

PSYCHROMETRIC TABLES FOR INCUBATION OF POULTRY AND GAME BIRD EGGS

2nd Edition
Sea Level to 9,500 ft.

PSYCHROMETRIC INCUBATION TABLE										
Sea Level										
(Percent Relative Humidity Vs. Wet/Dry Bulb Temperatures)										
DRY BULB TEMPERATURE (degrees F)										
	90	95	96	97	98	99	100	101	102	
	80	64.78	52.11	49.89	47.76	45.72	43.76	41.88	40.09	38.36
W	81	67.95	54.82	52.51	50.30	48.18	46.15	44.20	42.34	40.54
E	82	71.20	57.60	55.20	52.91	50.71	48.60	46.58	44.64	42.78
T	83	74.52	60.43	57.95	55.57	53.29	51.10	49.00	46.99	45.06
	84	77.92	63.33	60.76	58.30	55.93	53.67	51.49	49.40	47.40
B	85	81.39	66.30	63.63	61.08	58.63	56.29	54.03	51.87	49.79
U	86	84.95	69.33	66.58	63.94	61.40	58.97	56.63	54.39	52.23
L	87	88.59	72.44	69.59	66.86	64.23	61.71	59.29	56.97	54.73
B	88	92.30	75.61	72.66	69.84	67.12	64.51	62.01	59.60	57.29
	89	96.11	78.87	75.82	72.89	70.08	67.38	64.79	62.30	59.91
T	90	100	82.19	79.03	76.01	73.10	70.32	67.63	65.03	62.58
E	91		85.59	82.33	79.21	76.21	73.32	70.55	67.89	65.32
M	92		89.07	85.70	82.48	79.37	76.39	73.53	70.77	68.12
P	93		92.63	89.16	85.83	82.62	79.54	76.58	73.73	70.99
degrees F	94		96.27	92.68	89.24	85.93	82.75	79.69	76.76	73.93
	95		100	96.30	92.75	89.33	86.05	82.89	79.86	76.93

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TIPS FOR SUCCESSFUL INCUBATION

1. THOROUGHLY CLEAN AND STERILIZE YOUR INCUBATOR, TRAYS AND OTHER HATCHING EQUIPMENT BEFORE YOU HAVE EGGS TO SET: Use a good anti-bacterial solution or mist to sterilize, then RINSE completely to eliminate any residue which could contaminate your eggs or injure the hatching chicks.

2. AFTER STERILIZING YOUR INCUBATOR, START IT UP AND RUN IT FOR SEVERAL DAYS: Make all of the adjustments, just as if you were putting in eggs for hatching. Check each of the components to insure that they are operating properly and can be adjusted as necessary.

- A. Examine the thermostat wafers for cracks and signs of stress. If the wafer is over three years old...replace it. New thermostat units complete with wafers are inexpensive compared to what you would lose if one "blew up" and cooked your eggs.
- B. Buy some new wicks for the hygrometer. Wicks are cheap, approximately 2 for \$1. Mineral residue and common dirt can affect the wet bulb reading. And, if they aren't thoroughly sterilized; they represent a source of bacteria to infect your eggs. Given their price, it is not worth trying to "recycle" last year's wicks.

3. DO NOT PLACE YOUR INCUBATOR IN AREAS WHERE THE OUTSIDE TEMPERATURE FLUCTUATES ON A DIURNAL BASIS; i.e., barns, garages, and sheds. Even an insulated incubator will have a difficult time maintaining a stable internal temperature under these conditions.

4. COLLECT YOUR EGGS AT LEAST TWICE A DAY: Collect them more often in hot or cold weather. Eggs which have been overheated in the sun or frozen in the snow have a fertility rate on the negative side of the number line...not good. A little extra effort in collecting the eggs will result in more chicks hatching.

5. CLEAN AND SANITIZE YOUR EGGS IMMEDIATELY AFTER COLLECTION: There is good scientific data which indicate that if you wait more than three to four hours before cleaning and sanitizing your eggs, it is of diminished value. The bacteria have already penetrated the eggshell and begun to infect the embryo. Every successful breeder has their own way of cleaning and sanitizing their eggs: My suggestion is to buy a good product such as Tek Trol, Bio-Shield or Bio-Guard and follow the label's directions. **DON'T WAIT UNTIL THE END OF THE DAY TO CLEAN AND SANITIZE YOUR EGGS, DO IT AFTER EACH COLLECTION.**

6. DON'T STORE YOUR EGGS FOR TOO LONG BEFORE SETTING THEM: There are many excellent studies available on storage duration and hatchability. They all confirm that hatchability of eggs declines each day after being laid. So, when it comes to storing eggs, how long is too long? There is no single answer perfect for everyone. We recommend a storage period of no longer than 4 to 5 DAYS prior to setting. Eggs should be stored at a temperature of 50F - 60F and a relative humidity of 75% to 85%. Allow all eggs to come to room temperature before placing them into the incubator. Do not set odd-shaped or odd-sized eggs. Save the incubator space for good eggs.

7. USE THE INCUBATION TABLE IN THIS BOOKLET CLOSEST TO YOUR ELEVATION: Then, set your wet/dry bulb readings for the lower end of the acceptable range for relative humidity. In doing so, any effects from a low-pressure weather front will be negligible.

Setting the Correct Relative Humidity in the Incubator

The psychrometric table used by most aviculturists was prepared over forty years ago, with the values for relative humidity rounded to the nearest whole number. The table was calculated based on sea level readings. There was a notation at the bottom indicating that adjustments had to be made for increases in elevation above sea level. However, the recommended adjustment of one (1) percentage point relative humidity for each 2,500 feet of elevation above sea level was inaccurate. And, as the table was reprinted and referenced by scientists over the years, the notation that adjustments must be made for elevations above sea level was frequently omitted.

When the original sea level table is used at higher elevations, the relative humidity can be off by as much as two percentage points. When a low-pressure weather front occurs, the decrease in barometric pressure can increase the relative humidity by another one half-percentage point. Although the effect of a low-pressure front is small, when added to the error of using a sea level table (with rounded values) at higher elevations, it becomes significant.

Another frequently overlooked factor is dry bulb temperature fluctuation inside the incubator. Standard wafer thermostats generally vary by plus or minus 0.5 degrees F, but can deviate by as much as 1.0 degree F. A decrease in dry bulb temperature from 100F to 99F degrees can produce a change in the relative humidity of two percentage points.

Temperature fluctuations within the incubator can also be caused by the location of the incubator. Placing the incubator in areas where the outside temperature fluctuates on a diurnal basis...i.e., barns, garages, and sheds is not a good management practice (unless they are insulated and capable of maintaining stable temperatures). Even an insulated incubator will have a difficult time maintaining a stable internal temperature under these conditions.

All these factors taken together, elevation, low-pressure weather fronts, and temperature fluctuations inside the incubator can add up to a relative humidity of more than five percentage points higher than recommended. This higher relative humidity does not allow for the development of a normal air cell, resulting in chicks dying during the last week of incubation, literally drowning.

Therefore, what must be done? Check the location of your incubator and insure that it is not subjected to severe diurnal temperature fluctuations. Consider replacing the wafer thermostats with electronic thermostats. And, use the correct psychrometric table for setting the wet/dry bulb temperatures in the incubator. Finally, set your wet/dry bulb readings for the lower end of the acceptable range for relative humidity. In doing so, any effects from a low-pressure weather front will be negligible.

The new and expanded tables in this book are accurate to two decimals. They have been prepared for elevations from sea level to 9,500 feet in 500-foot intervals. Select the table closest to your elevation and use those settings in your incubator. With all other variables under control, the relative humidity inside the incubator will match to table.

PSYCHROMETRIC INCUBATION TABLE

Sea Level

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
W E T B U L B T E M P E R A T U R E	80	64.78	52.11	49.89	47.76	45.72	43.76	41.88	40.09	38.36
	81	67.95	54.82	52.51	50.30	48.18	46.15	44.20	42.34	40.54
	82	71.20	57.60	55.20	52.91	50.71	48.60	46.58	44.64	42.78
	83	74.52	60.43	57.95	55.57	53.29	51.10	49.00	46.99	45.06
	84	77.92	63.33	60.76	58.30	55.93	53.67	51.49	49.40	47.40
	85	81.39	66.30	63.63	61.08	58.63	56.29	54.03	51.87	49.79
	86	84.95	69.33	66.58	63.94	61.40	58.97	56.63	54.39	52.23
	87	88.59	72.44	69.59	66.86	64.23	61.71	59.29	56.97	54.73
	88	92.30	75.61	72.66	69.84	67.12	64.51	62.01	59.60	57.29
	89	96.11	78.87	75.82	72.89	70.08	67.38	64.79	62.30	59.91
	90	100	82.19	79.03	76.01	73.10	70.32	67.63	65.06	62.58
	91		85.59	82.33	79.21	76.21	73.32	70.55	67.89	65.32
	92		89.07	85.70	82.48	79.37	76.39	73.53	70.77	68.12
	93		92.63	89.16	85.83	82.62	79.54	76.58	73.73	70.99
	94		96.27	92.68	89.24	85.93	82.75	79.69	76.76	73.93
95		100	96.30	92.75	89.33	86.05	82.89	79.86	76.93	

PSYCHROMETRIC INCUBATION TABLE

500 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
W E T B U L B T E M P E R A T U R E	80	64.91	52.29	50.07	47.94	45.90	43.95	42.08	40.29	38.57
	81	68.07	54.98	52.68	50.48	48.36	46.33	44.39	42.53	40.74
	82	71.31	57.75	55.36	53.07	50.88	48.77	46.76	44.82	42.96
	83	74.61	60.57	58.09	55.72	53.45	51.27	49.17	47.16	45.24
	84	78.00	63.46	60.90	58.44	56.08	53.82	51.65	49.57	47.56
	85	81.46	66.41	63.76	61.21	58.77	56.43	54.18	52.02	49.94
	86	85.00	69.44	66.69	64.06	61.52	59.10	56.77	54.53	52.38
	87	88.63	72.53	69.69	66.96	64.34	61.83	59.42	57.10	54.87
	88	92.33	75.69	72.75	69.94	67.22	64.62	62.12	59.73	57.42
	89	96.12	78.93	75.89	72.98	70.17	67.49	64.90	62.42	60.03
	90	100	82.24	79.10	76.09	73.19	70.41	67.73	65.17	62.69
	91		85.64	82.39	79.28	76.28	73.40	70.64	67.98	65.43
	92		89.10	85.75	82.53	79.43	76.46	73.60	70.86	68.22
	93		92.65	89.19	85.87	82.67	79.60	76.65	73.81	71.08
	94		96.28	92.71	89.28	85.97	82.80	79.75	76.82	74.00
95		100	96.31	92.77	89.36	86.09	82.94	79.91	76.99	

PSYCHROMETRIC INCUBATION TABLE

1,000 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F	90	95	96	97	98	99	100	101	102	
	80	65.05	52.46	50.24	48.12	46.09	44.14	42.27	40.49	38.77
W	81	68.19	55.14	52.84	50.65	48.54	46.51	44.57	42.72	40.93
E	82	71.42	57.89	55.51	53.23	51.04	48.95	46.93	45.00	43.15
T	83	74.71	60.70	58.24	55.87	53.60	51.43	49.34	47.33	45.41
	84	78.08	63.58	61.03	58.58	56.23	53.97	51.80	49.73	47.73
B	85	81.52	65.53	63.88	61.34	58.90	56.57	54.32	52.17	50.10
U	86	85.06	69.54	66.80	64.17	61.65	59.23	56.90	54.67	52.53
L	87	88.67	72.62	69.79	67.07	64.46	61.95	59.54	57.23	55.01
B	88	92.36	75.77	72.84	70.03	67.33	64.74	62.24	59.85	57.55
	89	96.14	79.00	75.97	73.06	70.27	67.59	65.01	62.53	60.15
T	90	100	82.30	79.17	76.16	73.27	70.50	67.83	65.27	62.80
E	91		85.68	82.44	79.34	76.35	73.48	70.72	68.08	65.53
M	92		89.13	85.79	82.58	79.50	76.53	73.68	70.94	68.31
P	93		92.68	89.22	85.91	82.72	79.66	76.71	73.88	71.16
	94		96.29	92.73	89.31	86.02	82.85	79.81	76.89	74.07
	95		100	96.32	92.79	89.39	86.13	82.99	79.97	77.06

PSYCHROMETRIC INCUBATION TABLE

1,500 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F	90	95	96	97	98	99	100	101	102	
	80	65.18	52.62	50.41	48.30	46.27	44.33	42.46	40.68	38.96
W	81	68.31	55.30	53.01	50.81	48.71	46.69	44.75	42.90	41.12
E	82	71.52	58.04	55.66	53.39	51.20	49.11	47.10	45.18	43.33
T	83	74.80	60.84	58.38	56.02	53.75	51.58	49.50	47.50	45.58
	84	78.16	63.71	61.16	58.71	56.37	54.12	51.96	49.88	47.89
B	85	81.59	66.64	64.00	61.47	59.04	56.71	54.46	52.32	50.25
U	86	85.11	69.64	66.91	64.29	61.77	59.36	57.04	54.81	52.67
L	87	88.71	72.71	69.89	67.18	64.57	62.07	59.67	57.36	55.14
B	88	92.38	75.85	72.93	70.13	67.43	64.84	62.35	59.97	57.67
	89	96.15	79.07	76.05	73.15	70.36	67.68	65.11	62.64	60.26
T	90	100	82.36	79.23	76.24	73.35	70.59	67.92	65.37	62.91
E	91		85.73	82.50	79.40	76.42	73.56	70.81	68.17	65.63
M	92		89.17	85.83	82.64	79.56	76.60	73.76	71.03	68.40
P	93		92.70	89.26	85.95	82.77	79.72	76.78	73.96	71.24
	94		96.30	92.75	89.34	86.06	82.90	79.87	76.95	74.14
	95		100	96.33	92.81	89.42	86.17	83.03	80.02	77.12

PSYCHROMETRIC INCUBATION TABLE

2,000 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
	80	65.31	52.79	50.59	48.48	46.45	44.51	42.65	40.87	39.16
W	81	68.43	55.45	53.17	50.98	48.88	46.87	44.93	43.08	41.30
E	82	71.62	58.18	55.81	53.54	51.37	49.28	47.27	45.35	43.50
T	83	74.89	60.97	58.52	56.16	53.90	51.74	49.66	47.67	45.75
	84	78.24	63.83	61.29	58.85	56.51	54.26	52.11	50.04	48.05
B	85	81.65	66.75	64.11	61.59	59.17	56.84	54.61	52.46	50.40
U	86	85.16	69.74	67.01	64.40	61.89	59.48	57.17	54.95	52.81
L	87	88.74	72.80	69.98	67.28	64.68	62.19	59.79	57.49	55.28
B	88	92.41	75.93	73.01	70.22	67.53	64.95	62.47	60.09	57.80
	89	96.16	79.14	76.12	73.23	70.45	67.78	65.21	62.75	60.38
T	90	100	82.41	79.30	76.31	73.43	70.68	68.02	65.47	63.02
E	91		85.77	82.55	79.46	76.49	73.64	70.90	68.26	65.72
M	92		89.20	85.88	82.69	79.62	76.67	73.83	71.11	68.49
P	93		92.72	89.29	85.99	82.82	79.78	76.85	74.03	71.32
	94		96.31	92.77	89.37	86.10	82.95	79.92	77.02	74.22
	95		100	96.34	92.83	89.45	86.21	83.08	80.08	77.18

PSYCHROMETRIC INCUBATION TABLE

2,500 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
	80	65.43	52.95	50.75	48.65	46.63	44.70	42.84	41.06	39.35
W	81	68.54	55.60	53.32	51.14	49.05	47.04	45.11	43.26	41.49
E	82	71.73	58.32	55.96	53.70	51.52	49.44	47.44	45.52	43.68
T	83	74.98	61.10	58.65	56.31	54.05	51.89	49.82	47.83	45.91
	84	78.31	63.95	61.41	58.98	56.65	54.41	52.25	50.19	48.21
B	85	81.72	66.85	64.23	61.71	59.29	56.91	54.74	52.61	50.55
U	86	85.21	69.85	67.12	64.51	62.01	59.61	57.30	55.08	52.95
L	87	88.78	72.89	70.08	67.38	64.79	62.30	59.91	57.62	55.41
B	88	92.43	76.00	73.10	70.31	67.63	65.05	62.58	60.20	57.92
	89	96.18	79.20	76.19	73.31	70.54	67.88	65.32	62.86	60.49
T	90	100	82.47	79.36	76.38	73.51	70.76	68.11	65.57	63.12
E	91		85.81	82.60	79.53	76.56	73.72	70.98	68.35	65.82
M	92		89.23	85.92	82.74	79.68	76.74	73.91	71.19	68.57
P	93		92.74	89.32	86.03	82.87	79.84	76.91	74.10	71.40
	94		96.33	92.79	89.40	86.14	83.00	79.98	77.08	74.28
	95		100	96.35	92.85	89.48	86.25	83.13	80.13	77.24

PSYCHROMETRIC INCUBATION TABLE

3,000 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
	80	65.56	53.11	50.92	48.82	46.80	44.88	43.02	41.25	39.54
W	81	68.65	55.75	53.48	51.30	49.21	47.21	45.28	43.44	41.67
E	82	71.82	58.46	56.10	53.85	51.68	49.60	47.60	45.69	43.85
T	83	75.06	61.23	58.79	56.45	54.20	52.04	49.97	47.99	46.08
	84	78.39	64.06	61.53	59.11	56.78	54.55	52.40	50.34	48.36
B	85	81.78	66.96	64.34	61.83	59.42	57.11	54.88	52.75	50.70
U	86	85.26	69.93	67.22	64.62	62.13	59.73	57.43	55.22	53.09
L	87	88.82	72.97	70.17	67.48	64.90	62.42	60.03	57.74	55.54
B	88	92.46	76.08	73.18	70.40	67.72	65.16	62.69	60.32	58.04
	89	96.19	79.26	76.27	73.39	70.63	67.97	65.42	62.97	60.60
T	90	100	82.52	79.42	76.45	73.59	70.85	68.20	65.67	63.23
E	91		85.86	82.66	79.59	76.63	73.79	71.06	68.44	65.91
M	92		89.27	85.96	82.79	79.74	76.80	73.98	71.27	68.66
P	93		92.76	89.35	86.07	82.92	79.89	76.98	74.17	71.48
	94		96.34	92.81	89.43	86.17	83.05	80.03	77.14	74.35
	95		100	96.36	92.87	89.51	86.28	83.17	80.18	77.30

PSYCHROMETRIC INCUBATION TABLE

3,500 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
	80	65.68	53.27	51.09	48.99	46.98	45.06	43.21	41.43	39.73
W	81	68.77	55.90	53.64	51.46	49.38	47.38	45.46	43.62	41.85
E	82	71.93	58.60	56.25	54.00	51.84	49.76	47.77	45.86	44.02
T	83	75.15	61.36	58.92	56.59	54.35	52.20	50.13	48.15	46.24
	84	78.46	64.18	61.66	59.24	56.92	54.69	52.55	50.49	48.52
B	85	81.84	67.07	64.46	61.96	59.55	57.24	55.02	52.89	50.84
U	86	85.31	70.03	67.33	64.74	62.24	59.85	57.55	55.35	53.23
L	87	88.86	73.06	70.26	67.58	65.00	62.53	60.15	57.87	55.67
B	88	92.48	76.15	73.26	70.49	67.82	65.26	62.80	60.44	58.16
	89	96.20	79.33	76.34	73.47	70.71	68.07	65.52	63.07	60.72
T	90	100	82.57	79.48	76.52	73.67	70.93	68.30	65.77	63.33
E	91		85.90	82.71	79.65	76.70	73.87	71.14	68.53	66.01
M	92		89.30	86.00	82.84	79.79	76.87	74.05	71.35	68.75
P	93		92.78	89.38	86.12	82.97	79.95	77.04	74.25	71.55
	94		96.35	92.83	89.46	86.21	83.10	80.09	77.20	74.42
	95		100	96.37	92.89	89.54	86.32	83.22	80.24	77.37

PSYCHROMETRIC INCUBATION TABLE

4,000 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
	80	65.80	53.42	51.24	49.15	47.15	45.23	43.38	41.61	39.91
W	81	68.87	56.04	53.78	51.62	49.53	47.54	45.62	43.79	42.02
E	82	72.02	58.73	56.39	54.14	51.98	49.91	47.92	46.02	44.19
T	83	75.24	61.48	59.05	56.72	54.48	52.34	50.28	48.30	46.40
	84	78.53	64.29	61.78	59.37	57.05	54.83	52.69	50.64	48.67
B	85	81.90	67.17	64.57	62.07	59.67	57.37	55.15	53.03	50.98
U	86	85.36	70.12	67.42	64.84	62.35	59.97	57.68	55.48	53.36
L	87	88.89	73.14	70.35	67.68	65.10	62.64	60.26	57.98	55.79
B	88	92.51	76.23	73.34	70.58	67.92	65.36	62.90	60.55	58.27
	89	96.21	79.39	76.41	73.55	70.80	68.16	65.61	63.17	60.82
T	90	100	82.62	79.54	76.59	73.74	71.01	68.38	65.86	63.43
E	91		85.94	82.76	79.70	76.76	73.94	71.22	68.61	66.10
M	92		89.33	86.04	82.89	79.85	76.93	74.12	71.43	68.83
P	93		92.80	89.41	86.15	83.02	80.00	77.10	74.31	71.63
	94		96.36	92.85	89.49	86.25	83.14	80.14	77.26	74.49
	95		100	96.38	92.91	89.57	86.36	83.26	80.29	77.42

PSYCHROMETRIC INCUBATION TABLE

4,500 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
	80	65.92	53.58	51.40	49.32	47.31	45.40	43.55	41.79	40.09
W	81	68.98	56.19	53.93	51.77	49.69	47.70	45.79	43.96	42.19
E	82	72.12	58.87	56.53	54.29	52.13	50.07	48.08	46.18	44.35
T	83	75.32	61.60	59.18	56.86	54.62	52.48	50.42	48.45	46.55
	84	78.61	64.41	61.90	59.49	57.18	54.96	52.83	50.78	48.81
B	85	81.96	67.27	64.67	62.18	59.79	57.49	55.28	53.16	51.12
U	86	85.41	70.21	67.52	64.95	62.47	60.09	57.80	55.60	53.49
L	87	88.93	73.22	70.44	67.77	65.21	62.75	60.38	58.10	55.91
B	88	92.53	76.30	73.42	70.66	68.01	65.46	63.01	60.66	58.39
	89	96.22	79.45	76.48	73.63	70.88	68.25	65.71	63.27	60.93
T	90	100	82.67	79.60	76.65	73.82	71.09	68.47	65.95	63.53
E	91		85.98	82.81	79.76	76.83	74.01	71.30	68.70	66.19
M	92		89.36	86.08	82.94	79.91	77.00	74.19	71.50	68.91
P	93		92.82	89.44	86.19	83.06	80.06	77.16	74.38	71.70
	94		96.37	92.87	89.52	86.29	83.18	80.19	77.32	74.55
	95		100	96.39	92.93	89.60	86.39	83.31	80.34	77.48

PSYCHROMETRIC INCUBATION TABLE

5,000 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
	80	66.04	53.73	51.56	49.48	47.48	45.56	43.73	41.96	40.27
W	81	69.09	56.33	54.08	51.92	49.85	47.86	45.95	44.12	42.36
E	82	72.21	59.00	56.66	54.43	52.28	50.22	48.24	46.34	44.51
T	83	75.40	61.72	59.30	56.99	54.76	52.62	50.57	48.60	46.71
	84	78.68	64.52	62.01	59.61	57.31	55.09	52.96	50.92	48.96
B	85	82.02	67.37	64.78	62.30	59.91	57.62	55.41	53.29	51.26
U	86	85.45	70.30	67.62	65.05	62.58	60.20	57.92	55.73	53.62
L	87	88.96	73.30	70.53	67.87	65.31	62.85	60.49	58.22	56.03
B	88	92.55	76.37	73.50	70.75	68.10	65.56	63.11	60.76	58.50
	89	96.24	79.51	76.55	73.70	70.96	68.33	65.80	63.37	61.03
T	90	100	82.72	79.66	76.72	73.89	71.17	68.56	66.04	63.62
E	91		86.02	82.86	79.82	76.89	74.08	71.38	68.78	66.28
M	92		89.39	86.12	82.98	79.96	77.06	74.26	71.58	68.99
P	93		92.84	89.47	86.23	83.11	80.11	77.22	74.45	71.77
	94		96.38	92.89	89.55	86.32	83.23	80.25	77.38	74.62
	95		100	96.40	92.95	89.62	86.43	83.35	80.39	77.54

PSYCHROMETRIC INCUBATION TABLE

5,500 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
	80	66.16	53.87	51.71	49.63	47.64	45.73	43.89	42.13	40.44
W	81	69.19	56.47	54.22	52.07	50.00	48.02	46.11	44.29	42.53
E	82	72.30	59.12	56.80	54.57	52.42	50.37	48.39	46.49	44.67
T	83	75.48	61.84	59.43	57.12	54.89	52.76	50.71	48.75	46.86
	84	78.75	64.62	62.13	59.73	57.43	55.22	53.10	51.06	49.10
B	85	82.08	67.47	64.89	62.41	60.02	57.74	55.54	53.43	51.39
U	86	85.50	70.39	67.72	65.15	62.68	60.32	58.04	55.85	53.75
L	87	89.00	73.38	70.61	67.96	65.41	62.96	60.60	58.33	56.15
B	88	92.58	76.44	73.58	70.83	68.19	65.65	63.21	60.87	58.61
	89	96.25	79.57	76.61	73.78	71.04	68.42	65.90	63.47	61.14
T	90	100	82.77	79.72	76.79	73.96	71.25	68.64	66.13	63.72
E	91		86.06	82.90	79.87	76.95	74.15	71.45	68.86	66.36
M	92		89.42	86.16	83.03	80.01	77.12	74.33	71.65	69.07
P	93		92.86	89.50	86.27	83.15	80.16	77.28	74.51	71.85
	94		96.39	92.91	89.58	86.36	83.27	80.30	77.44	74.68
	95		100	96.41	92.97	89.65	86.46	83.39	80.44	77.59

PSYCHROMETRIC INCUBATION TABLE

6,000 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
W E T B U L B T E M P E R A T U R E	80	66.27	54.02	51.86	49.79	47.80	45.89	44.06	42.30	40.61
	81	69.29	56.60	54.36	52.21	50.15	48.17	46.27	44.45	42.69
	82	72.39	59.25	56.93	54.70	52.56	50.51	48.54	46.65	44.83
	83	75.56	61.96	59.55	57.24	55.03	52.90	50.85	48.89	47.01
	84	78.81	64.73	62.24	59.85	57.55	55.35	53.23	51.20	49.24
	85	82.14	67.57	64.99	62.52	60.14	57.86	55.66	53.55	51.53
	86	85.54	70.48	67.81	65.25	62.79	60.43	58.15	55.97	53.87
	87	89.03	73.46	70.70	68.05	65.50	63.06	60.70	58.45	56.27
	88	92.60	76.50	73.65	70.91	68.28	65.75	63.31	60.97	58.72
	89	96.26	79.63	76.68	73.85	71.12	68.51	65.99	63.57	61.24
	90	100	82.82	79.77	76.85	74.03	71.33	68.72	66.22	63.81
	91		86.10	82.95	79.93	77.02	74.22	71.53	68.94	66.45
	92		89.45	86.20	83.07	80.07	77.18	74.40	71.72	69.15
	93		92.88	89.53	86.30	83.20	80.21	77.34	74.58	71.92
	94		96.40	92.93	89.60	86.40	83.32	80.35	77.49	74.74
95		100	96.42	92.99	89.68	86.50	83.43	80.49	77.65	

PSYCHROMETRIC INCUBATION TABLE

6,500 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
W E T B U L B T E M P E R A T U R E	80	66.38	54.17	52.01	49.94	47.96	46.06	44.23	42.47	40.79
	81	69.40	56.74	54.50	52.36	50.30	48.33	46.43	44.61	42.86
	82	72.48	59.38	57.06	54.84	52.70	50.66	48.69	46.80	44.98
	83	75.64	62.07	59.67	57.37	55.16	53.04	51.00	49.04	47.16
	84	78.88	64.84	62.35	59.97	57.68	55.48	53.37	51.34	49.38
	85	82.19	67.67	65.09	62.63	60.25	57.98	55.79	53.68	51.66
	86	85.59	70.57	67.90	65.35	62.90	60.54	58.27	56.09	54.00
	87	89.07	73.54	70.78	68.14	65.60	63.16	60.81	58.56	56.39
	88	92.62	76.57	73.73	71.00	68.37	65.84	63.41	61.08	58.83
	89	96.27	79.69	76.74	73.92	71.20	68.59	66.08	63.67	61.34
	90	100	82.87	79.83	76.91	74.10	71.41	68.81	66.31	63.91
	91		86.14	83.00	79.98	77.08	74.29	71.60	69.02	66.54
	92		89.48	86.23	83.12	80.12	77.24	74.46	71.80	69.23
	93		92.90	89.55	86.34	83.24	80.27	77.40	74.64	71.99
	94		96.41	92.95	89.63	86.43	83.36	80.40	77.55	74.81
95		100	96.43	93.01	89.70	86.53	83.47	80.54	77.70	

PSYCHROMETRIC INCUBATION TABLE

7,000 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
W E T B U L B T E M P E R A T U R E	80	66.50	54.31	52.16	50.10	48.12	46.22	44.39	42.64	40.96
	81	69.50	56.87	54.64	52.51	50.45	48.48	46.59	44.77	43.02
	82	72.57	59.50	57.19	54.98	52.84	50.80	48.84	46.95	45.14
	83	75.72	62.19	59.79	57.50	55.29	53.17	51.14	49.18	47.30
	84	78.95	64.94	62.47	60.09	57.80	55.61	53.50	51.47	49.52
	85	82.25	67.76	65.20	62.74	60.37	58.10	55.91	53.81	51.79
	86	85.63	70.65	68.00	65.45	63.00	60.65	58.38	56.21	54.12
	87	89.10	73.61	70.87	68.23	65.70	63.26	60.92	58.67	56.50
	88	92.65	76.64	73.80	71.08	68.45	65.94	63.51	61.18	58.94
	89	96.28	79.74	76.81	73.99	71.28	68.68	66.17	63.76	61.44
	90	100	82.92	79.89	76.98	74.17	71.48	68.89	66.40	64.00
	91		86.18	83.04	80.04	77.14	74.36	71.68	69.10	66.62
	92		89.51	86.27	83.17	80.17	77.30	74.53	71.87	69.30
	93		92.92	89.58	86.38	83.28	80.32	77.45	74.71	72.06
	94		96.42	92.97	89.66	86.47	83.40	80.45	77.61	74.87
95		100	96.44	93.02	89.73	86.57	83.51	80.58	77.76	

PSYCHROMETRIC INCUBATION TABLE

7,500 ft. Elevation

(Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
W E T B U L B T E M P E R A T U R E	80	66.60	54.45	52.30	50.24	48.27	46.37	44.55	42.80	41.12
	81	69.59	57.00	54.77	52.64	50.59	48.63	46.73	44.92	43.18
	82	72.66	59.62	57.31	55.10	52.98	50.94	48.98	47.10	45.29
	83	75.80	62.30	59.91	57.62	55.42	53.30	51.27	49.32	47.44
	84	79.01	65.04	62.57	60.20	57.92	55.73	53.62	51.60	49.65
	85	82.30	67.85	65.29	62.84	60.48	58.21	56.03	53.93	51.92
	86	85.68	70.73	68.09	65.55	63.10	60.75	58.49	56.33	54.24
	87	89.13	73.69	70.95	68.32	65.79	63.36	61.02	58.78	56.61
	88	92.67	76.70	73.87	71.15	68.54	66.02	63.60	61.28	59.04
	89	96.29	79.80	76.87	74.06	71.36	68.76	66.26	63.85	61.54
	90	100	82.96	79.94	77.04	74.24	71.55	68.97	66.48	64.09
	91		86.21	83.09	80.09	77.20	74.42	71.75	69.18	66.70
	92		89.53	86.31	83.21	80.22	77.36	74.59	71.94	69.38
	93		92.94	89.61	86.41	83.33	80.36	77.51	74.77	72.12
	94		96.43	92.99	89.68	86.50	83.44	80.49	77.66	74.93
95		100	96.45	93.04	89.76	86.60	83.55	80.63	77.81	

PSYCHROMETRIC INCUBATION TABLE
8,000 ft. Elevation
 (Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
	80	66.72	54.59	52.45	50.40	48.42	46.53	44.71	42.97	41.29
W	81	69.69	57.14	54.92	52.79	50.74	48.78	46.89	45.08	43.34
E	82	72.75	59.75	57.45	55.24	53.12	51.08	49.13	47.25	45.44
T	83	75.88	62.41	60.03	57.75	55.55	53.44	51.41	49.46	47.59
	84	79.08	65.15	62.68	60.32	58.04	55.86	53.75	51.74	49.79
B	85	82.36	67.95	65.40	62.95	60.59	58.33	56.15	54.06	52.05
U	86	85.72	70.82	68.18	65.65	63.21	60.86	58.61	56.45	54.36
L	87	89.17	73.76	71.03	68.41	65.89	63.46	61.13	58.89	56.73
B	88	92.69	76.77	73.95	71.24	68.62	66.12	63.70	61.39	59.15
	89	96.30	79.86	76.94	74.14	71.44	68.84	66.35	63.95	61.64
T	90	100	83.01	80.00	77.10	74.31	71.63	69.05	66.57	64.18
E	91		86.25	83.13	80.14	77.26	74.49	71.82	69.26	66.79
M	92		89.56	86.34	83.25	80.28	77.41	74.66	72.01	69.46
P	93		92.96	89.64	86.45	83.37	80.42	77.57	74.83	72.19
	94		96.44	93.00	89.71	86.53	83.48	80.54	77.72	74.99
	95		100	96.46	93.06	89.78	86.63	83.60	80.68	77.86

PSYCHROMETRIC INCUBATION TABLE
8,500 ft. Elevation
 (Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
	80	66.82	54.73	52.59	50.54	48.57	46.68	44.86	43.13	41.45
W	81	69.79	57.26	55.05	52.92	50.88	48.92	47.04	45.23	43.49
E	82	72.84	59.86	57.57	55.37	53.25	51.22	49.27	47.39	45.58
T	83	75.95	62.52	60.14	57.87	55.67	53.57	51.54	49.60	47.73
	84	79.15	65.25	62.79	60.43	58.16	55.98	53.88	51.87	49.92
B	85	82.41	68.04	65.49	63.05	60.70	58.44	56.27	54.18	52.17
U	86	85.76	70.90	68.27	65.74	63.31	60.97	58.72	56.56	54.48
L	87	89.20	73.83	71.11	68.50	65.98	63.56	61.23	58.99	56.84
B	88	92.71	76.83	74.02	71.31	68.71	66.21	63.80	61.49	59.25
	89	96.31	79.91	77.00	74.21	71.51	68.92	66.43	64.04	61.73
T	90	100	83.06	80.05	77.16	74.38	71.70	69.13	66.65	64.27
E	91		86.29	83.18	80.19	77.32	74.56	71.89	69.34	66.87
M	92		89.59	86.38	83.30	80.33	77.47	74.72	72.08	69.53
P	93		92.98	89.67	86.48	83.41	80.47	77.62	74.89	72.26
	94		96.45	93.02	89.74	86.57	83.52	80.59	77.77	75.05
	95		100	96.47	93.08	89.81	86.66	83.64	80.72	77.91

PSYCHROMETRIC INCUBATION TABLE
9,000 ft. Elevation
 (Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
W E T B U L B T E M P	80	66.92	54.86	52.72	50.68	48.71	46.83	45.01	43.28	41.60
	81	69.88	57.38	55.17	53.05	51.01	49.06	47.18	45.37	43.64
	82	72.92	59.97	57.68	55.49	53.37	51.35	49.40	47.53	45.72
	83	76.02	62.62	60.25	57.98	55.79	53.69	51.67	49.73	47.86
	84	79.21	65.34	62.89	60.53	58.27	56.09	54.00	51.99	50.05
	85	82.46	68.13	65.58	63.15	60.80	58.55	56.38	54.30	52.29
	86	85.80	70.98	68.35	65.83	63.40	61.07	58.82	56.67	54.59
	87	89.23	73.90	71.18	68.58	66.06	63.65	61.32	59.09	56.94
	88	92.73	76.89	74.08	71.38	68.79	66.29	63.89	61.58	59.35
	89	96.32	79.96	77.06	74.27	71.58	69.00	66.51	64.13	61.82
	90	100	83.10	80.10	77.22	74.44	71.77	69.20	66.73	64.35
	91		86.32	83.22	80.24	77.37	74.62	71.96	69.41	66.94
	92		89.62	86.41	83.34	80.37	77.52	74.78	72.14	69.60
	93		93.00	89.69	86.51	83.45	80.51	77.67	74.95	72.32
	94		96.46	93.04	89.76	86.60	83.56	80.63	77.82	75.10
95		100	96.48	93.09	89.83	86.69	83.67	80.76	77.96	

PSYCHROMETRIC INCUBATION TABLE
9,500 ft. Elevation
 (Percent Relative Humidity vs. Wet/Dry Bulb Temperatures)

		DRY BULB TEMPERATURE								
Degrees F		90	95	96	97	98	99	100	101	102
W E T B U L B T E M P	80	67.03	54.99	52.86	50.82	48.86	46.98	45.17	43.43	41.76
	81	69.97	57.51	55.30	53.19	51.15	49.20	47.32	45.52	43.79
	82	73.00	60.09	57.80	55.61	53.50	51.48	49.53	47.67	45.87
	83	76.09	62.73	60.36	58.09	55.91	53.81	51.80	49.86	47.99
	84	79.27	65.44	62.99	60.64	59.38	56.21	54.12	52.11	50.18
	85	82.51	68.21	65.68	63.25	60.90	58.66	56.49	54.41	52.41
	86	85.85	71.06	68.44	65.92	63.50	61.17	58.93	56.78	54.70
	87	89.26	73.97	71.26	68.66	66.15	63.74	61.42	59.20	57.05
	88	92.75	76.96	74.15	71.46	68.87	66.38	63.98	61.67	59.45
	89	96.34	80.02	77.12	74.33	71.65	69.08	66.60	64.21	61.92
	90	100	83.15	80.15	77.27	74.50	71.84	69.28	66.81	64.44
	91		86.36	83.26	80.29	77.43	74.68	72.03	69.48	67.02
	92		89.64	86.45	83.38	80.42	77.58	74.84	72.21	69.67
	93		93.01	89.71	86.55	83.49	80.56	77.73	75.01	72.38
	94		96.47	93.06	89.78	86.63	83.60	80.68	77.87	75.16
95		100	96.49	93.11	89.85	86.73	83.71	80.81	78.01	

SPECIES	APPROXIMATE INCUBATION PERIOD	SPECIES	APPROXIMATE INCUBATION PERIOD
XXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
BARBARY PARTRIDGE	25 Days	HUNGARIAN PARTRIDGE	25 Days
BLUE EARED PHEASANT	26 to 28 Days	IMPEYAN MONAL	28 Days
BOBWHITE & SCALE QUAIL	23 to 24 Days	KALIJ PHEASANTS	24 to 25 Days
BROWN EARED PHEASANT	26 to 27 Days	KOKLASS PHEASANT	26 to 27 Days
CHEER PHEASANT	26 Days	LADY AMHERST PHEASANT	22 to 23 Days
CHICKENS	21 Days	MIKADO PHEASANT	27 to 28 Days
CHUKAR PARTRIDGE	22 to 24 Days	PEACOCK PHEASANTS	18 TO 21 Days
COPPER PHEASANTS	25 Days	PEAFOWL	27 to 28 Days
COTURNIX QUAIL	17 Days	RED JUNGLEFOWL	19 to 21 Days
DUCKS (most)	28 to 30 Days	RED-LEGGED PARTRIDGE	23 to 24 Days
EDWARD'S PHEASANT	22 Days	REEVE'S PHEASANT	24 to 25 Days
ELLIOT'S PHEASANT	25 Days	RINGNECK PHEASANTS	23 to 24 Days
FRANCOLIN PARTRIDGES	18 to 19 Days	ROCK PARTRIDGE	24 to 26 Days
GAMBEL'S & CALIFORNIA QUAIL	21 to 22 Days	SILVER PHEASANT	25 to 26 Days
GEESE	29 to 31 Days	SNOWCOCK PARTRIDGES	27 to 28 Days
GOLDEN PHEASANT	22 to 23 Days	SWINHOE'S PHEASANT	25 Days
GREY JUNGLEFOWL	20 to 21 Days	TRAGOPAN PHEASANTS	28 Days
GUINEA FOWL	26 to 28 Days	TURKEY	28 Days
HUMES BAR-TAILED PHEASANT	27 to 28 Days	WHITE EARED PHEASANT	24 to 25 Days