

2009 Review - Poultry Science Center South State Avenue, Ames, Iowa

A.S. Leaflet R2570

Bill Larson, superintendent,
Animal Science Poultry Unit

The ISU Poultry Farm is located on State Street approximately 3 miles southwest of the main campus. It is part of the teaching farm complex that also includes the beef, sheep, and swine teaching units. The unit is utilized for teaching and research activities with broilers, layers, turkeys, and other avian species. At least five courses annually use the farm either directly or indirectly. Animal science faculty and faculty from other departments in the college of agriculture and from the National Animal Disease center utilize the birds and farm facilities for their research. The farm continues to maintain the oldest inbred line of chickens in the world. This line dates back to 1925. The Department of Homeland Security recently deemed the inbred lines of chickens maintained at the farm as essential to the United States Department of Agriculture.

History

The first ISU Poultry Farm was located where the Towers Dorms are currently located. The facility being used at the present time was built in 1963 and covers 11 acres. The Poultry Science Center is the single farm within the department that provides facilities and labor to maintain programs of excellence in research and instruction with avian species.

Facilities

The nine buildings at the ISU Poultry farm are:

- Main Office Building - a multiple use facility
 - Hatchery Room with 5 Jamesway incubators each capable of hatching approximately 2500 chicks.
 - Nutrition Room with two Hobart mixers and small scales for mixing small batches of feed.
 - Battery Room used for quail research and contains 90 small cages and several batteries.
 - Class Room that will seat about 25 students.
 - Office Space and break room.
- Brooder House - currently used for genetics research
 - Eight large pens that are subdivided and used for brooding and rearing chicks
 - Each pen can hold approximately 800 chickens
- Teaching House - provides support for animal science courses and tour groups upon request.
 - The east end has one row of cages comprised of 60 individual cages suspended over an open pit. The

remainder of the east end has plywood over the pits and the area is used for demonstrating management procedures in animal science classes

- The west end has 36 pens that are used for holding exotic breeds of chickens and turkeys that are viewed in animal science classes and tours.

- Mating House - used for genetics research
 - Contains 1681 cages used for small to medium sized hens and roosters
 - Additional 360 cages for larger hens and roosters.
- North Nutrition House – Starter batteries and 4 by 4 foot pens are used for nutrition trials.
- Turkey and Broiler House - used for nutrition trials.
 - Twenty-four floor pens that are 7.5 foot by 14 foot for broiler or turkey nutrition trials
- Layer House - equipped with 528 laying hen cages, each capable of holding two hens for a total of 1056 laying hens, suspended over open pits
- Feed Mill - includes a weigh bin, vertical mixer, scales, hammer mill, feed ingredient storage, and three large outside storage bins. A new horizontal mixer was installed in 2006 is capable of mixing up to 400 lbs.
- Warehouse - storage for tractor, pickup, manure wagon and miscellaneous items.

Inventory Numbers during 2009

- Hatched, brooded and reared 1,677 birds from specialized genetic lines of chickens.
- Mating house numbers ranged from 200 to 1,194 adults
- Completed three nutrition trials utilizing 580 chickens and pheasants.
- Maintained 95 exotic breeds of chickens and turkeys for teaching.
- Hatched or purchased 350 chicks for teaching.

Teaching Activities

Animal Science 101 has over 390 students per year. They attend a two-hour lab at the farm. Management techniques are demonstrated to all students and they also tour the exotic breeds of chickens.

Animal Science 214L has about 250 students per year. The farm supplies 140 fertilized eggs in various stages of development and about 60 roosters and 60 hens each semester for anatomy classes.

Animal Science 332 has about 60 students annually. They attend a two-hour lab at the farm to work with roosters for analysis of semen.

Animal Science 223 has 25 students once a year. This is an introduction to principles, practices and decisions necessary when raising poultry.

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Animal Science 320 has about 15 students annually. They learn about feed ingredients and learn how to operate the feed mill.

Research Activities

Faculty who do research at the farm include:

- Dr. Michael Persia was hired in August and his research program will focus on the relationship between gastrointestinal integrity, immunology and the microflora on poultry nutrition. Secondary focuses will include both environmental management and industry relevant projects.
- Dr. Susan Lamont's research program involves immunogenetics and poultry breeding. Her research focuses on molecular genetics of poultry immunology, disease resistance, skeletal composition, body composition and meat quality.
- Dr. Dong Ahn is a poultry meat and egg researcher. He is currently studying the internal quality and chemical composition of eggs from laying hens fed varying levels of distiller's dried grains with solubles (DDGS).

- Other users include: Drs. Trampel, Xin, Andreasen, Ghoshal, Nieves, Spurlock, Griffith and several National Animal Disease Center (NADC) researchers.

Extension Activities

The farm provides chickens for the Iowa Poultry Association Pullorum Testing School.

The farm aided in the production of a DVD on poultry management techniques that are to be used in case of an outbreak Avian Influenza.

The farm provides equipment and labor for the Iowa State Fair Broiler Show.

The farm manager answers numerous phone calls about poultry issues and concerns.



Animal Science 101 class learning about broiler management.



Feed used for broilers (in background).



Animal Science 101 students handling baby chicks.



Inbred chickens used in genetic studies.