



# The "hole" story about injecting turkey eggs



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## The "Hole" Background

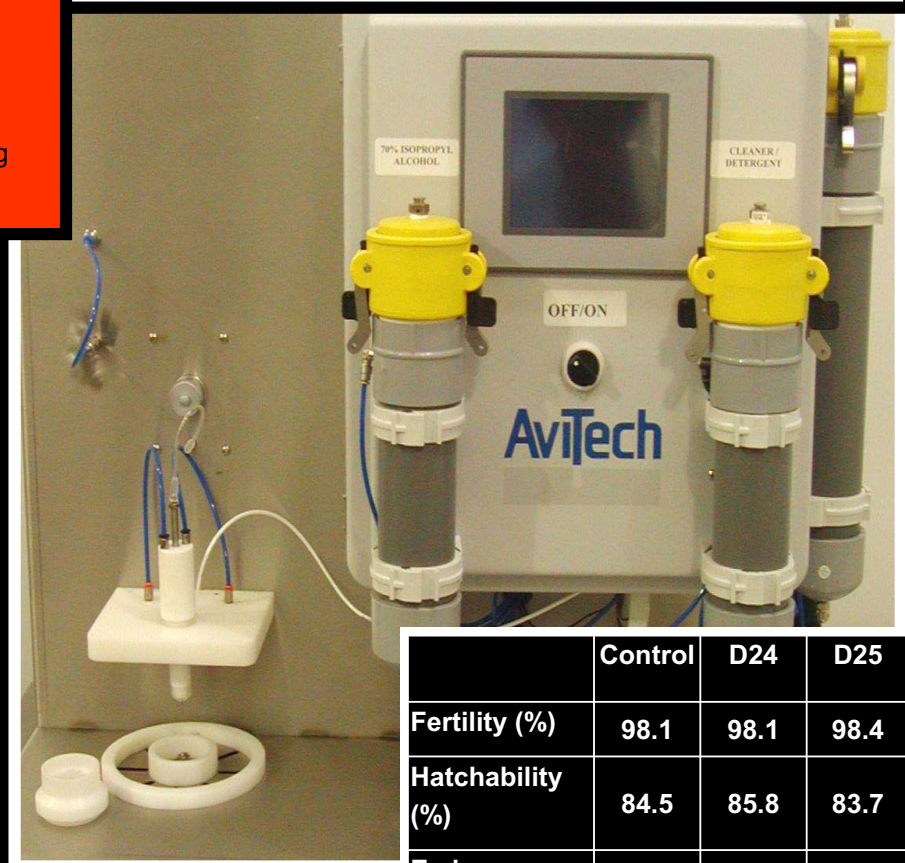
- *In ovo* injection: injecting substances such as vaccines or nutritional supplements into a hatching egg before hatching
- A small hole is created in the large end of the egg with a needle
- The hole allows more O<sub>2</sub> to enter & CO<sub>2</sub> to escape

## Goal of Research

- Determine if creating the hole improves hatchability
- Ensure that the hole does not delay the hatching process

## Experiment

- 1,185 Hybrid turkey hatching eggs were collected & divided into 3 groups:
  - Control = no hole (normal hatching egg)
  - D24 = hole created on d 24 of incubation
  - D25 = hole created on d 25 of incubation
- The needle depth=0.5 cm
- Hole Diameter= 1.3 mm
- From d 24 until hatching, a sample of eggs from each group was monitored for internal and external pipping
- On d 25 eggs were transferred to a hatcher
- At hatch poults were weighed, body length measured



	Control	D24	D25
Fertility (%)	98.1	98.1	98.4
Hatchability (%)	84.5	85.8	83.7
Embryo Mortality (%)	7.6	5.4	6.5
Poults Culled at Hatching (%)	6.8	6.6	7.9

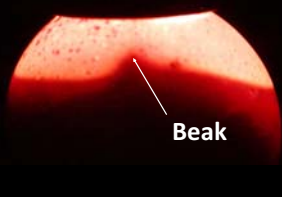


Figure 2. Internal pipping.



Figure 3. External pipping.

## Results

- Creating the hole did not increase or decrease hatchability
- The hole did not affect hatchability, embryo mortality or poult quality

## What Does This Mean?

- Benefits and effects of injecting different substances into the eggs can now be tested
- Research is being started to see if injecting Hy-D® (a vitamin D metabolite) will improve hatchability of broiler and turkey eggs

## Acknowledgements

