

Appendix 6. Dew Point or Condensation Table

When eggs are moved from a cold environment into warmer, more humid conditions, they may sweat. The following table gives the shell temperature that will result in condensation when moving eggs into a wide variety of temperatures and humidities.

Eggs may sweat when they are transported from a cold egg store on the farm to a warm hatchery or from a cold egg store in the hatchery for pre-warming or incubation.

If eggs are sweating do not fumigate them and do not put them into a cold egg store until they are dry.

Temperature °C (°F)	Relative Humidity (%RH)					
	40	50	60	70	80	90
15 (59)					11	13
20 (68)			12	14	16	18
Pre-warming 23 (74)		12	15	17	19	21
25 (77)	10	13	16	19	21	23
30 (86)	14	18	21	24	26	28
35 (95)	18	21	25	28	31	33
Incubator	21	25	28	31	34	36
40 (104)	23	27	30	33	36	38

To avoid condensation the egg shell temperature needs to be higher than given in the table.

Appendix 7. Some Suggestions for Hatchery Recording Forms

Form 1. Breakout of Unincubated Eggs

Company _____

Date _____

Farm								
No. of Eggs Sampled								
Fertile								
Infertile								
- Mottled Yolk								
- Watery Albumen								
- Sticky Yolk								

Form 2. Breakout of Partially Incubated Eggs

Company _____

Date _____

Farm								
No. of Eggs Sampled								
No. of Days Incubated								
Live Embryos								
Dead Embryos - 24 h "Early Dead"								
Dead Embryos - 48 h "Early Dead"								
Dead Embryos - "Blood Ring" (3 days)								
Dead Embryos - "Black Eye" (5-12 days)								
Infertile								

See **Tables 1 and 2** (pages 22-23) for classification systems for time of embryo death.

Form 3. Transfer Candling Analysis

Company _____

Date Set _____

Farm _____

Date Canded _____

Age _____

Date Broken Out _____

Setter Tray Size _____

Setter No. _____

Tray No.	1	2	3	4	5	6	7	8	9	10	Total	% of eggs set
No. of eggs removed												
Infertile												
24 h Early Dead												
48 h Early Dead												
“Blood Ring” (2.5-4 days)												
“Black Eye” (5-12 days)												
“Feathers” (13-17 days)												
Live Embryos												
Early Rot												
Late Rot												
Poor Shell Quality												
Cracked Shell												
Notes:												

See **Tables 1 and 2** (pages 22 - 23) for classification systems for time of embryo death.

Form 4. Transfer Candling Analysis – Simplified Version

Company _____

Date Set _____

Farm _____

Date Canded _____

Age _____

Date Broken Out _____

Setter Tray Size _____

Setter No. _____

Tray No.	1	2	3	4	5	6	7	8	9	10	Total	% of eggs set
No. of eggs removed												
Infertile												
“Early Dead” (0-7 days)												
“Mid Dead” (8-14days)												
Contaminated												
Poor Shell Quality												
Cracked Shell												
Notes:												

See **Tables 1 and 2** (pages 22-23) for classification systems for time of embryo death.

Form 5. Hatch Debris Analysis

Company _____

Date Set _____

Farm _____

Date Canded _____

Age _____

Date Broken Out _____

Hatch Tray Size _____

Setter No. _____

Hatcher No. _____

Tray No.	1	2	3	4	5	6	7	8	9	10	Total	% of eggs set
No. of eggs removed												
Infertile												
24 h "Early Dead"												
48 h "Early Dead"												
"Blood Ring" (2.5-4 days)												
"Black Eye" (5-12 days)												
"Feathers " (13-17 days)												
Turned (18-19 days)												
Internal Pip												
External Pip												
Dead and Cull Chicks												
Early Rot												
Late Rot												
Poor Shell Quality												
Cracked Shell												
Malpositions - Head in small end of egg												
- Head to left												
- Feet over head												
- Beak above right wing												
Malformations - Exposed brain/Eye defect												
- Extra limbs												
- Ectopic Viscera												
Embryo - Wet												
- Dehydrated												

Notes:

Form 6. Hatch Debris Analysis - Simplified Version

Company _____

Date Set _____

Farm _____

Date Canded _____

Age _____

Date Broken Out _____

Hatch Tray Size _____

Setter No. _____

Hatcher No. _____

Tray No.	1	2	3	4	5	6	7	8	9	10	Total	% of eggs set
No. of eggs removed												
Infertile												
“Early Dead” (0-7 days)												
“Mid Dead” (8-14 days)												
“Late Dead” (15-21 days)												
External Pip												
Dead and Cull Chicks												
Contaminated												
Poor Shell Quality												
Cracked Shell												
Malpositions - Head in small end of egg												
- Head to left												
- Feet over head												
- Beak above right wing												
Malformations - Exposed brain/Eye defect												
- Extra limbs												
- Ectopic Viscera												
Embryo - Wet												
- Dehydrated												

Notes:

Form 7. Egg Weights and Chick Weights

Company _____

Date Set _____

Farm _____

Date Hatched _____

Age _____

Date Broken Out _____

Setter No. _____

Hatcher No. _____

Tray No.	1	2	3	4	5	6	7	8	9	10
No. of Eggs										
Weight of Empty Tray										
Weight of Full Tray										
Transfer Weight										
No. of Chicks Hatched										
Total Chick Weight										
Culls and Deads										
Unhatched Eggs										
Egg Weight Loss (%)										
Mean Egg Weight (g)										
Mean Chick Weight (g)										
Chick Yield (%)										