

Physical Exam/Handling/Basic Diagnostics

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Abstract: This report highlights important aspects of physical exams, bird handling & basic diagnostics to consider when working with backyard poultry.

Key Words: handling, physical exam, poultry, backyard

Physical Exam/Handling/Basic Diagnostics of Backyard Poultry

- First & most importantly → think BIOSECURITY
 - Potential contagious disease?
 - Risk to avian species in clinic?
 - Potential zoonotic disease?
- Performing the physical examination. Observe:
 - Attitude
 - Alertness
 - Depression
 - Ruffled feathers
 - Droopy posture
 - Difficulty breathing
 - Gait, balance
- Head:
 - Eyes for lesions or discharge
 - Nares for debris/discharge
 - Non-feathered areas for scabs or swelling
 - Ectoparasites
 - Beak & Mouth:
 - Coloration
 - Lesions in oral cavity (pox, canker, focal ulcers, blood, mucous)
- Body & Wings:
 - Feel for muscle conditioning
 - Feather condition
 - Skin lesions
 - Ectoparasites
 - e.g. Lice (under wings)
- Remember when restraining birds that they can suffocate if the breastbone is not free to move in and out
- Determining Production:
 - Laying Hen
 - bright red comb
 - soft pliable abdomen / large oval vent
 - 3-4 finger spread
 - no molting or new growth of feathers
 - Non-laying Hen
 - dull shriveled comb
 - hard & fat abdomen
 - 1-2 fingers spread
 - molting or new growth of feathers
- Tail head

- Trauma/pecking
 - Feathering
- Vent area
 - Urate/fecal/blood staining
 - Cloacal prolapse
 - In production?
 - Palpate pin bone spread
 - Body fat over pin bones
 - Ectoparasites
 - Poultry mites or lice
 - Lice knits
- Legs
 - Shank color
 - Scale condition
 - Bruising or hemorrhage
 - Palpate joints & long bones
- Feet
 - Pododermatitis
 - Swelling
 - Scabs
 - Toe positioning
- Fecal Examination
 - Fresh feces for flotation
 - Coccidiosis
 - Nematode ova
 - Large round worms
 - *Capillaria*
 - Cecal worms
- Beyond the Physical Examination
 - Treat wounds like any other “pet”
 - Gas anaesthesia works well for invasive procedures
 - Very short list of approved drugs for use in food animal species, regardless if thought of only as a “pet”
 - Withdrawal times for meat & egg consumption
 - List of approved products ever changing
 - Green Book put out by FDA ([Animal Drugs @ FDA](#)) for updated complete list of approved drugs
- Sampling for Diagnostics
 - Collect blood (brachial vein)
 - Serology
 - Tracheal, choanal cleft and/or cloacal swabs
 - Virology, PCR
 - Swabs for bacteriology
 - Tissues for histopathology
 - Nx fresh dead or sick birds
 - Utilize state poultry labs for nx exam & diagnostic testing
- Before the Nx Exam
 - Review clinical hx
 - List differential dx
 - Observe clinical signs of flock
 - Euthanize birds by cervical dislocation, CO₂, or other AVMA approved method
 - Examine the exterior of bird thoroughly
- Necropsy Exam:
 - Start at the Head
 - Lay bird on its back & cut through corner of mouth to open it flat examine oral cavity
 - Continue incision through skin & esophagus to crop examine thymus, esophagus, & crop contents.

- Cut through larynx and continue to open the trachea examine tracheal mucous membranes & contents
 - Remove upper beak tip with a transverse cut inspect nasal cavities & infraorbital sinuses
 - Cut open sinuses if swollen examine fluids
 - Examine eyes
- Opening the Body Cavity
 - Cut skin between the legs & abdomen
 - Pull & twist legs to disarticulate the femur from hip
 - Cut skin across abdomen & reflect skin to expose abdomen & pectoral muscles
- Exposing the Viscera
 - Cut across abdominal muscles following sternal border
 - Continue through ribs to thoracic inlet
 - Cut & open the rib cage to expose viscera and examine surface of exposed organs
 - Take microbiological samples if needed before proceeding to the next step to avoid cross contamination
 - Reflect liver & intestines to visualize air sacs, lungs, & kidneys
 - Remove organs as needed for further sampling and/or better visualization
 - Examine:
 - liver, spleen, pancreas, kidneys
 - reproductive tract, ovaries
 - heart, lungs
 - intestinal tract
 - sciatic nerves & brain
 - bones & bone marrow
- Utilize state diagnostic laboratories
 - MS Diagnostic Lab: PRDL in Pearl, MS
 - Necropsy & consulting services provided to non -commercial type poultry owner