Results for the Chiren and fields with poultry

Paul Mak

Lively Research
for Health Angel Foundation

Goals

Exploratory research through pilot studies to investigate the possibilities and applications of the Chiren to improve poultry health and to decrease the use of antibiotics.

Ultra Short Bio: Paul Mak

- History in biontology, management, finances
- Freelance, full-time researcher of specific biophoton-related practices and devices for Lively Research

Activities

1. Neutralizing Salmonella Java bacteria
2. Neutralizing vaccination effects in humans
3. Neutralizing vaccination effects in broilers
4. Quality of hatching eggs and hatch results
5. Improving immune system in laying hens

Salmonella neutralization

Does not work, growing gel in petri dishes is sterilized

Neutralization of vaccination effects in humans

- Double-blinded pilot study designed to study the effects of Chiren-treated water on the negative impact vaccinations have on humans as measured through the Chiren
- Method of measurement through the Chiren proven in separate double-blinded pilot study for Master thesis by J.Muller et al.
- Measured through the Chiren, vaccinations have disturbing influences on the digestive tract, hormone system and nervous system

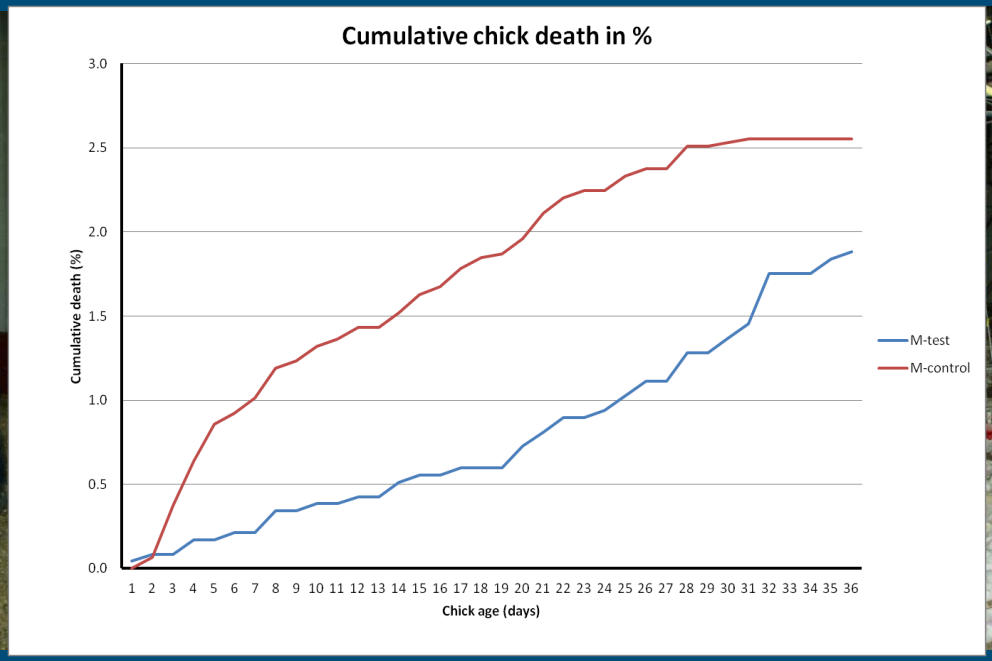
Neutralization of vaccination effects in humans

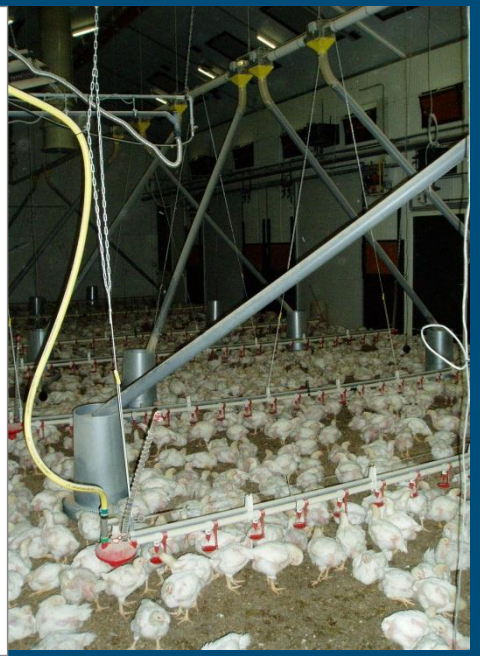
- Results t-test
  - Total group size = 22
  - Control = 7, test group = 15
  - $P < 0.01$
- Results Student's t-test for small data sets
  - Group size 22: $P < 0.01$
  - Group size 34: $P < 0.01$
- Observation: Drinking Chiren-treated water seems to solve negative aspects from vaccinations, this is confirmed through the positive aspects as shown in measurable effects on chickens

Neutralization of vaccination effects in broilers

- Water treated with Chiren, barn treated with field for test group
- No treatment for control group
- Both received several vaccinations during the pilot
- Mortality rate and pattern in treated chicks is lower and very different from untreated chicks
- Sudden increase in mortality of treated chicks around day 30 coincides with (untreated) feed changes

Neutralization of vaccination effects in broilers



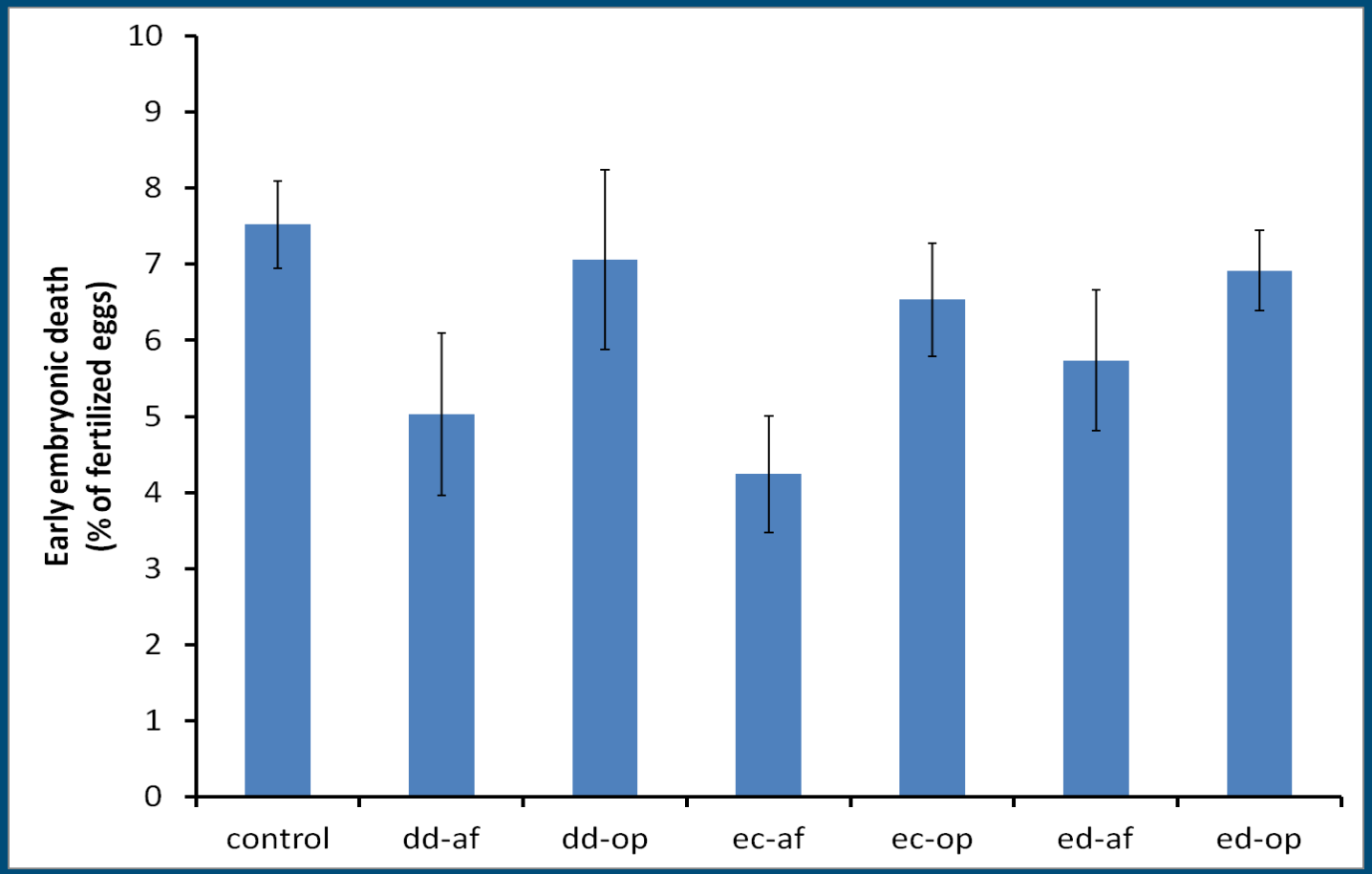


Observation: Lower and different pattern of chick mortality in treatment group vs control

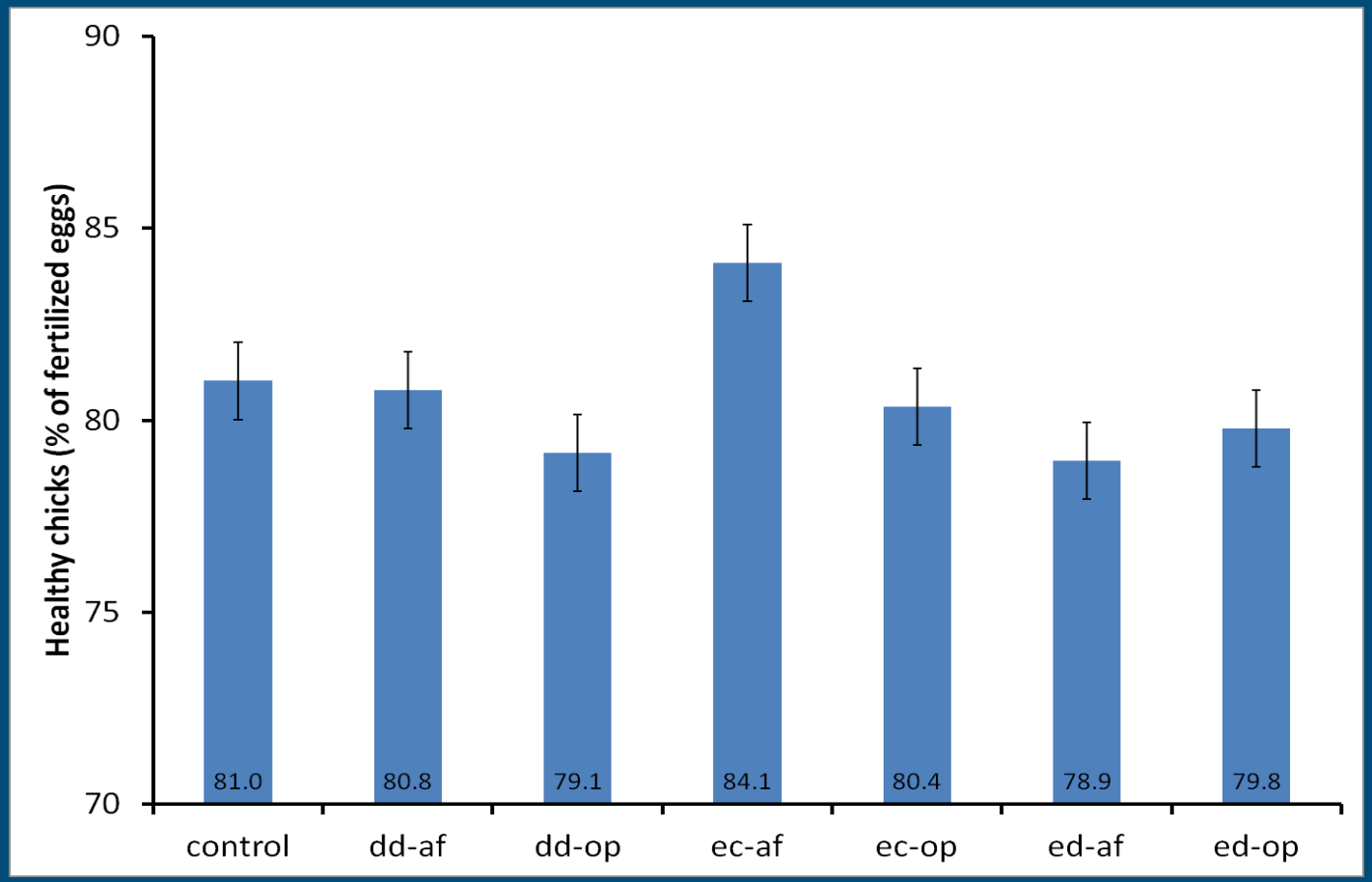
Eggs used for hatching chicks

- Eggs stored for 2 weeks at hatchery
- Storage in several different types of copper wire fields
- Eggs stored in some fields (ec-af) showed:
  - 3% less early embryonic death
  - 3% more healthy hatched chicks
- Observation: Egg stored in the right kind of field seem to show decreased embryonic mortality during incubation and hence better embryonic survival

Eggs used for hatching chicks:
% early embryonic death



Eggs used for hatching chicks:
% healthy chicks



Improving immune system of laying hens

- Young flock of organic laying hens
- Neutralization of 12th-week vaccination effects with:
  - Water treated with a Chiren
  - Field with information in barn
- Goal: support hens to deal with the vaccinations in the best way possible, with no mortality
- Objective observation by farmer
- No mortality shown after vaccinations with treatment so far!

Improving immune system of laying hens

Normal

- Vaccination stress: 2 days
- Water intake: stable
- Feed intake: less intake for at least half a day, catching up uncertain
- Swollen eyes: 60%-70%
- Sneezing/coughing: no
- Behavior after vacc: unrest, nervous chickens

With treatment

- Vaccination stress: 1 day
- Water intake: stable
- Feed intake: missing half day of intake caught up in day after vaccination
- Swollen eyes: 10%
- Sneezing/coughing: some
- Behavior after vacc: no unrest, chickens still flap wings and are playful

Improving immune system of laying hens

Normal

- Water intake: 550-600
- Feed intake: proportional to water intake
- Growth: 9-10 gram/day, normal growth
- Behavior: sluggish, unrest during vaccination, almost no flapping of wings
- Fiber intake: 50-56 bales
- Floor: dry

With treatment

- Water intake : 600-800
- Feed intake: lower proportional ratio to water
- Growth: 17-25 gram/day, exceeding normal growth
- Behavior: active, relaxed during vaccination, playful, continuous wing flapping
- Fiber intake: 24-26 bales
- Floor: dry

Improving immune system of laying hens

Normal

- Overall food usage: 6.3 kg/hen
- Overall growth: to norm

- Food intake in first 2 weeks: 224 grams/chick
- Weight after first 2 weeks: 119 grams/chick

With treatment

- Overall food usage: 5.7 kg/hen
- Overall growth: above norm

- Food intake in first 2 weeks: 147 grams/chick
- Weight after first 2 weeks: 115 grams

Conclusions

- We are on to something
- Some foundations are there already, but need to be expanded and confirmed, some foundations still need to be created
- With time, money and effort, everything can be tied together through expansion of pilot studies and thoroughly designed blinded research