- Infertile
  - No Development

- Fertile
  - Blastoderm

- Infertile
  - Blastodisc
DAY 1
EMBRYONIC DEVELOPMENT
• Appearance of Tissue Development

TROUBLESHOOTING
• Low fertility
• Pre-incubation
• Improper fumigation
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Rough egg handling
• Insufficient egg holding time
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 2  
EMBRYONIC DEVELOPMENT  
- Tissue development very visible  
- Appearance of blood vessels  

TROUBLESHOOTING  
- Low fertility  
- Pre-incubation  
- Improper fumigation  
- Improper turning  
- Improper temperature  
- Improper humidity  
- Improper ventilation  
- Inverted eggs  
- Rough egg handling  
- Insufficient egg holding time  
- Rough setting of eggs  
- Contaminated eggs  
- Nutritional-drugs-toxins
DAY 3
EMBRYONIC DEVELOPMENT
• Heart beats
• Blood vessels very visible

TROUBLESHOOTING
• Low fertility
• Pre-incubation
• Improper fumigation
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Rough egg handling
• Insufficient egg holding time
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 4
EMBRYONIC DEVELOPMENT
• Eye pigmented

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 5
EMBRYONIC DEVELOPMENT
• Appearance of elbows and knees

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 6
EMBRYONIC DEVELOPMENT
• Appearance of beak
• Voluntary movement begins

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 7
EMBRYONIC DEVELOPMENT
• Comb growth begins
• Egg tooth begins to appear

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 8
EMBRYONIC DEVELOPMENT
• Feather tracts seen
• Upper and lower beak equal in length

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Insufficient egg holding time
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 9
EMBRYONIC DEVELOPMENT
• Embryo starts to look bird-like
• Mouth opening appears

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Insufficient egg holding time
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 10
EMBRYONIC DEVELOPMENT
• Egg tooth prominent
• Toe nails

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Insufficient egg holding time
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 11
EMBRYONIC DEVELOPMENT
• Comb serrated
• Tail feathers apparent

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Insufficient egg holding time
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
**DAY 12**

**EMBRYONIC DEVELOPMENT**
- Toes fully formed
- First few visible feathers

**TROUBLESHOOTING**
- Improper turning
- Improper temperature
- Improper humidity
- Improper ventilation
- Inverted eggs
- Insufficient egg holding time
- Rough setting of eggs
- Contaminated eggs
- Nutritional-drugs-toxins
DAY 13
EMBRYONIC DEVELOPMENT
• Appearance of scales
• Body covered lightly with feathers

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Insufficient egg holding time
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 14
EMBRYONIC DEVELOPMENT
• Embryo turns head towards large end of egg

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Insufficient egg holding time
• Rough setting of eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 15
EMBRYONIC DEVELOPMENT
• Gut is drawn into abdominal cavity

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 16
EMBRYONIC DEVELOPMENT
• Feathers cover complete body
• Albumen nearly gone

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 17
EMBRYONIC DEVELOPMENT
• Amniotic fluid decreases
• Head is between legs

TROUBLESHOOTING
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Contaminated eggs
• Nutritional-drugs-toxins


**DAY 18**

**EMBRYONIC DEVELOPMENT**
- Growth of embryo nearly complete
- Yolk sac is still on outside of embryo
- Head is under the right wing

**TROUBLESHOOTING**
- Hatcher opened too much during hatch cycle
- Rough transfer
- Transfer cracks
- Wet trays and hatchers
- Inconsistent transfer
- Improper turning
- Improper temperature
- Improper humidity
- Improper ventilation
- Inverted eggs
- Contaminated eggs
- Nutritional-drugs-toxins
DAY 19 EMBRYONIC DEVELOPMENT

• Yolk sac draws into body cavity
• Amniotic fluid gone
• Embryo occupies most of space within egg (not in the air cell)

TROUBLESHOOTING

• Hatcher opened too much during hatch cycle
• Rough transfer
• Transfer cracks
• Wet trays and hatchers
• Inconsistent transfer
• Improper turning
• Improper temperature
• Improper humidity
• Improper ventilation
• Inverted eggs
• Contaminated eggs
• Nutritional-drugs-toxins
DAY 20
EMBRYONIC DEVELOPMENT
- Yolk sac drawn completely into body
- Embryo becomes a chick (breathing in air cell)
- Internal and external pip

TROUBLESHOOTING
- Hatcher opened too much during hatch cycle
- Rough transfer
- Transfer cracks
- Wet trays and hatchers
- Inconsistent transfer
- Improper turning
- Improper temperature
- Improper humidity
- Improper ventilation
- Inverted eggs
- Contaminated eggs
- Nutritional-drugs-toxins

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DAY 21
EMBRYONIC DEVELOPMENT
• Chick hatches
• Feathers dry
• Should be pulled from hatcher before becoming dehydrated
• No longer an embryo - will require feed, water, and controlled climate
• Bird ready for placement into house