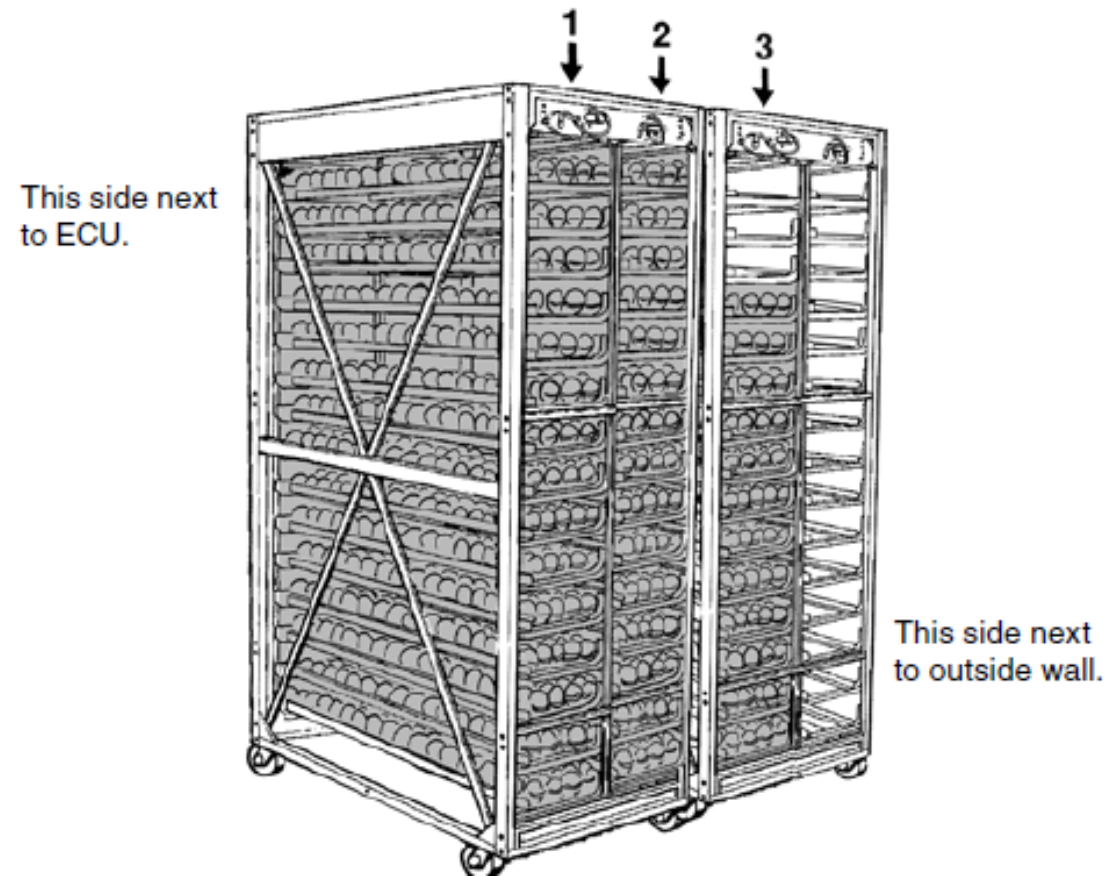


With Four empty racks



# Partial Setting

If possible, avoid sets that are less than half the capacity of the machine.





# Setting the Platinum Incubator

Before eggs are set, with machine empty:

- Leave incubator fans off and doors closed before loading eggs from the egg room
- 2 hours before loading, open the doors with dampers closed and allow to cool to room temperature
- Ensure incubator is completely dry





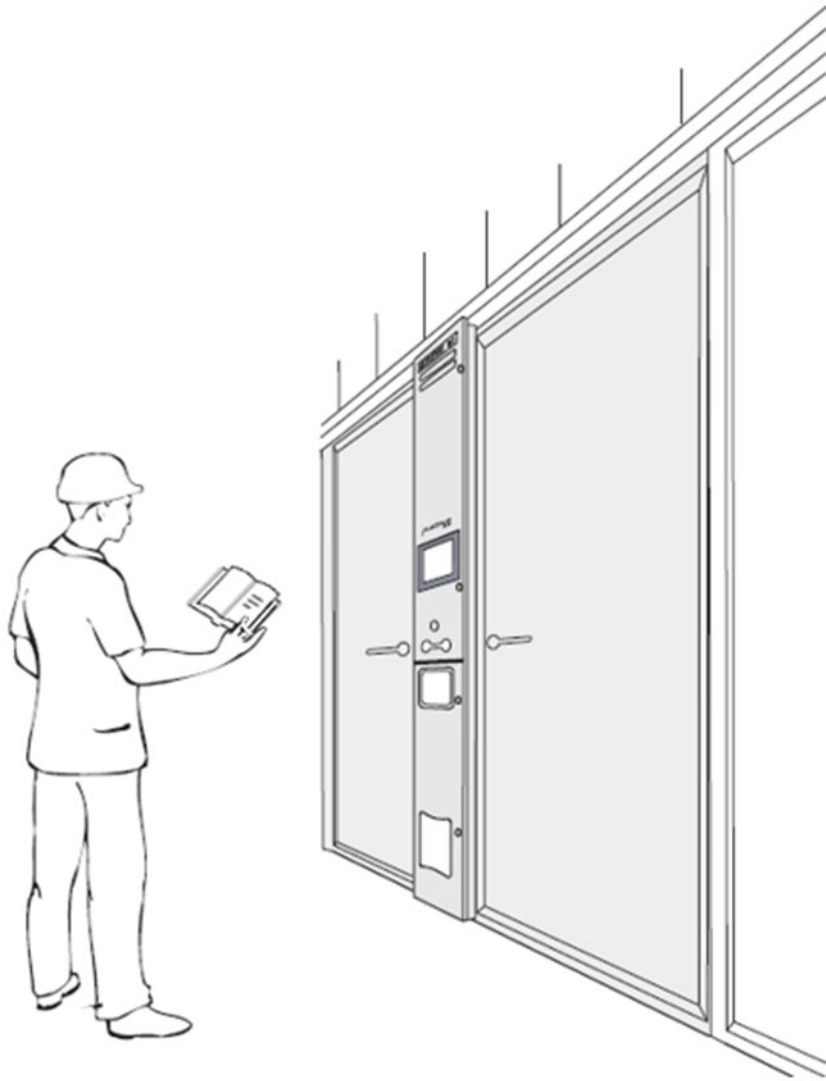


# Setting the Platinum Incubator

- A minimum of 8 hours of holding mode is recommended to stabilize the egg temperature
- Verify correct profile date, time and person who made set
- If no mechanical issues, only open doors for candling and transfer



# Tales from the Notebook:



1. Basic Requirements
  - a. Ventilation
2. Setting
  - a. Partial
  - b. Wet machines



# Incubator Profiles

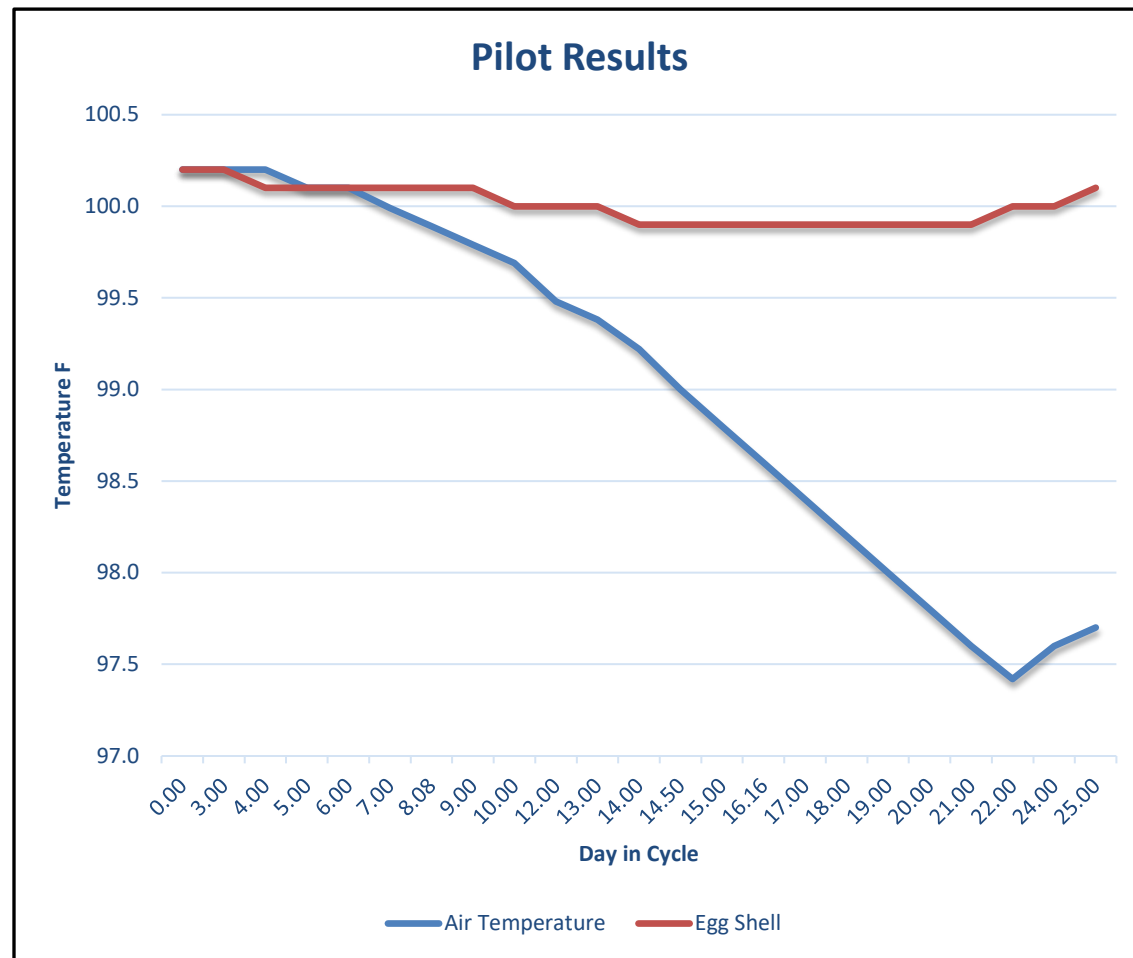
ACI Turkey Profile					
		Day/Hr	Temperature	Humidity RH%	Damper %Opening
Endothermic	Developmental	0.00	100.2	60	0
		2.00	100.0	60	0
		4.00	99.9	60	0
		5.00	99.9	60	0
		6.00	99.8	60	0
		7.00	99.8	60	0
Neutral	Maintenance	8.00	99.6	60	0
		9.00	99.6	60	0
		10.00	99.3	60	0
		12.00	99.3	55	0
		13.00	99.1	50	15
		14.00	98.8	45	25
		14.50	98.8	45	25
Exothermic	Maturity	15.00	98.8	35	30
		16.00	98.8	35	35
		17.00	98.8	35	40
		18.00	98.4	35	45
		19.00	98.4	35	45
		20.00	98.4	35	50
		21.00	98.4	35	55
		22.00	98.2	35	60
		24.00	98.2	35	65
		25.00	98.2	35	70

Platinum Turkey Profile						
		Day/Hr	Temperature	Humidity RH%	Damper CO2 PPM	Damper %Opening
Standby		-08h	75.0	65	5	5
PreWarm	1	- 6h	80.0	65	5	5
	2	- 3h	85.0	65	5	5
Endothermic	Developmental	3	0.00	100.2	75	0
		4	3.00	100.2	75	3000ppm
		5	4.00	100.2	75	4000ppm
		6	5.00	100.1	75	5000ppm
		7	6.00	100.1	75	6000ppm
		8	7.00	100.0	75	7000ppm
		9	8.08	99.9	72	8000ppm
		10	9.00	99.8	72	9000ppm
Neutral	Maintenance	11	10.00	99.7	72	9000ppm
		12	12.00	99.5	72	9000ppm
		13	13.00	99.4	72	9000ppm
		14	14.00	99.2	65	6000ppm
		15	14.50	99.0	60	5000ppm
		16	15.00	98.8	50	4000ppm
		17	16.16	98.6	45	4000ppm
		18	17.00	98.4	40	4000ppm
Exothermic	Maturity	19	18.00	98.2	40	4000ppm
		20	19.00	98.0	40	3500ppm
		21	20.00	97.8	38	3500ppm
		22	21.00	97.6	36	3500ppm
		23	22.00	97.4	35	3200ppm
		24	24.00	97.6	33	3000ppm
		25	25.00	97.7	32	2800ppm
						100



























# Platinum Profile

Platinum Turkey Profile						
	Day/Hr	Pilot Temperature	Air Temperature	Humidity RH%	Damper CO2 PPM	Damper 11 %Opening
Standby	-08h	75.0	75.0	65	5	5
PreWarm	1	- 6h	80.0	80.0	65	5
	2	- 3h	85.0	85.0	65	5
Endothermic	3	0.00	100.2	100.2	75	0
	4	3.00	100.2	100.2	75	3000ppm
	5	4.00	100.1	100.2	75	4000ppm
	6	5.00	100.1	100.1	75	5000ppm
	7	6.00	100.1	100.1	75	6000ppm
	8	7.00	100.1	100.0	75	7000ppm
	9	8.08	100.1	99.9	72	8000ppm
	10	9.00	100.1	99.8	72	9000ppm
Neutral	11	10.00	100.0	99.7	72	9000ppm
	12	12.00	100.0	99.5	72	9000ppm
	13	13.00	100.0	99.4	72	9000ppm
	14	14.00	99.9	99.2	65	6000ppm
	15	14.50	99.9	99.0	60	5000ppm
	16	15.00	99.9	98.8	50	4000ppm
	17	16.16	99.9	98.6	45	4000ppm
	18	17.00	99.9	98.4	40	4000ppm
Exothermic	19	18.00	99.9	98.2	40	4000ppm
	20	19.00	99.9	98.0	40	3500ppm
	21	20.00	99.9	97.8	38	3500ppm
	22	21.00	99.9	97.6	36	3500ppm
	23	22.00	99.9	97.4	35	3200ppm
	24	24.00	100.0	97.6	33	3000ppm
	25	25.00	100.1	97.7	32	2800ppm



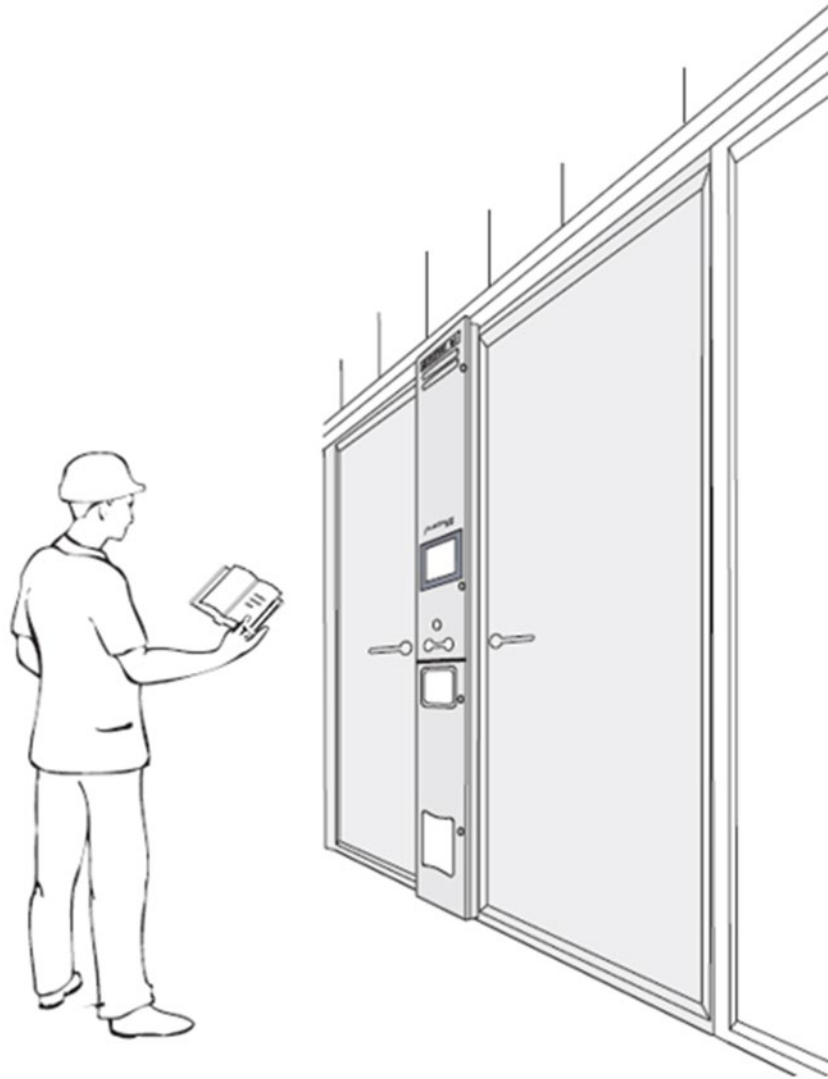
# Incubator Setups

Fan Setup (1 SS Turkey Incubator 1)

	 0-1	 1-7	 7-10	 10-14	 14+
					
30	90	60	80	90	100
					
 Cancel	 OK	 Global	 Select Days	 Delay Start	 Delta Drive



# Tales from the Notebook:



1. Basic Requirements
  - a. Ventilation
2. Setting
  - a. Partial
  - b. Wet machines
3. Profiles/Setups
  - a. Changed





# Platinum Calibration

- One of the most important procedures with the Platinum or any incubation equipment is calibration.
- Jamesway recommends temperature, humidity and CO2 be checked for each incubation cycle.
- Hatchers require once a month calibration checks.

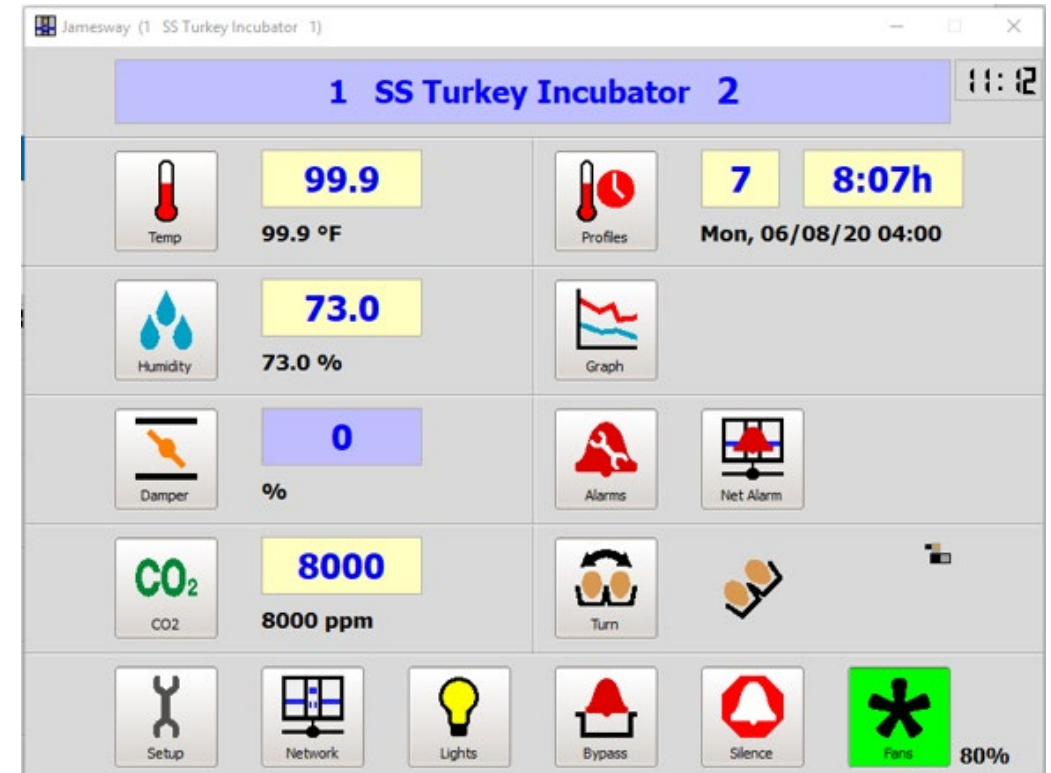
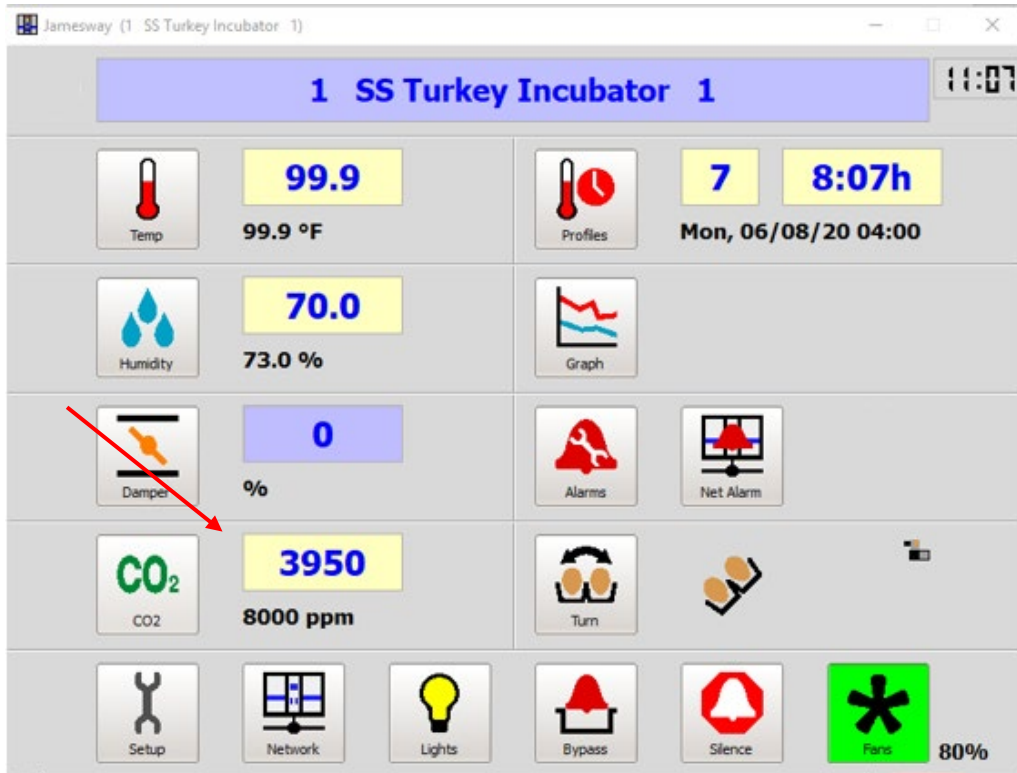


## Checking Fertility at 7-10 Days

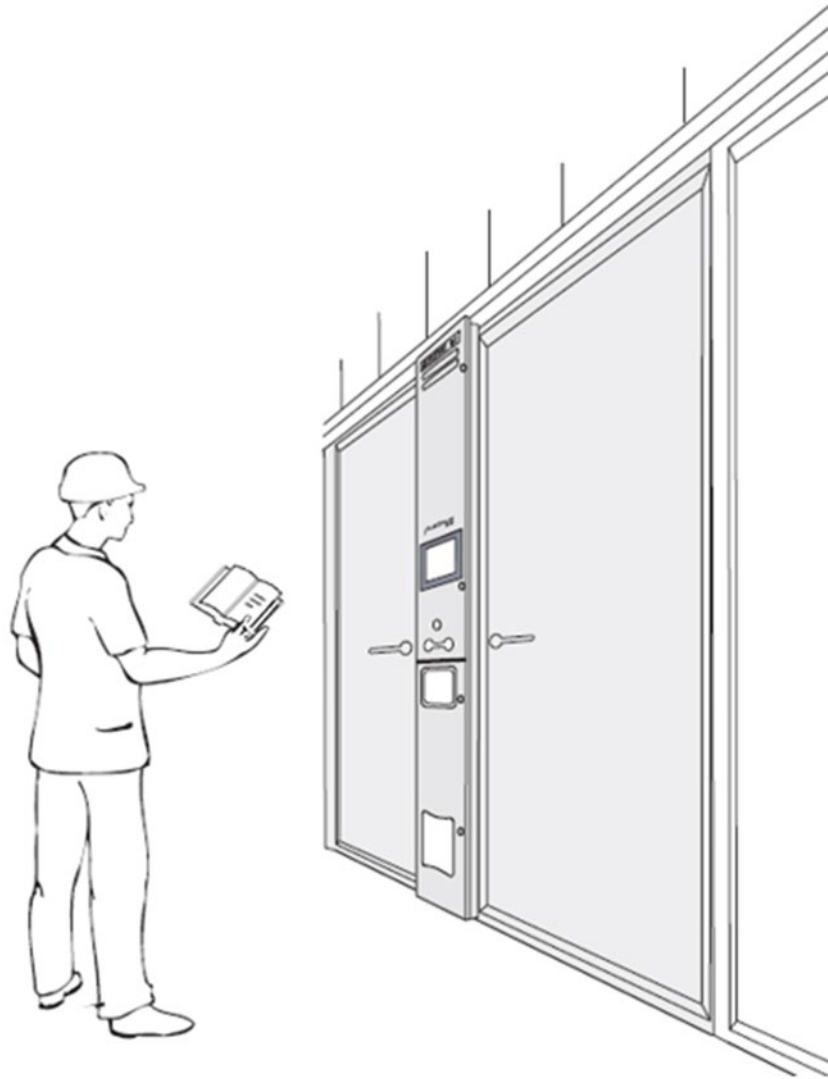
- Candling the outside 2 rows of column (40 eggs)  
= 33% sample.



# Monitoring Machine Behavior



# Tales from the Notebook:



1. Basic Requirements
  - a. Ventilation
2. Setting
  - a. Partial
  - b. Wet machines
3. Profiles/Setups
  - a. Changed
4. Machine Behavior
  - a. Not predictable

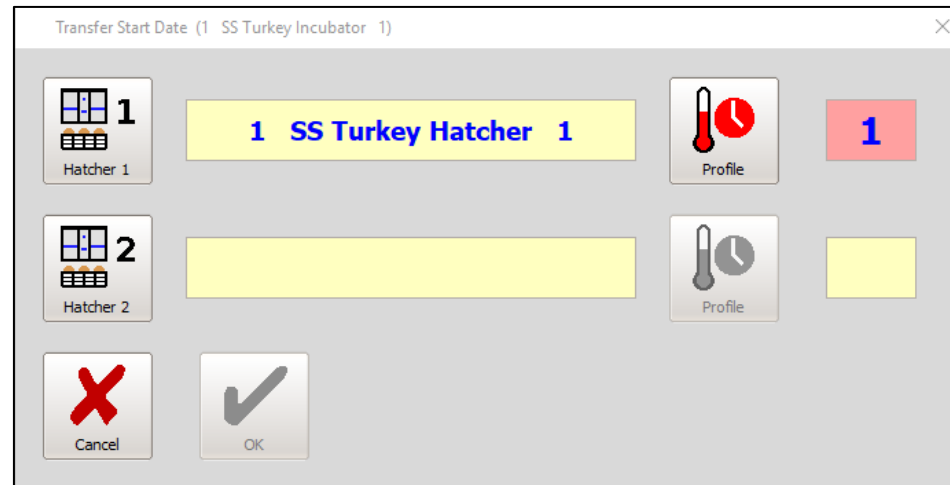


# Hatcher Operating Instructions

- Start Hatchers 2 Hours before Transfer with Baskets in Machines
  - Ensure fans are on and protective sensor covers removed



- Transfer Profile Start Date from the Incubator to Hatchers



# Hatcher Profile with Setups
























Day/Hr	Temperature	Humidity RH%	Damper CO2	Damper %
0.00	98.0	40%	4000 PPM	25%
24.00	98.0	40%	4000 PPM	25%
24.04	98.0	40%	4000 PPM	25%
24.16	98.0	40%	4000 PPM	25%
24.20	98.0	40%	4000 PPM	30%
25.00	98.0	40%	4000 PPM	40%
25.02	98.0	40%	4000 PPM	45%
25.04	97.8	40%	4000 PPM	50%
25.08	97.7	40%	4000 PPM	52%
25.13	97.6	45%	4000 PPM	55%
25.20	97.4	45%	3500 PPM	60%
26.01	97.2	50%	3500 PPM	65%
26.05	97.0	55%	3500 PPM	68%
26.09	96.8	60%	3500 PPM	70%
26.10	96.7	65%	3500 PPM	72%
26.12	96.6	70%	3500 PPM	73%
26.14	96.5	65%	3000 PPM	75%
26.17	96.4	60%	3000 PPM	78%
26.20	96.3	58%	3000 PPM	80%
26.23	96.2	53%	3000 PPM	85%
27.01	96.1	50%	3000 PPM	90%
27.06	96.0	45%	2500 PPM	90%
27.08	96.0	45%	2500 PPM	95%
27.12	95.8	40%	100%	100%

Note: Red Indicates Hatch Start, Peak and Finish (Hatch Curve)

Carbon Dioxide Setup (1 SS Turkey Hatcher 1)

 Span Conc	<b>5000</b> ppm	 High CO2	<b>6500</b> ppm
 Min Damp	<b>25</b> %	 Safety Day	<b>24</b> day
 Hysteresis	<b>100</b> ppm	 Damp Duty	<b>10</b> %
 Cancel	 OK	 Global	 Defaults

Fan Setup (1 SS Turkey Hatcher 1)

	 0-24	 24-25	 25-26	 26-27	 27+
					
<b>100</b>	<b>100</b>	<b>75</b>	<b>80</b>	<b>85</b>	<b>90</b>
					
 Cancel	 OK	 Global	 Select Days	 Delay Start	



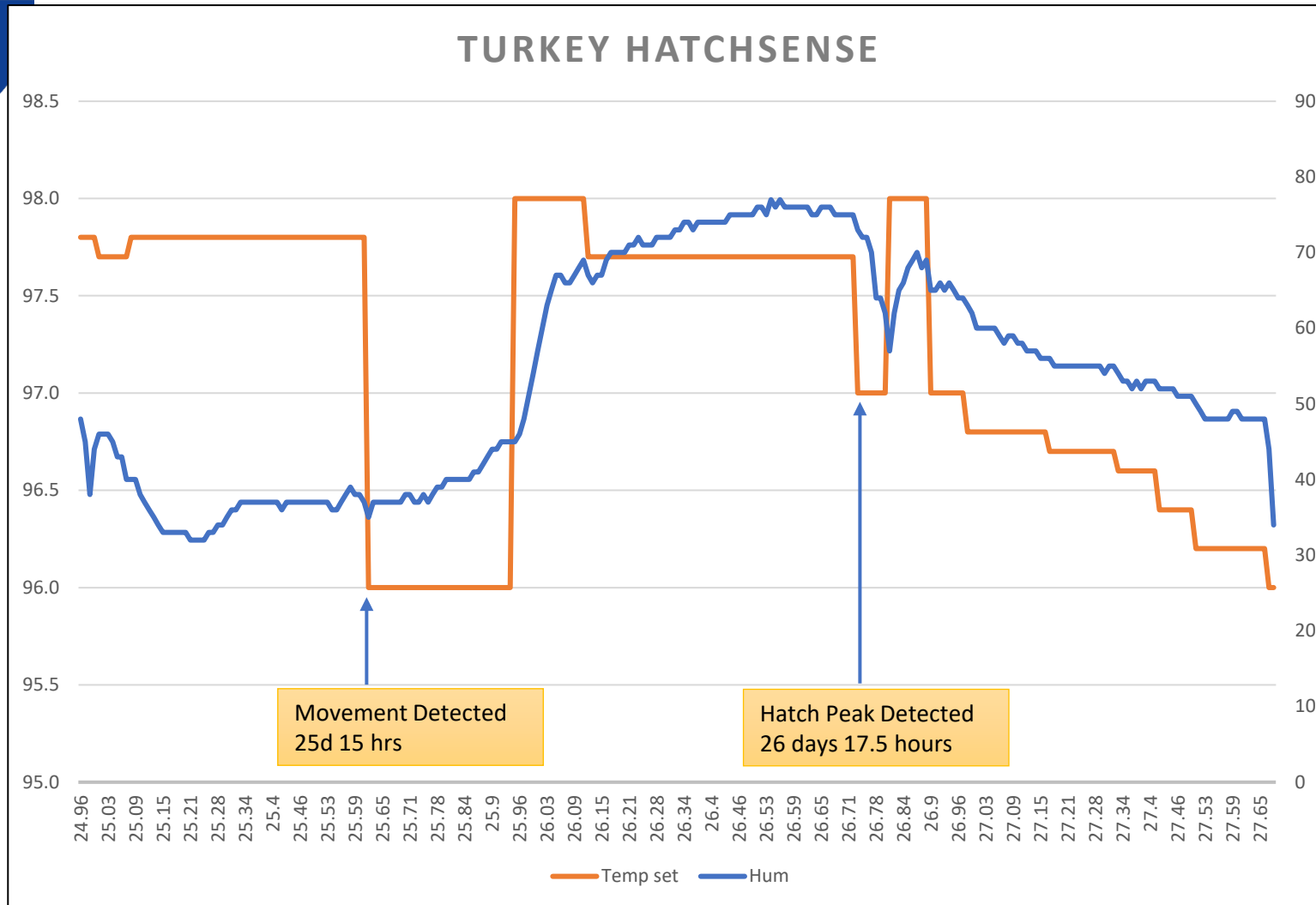


# HatchSense Profile

20	Day	Temp	Humidity	Damper
	0:00h	98.0	40.0	4000p
	24:00h	98.0	40.0	4000p
	24:20h	97.8	40.0	4000p
	25:00h	97.8	40.0	3500p
	25:02h	97.8	40.0	3500p
●	+ 0h	96.0	50.0	3000p
●	+ 8h	98.0	55.0	7500p
●	+ 12h	97.7	60.0	7500p
●	+ 0h	97.0	58.0	3000p
●	+ 2h	98.0	56.0	5500p
●	+ 4h	97.0	54.0	4500p
●	+ 6h	96.8	54.0	4000p
●	+ 7h	96.8	52.0	4000p
●	+ 8h	96.8	50.0	4000p
	27:04h	96.7	48.0	4000p
	27:08h	96.6	46.0	3500p
	27:10h	96.4	46.0	3500p
	27:12h	96.2	44.0	3000p
	27:16h	96.0	42.0	3000p
	27:18h	95.5	40.0	100



# HatchSense Actual Data



**20**

Day	Temp	Humidity	Damper
0:00h	98.0	40.0	4000p
24:00h	98.0	40.0	4000p
24:20h	97.8	40.0	4000p
25:00h	97.8	40.0	3500p
25:02h	97.8	40.0	3500p
+ 0h	96.0	50.0	3000p
+ 8h	98.0	55.0	7500p
+ 12h	97.7	60.0	7500p
+ 0h	97.0	58.0	3000p
+ 2h	98.0	56.0	5500p
+ 4h	97.0	54.0	4500p
+ 6h	96.8	54.0	4000p
+ 7h	96.8	52.0	4000p
+ 8h	96.8	50.0	4000p
27:04h	96.7	48.0	4000p
27:08h	96.6	46.0	3500p
27:10h	96.4	46.0	3500p
27:12h	96.2	44.0	3000p
27:16h	96.0	42.0	3000p
27:18h	95.5	40.0	100

HatchSense Setup (1 SS Chicken Hatcher 1)

Global

Timeout

26:03h

OK

Timeout

26:21h

Cancel

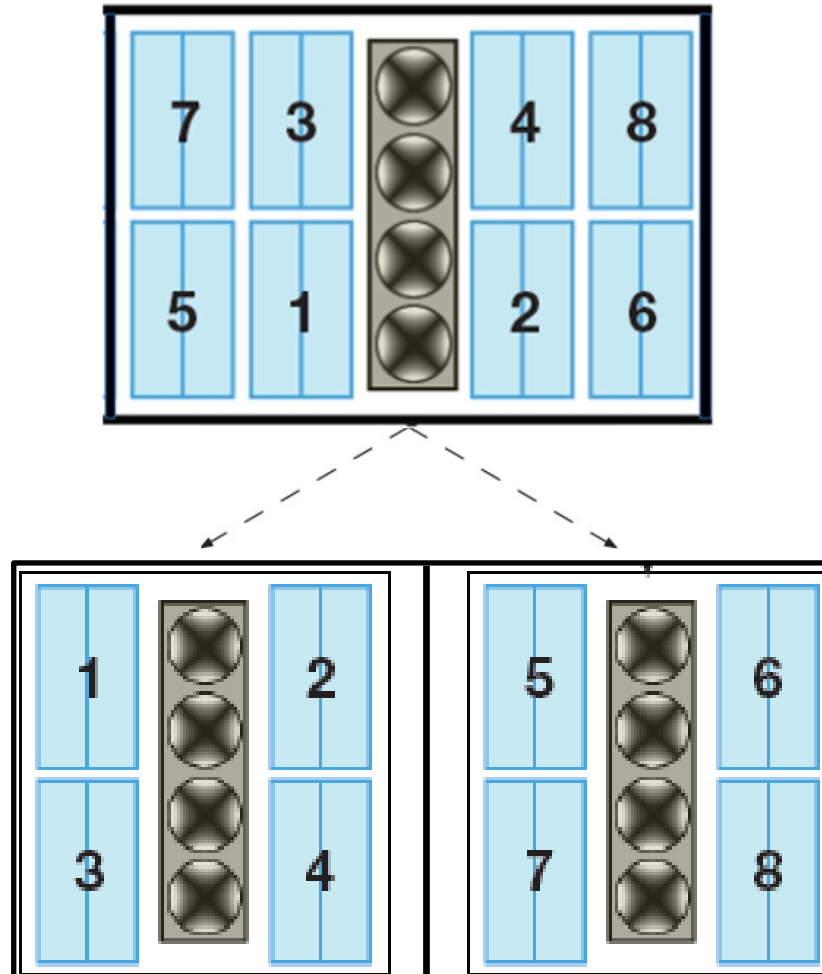
Hum Peak

4.0

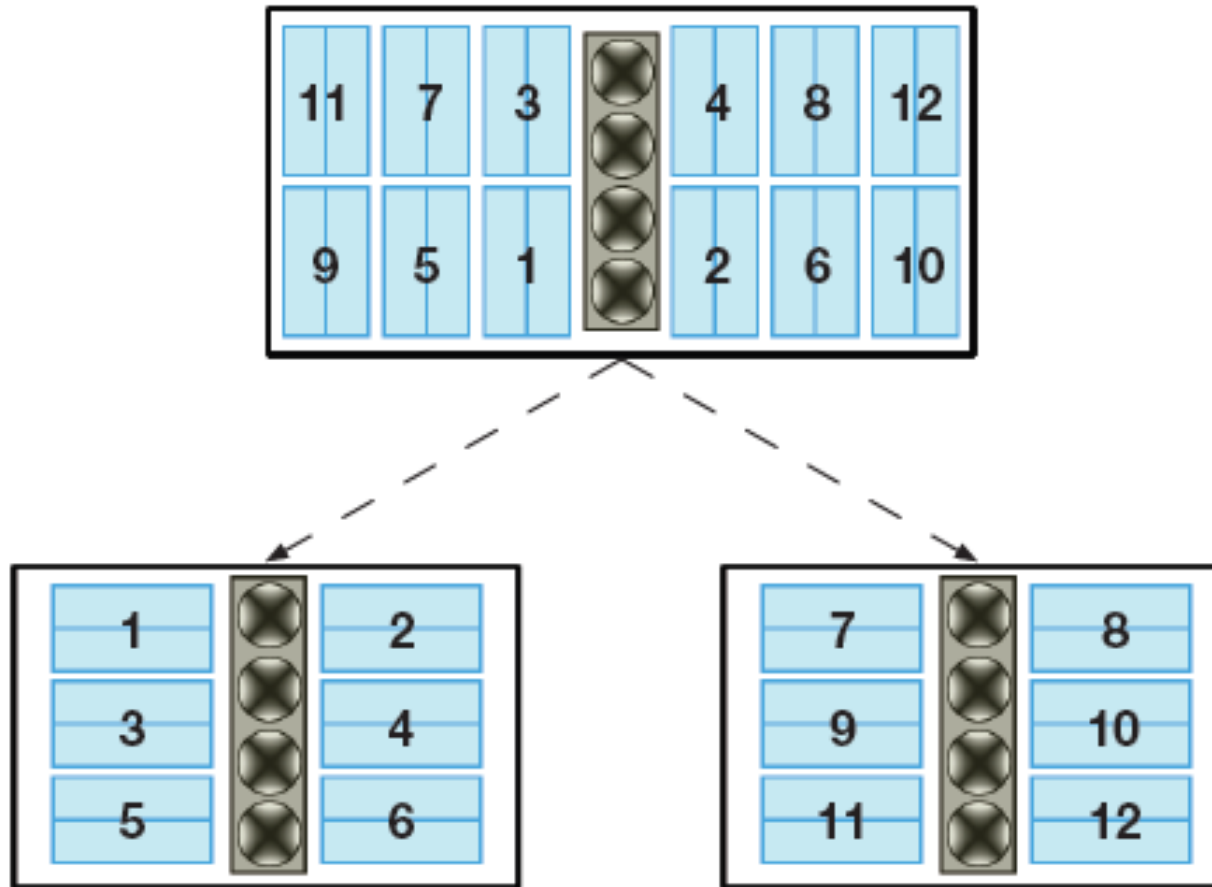
2.0



# Transferring the P40 Incubator to 2 P20 Hatchers



# Transferring the P60 Incubator to 2 P30 Hatchers



# Egg Transfer



Start at the top right-hand column and move downwards. Remove all trays from the right column before proceeding to the left.



Hatcher baskets are first stacked on the right-hand side. The right stack will contain all the eggs from the right column of the incubator rack. The left stack will contain all the eggs from the left column of the incubator rack.

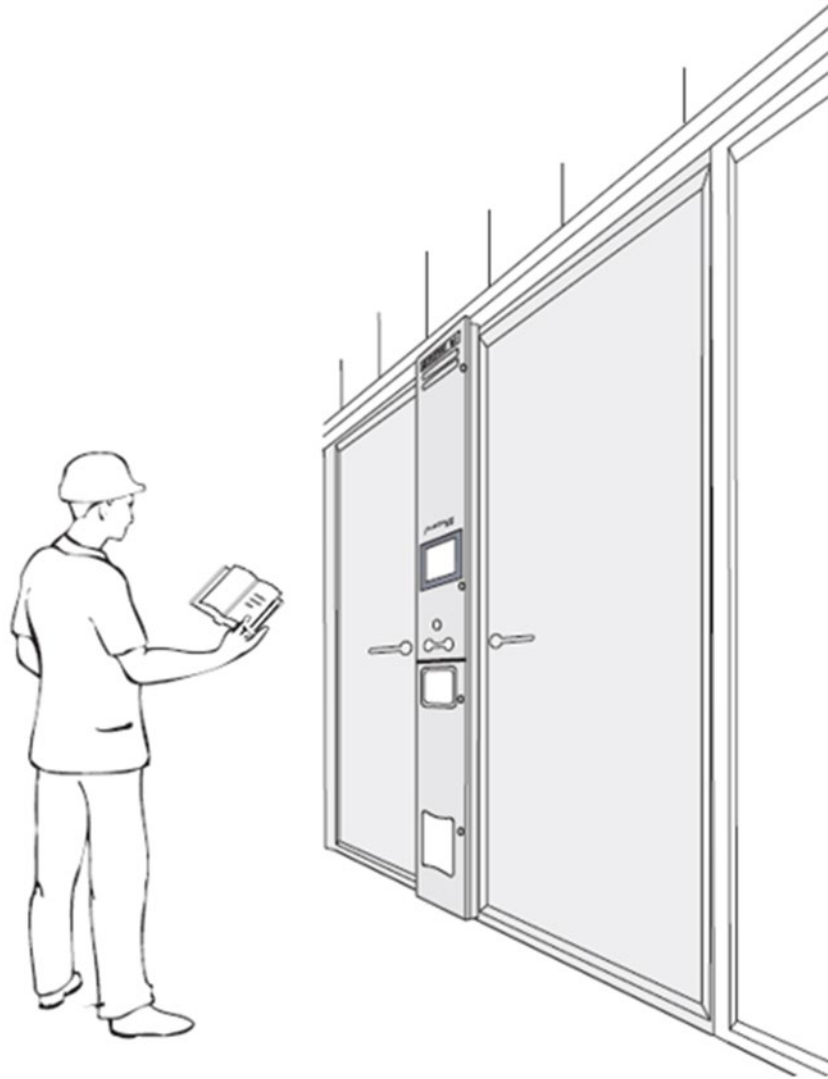




## Reminder List for Egg Transfer

- During transfer, handle eggs with care.
- Do not remove racks without levelling eggs first.
- Do not remove all incubator racks from one side and then the other side.
- Do not transfer eggs into wet hatcher baskets.
- Do not bang the basket down on the table during transfer.
- Do not flip eggs too quickly during transfer. Turn in a smooth gently rotating motion.
- Do not allow eggs to cool excessively during transfer.
- Once transfer has started, it must be completed for all the racks.
- Ensure all racks or dollies are positioned properly in the hatchers.

# Tales from the Notebook:

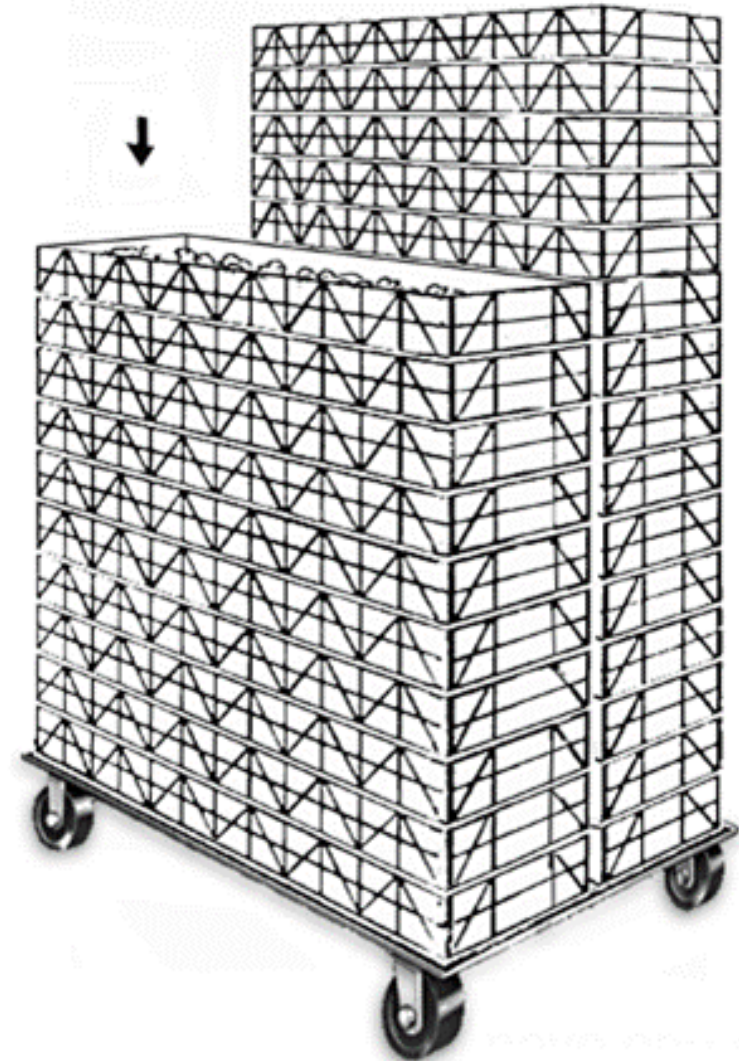


1. Basic Requirements
  - a. Ventilation
2. Setting
  - a. Partial
  - b. Wet machines
3. Profiles/Setups
  - a. Changed
4. Machine Behavior
  - a. Not Predictable
5. Transfer
  - a. Removing racks
  - b. Wet baskets
  - c. Doors not latched



## Taking off the Hatch

- Turn on alarm bypass and fans off
- Open doors and remove all dollies with baskets of poult
- After hatcher is empty close doors and set damper to 0%
- Remove the lid from one column
- Destack that column before going onto the next.



# Washing and Cleaning

- Wash and sanitize the Incubator after transfer, Hatcher after pull
- Protect humidity and carbon dioxide sensors with the covers provided
- Lift the ECU fan motors into the vertical position.
- Open the skirts on the ECU
- Using a power hose, thoroughly wash the entire machine ECU frame and coils. Do not use a high-pressure washer on motors
- Apply a disinfectant solution
- Allow the machine to dry completely before reloading

Warning: Disconnect the machine from electrical supply before commencing clean-out.

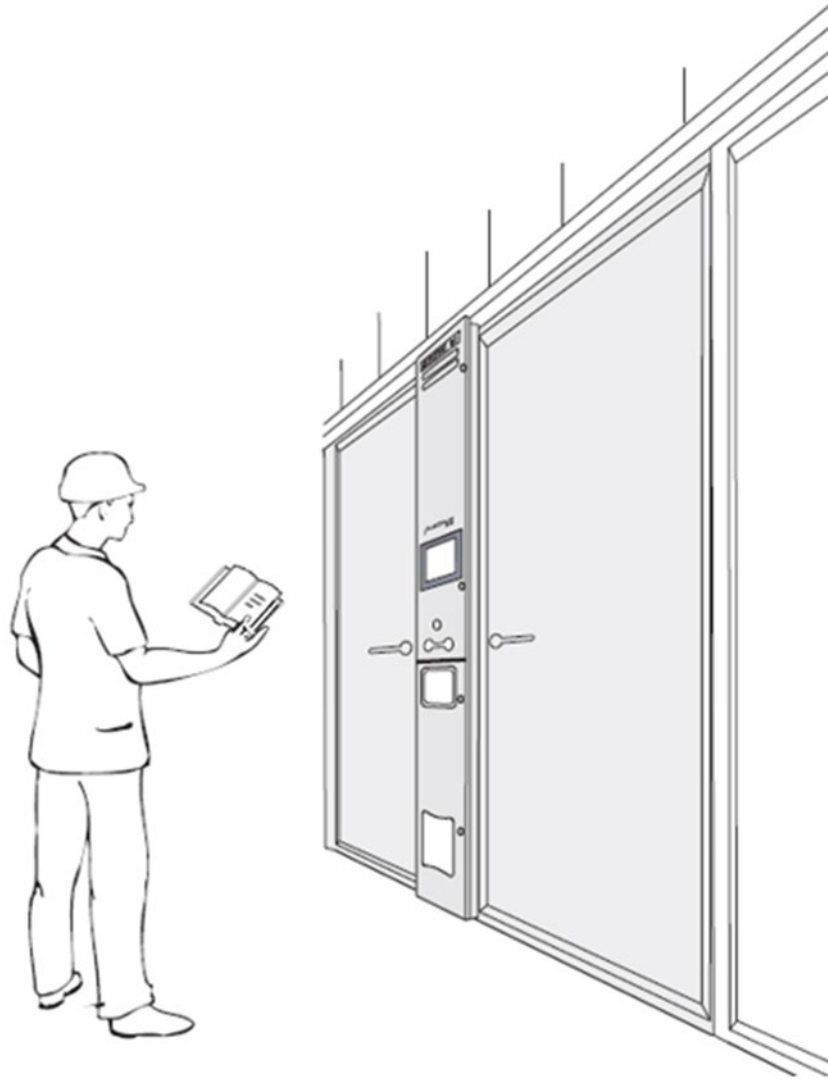
Turn off the power.

Wipe down and clean ECU motors and fan blades by hand only. Do not use a power washer to clean the motors or fans.





# Tales from the Notebook:



1. Basic Requirements
  - a. Ventilation
2. Setting
  - a. Partial
  - b. Wet machines
3. Profiles/Setups
  - a. Changed
4. Machine Behavior
  - a. Not Predictable
5. Transfer
  - a. Removing racks
  - b. Wet baskets
  - c. Doors not latched
6. Cleaning
  - a. Sensors not covered
  - b. Motors and fan blades high pressure
  - c. Displays get wet

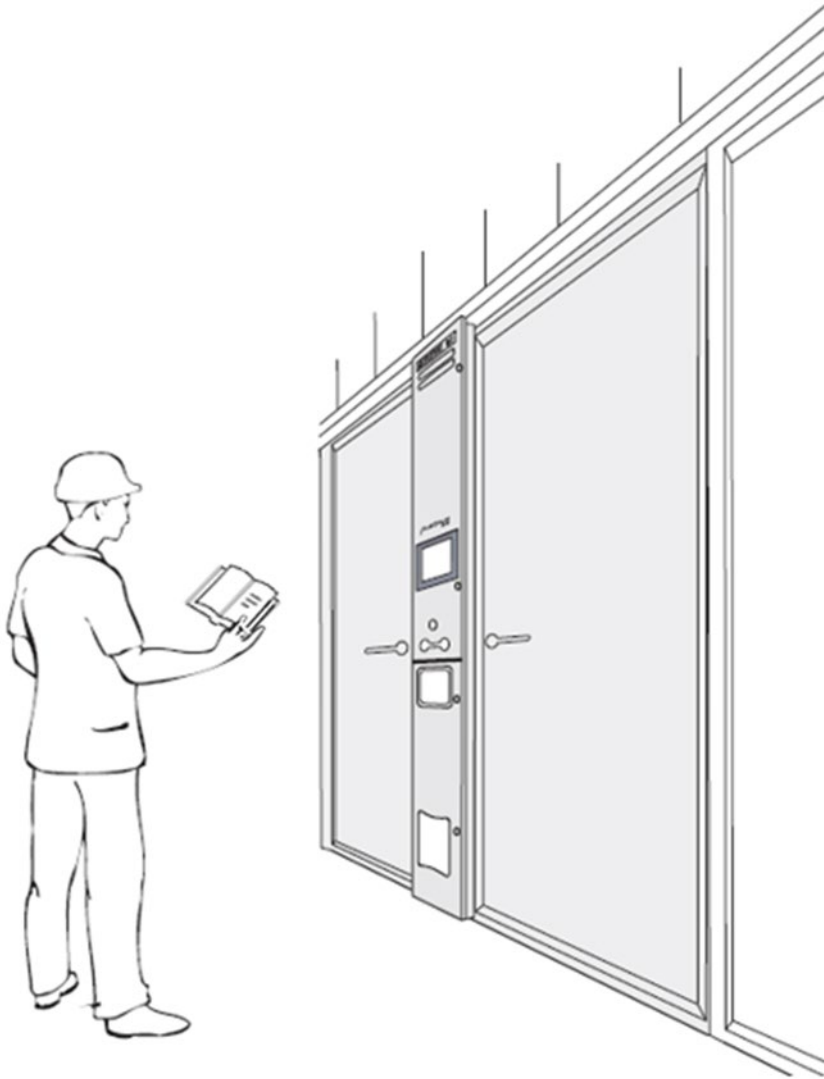




# Tales from the Notepad:

Little things make the difference.  
Everyone is well prepared in the big  
things, but only the winners perfect  
the little things....Bear Bryant

Successful Hatcheries do the little  
things...



# Questions?

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