

# Healthy Livestock project

Effect of peri-hatching environment (=hatching system) on:

Study 1. Broiler chicken health, welfare and performance

Study 2. Resilience against pathogen (vaccine response)



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# Hatching systems

**Hatchery-hatched** system, no provision of feed and water



- No light during incubation
- Processing & transportation
- No feed/water until arrival at farm (30-72 hrs)

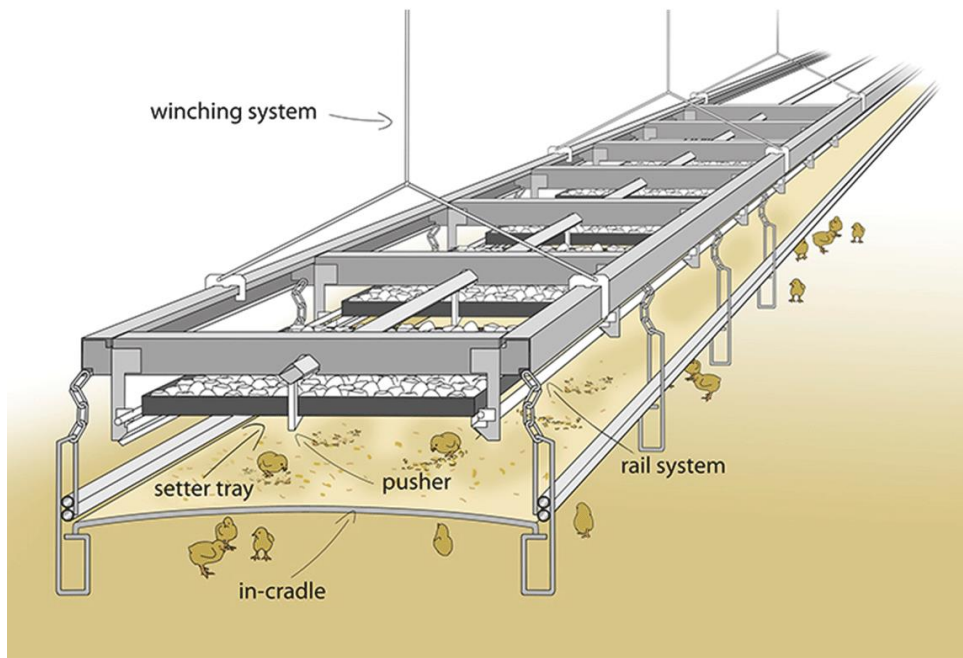
# Hatching systems

**Hatchery-fed** system- providing feed and water at hatchery



# Hatching systems

## On-farm hatching system – Hatching at broiler farm



# Results study 1 (semi-commercial conditions)

Chicks originating of young broiler breeder flock that were **hatchery-fed** or **on-farm hatched** showed:

- Higher body weight until d39 (+3.2%/+4.4%)
- Less food pad dermatitis (-10%/-30%)
- No difference in FCR
- No difference in mortality
- More wooden breast (WB) and white striping (WS)  
(+8% very hard WB; +13% severe lines WS)

# Results study 2 (experimental conditions)

Vaccine response after NCD at d0/14 and IB at d28

Chicks originating of young broiler breeder flock that were hatchery-fed or on-farm hatched showed:

- No effect on humoral immune response

(similar NCD titres at d18)

- No difference in resilience indicators

(similar expression trachea genes related to epithelia integrity/inflammation at d31; claudin, occludin, IL8, IL10, NF- $\kappa$ B, IFN $\gamma$ )