

**Update: MSU Poultry Teaching & Research Center**

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| **Personnel** | Angelo Napolitano – Farm Manager  Jeff Greenlee – Agricultural Laborer  Dr. Zac Williams – Farm Faculty Coordinator  2-4 student employees throughout the year |
| **Mission Statement** | The Poultry Teaching and Research Center's Mission is two-fold. First to provide facilities and resources for the education of animal science students interested in Poultry Science as a career and second to conduct basic and applied research that will benefit the poultry producers of the State of Michigan. |
| **Infrastructure and** **Inventory** | **Facilities**  The Poultry Research Farm consists of a service building, 7 pole barn type buildings, two storage sheds, the turkey facility and the laying hen facility.**Current Inventory**2650 pullets477 Laying hens for fertile egg production and classroom use52 Riboflavin deficient leghorns**Recent construction and renovations**Renovation of House #3 to provide facilities to raise cage-free pullets for the aviary hen housing systemConstruction of the laying hen facility, completed in December 2012Renovation of a room to raise broilers and a feed mixing room for ANS313 nutrition classRenovation of a room to raise turkeys for the Avian Science Club turkey fundraiserRenovation of 4 enriched colony rooms in Laying Hen Facility to Aviary systems |
| **Teaching** | **Courses Utilizing Center (2014-20, ~743 students)**  ANS 110 – Introductory Animal Science ANS 252 – Intro Management Avian Species  ANS 305 – Applied Animal Behavior  ANS 313 – Animal Feeding and Nutrition  ANS 455 – Avian Physiology  PDI 630 – Diagnostic Pathology Clerkship  VM 165 – Large Animal Nursing Skills  IBIO 320 – Developmental Biology |
| The MSU Poultry Farm sells fertile eggs to16 different labs at 9 different universities for classes and research use. |
| **Research** | **Research projects (2013-20) – Poultry**   * Erasmus, M; Swanson, J, 2013. Individual and genetic differences in fearfulness: Effects on feather pecking and meat quality of turkeys. * Karcher, D, 2013. Enriched colony cages: stocking density on laying hen well-being. * Strasburg, G, 2014. Influence of thermal challenge on turkey muscle development and meat quality. * Siegford, J, 2014. Distribution patterns, resource use, welfare and production of four strains of laying hens housed in commercial-style aviaries. * Makagon, M, 2014. Causes of keel abnormalities in laying hens housed in enriched colony cages. * Karcher, D, 2014. Egg quality and safety: Impact of strains in an aviary housing system. * Karcher, D, 2015. Impact of Bio-D on layer performance from 17 to 84 weeks of age. * Karcher, D, 2015. Impact of Salmonella Typhimurium and Salmonella Kentucky contamination of laying hens in enriched colony cage housing. * Strasburg, G, 2015. Influence of thermal challenge on turkey muscle development and meat quality. * Kang, I, 2015. Cold-batter mixing for low-sodium and low-fat processed meats. * Bursian, S, 2016. Developmental and post hatch effects in ovo exposure to bisphenol A   diglycidly ether (BADGE) in white leghorn chicken embryos.   * Karcher, D, 2016. Delayed movement of pullets to the hen facility during a disease outbreak * Ali AB, Siegford JM. 2016. Impact of individual hen behavior on welfare, mortality and production in four strains of aviary-housed laying hens through end of lay. * Busian, S, 2017.Development of Toxicity Reference Values (TRVs) for Birds Exposed to PFOS, PFOA and Associated Mixtures of Fluorinated Compounds (DOD/VA) * Siegford JM,Ali AB, Toscano MJ. 2017. Impacts of extended pullet housing on production, behavior and welfare: can laying hens adapt to aviaries if they have already begun to lay in a pullet facility? * Bursian, S. 2017. Efficacy and tolerance of Bioxylanase TT as assessed by turkey poult performance, blood chemistry, hematology and histology following supplementation over 6 weeks. * Rust, S: Liu, Y, 2017. Evaluation of probiotic sugar beet ferment on chick growth and performance. * Strasburg, G, 2017. Influence of thermal challenge on turkey muscle development and meat quality * Karcher, D, 2018. Addressing keel bone fractures in laying hens housed in cage-free aviary systems using nutrition and management interventions. Phase 1 * Nielsen, B, 2019. Silicon supplementation to improve bone, cartilage and collagen health in broiler chickens. * Williams, Z, 2019. Composting of chickens using vertical mixer wagons. * Karcher, D, 2020. Addressing keel bone fractures in laying hens housed in cage-free aviary systems using nutrition and management interventions. Phase 2 |
| **Extension** | **Programs/Tours/Events**Provide fertile eggs, incubated eggs, and /or incubators for 38 local schools and day care facilities for hatching displays in the classroomProvide incubated eggs and display incubators for 21 county/state/community fairs and Project REDS across the stateProvide materials (birds, equipment) for the FFA Poultry Career Development EventMSU Small Animals DayCVM – Vetward Bound ProgramGrand Parent UniversityANR Week- Pullorum SchoolMichigan Veterinary Conference Wet Lab Potter Park Zoo Vet Med Day’s  Chicago High School for Agricultural Sciences Vet Camp   2016 Michigan 4-H Animal and Veterinary Science Camp  Assist Avian Science club with fall turkey fundraiser |
| **Clubs** | Avian Science Club |