

# Start your chicks off right: good starts help achieve a good finish

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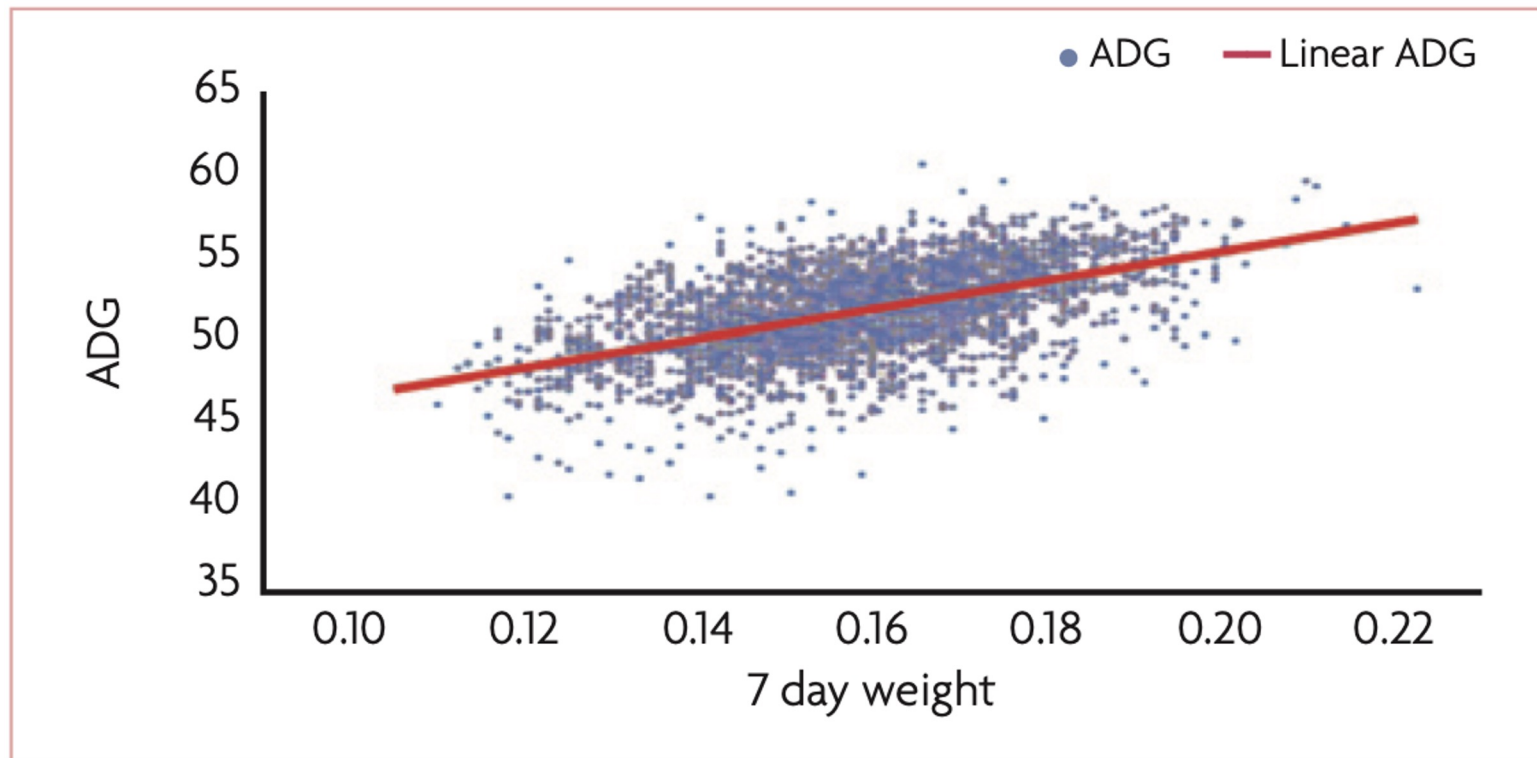


# Chick starts are critical for success

- General health and vitality
  - Performance
  - Immune status
- Muscle development
- Vaccine response
  - Especially coccidiosis
- Concepts are for all species and types of poultry.

# Performance

**Fig. 1. Every 1g gain above 160g at seven days is worth 6g average daily gain (ADG) at 37 days (Cobb Vantress).**



# Stress

- Animals that are stressed early perform poorly.
  - Heat stress is well documented in poultry
  - Stress and immune function well documented in poultry



# Muscle development

- Satellite cell formation
  - The ability for muscle to grow and heal is defined early

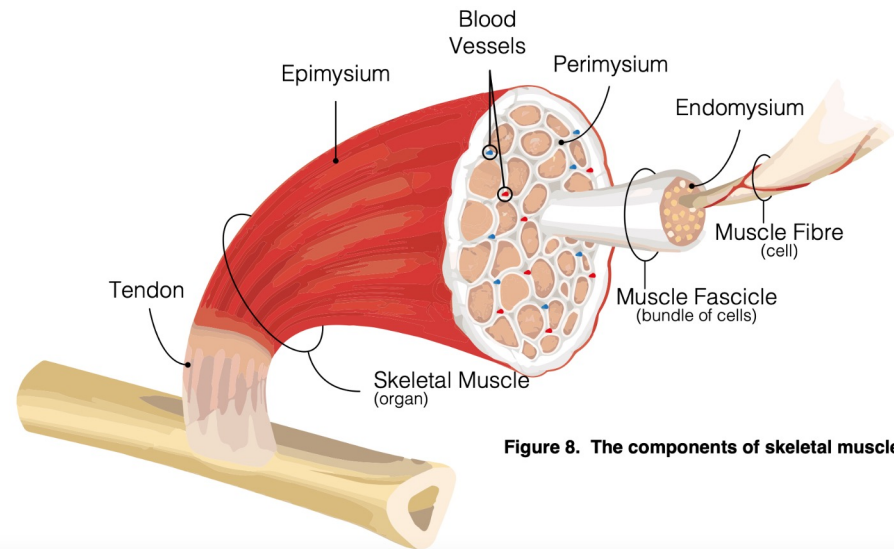


Figure 8. The components of skeletal muscle.

# Coccidiosis cycling

- 3 major species for broilers
  - *Eimeria acervulina*, *E. maxima*, *E. tenella*
- Life cycle is ~7 days
- Need 3 consecutive cycles to generate immunity
- Control re-infection by controlling litter moisture and bird behavior

# The start depends on other departments



What you do with those inputs is up to you!



# How to ensure FLAWLESS starts

- Feed
- Light
- Air
- Water
- Litter
- Environment
- Sanitation
- bioSecurity

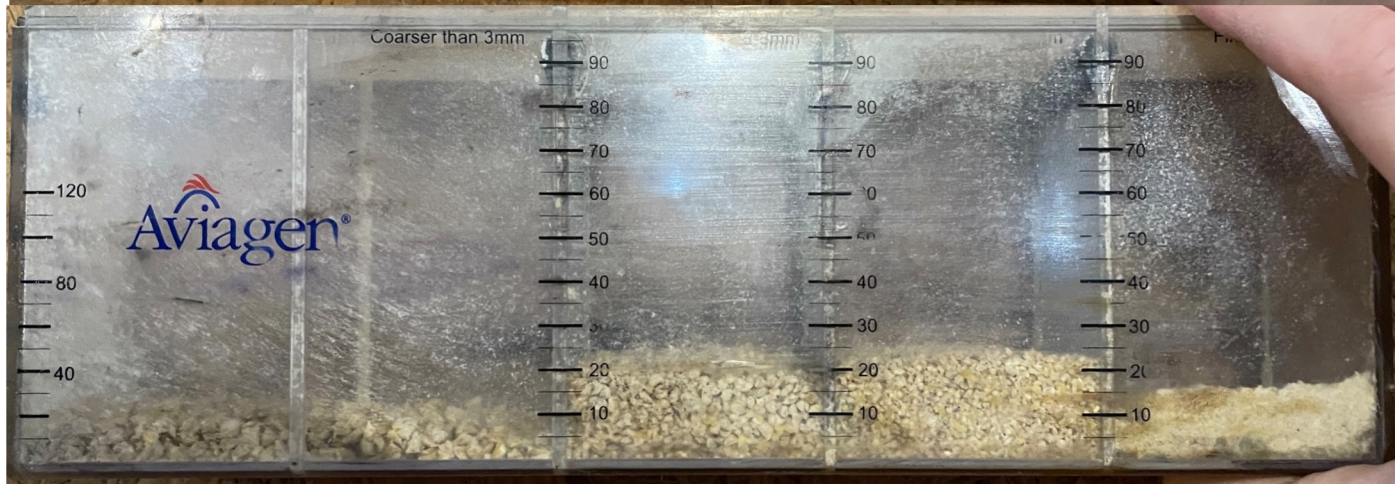


# Feed

- Nutrition
- Form
- Transport
- Presentation and availability







# Light

- Uniform and adequate
  - Dark spots and bright spots-bird distribution
- Not excessive
- On water lines
- Use as a tool for feed consumption

Figure 3: Effect of daylength on body weight at 48/49 days of age.

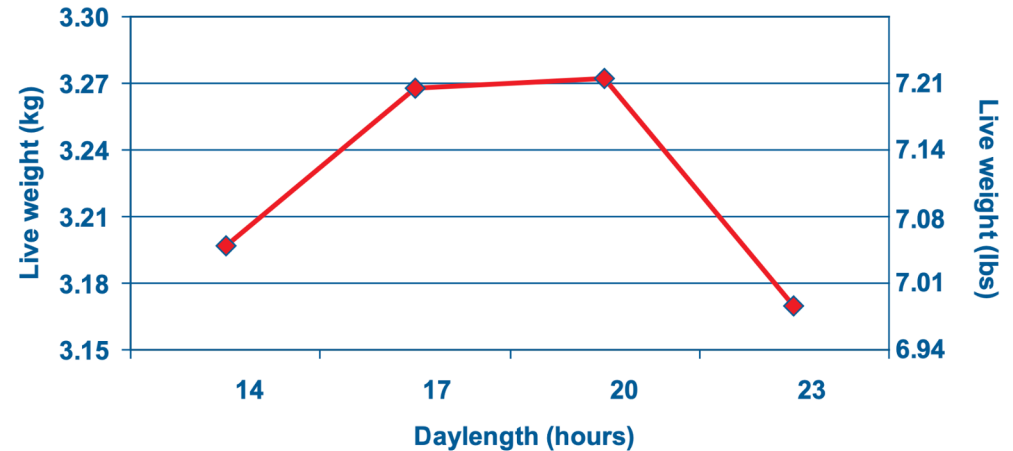
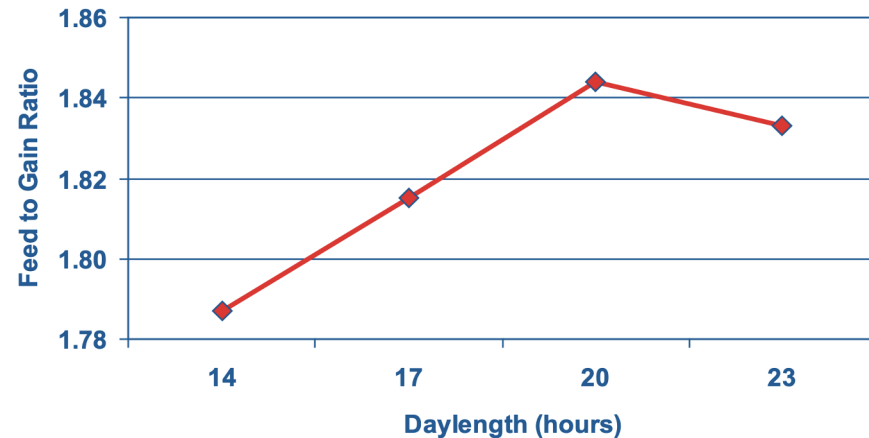


Figure 6: Effect of daylength on feed to gain ratio of broilers from 0 to 48/49 days of age.







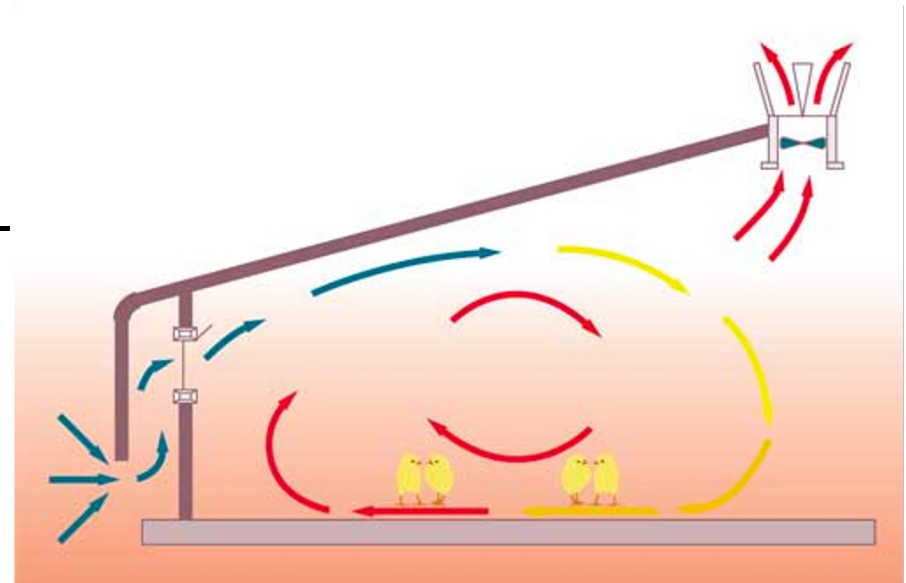
# Air quality

- Temperature
  - Start at 89F
- Humidity 50-70% RH
- Gasses
  - Ammonia- under 20ppm
    - people can smell between 5-53ppm
  - CO2- under 3000ppm
  - CO- 0ppm



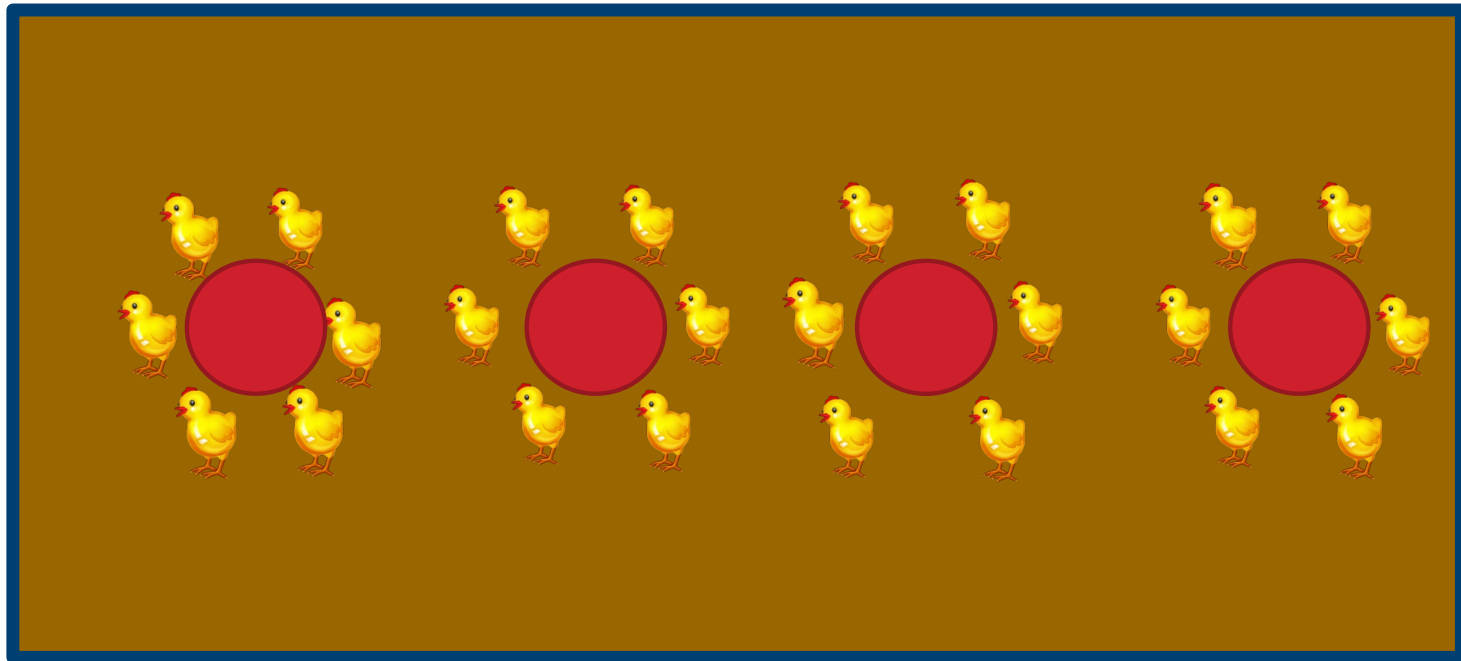
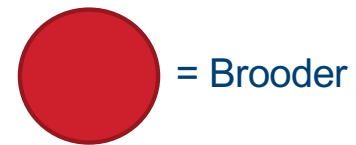
# Ventilation

- Do not overheat or chill chicks
- Do not wet the floors- ensure proper mixing of air
- Minimum ventilation calculator - UGA
- Stir fans

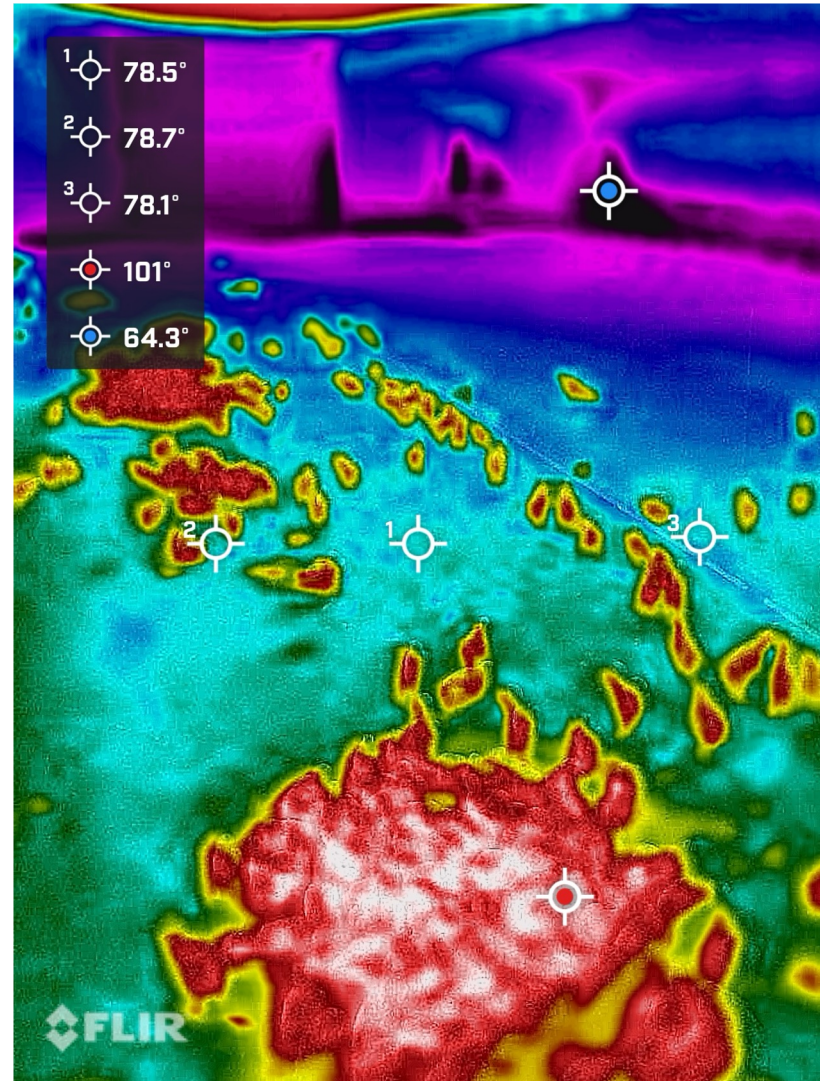


# Assessing Chick Comfort

Too Cold

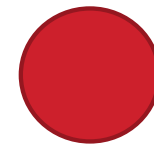




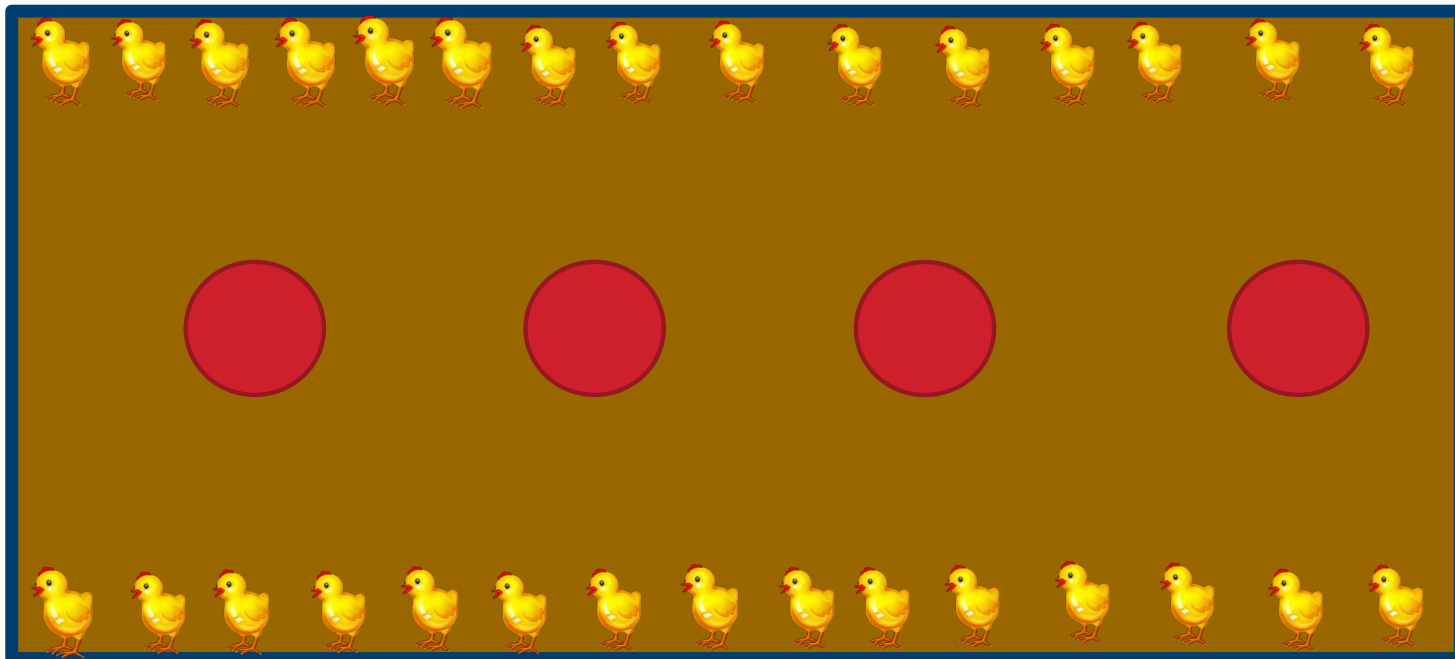


# Assessing Chick Comfort

Too Hot

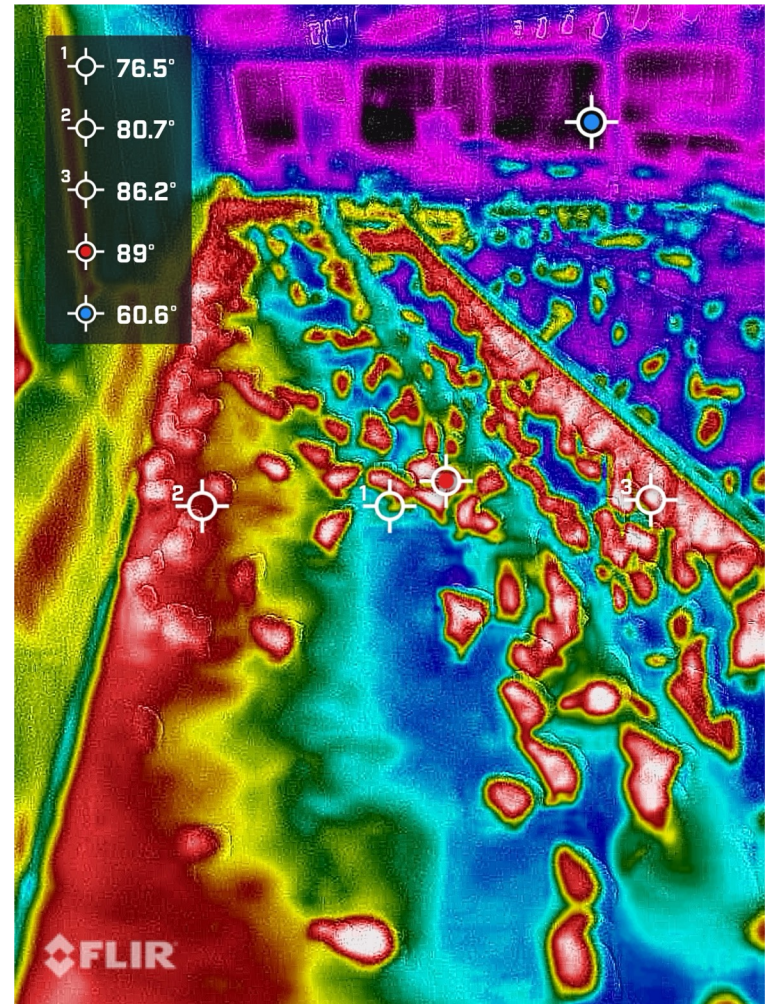


= Brooder



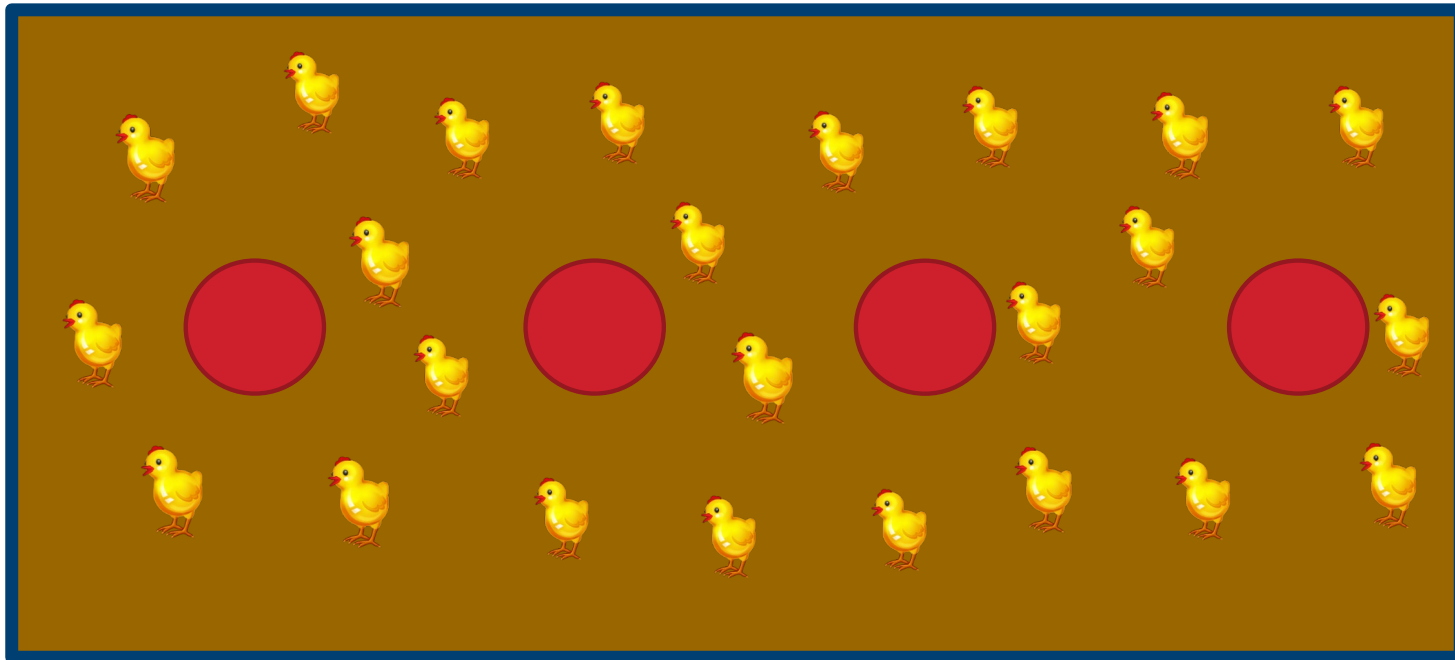
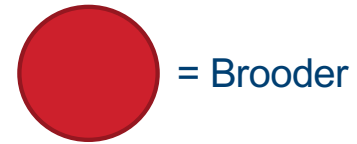


Caution- These birds were on the wall not because they were hot. The south facing wall was warm.

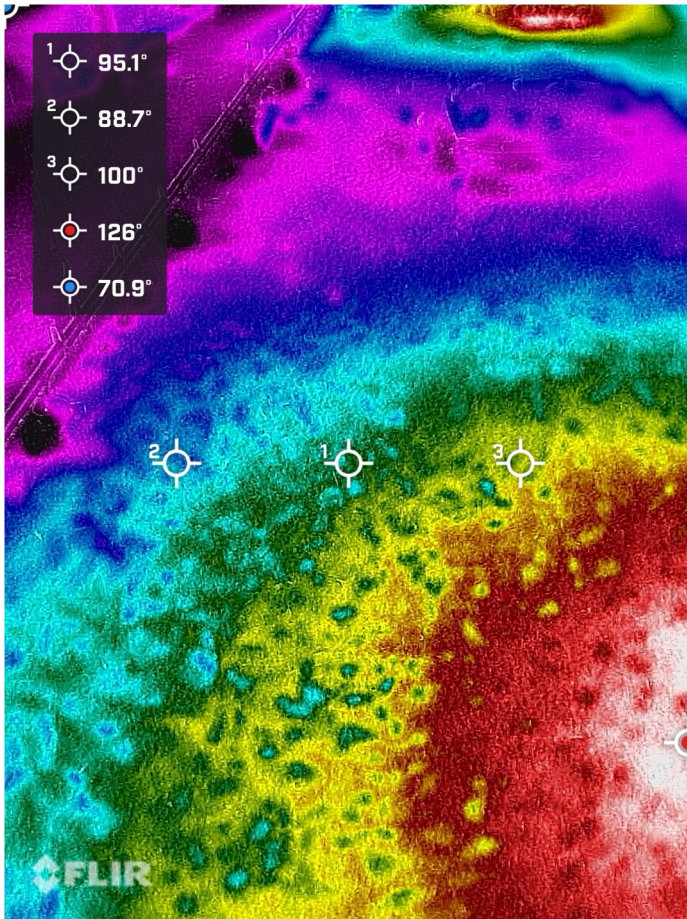


# Assessing Chick Comfort

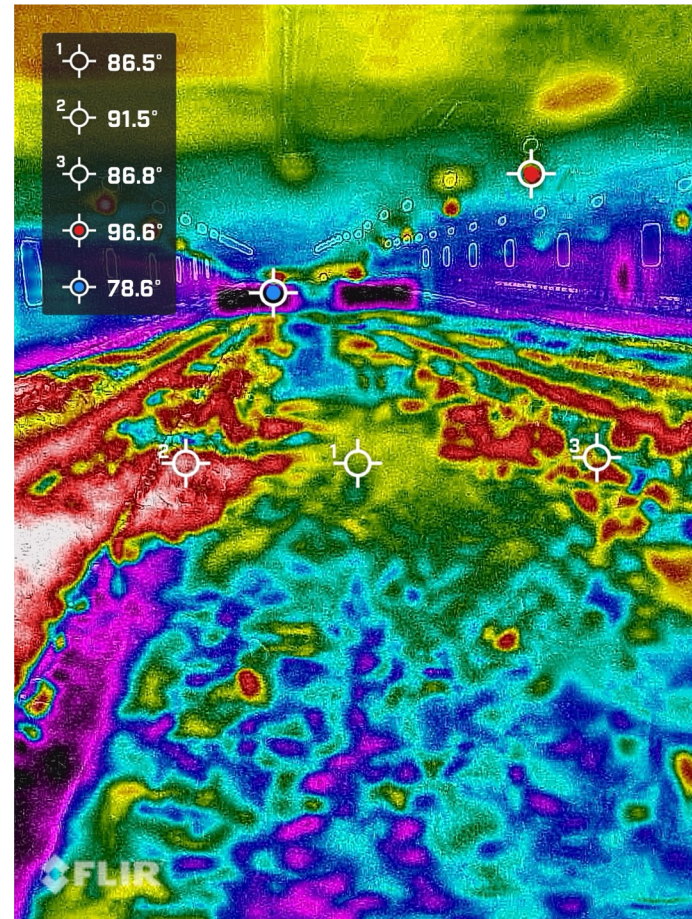
Just Right







Temperature gradients

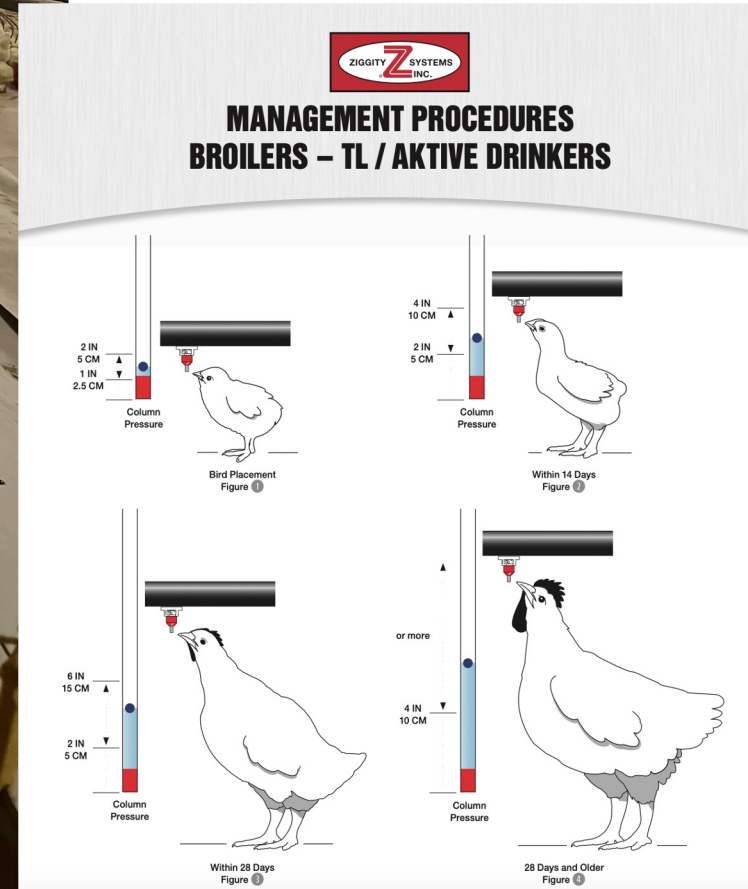


Chicks will choose their comfort zone



# Water

- Quantity
  - Pressure and availability
- Quality
  - Mineral
  - Bacterial



# Litter

- Condition
  - Temperature
  - Quality
    - Form and microbiological
  - Ammonia
- Moisture
  - Ideal litter moisture for coccidiosis vaccine cycling is 25%
  - When squeezed litter should clump together, but fall apart shortly after.



# Environment

- Temperature
  - Preheat houses for at least 24 hours
- Drafts
- Brooding set up
- Clean and orderly farm
  - Research from other industries: an orderly workplace improves employee mood, employee productivity, and decreases absenteeism

# Sanitation

- Water line cleaning
- Cleaning between flocks
- Litter preparation and amendments
- Insect control
- Rodent control

# Biosecurity

- Farm maintenance
  - Weeds
  - Junk
  - Barriers and cleaning



**BIOSECURITY  
IN PLACE  
STEP INTO FOOTBATH  
BEFORE ENTERING**

# How to measure chick starts

- Check crops at 24 hours
  - Greater than 95% full
- Check crops at 48 hours
  - 100% full
- 7 day weights
  - Day 7 should weigh 4x day 1
- Bird appearance and behavior

Thank you for your attention!

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