Backyard Poultry: Individual Medicine and Surgery

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Backyard Poultry
• Increasing popularity & number
  – Companionship
  – Egg and meat production
• Practitioners
  – Increasingly asked to provide care
• Backyard poultry medicine
  – Differs from commercial production

Backyard Poultry
• Laws/Regulations
  – Designed for large commercial production
  – Regulatory requirements – Mandatory
  – Veterinary Obligations
  – Violations – Criminal consequences, civil liability
  – Regulatory violations – Fines, reprimands, etc…
Backyard Poultry

• Reportable Diseases (ODA, USDA)
  – Backyard Flock
    • Required Reporting of disease
    • Quarantined
    • Depopulated!
  – OHIO ANIMAL AND ZOONOTIC DISEASE REPORTING REFERENCE (on line)
• Professional duty to guide clients on applicable laws

Backyard Poultry

• Laws to protect public health
  – Meat – consumed on the premise, no laws
  – if moved off premise, then subject to State/Federal Regulations
  – Poultry Products Inspection Act (PPIA)
  – Administered by USDA - FSIS
  – Cannot donate meat for consumption outside of their immediate household

Backyard Poultry

• Laws to protect public health
  – Eggs – Regulated by FDA-HHS
  – Safety requirements – Salmonella enteritidas
  – Flocks < 3,000 birds exempt
  – However, eggs must be kept < 45 F at all times
  – Must bear “Safe Handling Instructions”
  – USDA – ensures egg quality
    • Grades eggs
  – Exceptions to Regulations exist
Backyard Poultry

- Backyard Poultry = Food Producing Animals
- Important Regulatory Considerations
  - Approved medications
  - Withdrawal periods
- Medications formulated for large scale use
- Be familiar with Legislation, Guidelines and Scientific Literature!

Resources

- FARAD – drug database for food animals
  - www.farad.org/vetgram/
- FARAD – prohibited drugs
  - www.farad.org/eldu/prohibit.asp
- USDA – Contact information & links to resources
  - www.fsis.usda.gov/

Backyard Poultry

- Practical Information
  - Husbandry
  - Medicine
  - Surgery
- University extension websites
Sourcing Backyard Poultry

• Neighbor, Backyard Enthusiast, Feed Store,
  • Farmers Market, Hatchery
    – Easy way to introduce disease!
• Recommend to purchase from National Poultry Improvement Plan (NPIP) member Hatcheries or Breeders

Sourcing Backyard Poultry

• National Poultry Improvement Plan (NPIP)
  – Established 1930, voluntary program
  – Ensure disease free chicks
  – Initially to control Salmonella pullorum
  – S. typhimurium, S. enteritidas
  – Mycoplasma spp. Low Path Avian Flu

Sourcing Backyard Poultry

• Transport of birds into & within State is regulated
• Health Certificate needed for most birds
• Accreditation Category II (food animals)
• Fertilized eggs – treated same as live birds
• Exception – NPIP Sourced eggs, chicks
  – Uses form VS-9-3 in lieu of health certificate
Caring for Backyard Poultry

• GI Chicken Diseases
  • Arizonosis
  • Avian intestinal spirochetosis
  • Cancer
  • Canker (trichomonosis)
  • Capillariasis
  • Cecal worms
  • Coccidiosis
  • Colibacillosis
  • Crop impaction
  • Cryptosporidiosis
  • Deoxynivalenol mycotoxicosis
  • Fowl cholera (Pasteurellosis)
  • Fowl pox
  • Fowl typhoid
  • Hen diuresis syndrome
  • Histoplasmosis
  • Inclusion body hepatitis
  • Infectious bursal disease
  • Infectious coryza
  • Intestinal volvulus
  • Intussusception
  • Malabsorption syndrome
  • Marek's disease
  • Necrotic enteritis
  • Paratyphoid
  • Pendulous crop
  • Pullorum disease
  • Roundworm infection
  • Salmonellosis
  • Shigellosis
  • Sour crop
  • Tapeworm infection
  • Ulcerative enteritis
  • Vent gleet
  • Vitamin A deficiency

Traumatic Diseases

• Beak deformities
• Beak injury
• Blindness
• Breast blister
• Bruising
• Bumblefoot
• Cannibalism
• Crooked toes
• Crop impaction
• Curled-toe paralysis

Eye/Ear Chicken Diseases

• Ammonia toxicity
• Anophthalmia
• Avian encephalomyelitis
• Avian influenza
• Blindness
• Cataracts
• Chronic respiratory disease (MG infection)
• Conjunctivitis
• Ear infection
• Erysipelas
• Eye injuries
• Fowl cholera (Pasteurellosis)
• Fowl pox
• Glaucoma
• Infectious bronchitis
• Infectious coryza
• Infectious laryngotracheitis
• Marek's disease
• Newcastle disease
• Oxyspiruriasis
• Retinopathy globe enlarged
• Vitamin A deficiency

Neurological Disease

• Avian encephalomyelitis
• Avian influenza
• Blue-green algae poisoning
• Botulism
• Cerebellar hypoplasia
• Curled-toe paralysis
• Dactylariosis
• Ear infection
• Fowl cholera (Pasteurellosis)
• Head trauma
• Listeriosis
• Marek’s disease
• Newcastle disease
• Pantothenic acid deficiency
• Peripheral neuropathy
• Pyrrolizidine alkaloid toxicity
• Virulent Newcastle disease (VND)
• Vitamin E deficiency
• Zinc deficiency

Infectious Diseases

• Arizonosis
• Avian encephalomyelitis
• Avian influenza
• Avian intestinal spirochetosis
• Avian mycobacteriosis
• Chicken infectious anemia
• Chronic respiratory disease (MG infection)
• Erysipelas
• Fowl cholera (Pasteurellosis)
• Fowl pox
• Gapeworm Infection
• Histoplasmosis
• Infectious bronchitis
• Infectious coryza
• Infectious laryngotracheitis
• Mycoplasmosis
• Newcastle disease
• Ornithobacteriosis
• Pneumonia
• Respiratory tract infections
• Sinus infection (sinusitis)
• Swollen head syndrome
• Teflon poisoning

Reproductive Diseases

• Broody
• Cancer
• Egg binding
• Egg drop syndrome
• Egg yolk peritonitis
• Immature or defective shell gland
• Internal layer
• Low Blood Calcium Level
• Ovarian cancer
• Oviduct impaction

Musculoskeletal Diseases

• Avian osteoporosis
• Bumblefoot
• Choline deficiency
• Crooked toes
• Curled-toe paralysis
• Enterococcal spondylitis
• Fowl cholera (Pasteurellosis)
• Gout
• Infectious synovitis
• Keel bone injury

Nutritional Disease

• Aflatoxicosis
• Anemia
• Arginine deficiency
• Ascites
• Atherosclerosis
• Avian goiter
• Avian osteoporosis

Respiratory Diseases

• Airsacculitis
• Ascites
• Aspergillosis
• Avian chlamydiosis
• Avian influenza
• Brooder pneumonia
• Cancer
• Chronic respiratory disease (MG infection)
• Cryptosporidiosis
• Fowl cholera (Pasteurellosis)
• Fowl pox
• Gapeworm Infection
• Histoplasmosis
• Infectious bronchitis
• Infectious coryza
• Infectious laryngotracheitis
• Mycoplasmosis
• Newcastle disease
• Ornithobacteriosis
• Pneumonia
• Respiratory tract infections
• Sinus infection
• Swollen head syndrome
• Teflon poisoning

Examination

• History – signalment
  – Breed, age, gender
  – Use? eggs, meat, mating
  – Pet

• Flock
  – Size, length of ownership
  – New additions (biosecurity)
Environment

- **Housing**
  - Size, perches, substrate
  - Free Range?
  - Provide for ease of bird care
  - Comfort
  - Well-being

- Provides adequate space for # of birds
  - Overcrowding – fighting, cannibalism
  - Easy to clean
  - Protection from Predators
  - Adequate **Ventilation**
    - Moisture removal (winter)
    - Heat removal (summer)
    - Provide fresh air

- **Litter**
  - Absorbant
  - Loose
  - Inexpensive
  - Pine shavings-
  - Straw – not very absorbant
  - Sand – expensive, cool in hot weather
  - Shredded paper -
Environment

**Housing- Lighting - Hens**
- Poultry need a natural daylight/dark cycle
- Hens – need 12 h daylight to lay
- Maximum of 16 hr light, 8 hr darkness

**Temperature**
- Chicken body temperature – 105 F – 107 F
- Ideal temperature range 50 F to 75 F

**Brooding Chicks**
- Start @ 95 F
- Decrease 5 degrees each week
- Limit outdoor access to birds
  < 6 weeks of age
- Down being replaced by feathers
Examination - Feed

- **Diet**
  - Type, where purchased
  - How old?
  - Medicated?

- **Common Problems**
  - Prolonged storage (nutrient depletion)
  - Feeding the wrong “life-stage” diet
  - Improper Vitamin/mineral levels, Home mix

Nutrient Needs Differ!

- **Pullet Starter** 0-6 w CP 20% Ca 1%
- **Pullet Grower** 6-16 w CP 18.6% Ca 1%
- **Pre-Lay** 16-18 w CP 18.4% Ca 2.5%
- **Hen** 18 w CP 18.3% Ca 4.2%
- **Rooster** --- CP 11.54% Ca 0.75%

Examination

- **Water** - Fresh & Clean
  - Changed daily
  - Waterers cleaned regularly
Physical Exam
- Complete and Thorough
- Start at Head
- Work down towards Feet
- Visual Exam First then Hands on
- Droppings

Visual Exam
- Observe bird from a distance
- Appearance
- Behavior
- Healthy Bird: 
  - Bright, Alert
  - Interacting with Flock

Visual Exam
- In clinic, quiet room
- Observe from a distance
- Level of alertness
- Head held high or low?
- Eyes wide open?
- Stance, Posture
- Complete Exam Visually
Visual Exam

• Stance, Posture

• Fluffed
• Eyes droopy, closed
• Depressed
• Observe respiratory
  – Rate and effort
• Abdomen

Physical Exam

• Gentle Restraint
  – Secure surface
  – Wings held to body
    • Fingers spread
  – Allow normal respirations
    • Lack of Diaphragm
  – Carry under arm
  – Secure legs
Physical Exam

- Examine Head & Neck
- Comb
  - Bright red
  - Slightly Warm
  - Firm
  - Free of scabs, lesions
  - Refill ~ 1.5 - 2 sec.

Physical Exam

- Comb
  - Pale color
  - Non-laying Hen
  - Molt ?
  - Anemia ?

Physical Exam

- Comb lesions
  - Pecking injuries
Physical Exam

- Comb lesions
  - Pecking injuries
  - Frostbite

- Eyes
  - Clear, bright
  - Discharge
  - Swellings

- Pupils
  - Well defined

- Eyelids
  - Wide open
Physical Exam

• Eyes
  – Marek’s Disease
  – Grey iris color
  – Lymphocyte infiltrate
  – Irregular margins

• External nares
  – Discharge
  – Crusts
  – Scratches

• Beak
  – Smooth
  – Free of cracks
  – Broken
Physical Exam

- Oral Cavity
  - Ulcers
  - Mucosal lesions
- Choana
  - Clean
  - No drainage
  - Samples for
    - Gram stain
    - Laboratory testing

Physical Exam

- Evaluate Feathers
  - Clean
  - Smooth
- Feather Loss
  - Base of neck
  - Back
  - Rooster/mating

Physical Exam

- Feather Loss
  - Base of neck
  - Back, Tailhead
  - Rooster/mating
Physical Exam

• Evaluate Feathers
  – Base of feathers
  – Ectoparasites
    • Lice
    • Mites
    • Eggs

Physical Exam

• Evaluate Crop
  – Impaction
  – Grass, springtime

• Evaluate Wings
  – Held up, close to body

• Palpate Keel
  – Evaluate
  – Body condition

Physical Exam

• Evaluate Abdomen
  – Swelling
  – Respirations
    • Rate
    • Effort
  – Palpate
    • Egg Impactions
Physical Exam

• Evaluate Feet & Legs
  – Pododermatitis
  – Hyperkeratosis
  • Mites

Physical Exam

• Evaluate Cloaca
  – Swollen
  – Soiled-diarrhea
  – Prolapsed

Normal, Egg Laying Hen

Physical Exam

• Accurate body weight
  – In grams not pounds
Select Medical Problems

- External Parasites
  - Lice

Poultry Lice

- Common in backyard chickens
- Usually chewing lice
- Feather damage
- Not zoonotic

- Menacanthus spp. chew on skin
- Can cause blood loss
- Wings, Abdomen, Breast, Back
- Egg Clusters at base of Feather Shaft
**Poultry Mites**

- *Dermanyssus gallinae* (Red Poultry Mite)
  - In cracks & crevices of housing
  - More common in warm months
  - Feed on host blood at night
  - Dermatitis, restless at night
  - Anemia, weight loss, death
  - Zoonotic

- *Ornithonyssus sylviarum* (Northern Fowl Mite)
  - Feed on blood
  - On breast, thighs, cloaca
  - Entire 5-7d life cycle on host
  - See mites, eggs, droppings on host
  - Zoonotic

- *Knemidocoptes mutans* (Scaly Leg Mite)
  - Crusting, thickening, lifting of scales on legs
  - Older chickens
  - Skin scrape to ID
Other Ectoparasites

- *Echidnophaga gallinacea* (Stick Tight Flea)
- *Trombiculidae* (Chigger)
- *Argas persicus* (Fowl Tick)
- Biting Flies

Endoparasites

- Backyard Chickens – greater problem
- Contact with soil, poor management
- Mixed ages housed together
- Survey – Coccidia > Ascarids > Capillaria

Coccidia

- Coccidia – *Eimeria* spp. (9)
- Species specific
- Most common problem
- Young birds 1-4 months old
- Crowding, housing mixed ages together
- Moist, heavily soiled litter
Coccidia

- Bloody diarrhea, pale combs, lethargy, tendency to huddle, anorexia, weight loss, dehydration, and death.
- *E. tenella* – cecal hemorrhage
- *E. acervulina* and *E. necatrix*
  - Intestines, less severe
- Resistance increases with age

The key is prevention.

Treatment:
- Amprolium
- Sulfamethazine
- Sulfadimethoxine (Off Label Use)
- Vaccine – not commonly used in backyard poultry

Ascarids

- One of most common helminths seen
- *Ascaridia galli*
- *Baylascaris spp.*
- Decreased body weight
- Diarrhea, anemia
- May increase susceptibility to salmonella
- Eggs infective in environment for 160 wks
- Piperazine – treatment of choice
Cecal Worm

- *Heterakis gallinarum*
  - Egg looks similar to Ascarid
- Morbidity & Mortality
  - seen more in turkeys
  - game birds
- Can affect chickens
- Transmits protozoan
- *Histomonas meleagridis* (Black head)

Cecal Worm

- *Histomonas meleagridis* (Black Head)
- Liver necrosis
- Cecal inflammation
- High Mortality
  - Turkeys (chickens)
- H. gallinarum eggs remain infective for years
- Do not raise turkeys on chicken pastures

Capillaria

- *Capillaria spp.* - “hairworm”
- Earthworm – intermediate host
- Found in esophagus, crop and intestines
- Inflammation & sloughing of the epithelium
- Diarrhea, anemia
- Respiratory disease in quail
Syngamus trachea

- "Gapeworm," nematode
- Often seen in “free range” chickens
- Present in trachea
- Physical blockage
- Gape, extend neck
- Open mouthed breathing

Approved Parasiticides

- Fenbendazole - Ascaridia & Heterakis, only in breeder birds, not egg layers
- Permethrin (Permethrin) – Lice, Northern Fowl Mite
- Piperazine - Roundworms

Anesthesia

- Inhalation Anesthesia
  - Great speed, safety, predictability in birds
  - Avian respiratory system – very efficient gas exchange system
  - Uptake & elimination of anesthetic gases is much faster in birds than mammals
Anesthesia

- **Injectable Anesthesia**
  - Dose response is variable
    - Among species & individuals
  - Most drugs are non-reversible
  - Questionable safety - higher risk
  - Difficult recovery

Inhalation Anesthesia

- **Anesthetics of Choice**
- **Isoflurane**
- **Sevoflurane**

  - Both produce rapid, smooth induction and recovery

Inhalation Anesthesia

- **Isoflurane** –
  - wide margin of safety
- **Sevoflurane**
  - low blood solubility
  - induction & recovery more rapid,
  - $$
Inhalation Anesthesia

- Analgesia questionable
- Pre-medicate
  - Butorphanol
    - 2 mg/kg IV (chickens)
  - NSAID
    - Meloxicam 0.5 mg/kg IM, Robenecoxib 2-5 mg/kg IM
    - Tramadol
      - 5 – 10 mg/kg PO

Preanesthetic Considerations

- Five Key Elements:
- 1) Time
  - Keep anesthetic & surgery time to a minimum
  - All surgical equipment prepared & ready
- 2) Limit Blood Loss
  - Ellman radio surgery
  - Surgical laser

- 3) Maintain hydration
  - blood pressure, glucose
  - maintenance fluid 50 ml/kg/day
  - 1st Hour surgery 10 ml/kg/hour
  - 2nd Hour surgery 5 ml/kg/hour
  - Pre-warm fluids (LRS/.9% NaCl)

Subcutaneous fluids
Intraosseus catheter – Ulna, Tibiotarsus
Preanesthetic Considerations

• 4) Maintain Body Temperature
  – Newly hatched chick ~103.5°F
  – Adult chicken ~105°F and 107°F
• Water jacketed pad
• Bair – hot air blanket

Preanesthetic Considerations

• 5) Experience
  – Technician to assist & monitor anesthesia
  – Surgeons skill
    • Association of Avian Veterinarians Conference
    • AAV Wet labs, Master Classes
      – Anatomy, Physiology, Diagnostics
      – Surgery, Disease, Treatments

Preanesthetic Considerations

• Fasting - allows the upper GI tract to empty,
  – Reduces likelihood of regurgitation
  – Reduces proventricular and ventricular distension, reducing interference with normal respirations
  – 3 hour fast for most birds
  – Position with crop above level of stomach
Patient Monitoring
- ECG - Standard animal lead positions
- Pulse oximetry
- Ultrasonic Dopplers – very accurate
  - superficial ulnar artery
  - radial artery inside the elbow
- Blood pressure
  - neonatal cuff, distal humerus
  - 90 to 180 mm Hg

Anesthetic Induction
- **Mask induction**
  - Glottis maintains airway
  - Most birds mask down easily
  - Oxygen flow rate 1-2 L/min
  - Isoflurane 4-5% initially
  - Blink – reduce to 3%
  - 1.5% -2% maintenance level

Anesthetic Induction
- **Maintain Anesthesia with Mask**
  - Short procedures
- Make sure nostrils are clean & patent
Anesthetic Induction

• Intubate
  – Glottis readily visualized
  – Relatively easy to intubate
  – Stabilize to head

Anesthetic Induction

• Intubate
  – Longer procedures
  – Artificial ventilation
  – Complete tracheal rings
  – Uncuffed tube
  – Glottis is wider than trachea
    • Avoid mucosal damage
    • Tracheal strictures

Ventilation

• Intubate
  – Ventilatory support if procedure > 20-30 min.
  – With patient breathing on its own,
    • Provide 1-2 full inspiratory breaths per minute
    • Thoroughly inflates the air sacs
    • Supports complete circulation of air and gases through the air sac system
  – Mechanical ventilation 6-10 breathes/min.
Ventilation

• Vetronics Small Animal Ventilator
• Patients from 10g to 10 kg

Surgical Considerations

– Anesthetic gases can escape during procedures that disrupt the air sacs or extensions of the air sacs into pneumatic bones
– Allow "fresh" air into the respiratory system thereby decreasing the anesthetic gas
– Expose staff to anesthetic gases

Anesthetic Recovery

• Holding the patient in a light towel wrap or rolling into a loose "burrito"
• Provides mild restraint to prevent chaotic body movements.
• Keeping the bird in a warm, quiet, dark place also aids a smooth recovery
**Endoscopy**
- Internal evaluation
- Diagnostic sampling
- Surgical procedures

**Select Problems - Trauma**
- Entrapment of limbs in cages/equipment
- Predator injuries
- Pecking
- Fighting - spurs, nails
  - Reduce density
  - Increase # of feeders
  - Separate roosters

**Trauma**
- Predators
Predator Attack Trauma

• Predators
  Generally kill to eat
  Small numbers attacked
  Return frequently

Predator Attack Trauma

• Predators
  • Do not kill just to eat
  • Kill many birds at once
  • Mink – decapitate birds
  • Raccoons – kill and maim
  attempt to pull through fencing

Trauma

• Wounds not penetrating respiratory or abdominal cavities
  – Most respond with basic wound care
  – Topical antiseptics
  – May need to isolate from other birds
    (cannibalism)
Predator Attack Trauma

Pododermatitis (Bumble Foot)

- Inflammation of the foot
  - Swelling, ulceration, erythema
- Plantar metatarsal pad
- Plantar digital pads

Pododermatitis (Bumble Foot)

- Bacteria – usually Staphylococcus aureus, E.coli, and/or Proteus
- Also:
  - Pseudomonas aeruginosa, Klebsiella sp.,
  - Clostridium sp., Corynebacterium sp.,
  - Streptococcus sp., Pasteurella spp
  - Nocardia sp., Actinomyces sp., Candida sp.,
Pododermatitis (Bumble Foot)

- **Risk Factors** –
  - Previous injury
  - Damp or unsanitary bedding/litter
  - Hard, wet, uneven or rough floor surfaces
  - Poor Diet, Vitamin A/Biotin deficiency
  - Overweight, Lack of activity
  - Overgrown toe nails
  - Excessively dry skin, Scaly mites

Pododermatitis (Bumble Foot)

- **Clinical Grades**

<table>
<thead>
<tr>
<th>Grade I</th>
<th>Grade II</th>
<th>Grade III</th>
<th>Grade IV</th>
<th>Grade V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shiny, Pink Skin</td>
<td>Smooth, Circumscribed Areas</td>
<td>Ulceration, Peripheral Callus, Abscess</td>
<td>Ulcer, Pain Necrotic plug Mild lameness</td>
<td>Swelling, Pain Necrotic plug Lameness (severe)</td>
</tr>
</tbody>
</table>

Pododermatitis (Bumble Foot)

- **Treatment Options:**
  - Early stages are much easier to treat
  - May only even require simple environment and/or management
  - If infection present - surgical debridement, post-surgical care, ± antibiotics
Pododermatitis (Bumble Foot)

**Treatment Options:**
- Drain any fluid accumulation (abscess)
- Soak foot in Epsom salts every 12 hrs
- 2% Chlorhexidine solution
- Povidone-Iodine

Pododermatitis (Bumble Foot)

**Treatment Options:**
- Surgical debridement

Pododermatitis (Bumble Foot)

**Treatment Options:**
- Topical anti-bacterials & Bandage
- Silver Sulfadiazine
- Triple Antibiotic Ointment
- Preparation H
- Manuka Honey!
- Poor prognosis if Osteomyelitis present
**Pododermatitis (Bumble Foot)**

- Manuka Honey – New Zealand

**Prevention:**
- Better sanitation
- Clean coop and enclosures frequently
- Avoid overcrowding, enlarge area
- Establish good water drainage, prevent puddling

- Provide atraumatic substrate
- Grass, Astroturf, Straw, Sand
- Balanced diet, avoid obesity, increase activity
- Birdy Boots, Tuf Foot, Benzoin, Moleskin
Pododermatitis (in Raptors)

- 250 mg Amikacin
- 25 mg Dex.NaPO
- In 25 ml DMSO
- Apply topically to affected foot once daily until resolved

Impacted Crop

- Allowing chickens access to grass clippings.
- Feeding dried oatmeal, soybeans absorb water-swell
- Feeding a poor quality diet ingest materials they wouldn’t normally eat.
- Leaving potentially hazardous objects where chickens can access them

- String, plastic, metal objects…
- Enlarged, firm crop
- Reduced appetite
- Increased thirst
- Foul odor from mouth
Impacted Crop
• Flush crop with warm water
• Endotracheal tube (7.0), catheter tip syringe
• Gently massage crop
• Often bacterial overgrowth
• Spectam (15 ml/gallon water)
• Surgery

Impacted Crop-Prevention
• Keep the grass mowed regularly
• Remove any grass clippings
• Always provide plenty of fresh, clean water
• Do not allow chickens access to objects such as metal, plastic, strings, etc.
• Do not allow chickens access to composts

Egg Binding
• Pullets brought in to production too early
• Obese hens
• Single or multiple eggs
Egg Binding

- Lack of exercise
- Chronic egg laying
- Calcium deficiency (poor diet)

- Lethargy
- No eggs laid
- Swollen and pasted vent
- Swollen belly
- Straining, Sitting/squatting abnormally
- Tail pumping
- Excessive time spent in the nestbox

- Abdominal palpation
- Radiographs
- Ultrasound
Egg Binding

- Warmth
- Massage abdomen
- Manual obstetrical delivery
- Fluids, calcium
- Salpingotomy
- Salpingohysterectomy

Egg Binding

- Salpingohysterectomy
  - Multiple eggs
  - Salvage procedure

Ascites/Egg Yolk Peritonitis

- **Predisposing Factors**
  - Chronic Egg Laying
  - Obese hens
  - Existing infections
  - Heavy parasite load
  - Ovarian tumors
Ascites/Egg Yolk Peritonitis

- Lethargy
- Depressed
- Reduced activity
- Horizontal Posture
- Increased Respiratory Rate
- Open mouthed breathing
- Abdominal distention

Ascites/Egg Yolk Peritonitis

- Abdominal distention
- Liver disease
- Salpingitis
- Egg yolk coelomitis
- Abdominal palpation

Ascites/Egg Yolk Peritonitis

- Radiographs
- Ultrasound
- Abdominocentesis
Ascites/Egg Yolk Peritonitis
- Treatment varies depending on cause/severity of clinical signs
- Mild cases, no secondary bacterial infection may only require supportive care.
- Infection present, usually analgesics, anti-inflammatories, antibiotics, supportive care,
- Reducing egg laying activity.
- Surgery - remove excessive egg material.

Foreign Body Ingestion
- Free Range Birds
- Individual Birds
  - Obstructive disease
  - Toxic exposure
  - Metal poisoning (lead, zinc)

Foreign Body Ingestion
- Symptoms:
  - Anorexia
  - Regurgitation
  - Diarrhea
  - Weight loss
  - Neurological signs (lead, zinc)
Foreign Body Ingestion

Respiratory Disease

- Not common in backyard Poultry
- Usually is non-specific
  - Dusty environment
  - Poor ventilation
  - High ammonia levels
- Usually in spring or fall
- Control humidity
- Proper ventilation

Respiratory Disease

- **Mycoplasma** infection (usually gallisepticum)
  - Can be silent infection
  - Respiratory rales,
  - Sneeze
  - Puffy, swollen faces
  - Passes thru egg
  - Silent infections
Respiratory Disease

• **Fowl Cholera (Pasteurella multocida)**
  – Very common
  – Swollen eyes, wattles
  – Septicemia
  – Can be chronic disease
  – Bites from cats, rats
  – Tetracyclines, Sulfas

Respiratory Disease

• **Infectious Laryngotracheitis (ILT)**
  – Usually 7 days after returning from show
  – Gallid Herpes virus
  – Death (may double each day)
  – Dyspnea
  – Head shaking
  – Cough
  – Use genetically modified ILT vaccine

Respiratory Disease

• **Less Common**
  • Infectious Bronchitis – coronavirus
  • Infectious Coryza – Avibacterum gallinarum (Hemophilus)
  • Avian Influenza (Low Pathogenic AI)
    – High Path AI – rapid death, neurologic signs
  • Newcastle’s Disease – Avian Paramyxovirus 1
    – Lentogenic, Mesogenic, Velogenic
Backyard Poultry

• Poultry – Food Producing Animals
• Important Regulatory Considerations
  – Approved medications
  – Withdrawal periods
• Medications formulated for large scale use
• Be familiar with Legislation, Guidelines and Scientific Literature!

Backyard Poultry

• Internet Reference

**OHIO ANIMAL AND ZOONOTIC DISEASE REPORTING REFERENCE**

Backyard Poultry

• Animal Disease Diagnostic Laboratory

Poultry Disease Diagnosis and Control

- Clinical History
- Clinical signs
- Necropsy
- Laboratory diagnosis
- Control
Resources

• FARAD – drug database for food animals
  – www.farad.org/vetgram/
• FARAD – prohibited drugs
  – www.farad.org/eldu/prohibit.asp
• USDA – Contact information & links to resources
  – www.fsis.usda.gov/
• http://www.poultrydvm.com

Free Range Chicken

Thank You