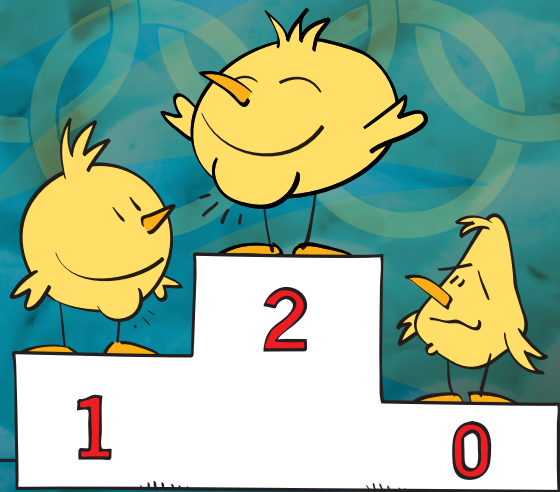


Chick Champs

Chickens in Olympic shape

A precise brooding program* to minimize mortality and maximize chick weight up to 7 days old. It involves providing chicks with an optimal environment to promote their well-being and reduce disease pressure in the barn.



The 24 hour ROUTINE

THE CHICK CHAMPS ROUTINE

COMFORT
ZONE
OPTIMIZED

CROP
WELL
FILLED

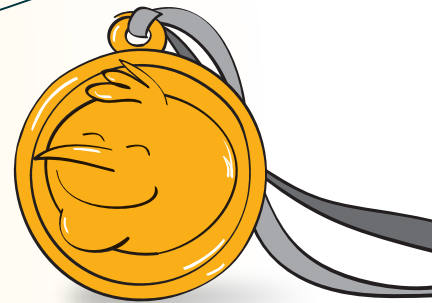
BODY
TEMPERATURE
ADEQUATE

IMPROVED
MONITORING AND
STIMULATION

Try this 24 hour routine
It's easy!

With better management during brooding, less antibiotics will be needed. The Chick Champs brooding program thus helps counter antibiotic resistance. This applied research project will help position Canada's poultry industry at the leading edge of innovation.

* Developed as part of a large-scale production trial of chickens without antibiotics by the University of Montreal's Faculty of Veterinary Medicine Poultry Research Chair.



EVERYBODY WINS!

For chickens that haven't received antibiotics at the hatchery or were raised without antibiotics, as well as to improve the raising of conventional chickens.



HEY! THIS IS PERFECT.
WHEN DO WE START?

Brooding period - critical for chickens!

Before the chicks arrive PREPARE THEIR ENVIRONMENT!

BARN



- 1 Heat the barn and litter at least 2 or 3 days before the chicks arrive to reach a minimum litter temperature of 90 – 93 °F (32 – 34 °C), measured using a thermometer or an infrared camera. Depending on your heating system, you will define the comfort zones where your chicks will naturally position themselves. In winter, preheat the 1st story floor before spreading litter.



- 2 Ensure that all equipment is in place.



- 3 Place temperature probes at the birds' level, preferably in the center of the brooding area.

WATER

- 1 Flush the water lines and adjust the pressure so that a droplet is visible at the end of each nipple and it is at the chick's eye level. The water must not be cold when the chicks arrive.



Temperature cool but not cold!



- 2 Disinfecting water lines between flocks is essential. This should be done according to the manufacturer's and your technical advisor's instructions.



- 3 Check the free chlorine level (≥ 2 ppm) and the ORP (>650 mV). Maintain a pH of 6.

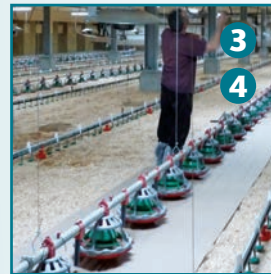
FEED



- 1 Spread chick paper under the feeders and add feed boxes for optimum access.
→ Calculate 65g of feed per chick or the equivalent of 2 days consumption on your chart.



- 2 If you only use cardboard boxes, place them in the brooding area (1 per 75 chicks) between the water and feed lines and near the heating.



- 3 Ensure that the feed lines are on the ground and the feeders are filled to the rim.
- 4 Check the feed temperature (93 °F, 34 °C).

LITTER

- 1 Using an infrared thermometer, aim for 90 – 93 °F (32 – 34 °C).
- 2 Maintain the relative humidity at brooding under:
 - 55 % on wood chips.
 - 50 % on straw.



If the litter is humid upon delivery, ventilate more during preheating.

Day 1

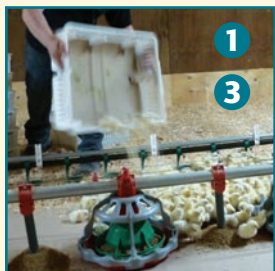
The Chick Champs routine IN 24 HOURS



**The 24h hour
ROUTINE**



HOUR 0



1 Do not lower the barn temperature when unloading the chicks. They should be comfortable, not you!

2 Dim the lights when unloading to reduce stress.

3 Place the chicks on the feed upon arrival. Recheck the height of each nipple so that the water droplet is at the chicks' eye level during the first 24 hours.



4 Before leaving the barn, ensure that the lighting at the feeders, at chick level, reaches between 60 and 100 lux for 24 hours of continuous light.



→ **Litter** (90 – 93 °F, 32 – 34 °C)

→ **Feed** (93 °F, 34 °C)

→ **Minimal ventilation**



HOURS 4 TO 6

1 Walk among the chicks again to re-stimulate them.

2 Check **foot temperature** (against your wrist or neck). If the feet are cold, it's a sign of cold litter. Adjust the barn temperature if necessary.

3 Take the cloacal temperature of 30 chicks at random to check if they are comfortable. Aim for 104 – 105.4 °F (40 – 40.7 °C).



HOUR 2



1 When you return to the barn, observe the chicks' distribution.

A *Even distribution indicates that the chicks are comfortable.*

B *Huddling is characteristic of cold chicks (photo below)*

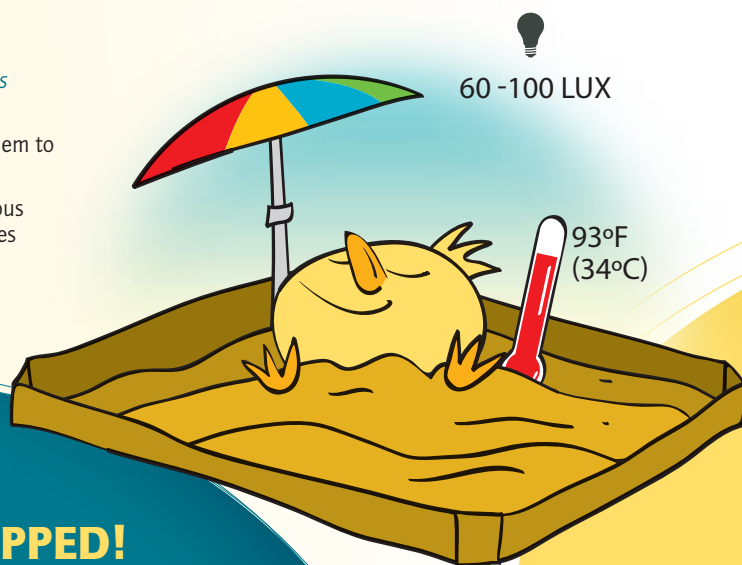
2 Walk among the chicks to stimulate them to move to the feeders and drinkers.

3 Measure the barn temperature at various points to ensure there are comfort zones using an infrared thermometer.



LATE EVENING

1 Walk among the chicks again to keep stimulating them.



My chicks ARE WELL EQUIPPED!

Checklist:

- ✓ **Humidity probes**
- ✓ **Infrared thermometer**
- ✓ **Electronic thermometer** (cloacal temperature)



Day 2

CHECK THE PERFORMANCE of your Chick Champs routine!

Crop fill and cloacal temperature indicate the well-being of your chicks.



24 HOURS AFTER ARRIVAL

Go back to the barn

Walk among the chicks and pick some up at random for evaluation. You should check 25 chicks walking one way and 25 coming back. (see the data capture chart on the next page)

For each chick, measure

1- CROP FILL

to check whether the chicks have eaten.



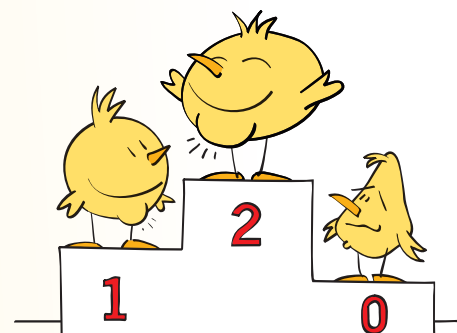
Completely empty
(There is nothing or only a few grains)



A bit of feed,
but not more than the size of a small pellet



The crop is full and it is puffed up



After 24 hours, more than **95% of the chicks** should have feed in their crop (1+2 >95%)

2- CLOACAL TEMPERATURE

to ensure that the chick is comfortable (104 – 105.4 °F, 40 – 40.7 °C).



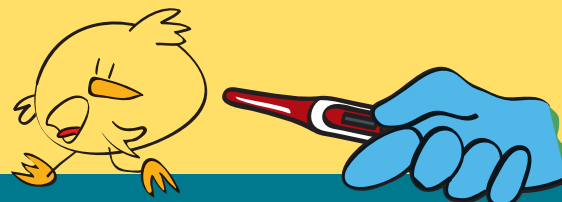
Place the thermometer against the chick's cloaca.



The temperature is taken when the green light comes on.

Adjust the heating in areas where the chicks' cloacal temperature is outside the normal range of 104 – 105.4 °F (40 – 40.7 °C).

HEY! WHAT TECHNIQUE IS THAT?



Measuring the chicks' welfare 24 hours after their arrival

TOO COLD

IDEAL!

TOO HOT

Conversion table	
°F → °C	
91 →	32.8
92 →	33.3
93 →	33.9
101 →	38.3
102 →	38.9
103 →	39.4
104 →	40.0
105 →	40.6
106 →	41.1

N°	CROP			CLOACAL TEMP (°F/°C)			N°	CROP			CLOACAL TEMP (°F/°C)		
	0	1	2	<104 °F < 40 °C	104 to 105.4 °F 40 to 40.7 °C	105.5 to 106 °F 40.8 to 41.1 °C		0	1	2	<104 °F < 40 °C	104 to 105.4 °F 40 to 40.7 °C	105.5 to 106 °F 40.8 to 41.1 °C
1							25						
2							24						
3							23						
4							22						
5							21						
6							20						
7							19						
8							18						
9							17						
10							16						
11							15						
12							14						
13							13						
14							12						
15							11						
16							10						
17							9						
18							8						
19							7						
20							6						
21							5						
22							4						
23							3						
24							2						
25							1						
TOTAL CHICKS							TOTAL CHICKS						

Don't let down **YOUR GUARD!**

The first 7 days | Daily:

- Flush the water lines to provide fresh water.
- Check the water pH (≤ 6), the ORP and the water free chlorine level.
- Ventilate excess humidity (if $>60\%$) to ensure litter quality and comfort.
- Cull sick chicks and runts.
- Record mortality (dead and culled) and dispose of dead chicks.
- Introduce periods of darkness after the first 24 hours based on your technical advisor's recommendations.
- Lower light intensity on the 3rd day.

At 7 days of age

Weigh 100 chicks from different parts of the barn and compare the average to breeder recommendations



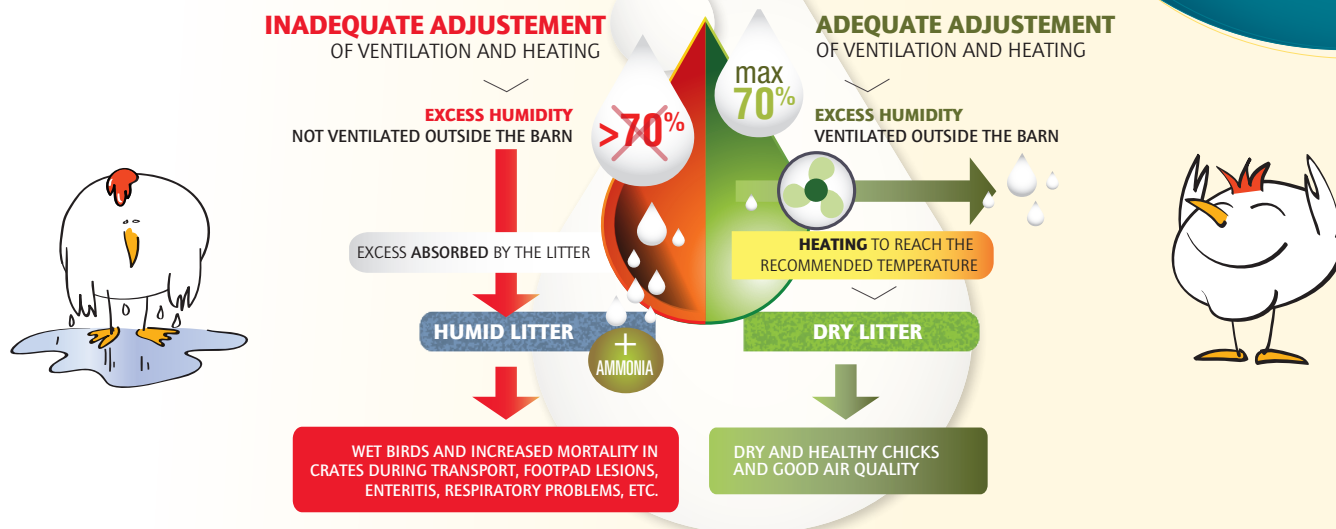
Litter quality is a direct reflection of ventilation. Dry chickens perform better while growing.

It is important to optimize conditions in the barn while chickens are growing:

- 1 for the birds' health and welfare
 - 2 for improved performance and carcass quality
- Measure relative humidity in the barn daily.
 - Ensure that ventilation is sufficient to keep humidity under 70%, and that heating systems maintain the temperature as recommended for the age of the birds.
 - Adjust the height of drinkers to the birds' size and repair leaking nipples.

Each barn and each flock is unique and will require adjustments. Consult your vet or technical advisor if necessary

Humidity rate in the barn



An initiative made possible by collaboration by the Éleveurs de volailles du Québec, the University of Montreal's Poultry Research Chair, the Quebec association of feed mills, Quebec hatcheries, poultry catchers and transporters, and the Association of poultry processors in Québec.

It should be noted that the governments of Canada and Quebec signed the bilateral Growing Forward Agreement 2 (for which they granted 293 million dollars funding over a five-year period, from 2013 to 2018). The purpose of this important agreement is to support strategic initiatives in innovation, competitiveness and market development, to benefit both the agricultural industry and the food processing industry.

Translated in English and distributed by Chicken Farmers of Canada.



CHAIRE EN RECHERCHE AVICOLE
Faculté de médecine vétérinaire



Cultivons l'avenir 2
Une initiative fédérale-provinciale-territoriale

Canada

Québec