Hatchery Talks

Incubation in hot, humid climates

Before we start …

- Polls
- Questions in chat
- Webinar-replay + hand-out

Poll

Agree or disagree: Incubation in hot, humid climates poses some challenges in achieving optimal results

Contents

Hatchery Talks

Introduction

What do we need to get good hatch results

1. Good quality hatching eggs
2. Optimal incubation conditions
3. Good management (knowledge & experience)

Poll

True or false: Hatching eggs produced under warm conditions are similar to hatching eggs produced under cold conditions

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Breeder farm

Breeder farm

Cooling down

For optimal embryo development eggs have to cool down from body temperature hen (41 ◦C/ 105.8 ◦F) to **internal** temperature of **22-25 °C / 71.6 – 77 °F** during a period of **6 hours**

Too slow cooling down: too far advanced embryos

Fertile

Fertile, too far developed

Breeder farm

Cooling down rate depends on multiple factors

- Nest type
- External temperature (temperature + air flow!)
- Frequency of egg collection
- Type of egg tray



Breeder farm

Egg quality upon receipt

Fertility and embryo quality

Breeder farm

Egg quality upon receipt

Fertility and embryo quality

Recording Form 8C: Fertility and embryo quality upon receipt

Category	Number of eggs within …	
	Sample of 10 eggs	Additional 20 eggs
Infertile		
Fertile, diameter approx. 3.5– 5 mm; doughnut-like opaque ring with translucent centre		
Fertile, embryo too small (≤ 3.5 mm); white dots in centre of opaque ring		
Fertile, embryo too big (> 5 mm)		
Fertile, abnormal embryo		

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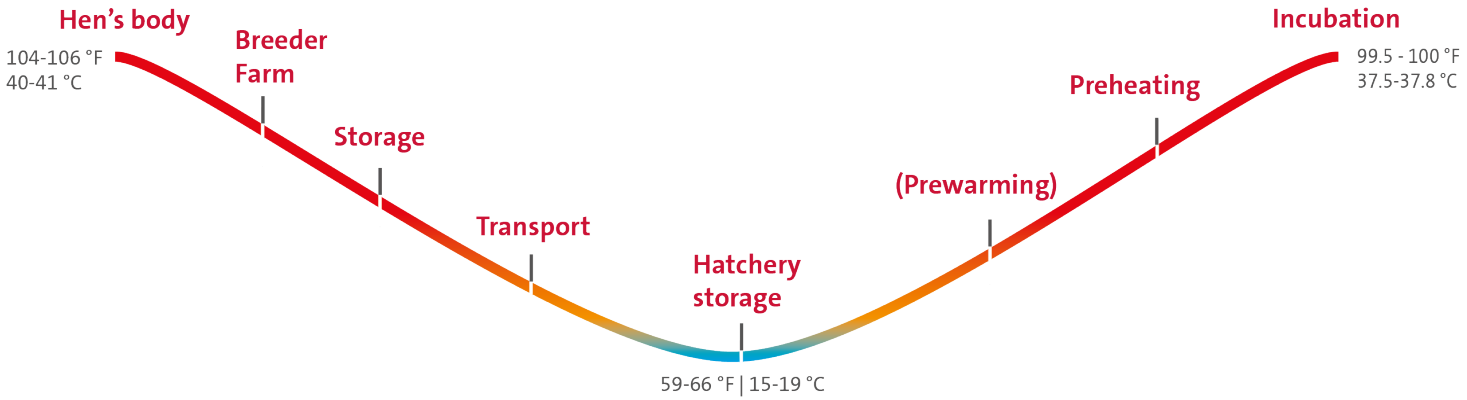
Storage

Egg storage not only in the hatchery

- In the nest
- At the breeder farm
- During transport
- In the hatchery

Control of environment

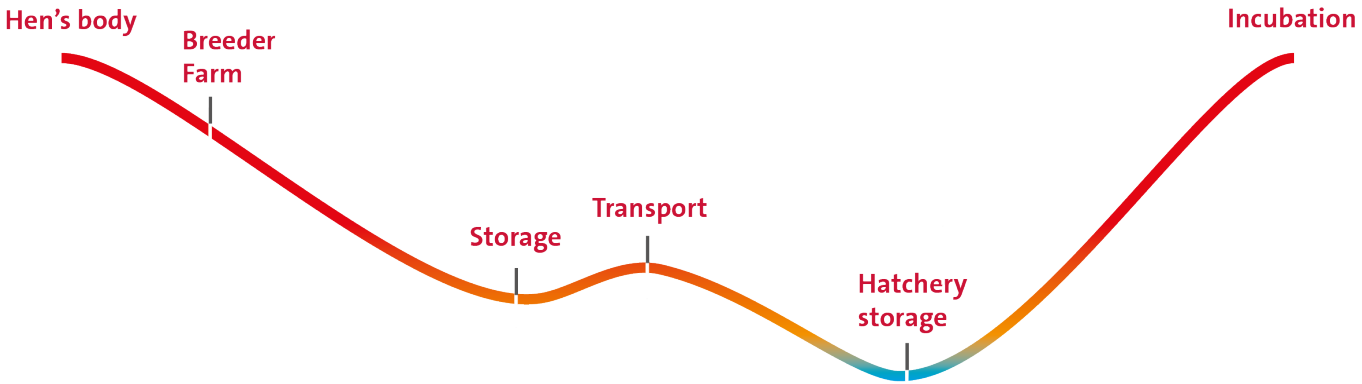
Eggs need to cool down slow and steady until gradual warming up towards incubation temperature is reached



Courtesy of Cobb

Control of environment

Fluctuations will harm hatch results



Courtesy of Cobb

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Heat treatment

Heat treatment during storage

When

- Eggs that will be stored for a long time
- Eggs that have been cooled down too fast

Why

- To minimise impact of long storage
- To get all embryo's to optimal storage stage

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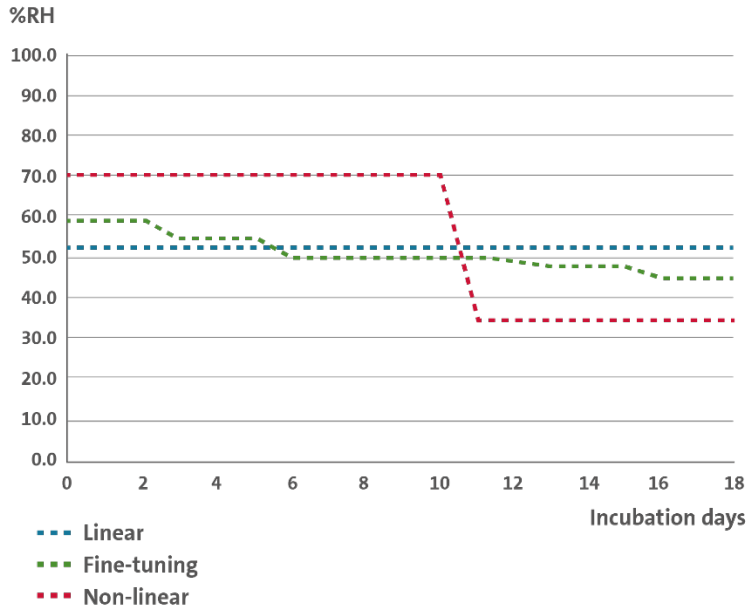
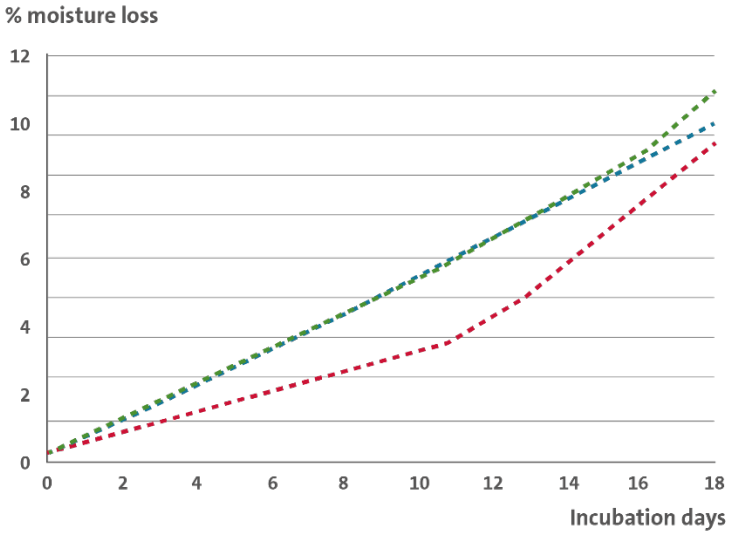
Moisture loss

Moisture loss

Ventilating = Dehumidification

RH% profiles → weight loss pattern



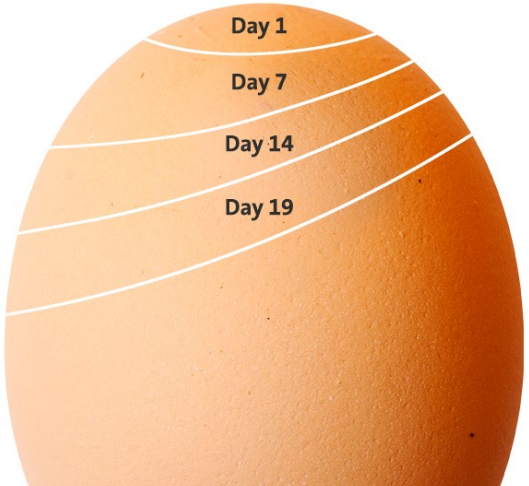


Moisture loss

Increase ventilation

Ventilating means removal of metabolic water (H_2O) from the eggs

Relative humidity set points help determine the size of the air cell at transfer



Moisture loss

Air Handling Unit

Climatizing inlet air > De-humidification!

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Chick quality

Poll

True or false: Chick quality should be the same from hatching to housing

From pulling to delivery

- Chick holding
- Chick transport
- Unloading and brooding at the farm

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Summary

Summary

Optimal hatching in hot, humid climates

Most important parameters to keep in check

- Breeder farm conditions
- Storage and transport
- DOC quality
- High relative humidity in setter

Summary

Thanks for watching!

- Webinar-replay + hand-out
- academy@pasreform.com
- Knowledge section at our website

See you at our next webinar!

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