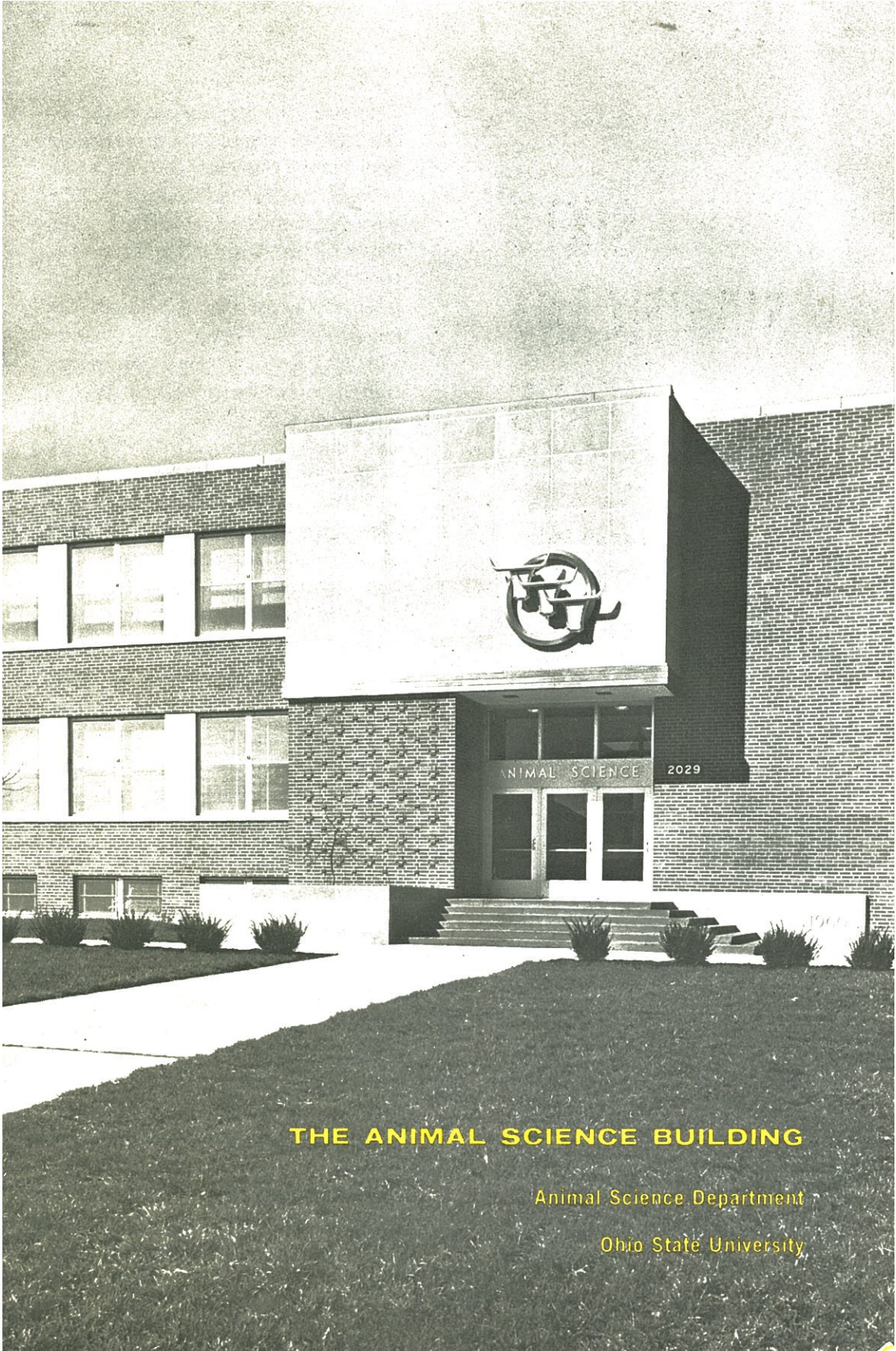




THE ANIMAL SCIENCE BUILDING

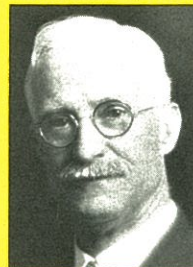
Animal Science Department

Ohio State University

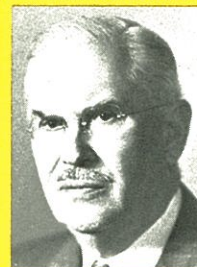
SIXTY SIGNIFICANT YEARS

OF THE DEPARTMENT AT OHIO STATE

CHAIRMEN: DEPARTMENT OF ANIMAL SCIENCE



C. S. PLUMB
1902-20



CARL W. GAY
1920-40



D. J. KAYS
1940-51



T. S. SUTTON
1951-55



L. A. KAUFFMAN
1955-58



G. R. JOHNSON
1958-

Charles S. Plumb, a graduate of Massachusetts Agriculture College was called from Purdue University in 1902, where he was serving as Director of the Experiment Station, to establish a department of Animal Husbandry at Ohio State. Some livestock work had been given by Dr. Townsend, the founder of the College of Agriculture and by Thomas F. Hunt, an agronomist who had become Dean. Professor Plumb's distinction as a teacher and previous experience of 11 years as Director of the Experiment Station at Purdue, made him an aggressive leader for the position. Headquarters of the Animal Husbandry Department were originally in Townsend Hall with an office on the main floor and a judging arena in the south basement.

The barns which housed the beef and dairy cattle, horses, sheep and swine were situated down the slope west of Neil Avenue in the vicinity of the Women's Field House. Pastures were in the Olentangy River bottom and east of Neil Avenue extending half way to High Street between 11th and 12th Avenues.

A new set of buildings were built for Animal Husbandry on Neil Avenue in 1908, after the main barn in the former group burned. The new buildings provided an office and classroom center with a large judging arena in what is now identified as Rehearsal Hall. The horse barns have since been remodeled and are now known as Ives Hall. The combined dairy and beef cattle barn is converted and shared by the Service Department for storage and

by the Veterinary Clinic for an animal hospital.

The one-man department was enhanced in March of 1905 when Dr. Carl W. Gay joined Professor Plumb. The third staff member at that time was W. H. Palmer who later became State 4-H Club Leader of Ohio.

Early prestige was gained for the department by the publication of "*Types and Breeds of Farm Animals*" by Plumb. This text was widely used and was translated for use in foreign countries. A later text, "*Types and Market Classes of Livestock*" by H. W. Vaughan in 1915 was also broadly accepted. These two books did much to advance the standing of the department in which both authors were faculty members.

The first encroachment on the physical plant of Animal Husbandry was the construction of the stadium in 1921. The polo field, tennis courts and parking area took away so much pasture area that the use of the barns was curtailed and expansion across the river was inevitable. In response to this demand, the set of buildings in the Plumb Hall area was erected and first occupied in 1926.

THE GAY ERA

The development of these facilities was the responsibility of Dr. Gay who had returned to Ohio State as Chairman of the Department. Dr. Gay had resigned his position here in 1907 to accept an assignment at the University of Penn-

sylvania and had later moved to the University of Minnesota where he was then serving as Chairman of Animal Husbandry.

Dr. Gay staffed the department with outstanding teachers such as Professor C. T. Conklin, Professor J. S. Coffey and Professor D. J. Kays. By this time, "*Productive Horse Husbandry*" had been published by Dr. Gay. Professor Kays was teaching the horse work and was to succeed Professor Plumb with the sheep section. Professor Coffey taught the swine course and a beginning animal husbandry course. These two men comprised the teaching team that won student approval and contributed much to the strong position the Animal Husbandry Department has enjoyed in the teaching area.

Professor Conklin taught the first meats course at OSU, although he was primarily the cattleman, both dairy and beef, at this time.

1917 FIRST MEATS COURSE

Paul Gerlaugh assumed the meat responsibility and Professor S. M. Salisbury succeeded with the dairy production division.

The first notable research in the Animal Husbandry Department was achieved by the first faculty members to attain Ph.D. degrees, Dr. E. E. Heiser now Chairman of Dairy Husbandry at the University of Wisconsin and our own Dr. T. S. Sutton currently Associate Dean of Agriculture and Home Economics.



1917 . . . FIRST MEAT CLASS

The years of Mr. Gerlaugh with beef cattle and meat teaching were terminated when he was appointed chief of Animal Industry at the Experiment Station. This was the beginning of closer association of the staff at Wooster with the Animal Husbandry teachers at the University. The meat teaching was assumed by F. H. Helmreich who with the encouragement of Dr. Gay and the assistance of the university administrators, developed the original plan for contact teaching and product utilization which has grown with the needs and requirements for meat processing.

John W. Wuichet was the first extension specialist devoting his attention mostly to hogs. Paul Gerlaugh followed with beef cattle. L. P. McCann succeeded Mr. Gerlaugh and was joined by L. A. Kauffman, the first sheep extension man.

The Extension teaching has been a strong cog in the development of the Animal Husbandry Department over the years. Highly qualified men in their

respective specie class have been maintained on the staff.

THE HUSBANDRY INFLUENCE OF KAYS

Professor D. J. Kays came to Ohio from the University of Illinois in 1913. Professor Kays enthusiastically promoted livestock and did much to raise the excellence of the University herds and flocks. He considered teaching to be a high calling and was a practicing example of meticulous classroom leadership. He was asked to serve as Chairman of the Department upon Dr. Gay's retirement in 1940 from this position.

A spirit of competition was an important part of the Kays administration. The show ring records of the horse division were dependent upon Professor Kays' judgment and Bob Watson's good grooming. The one steer grand championship at the Chicago International was long in developing but was an especially high honor in the Professor's sight.

Men were also important to this man. His persistence won the services of a former student and colleague, L. A. Kauffman. He filled a real niche in the immediate post-war period as leader of freshmen teaching and he was coordinating advisor to students.

The separation of the dairy production into a department by itself under Dr. W. E. Krauss took place in 1947.

SUTTON STIMULATES RESEARCH

Dr. T. S. Sutton, succeeded Professor Kays as Chairman in 1951 and assumed also the added responsibility of Chairman of Animal Industry at the Agricultural Experiment Station. It was in that year also that the name was changed to the Department of Animal Science.

Dr. Sutton stimulated further emphasis on research in breadth and depth. The establishment of a Swine Evaluation Station in 1954, was a

pioneering step in service to the livestock industry. Many improved lines of breeding stock and much new knowledge result from the work of this facility, directed by W. H. Bruner.

KAUFFMAN BRINGS BUILDING PLANS TO REALITY

Dr. Sutton's aims were pursued by Professor L. A. Kauffman who succeeded as Chairman in 1955. He also insisted on balance between teaching and research and saw a great need for expansion of many areas of the Department. A production testing program for beef cattle and sheep on Ohio farms was initiated in 1959. Professor Kauffman was chairman of the Department during the time which the appropriation for this new building was secured and he was charged with the main responsibility for developing the plans and specifications from which this present structure was built.

Bardoliermere -2nd yields favorite pasture to become the site of the Animal Science Building



OUR PURPOSE IN 1961

THE FIELD of Animal Science encompasses selection, breeding, management, marketing and processing of livestock and livestock products. Three study programs are available to the undergraduate students majoring in Animal Science. The Agricultural Program provides a broad preparation in livestock production. Emphasis is placed on management, breeding, nutrition, and selection including live animal and carcass evaluation. Students selecting the Agricultural Industries Program are interested in the business aspects of the livestock industry. Students such as prospective graduate students who wish to receive a broad training in the fundamental biological and physical sciences, select the Agricultural Science Program.

Areas of specialization for Master of Science and Doctor of Philosophy graduate degrees include Animal Nutrition, Animal Breeding, Livestock Production, and Meat Technology. Course work is taken at the Ohio State University, but many Animal Science graduate students especially at the Doctor of Philosophy level, conduct their research at the Ohio Agricultural Experiment Station. Staff members located at Wooster spend considerable time training graduate students.

Most of the Animal Science research work will continue to be centered at the Ohio Agricultural Experiment Station. Meat research, however, will be centered in the new building. The new facilities will make it possible to expand research in all areas in a coordinated program with the Experiment Station at Wooster.

Laboratories available to the Department for the first time include meat research, nutrition and physiology. Other major facilities that will be used by the more than 1,000 students each year are classrooms, conference and seminar rooms, 240 seat livestock arena, management laboratory and a complete meat processing plant (dressing, chilling, and aging, cutting, curing and smoking, sausage manufacture, freezing). Greater emphasis must be placed on carcass evaluation in teaching, research and Extension programs.

The offices of the Extension Service livestock specialists will be the operation center for livestock improvement programs reaching growers throughout the State.



OPEN HOUSE PROGRAM

MAY 5, 1961 • 2:30 P.M.

Invocation

Milton D. McLean
Director and Coordinator
Religious Center

Significance of Animal Science

Dean Roy M. Kottman
Dean College of Agriculture
and Home Economics

Remarks

Dr. Novice G. Fawcett
President, The Ohio State University

Remarks

Mr. Stanley C. Allyn
Chairman, Board of Trustees

Invitation to tour the building

Dr. George R. Johnson

THE BIRTH of a building



GROUND BREAKING . . . APRIL 1959



CONSTRUCTION . . . SUMMER 1959



CONSTRUCTION . . . SUMMER 1959



CONSTRUCTION . . . SUMMER 1960



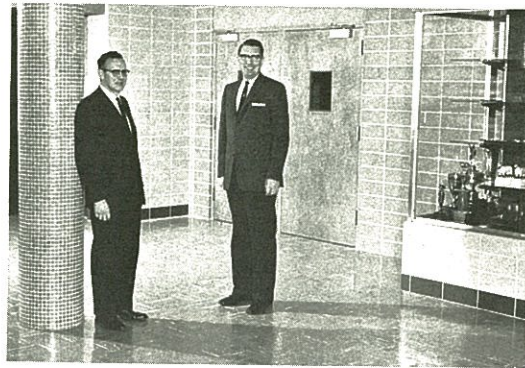
CORNERSTONE . . . MARCH 1960

FACTS

about the building

Financed by authority of HB-939 from the Capital Improvement Fund. Architects; Croce and Abbot, and William E. Linch — University architect. General Contractor; George W. Timmons, Plumbing and Heating; Chillicothe Plumbing & Heating Company. Electrical; Burroughs Electric Company, Inc. Site Improvement; General Maintenance & Engineering Company. Cost; \$987,-690. Size; Three floors, 56,000 sq. ft. in 76 rooms. Heat and hot water supplied by 3 automatic gas-fired boilers.

Controlled air is electrostatically filtered. Refrigeration; 13 compressors operate six insulated rooms with a range in temperature from 55° to -20°F. The general purpose abattoir room may be used to dress research animals or market animals for teaching carcass yield. There is planned capacity for chilling 40 pork carcasses or 20 beef carcasses per class day. The coolers, meat classroom, campus order-filling room and arena are connected with monorail. The meat classroom is equipped with two kinds of light, as well as temperature & humidity controls. The 240 seat teaching arena is divided by an automatic folding partition. Research laboratory facilities for fundamental teaching and research in the areas of animal nutrition and meat are provided.



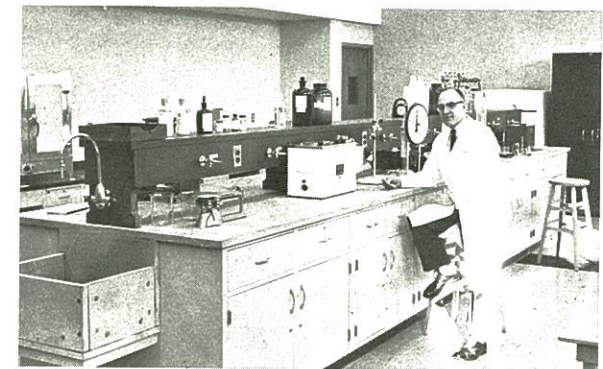
IN THE LOBBY — Professor George R. Johnson (left), chairman of the department of Animal Science, and Agricultural Dean Roy M. Kottman, pose in the lobby of the new Animal Science Building



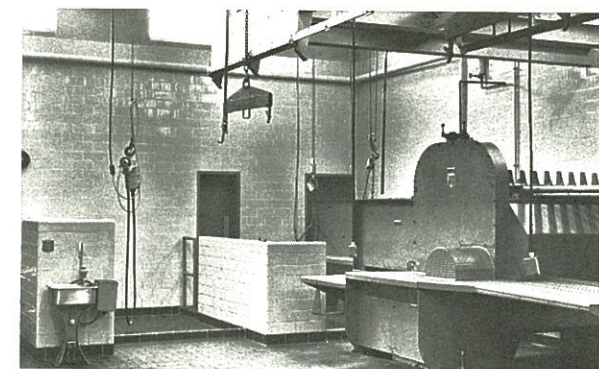
THE LIVESTOCK ARENA — 60-foot automatic electric folding partition provides a divider for the livestock Arena so that two classes, for example as illustrated here, can use it simultaneously. A portion of the partition can be noted on the right extending part way into the picture. The Arena has a seating capacity of 240.



NUTRITION LABORATORY



MEAT RESEARCH LABORATORY



THE ABATTOIR



MEAT CLASSROOM

1961 STAFF

ALTHOUSE, Paul G.
BARNES, Herbert M.
BRUNER, Wilbur H.
CAHILL, Vern R.
CLINE, Jack H.
GAY, Carl W.
GRIMSHAW, Ralph
JOHNSON, George R.
JOHNSON, Ralph M.
JUDY, John K.
KOTTMAN, Roy M.
KUNKLE, Lawrence E.
LUDWICK, T. M.
REED, Randall R.
SUTTON, T. S.

TYZNIK, Wm. J.
VAN STAVERN, B. D.
VENZKE, Walter G.
WARNER, James H.
WEISER, H. H.
WHARTON, Wm. W.
WILSON, George R.
WILSON, Richard F.
BELL, D. S.
DEHORITY, Burke
JOHNSON, Ronald R.
KLOSTERMAN, Earle W.
MOXON, Alvin L.
TEAGUE, Howard S.

The Animal Science Staff includes men with full time teaching responsibilities, full time research assignments, extension workers, many with joint teaching and research appointments and men with their major responsibilities in administration or other departments.

BOARD of TRUSTEES

of the Ohio State University and Board of Control
of the Ohio Agricultural Experiment Station.

Stanley C. Allyn
Chairman

Forrest G. Ketner

Smith L. Rairdon

John W. Bricker
Vice Chairman

Thomas F. Patton

Alan B. Loop

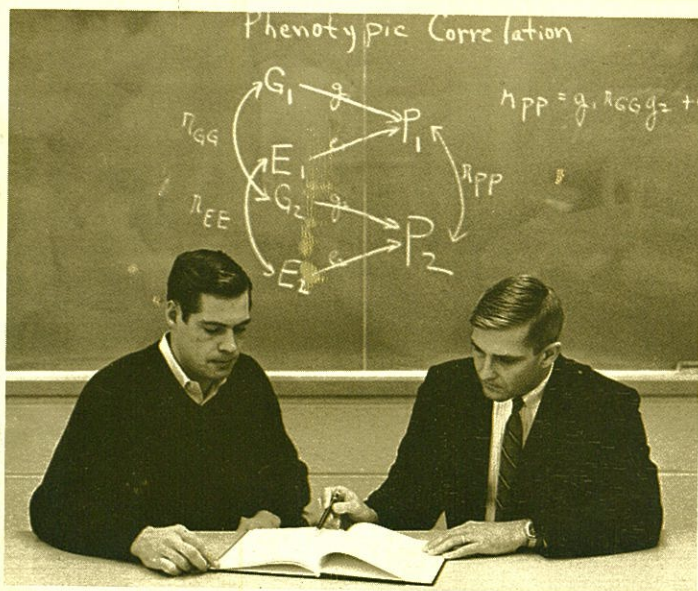
Jacob E. Davis

Robert H. Terhune,
State Director of Agriculture and
member, Board of Control

John T. Mount
Vice President of the University and
Secretary of the Boards

Animal Breeding & Genetics

GRADUATE EDUCATION AT THE OHIO STATE UNIVERSITY



Departments of Animal, Dairy,
and Poultry Science

College of Agriculture
and Home Economics

The Ohio State University
and

The Ohio Agricultural Research
and Development Center



Graduate and postdoctoral educational programs in animal breeding and genetics are offered by the Departments of Animal, Dairy, and Poultry Science in the College of Agriculture and Home Economics at The Ohio State University. The instruction and research programs are coordinated by an interdepartmental committee representing the graduate faculty of the three departments involved in animal breeding and genetics. Graduate and research assistantships and fellowships are available to outstanding students within each of the three departments.

Interdepartmental courses in animal breeding and genetics, and supporting courses in allied areas provide the basis for a strong graduate education program. Programs offered in quantitative, population, physiological, and cytological genetics prepare students for research and teaching connected with large animals and poultry, and in other phases of biological sciences where such training is desired.

The laboratories and animal species available for research at The Ohio State University and the Ohio Agricultural Research and Development Center are complemented by programs and facilities in biology, medicine, veterinary medicine, chemistry, mathematics, physical sciences, and computer science.

Course Offerings

Genetics of Animal Populations

A basic course in the theory and application of population genetics is offered in the animal departments.

Current Topics in Animal Genetics

Advanced topics covering selection index theory, nonadditive genetic variance, polymorphic systems, simulation of genetic systems, cytogenetics of animal populations, and physiological indexes in animal breeding. The course is offered each quarter, and may be taken four times by doctoral candidates. Instruction is provided by visiting professors and resident faculty.

Mathematical Genetics

The construction of mathematical models, use of path coefficients, generation matrices, least squares, and maximum likelihood methods for estimating genetic parameters and breeding values in quantitative genetics. Offered by the College of Biological Sciences. Courses in quantitative genetics and selection theory are also offered by the College of Biological Sciences.

Course offerings in cellular genetics and theoretical and applied statistics are available in other colleges. Supporting courses in physiology, biochemistry, and computer science are available.

Areas of Research

Cytological Genetics

The etiological factors involved in stillbirth and congenital malformation of cattle are being studied in cooperation with the Central Ohio Breeding Association, NOBA, Inc., and about 100 dairymen. The effects of sex, sire, inbreeding, twinning, year, season, herd, and number of services required per pregnancy, on the frequency of wasted pregnancies are being determined.

The importance of chromosomal aberrations in farm animals as causative agents in embryo and fetal deaths, stillbirths, and phenotypic abnormalities is being ascertained through work with cattle, swine, and poultry. Genetic and environmental factors that influence the rate and frequency of chromosomal aberrations are being studied.

Through the use of sex chromosome chimerae, spontaneously occurring and experimentally induced in cattle, poultry, and laboratory mammals, an attempt is being made to elucidate the specific activity of the two sex chromosomes and the autosomes on sexual differentiation and development.

Computer Simulation

Research workers in animal breeding and livestock breeders usually work with finite populations. Genetic changes which occur from generation to generation and the distribution of genetic differences are influenced by population size. The influences of stochastic processes on genetic progress and on the variance of such progress under a specified selection and mating scheme are largely unknown.

The objective of current work on computer simulation of genetic systems is to determine the variability in estimates of realized heritability from single-trait selection experiments

as influenced by population size, selection intensity, selection procedure, mating system, generations of selection, and magnitude of true heritability.

Mouse Population Genetics

A mouse genetics laboratory, which houses approximately 1,200 cages, is available for basic genetics research. Randombred groups have been established from crosses among inbred lines. These populations are used for single and two-trait selection experiments. Emphasis is placed on characters influenced by maternal effects.

Poultry Breeding and Genetics

Facilities for research in poultry breeding and genetics include approximately 1,500 chicken and 800 turkey breeders, as well as rearing facilities for 8,000 chickens and 6,000 turkey poults.

The research objectives with chickens are directed toward exploration of new techniques for identifying and utilizing genetic variation, rates and limits of genetic progress under alternative breeding systems, the influence of sex-linked genes and maternal effects, and the role of the bursa of Fabricius.

Five populations of broiler-type chickens are involved in selection experiments for rapidity of growth. Two additional populations are maintained as randombred controls. Research is concerned with relative rates dissipation of additive genetic variance, probable reasons for plateauing of progress in the oldest population, the role of reproductive fitness, and the probable reasons for appearance of non-additive genetic variance arising from intra-population selection.

Two sex-linked loci are being utilized in a "trick" breeding system to produce sight sexing in an interbreeding population. A sex-linked body dwarfing gene is being explored as a possible means of reducing adult size of the broiler

dam. Maternal effects of these loci in the hemizygous dam are being studied. This White Gold population also provides genetic markers for sex-mosaicism and the possible influence of mixtures of cell types in this phenomenon.

Four populations of egg-type chickens are maintained for studies on the role of the bursa of Fabricius. Two lines are under selection for large bursa size at hatching and two are randombred controls. Emphasis is being placed on the antigen-antibody reaction, adrenal stress, and the negative genetic correlation between bursa and body size.

Research in turkey breeding and genetics uses a randombred control population developed to assay genetic and environmental changes. Selection experiments in progress with turkeys include the genetic correlations between circulating glucocorticosteroid response to cold stress and productive performance; genetic and phenotypic correlations for various aspects of selection for egg production and body growth traits; and selection for semen yield and possible correlations with other reproductive traits.

Beef Cattle Breeding

A comprehensive crossbreeding experiment is underway with the Charolais and Hereford breeds. Growth, carcass, and maternal traits are being evaluated.

Crosses among beef and dairy breeds of both large and small mature size are being used to determine the importance of size and rate of growth as related to the efficiency of producing beef. The relative value of crossbred and purebred cows at different ages is also being investigated.

The genetic and environmental variation in the maintenance requirements of beef cattle is of major interest. The interrelationships of appetite, growth, feed utilization, and mature size as components of efficiency are being studied.

Sheep Breeding

A large population of sheep, located at Wooster, Ohio, is involved in a cooperative study with the University of Illinois and North Dakota State University. The objectives of this investigation are to define the heritable traits of economic importance in lamb meat production. Heritability and genetic and phenotypic correlations will be calculated from data collected on 24 different sire groups each year. Selection indexes will be constructed for application in the sheep industry.

The three breeds involved in the study are Columbia, Suffolk, and Targhee. Two breeds are maintained at each station and replicated at the other stations so genetic-environmental interactions can be investigated according to breed and strain differences. Two- and three-breed crosses are planned to establish the importance of mating systems for lamb meat production. Detailed carcass data are obtained on slaughter lambs.

Crossbred and straightbred animals of the Dorset, Rambouillet, and Targhee breeds are produced to study combining ability and systems of mating for lambs raised under extensive and intensive systems of management. Special emphasis is given to the importance of inheritance for developing sheep capable of twice-a-year lambing. Rambouillet and Rambouillet crossbreds have been exchanged with the Texas station to study breeding and location effects on reproductive performance.

A completely computerized production testing program, with records available on purebred and commercial flocks in Ohio and many other states, provides additional data for studies in sheep breeding.

Swine Breeding

A within-breed selection experiment using 60 Hampshire and 60 Yorkshire females is underway. The primary basis for selection is the ultrasonic prediction of leanness on live

animals. Each breed is divided into four lines with the selection criteria being lean growth rate, lean cut percentage, gross growth rate, and random control. The direct genetic response to selection for leanness and the indirect genetic responses of other economic traits such as feed use, reproductive ability, soundness, and carcass characteristics will be measured. Studies of the genetic relationships of physiological and biochemical traits with the production traits of swine are planned.

A herd of 40 females is maintained on a two-breed, rotational crossbreeding system. The progeny are used for short-term experimental work.

The Swine Evaluation Station and Herd Improvement Program of the Ohio Pork Improvement Association provide data for studies on genetic and environmental parameters of live and carcass traits. The station has been in operation since 1954.

Dairy Cattle Breeding

Research opportunities for the study of the dynamics of dairy cattle populations are readily available. Monthly and lactational records are collected routinely from herds in Ohio and Indiana participating in the Dairy Herd Improvement (DHIA) Program. These records are available for investigating improvements needed in dairy sire evaluation methods. Studies of the selection practiced in dairy cattle populations and new techniques for improving the efficiency of selection methods toward maximum genetic progress are underway.

A long-range dairy cattle breeding project to study the potential of specific combining ability has been underway since 1952. This project is conducted with the cooperation of seven state-owned institutional herds comprised of approximately 800 milking cows. Data collected from these herds provide numerous opportunities for research investigations. Routinely collected data include body weights at four

Associated Programs

Biostatistics

An interdisciplinary program in biostatistics leading to the Ph.D. degree is available at The Ohio State University. The program is administered by a committee appointed by the Dean of the Graduate School. Several courses in applied statistics of interest to students in animal breeding are being offered. Many students in the biostatistics program take supporting or minor work in quantitative genetics.

Computing Facilities

The Ohio State University Computer Center consists of a central computing facility with remote terminals in direct communication with the main center. The College terminal is located in Plumb Hall, home of the Department of Dairy Science. This terminal provides for an exceptionally convenient facility for the submission and return of up to two separate computing jobs in one day. Numerous library computer programs are available for routine statistical analyses. The central computer is an IBM 360/50/75 computing system. An IBM 1130 is located at the Ohio Agricultural Research and Development Center at Wooster, Ohio. Statistical consulting services are available to graduate students and staff.

Genetics Research in the College of Biological Sciences

A strong research program in basic genetics is centered in the College of Biological Sciences.

Of particular interest to students in animal breeding is the excellent program in theoretical and experimental population genetics under the direction of Bruce J. Griffing and S. S. Y. Young. The developmental genetics research, primarily with *Drosophila*, is directed by Verl L. House; physiological genetics by Henry L. Plaine; cytogenetics by Elton F. Paddock; and the behavioral genetics by Walter C. Rothenbuhler.

ages, scoring of ten type components, milk yield and composition, blood types, and reproductive performance.

Investigations of hair color in cattle has led to differentiating genotypes from variation in their melanin and mineral content. The limits of variability of these color patterns in cattle breeds are being established, along with the reliability of using phenotypic information as indicative of genotype for parentage exclusion in cases not applicable to blood typing. The physiological basis of sex-influenced inheritance and the association of color pattern traits as well as anatomical and milk protein genes with cellular antigens are being investigated.

Procedure for Application for Admission and Financial Support

Initial contact by interested individuals should be made by writing a faculty member listed below. Indicate your primary interests within the general area of animal breeding and request financial assistance, if desired.

Application forms and instructions will be sent to you by the Admissions Office. Admission procedures should be completed by February 1 for fellowship eligibility for the following Autumn Quarter. Early application is desirable for consideration for graduate and research assistantships, also. Applications will be considered throughout the year, and graduate study may be initiated in any of the four quarters.

Faculty

The following faculty members are actively engaged full time in research and teaching in animal breeding and genetics:

Francis R. Allaire, Ph.D. 1965. Cornell University. Selection in dairy cattle and statistical genetics. Department of Mathematics and Department of Dairy Science.

Eldon W. Brum, Ph.D. 1963. The Ohio State University. Dairy cattle breeding. Department of Dairy Science.

N. S. Fechheimer, Ph.D. 1957. The Ohio State University. Genetic and cytogenetic aspects of reduced fitness. Department of Dairy Science.

L. O. Gilmore, Ph.D. 1939. University of Minnesota. Dairy cattle genetics, congenital malformations, hair pigmentation and milk composition. Department of Dairy Science, OARDC, Wooster.

Walter R. Harvey, Ph.D. 1949. Iowa State University. Animal breeding and statistical genetics. Associate Editor, Journal of Animal Science. Animal Breeding and Genetics Award of the American Society of Animal Science. Distinguished Professor with a joint appointment in the Departments of Animal Science, Dairy Science, and Poultry Science, and the Faculty of Genetics.

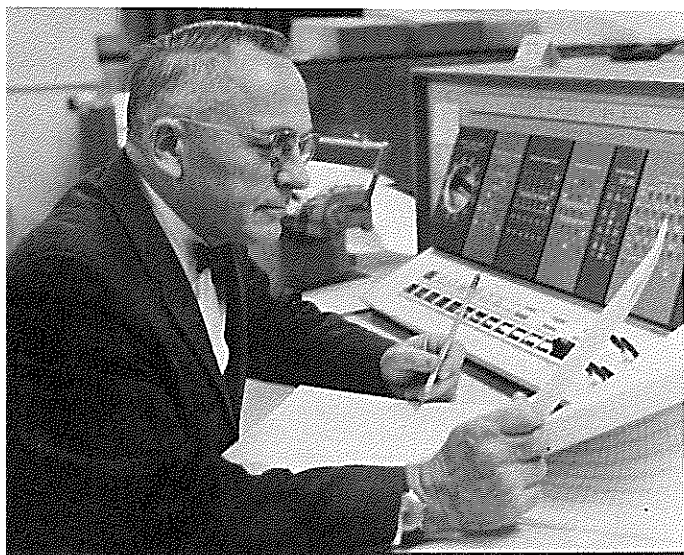
R. George Jaap, Ph.D. 1933. University of Wisconsin. Poultry breeding and physiological genetics. FAO Panel on Animal Breeding and Climatology; Editor, World's Poultry Science Journal; Fellow and Past-President, Poultry Science Association. Department of Poultry Science.

Karl E. Nestor, Ph.D. 1964. The Ohio State University. Turkey breeding and genetics. Department of Poultry Science, OARDC, Wooster.

Charles F. Parker, Ph.D. 1963. Texas A & M University. Beef cattle and sheep breeding and genetics. Department of Animal Science, OARDC, Wooster.

L. A. Swiger, Ph.D. 1960. Iowa State University. Population genetics and animal breeding. Department of Animal Science.

Wallace R. Taylor, M.S. 1955. University of Idaho. Dairy cattle breeding. Department of Dairy Science.



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The Ohio State University
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Columbus, Ohio 43210

Department of Dairy Science
The Ohio State University
735 Stadium Drive
Columbus, Ohio 43210

Department of Poultry Science
The Ohio State University
674 West Lane Avenue
Columbus, Ohio 43210

Ohio Agricultural Research
and Development Center
Wooster, Ohio 44691



Animal homes moved

By Victoria Tashjian

10 Aug 72

Animals at Ohio State have it better these days, especially Autumn Quarter when they will be relocated in all-new facilities by Don Scott Field.

These new barns for sheep, swine, beef and horses, in addition to a new feed mill, machine storage facility and a farm shop which are nearly completed, are going to be "quite an improvement," said George Johnson, chairman of the Department of Animal Science. He added that the old facilities were built in 1922 and are very outdated. The old structures will be torn down.

The dairy science barns are

going to be relocated on Lane Avenue, Johnson said. They are the only buildings which will not be in the Don Scott area.

These facilities are used for student contact with the animals, Johnson said, explaining that the area serves as a laboratory.

This location, seven miles north of campus, was selected because it is University owned land and it is partially isolated, which is advantageous for facilities where animals, especially large ones, are kept. Also, the area adjacent to the site was suitable for expansion.

The new animal science laboratory, made possible

through a \$723,000 grant from the Department of Health, Education and Welfare, will be in use Autumn Quarter.

Although no definite schedule is arranged, students will be bussed out to the area, Johnson said. He added that no actual classes are held so that students will only make the trips occasionally. This fall mostly students in advanced classes will be using the facilities regularly.

The area between the Olen-tangy River and Kenny Road, where the present buildings are located will be landscaped as green area until funds become available for additional buildings, according to the department of campus planning.

From hoof to table; OSU raises its own

4-30-81

OSU does not have to shop at Big Bear or Kroger for the hamburger and pork chops served in residence hall commons; the meat is purchased from the OSU meat laboratory.

The meat lab, located in the Animal Sciences building on the agricultural campus, affords about 40 students per quarter the opportunity to gain practical experience in slaughtering, cutting and packaging beef, pork and some lamb.

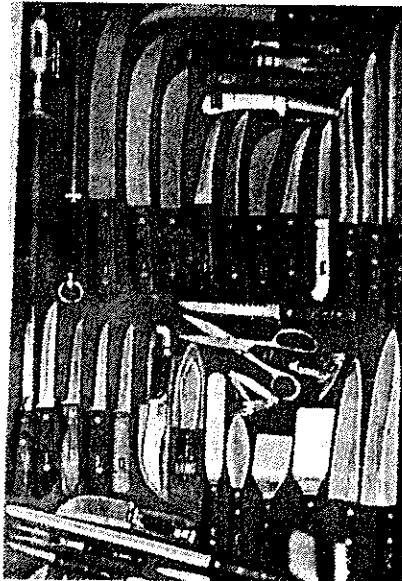
According to Paul Althouse, associate professor of animal sciences and the meat lab manager, the main purpose of the lab is to teach students to evaluate livestock from the "live animal to the edible product."

The lab provides extension, or informational services to the community, answering questions the public might have concerning meat, he added.

Although other universities have meat laboratories, OSU's is unique because it is a campus food service, Althouse said. It does not sell meat to outside purchasers.

The meat lab supplies not only the residence hall commons, but University Hospital, the Fawcett Center for Tomorrow, some of the student unions' needs, and special events such as picnics for student organizations.

"I feel it (restricting the meat sup-



ply to the university) is a definite plus to the OSU Animal Sciences Department," Althouse said. "We have an outlet for the product we use in teaching and research."

The university buys just enough livestock for the purpose of teaching and research, and only a small number of these animals are slaughtered, Althouse said. About 120 to 140 cattle and hogs are slaughtered at the meat lab each year, and from 80 to 100 sheep, he said. Slaughtering is done two or three days a week.

Most of the meat distributed by the meat lab comes from carcasses and processed meats, such as bologna and hot dogs, purchased by Althouse

from outside meat merchants. Most of this meat requires further work such as bone removal, trimming and cutting, Althouse said.

Students are hired to work at the meat lab on a part-time basis starting at minimum wage and are encouraged to work at least 10-15 hours each week. The meat lab used to hire about 60 students each quarter but budget cutbacks have limited student employment numbers, Althouse said.

Althouse said the meat lab usually attracts students majoring in agriculture, home economics, veterinary medicine and natural resources.

The lab aims to teach its employees the "ever-changing" technology of meat cutting and packaging, especially packaging, which has changed tremendously in the last five to ten years, Althouse said.

"You used to be able to have meat cut to order in grocery stores," he said. "Now everything is already packaged."

"We also hope to teach students economics in the production of livestock," Althouse said.

Brent English, a junior from Bryan majoring in agricultural economics, has worked at the meat lab for several quarters.

"It's interesting," English said. "It's a change of pace." He said he plans to use this work experience in farming after he graduates. "There aren't many people who farmed out of books and made money," he said.



Mary-Jo Mostow/ the Lantern

Quarter horses graze Friday at the OSU stables on Sawmill Road. They will be sold with 23 other horses by the department of animal science Sept. 20 to make room for new horses at the university's horse barn.

Horses to head for auction block

By Keith McCallum
Lantern staff writer

Twenty-seven horses will be auctioned at 1 p.m. Sept. 20 by the department of animal science.

The auction will be held at the university's horse barn on Sawmill Road, and will include 14 colts, five saddle-broken two-year-olds and pregnant mares.

The price range for the horses will be "really wild" because there are currently too many horses on the market, said Bob Kline, associate professor of animal science in charge of the horse herd.

A colt will sell anywhere from \$500 to \$1,500 and a two-year-old horse will sell between \$1,000 and \$2,500, Kline said.

Although some horses are used in nutrition experiments "to see how fast they can grow," they are totally healthy, and some of the horses won prizes in Ohio horse competitions, Kline said.

"These are all registered quarter horses, and many of the horses were donated by reputable breeders," Kline said.

OSU horses probably have a good reputation for breeding and show-

ing, said Rusty Dare, owner of Rusty Dare Training Stables in Hilliard. Dare purchased an OSU horse last year and it won a blue ribbon as a show-horse, Dare said.

The horses are being sold because OSU supports only 4 horses at a time, and more births are anticipated this year, Kline said.

The expected \$12,000 generated by the auction will be used to buy more equipment for the farm.

Prospective buyers may inspect the animals before the sale by contacting Kline at 422-6791.

Animal science plagued by declining enrollment

Lynn Hamilton
Lantern staff writer

A steady decline in the number of students majoring in agriculture is a major concern for the new chairman of the Animal Science Department. Charles F. Parker, a native Ohioan and former OSU researcher, said he plans to emphasize several important issues — student recruitment, faculty balance, and adapting the department to the changing needs of animal agriculture. Animal science is the study of domestic farm animals and their role in productivity and food supply. The Animal Science Department has the largest enrollment in the College of Agriculture. Despite this, enrollment in animal science has declined 32 percent in the

last decade. The College of Agriculture has lost 27 percent of its students since 1976.

Parker said there are two reasons for the decline.

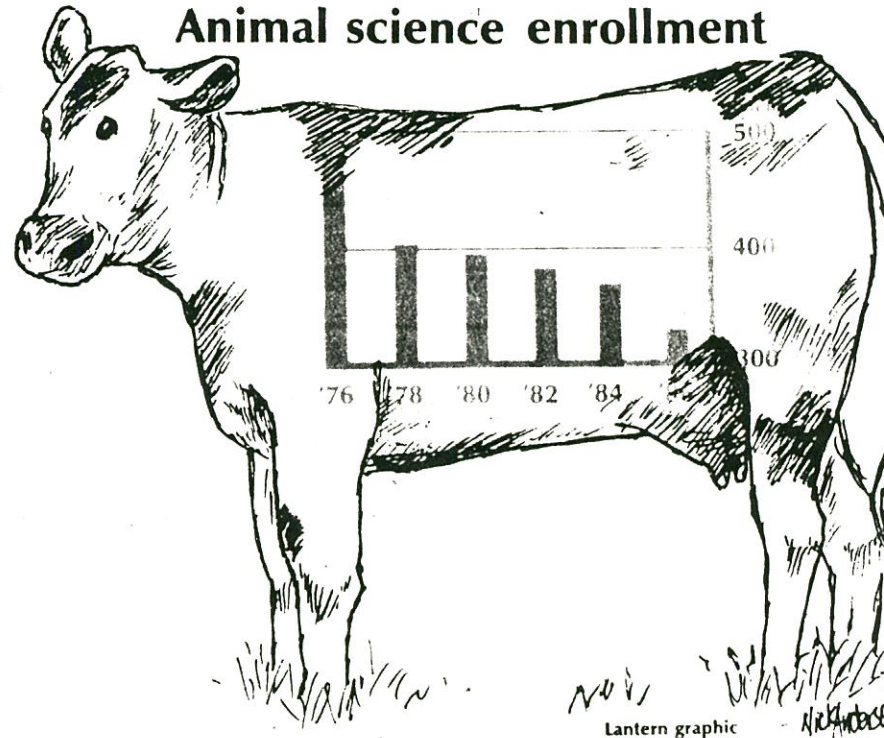
The methods of agriculture have changed, and students haven't kept up with the new opportunities, creating a tremendous shortage of students, he said.

A second factor is the decreasing number of rural students, Parker said. Fewer people are involved in farming today, and fewer students are interested in agricultural study.

"The bottom line is that there is a stronger need than ever to have more

See Page 2, **ANIMAL SCIENCE**

Animal science enrollment



Continued from Page One

education," Parker said. The college and department must find ways of dealing with declining enrollment, he said.

Parker said parents have more influence on high school students' decisions than anyone else, so a

key to recruiting more students is through informing parents.

"We want to improve communication with parents," he said. "We have to be sure that parents appreciate, more than ever, the importance of education."

In addition to recruiting, diversity among the faculty is also essential, Parker said.

Bobby D. VanStavern, professor of animal science and a member of the search committee that selected VanStavern, said the ability to steer the department's efforts in teaching and research was an important factor they looked for.

A unified faculty will be more qualified to meet the new chal-

lenges of animal agriculture, Parker said. "Animal agriculture is the world's largest commercial industry in terms of dollars," he said.

"The strong base population in the state and the variety of resources available in the state provide an excellent resource to tackle complex problems," he said.

Meat science fund offered

By LISA HILL
Lantern staff writer

A new scholarship fund is available to OSU animal science students specializing in meat science.

The Rodney F. Plimpton Jr. Memorial Scholarship Fund was established with the gift of \$15,000 from Plimpton's family and friends.

The scholarship will be awarded annually to students who are selected for their participation in

student activities, have completed two animal science courses and are in good academic standing.

"We are looking for a well-rounded student who demonstrates potential and motivation," said George Greenleaf, coordinator of Special Projects for Agricultural Development.

The fund, recently approved by the board, requires a recommendation from President Edward H. Jennings describing the fund and the money that is involved, said Madison Scott, vice president of

personnel services and secretary of the board.

Plimpton was a professor of animal science at the time of his death last May. He joined the OSU Department of Animal Science after he earned his master's degree in science and doctorate degree in meat science in 1961 and 1965.

He was nominated every year by his students for the Alumni Distinguished Teaching Award and was the first OSU professor to receive the award twice.

Renovation allows study

new animal lab to research isotopes

WICK STEVENS
Lantern staff writer

Radioactive isotopes seem like a research topic for nuclear engineering, not animal science. However, a new research lab in the Department of Animal Science is designed for study in this area.

Two rooms in the Animal Science Building have been renovated over the past two years for research in the reproductive systems in cattle, sheep and swine, said Michael L. Day, professor of animal science.

Of the two labs, one is for graduate students who are carrying out research projects. Four graduate rooms make up the new graduate research lab, each with a specific function.

The room is specially designed for the handling of the radioactive isotopes. Before a person works in this room he or she must take a safety class, Day said. The room is inspected regularly for radiation levels, he

said. Radioactive isotopes are any of two or more forms of an

element having the same property of a chemical or very closely related chemical properties and the same atomic number, but different atomic weights.

Various hormones are analyzed with solvents in another room, Day said, and the other two rooms are for microscopic work and for extracting samples.

The other lab is used for undergraduates, where a reproductive management course is being taught this quarter, Day said. Students will learn artificial insemination, pregnancy and heat detection in animals, and how to assist animals giving birth.

Micheal Wright, research coordinator of the facilities, said, "Students in the class can benefit from hands-on training. They will be able to use state-of-the-art equipment not readily available to others."

Day said, "Before these labs opened, the department either used the Dairy Science labs, or we sent samples to Wooster to be analyzed." The labs have

been in use since August, he said.

Day said he currently has several research projects underway. The main project he is working on involves trying to understand why a cow is infertile during her first ovulation after calving. "We're trying to understand how we can make it become a fertile ovulation," Day said.

William Pope, professor of animal science, said he and Day have eight graduate students working in the research lab. Pope said one of his research projects is trying to develop a way to get a sow to ovulate all her eggs at the same time. "If we can develop a way to do this, then that will decrease embryo mortality," Pope said.

Pope said several work-study and undergraduate honors students work in the labs along with the graduate students. The student employees assist with lab procedures and the collecting and processing of samples.

Pope hopes that in the future the department will be able to get a Micro-Manipulator.



Michele Tesone/t

Hu Yuntie, an animal science graduate student, works in the new animal science laboratory. Yuntie is from the People's Republic of China.



LaNelle Williams, left, and Robert Pickard conduct experiment in growing animal cells

Dispatch photo by Harry E. Walker

OSU uses lab as bait for students

By Barbara Carmen
Dispatch Schools Reporter

Down a dim, college hallway is a brightly lit laboratory where four young researchers with furrowed brows are helping solve a mystery — how to interest high school students in science.

They are experts — most weekdays, they are students at Columbus Alternative High School.

Each Wednesday, they don goggles and white lab coats, and become research scientists at The Ohio State University.

THEIR TRANSFORMATION is part of an attempt by OSU's department of animal science to persuade teen-agers that science is fun, fascinating and a good career.

"We want to provide an understanding of the opportunities that exist in science," said Charles Parker, chairman of the animal science department.

"It's important to reach out to them at this age. Once they've decided what they want to do, it's too late."

Too often, high school students don't consider fields like animal science because they've never even heard of them. So several

years ago, OSU animal science professors invited Columbus students into their lab.

Such tasks as tossing manure and washing petri dishes failed to enthrall the students, and the program fizzled.

Two years ago, assistant professors Mike White and Tim Ramsay came up with more exciting duties, including animal surgery and cell culturing.

As a result, 11 students from Columbus Alternative High School have joined the lab program and several are deciding a science career beats becoming a lawyer, a dancer or an architect.

"I always thought science was dreary and drab," senior Dawn White, 18, said, "but now I enjoy it."

Dawn, who had planned a career in architecture or psychology, entered the lab program a year ago. Next year, she'll head to OSU where she has a scholarship to study animal science.

LaNelle Williams, 15, a sophomore, wants to be a performing arts major in college, but she now plans to attend OSU for graduate work in a scientific field.

"I have learned a lot from working in the lab," LaNelle said. "You really can't do this at high school."

"You can't operate on a pig to pull out some fat to study because schools don't have pigs around."

LaNelle said she's paying closer attention to her high school biology course.

The four students — Dawn, LaNelle, Michelle Keckley, 16, and Robert Pickard, 18, — spend about five hours in the lab each Wednesday.

Mike White said, "They are looking at what diabetic blood does to normal muscle."

"It appears to slow down development. Most of the work can be used for agriculture, but it also has very strong medical implications."

THE PROGRAM does put a burden on the university. "We easily spend more than \$1,000 a year on each student," Mike White said.

He hopes OSU will eventually expand the program to other science departments.

"It's a lot of work and a lot of time for us," Mike White said, "but it's worth it when you get someone talented, like Dawn, who becomes interested."

"We need to get young people more interested in science."

New department proposed

By Crystal Jones
Lantern staff writer

A proposed combination of three departments in the College of Agriculture will unite students and faculty in the food sciences.

The proposed food science and technology department will combine the food science areas from the department of animal science, the department of food science and nutrition and the department of horticulture. It will replace the existing food science and nutrition department.

The target date for starting the department is Oct. 1, 1989.

Robert Warmbrod, acting associate dean for the College of Agriculture, said the proposal for the unified department was ratified May 9 by the University

Council on Academic Affairs and is pending the approval of the University Senate and the Board of Trustees.

"It will lead to improved and expanded teaching and research programs in foods, food processing and nutrition," Warmbrod said.

"The new department is obviously a step that is needed at this university," Warmbrod said. Major universities across the nation have combined food science and technology programs.

Fred Hutchinson, dean and vice president for Agricultural Administration and recently named provost and acting vice president for Academic Affairs, appointed eight faculty members to the Committee to study the future of food programs in the College of Agriculture in July 1987.

This committee made the recommendation for the new department and surveyed the faculty of the College of Agriculture.

Of the 591 faculty members in the College of Agriculture, 369 responded to the survey with 349, or 95 percent, in favor of the new department and 20 against it, Warmbrod said.

Mike Mangino, associate professor of food science and nutrition and a member of the committee, said the efficiency of the new department will provide a more coherent program for students and eliminate duplicate courses.

The combined department will tie research projects together, generate new ideas from a larger number of people and create positive interactions between people, Mangino said.

to unite agricultural fields

Warmbrod said, "A priority of the college is that an addition will be made to Howlett Hall and the Animal Science Building combining the two departments." This facility would house the new department.

Until then, the existing department buildings will continue to house the faculty for the proposed food science and technology department.

Mangino said there is a different emphasis in agriculture today. "It's no longer how much we can produce, but how we can take

what we produce and make it more valuable," Mangino said.

He said the new department will prepare students to satisfy the industry's focus on making a higher value product from a lower value product through processing.

"More utilization of our time and efforts will not only help us but help the students as well," Mangino said.

As of autumn quarter, 95 undergraduate and 78 graduate students were enrolled in the various OSU food programs in the College of Agriculture.

Diane Marrison, a junior from Jefferson majoring in food business management, said, "It will be a lot better having the students and faculty in one department working together."

Samantha Johnson, a junior from Somerset majoring in food business management, said it will be easier to go to one department instead of trying to choose one of the three departments.

"The broader base in food studies makes students more marketable to corporations," Johnson said.



The entrance to the Ohio State Fair, which opens today, located on Eleventh Avenue.

Kendra Smith/the Lantern

Four departments represent university at Ohio State Fair

By Patrick Dawson
Lantern staff writer

OSU students will have a say in the success or failure of the Ohio State Fair this year.

Representatives from the Dairy Science Department and the Animal Science Department will be at the fair. Veterinary Medicine and the College of Education will also be there.

Jody Black, extension associate 4-H animal science and livestock coordinator for the fair, said people from Ohio State act mostly as experts and advisors at the fair.

A MAJOR project of the Cooperative Extension Service at the fair is in the 4-H booths and activities, said Jim Helt, acting assistant director of the Cooperative Extension Service and state 4-H leader.

"The 4-H youth development

program at Ohio State is the off-campus youth outreach arm of the university," Helt said.

He said Ohio State's involvement in the fair is primarily young people from the 4-H program who go to show their 4-H projects.

There are over 170 projects in the fair ranging from model rockets to natural resources, Helt said.

THE COMPETITION is mainly concerned with the knowledge and skills the youths have gained by doing the project, he said.

Most people think of agriculture as the main product at the fair, but 4-H is bringing in over 700 horses as well as all of the displays and projects to the fair, Helt said.

He said 4-H has been heavily involved in the Ohio State Fair for the last 60 years.

Although the 4-H program is an

official part of Ohio State, it serves as part of the outreach and extension service branch of the university, Helt said.

"THE IDEA of the extension service is to extend the university out to the citizens of Ohio," said Helt.

The 4-H program is just one of four programs that are part of the Cooperative Extension Service, Helt said. The other three are natural resources, home economics and agriculture.

Helt said there are some students from Ohio State that are involved with the fair.

"Sue Mantey, a sophomore at Ohio State, is a junior fair board member and Cathy Grover is the Ohio State Fair queen, and will be a sophomore," Helt said.

THE FAIR opens Thursday and runs through Aug. 20.

OSU's animal science farms moving

BY DEAN PETERSON

Ohio State University's (OSU) purchase of the 1,102 acre Yoder Farm adjacent to the Farm Science Review site near London, Ohio, brings big changes to OSU's **Animal Science Department**. The Yoder Farm will become the home of modern livestock facilities. Many of OSU's livestock facilities in Columbus, Ohio, will be phased out.

THE OHIO FARMER recently asked Glen Schmidt, chairperson of OSU's Animal Science Department, how these changes will affect his department.

Why is this move necessary?

Our beef and swine units are on the west end of the runway at Don Scott Field. That runway will be expanded in time, forcing the units to move. Our horse unit is also at the west end of the runway.

Our swine evaluation and sheep units are south of Scott Field and as housing develops in that area, there will be pressure to

move.

At some future date, we will want to move to some other site. The Yoder Farm gives us an opportunity to move those units.

All of our buildings in Columbus were built in the late 1950s or early 1960s and we have all of the associated challenges with using facilities that old. We would need to spend quite a bit of money to upgrade our teaching and research facilities here if we stayed.

In a general sense, what will the new facilities do for your department?

It will provide us many more opportunities for research – both basic and applied research.

It will cause problems in transportation of animals from the new research facilities to our teaching facilities in Columbus. It will cause problems for students working at the new facilities who will have 45 minutes to an hour of travel.

The challenges will be still providing the student interns with the

work experience and still providing animals for our teaching experience in Columbus, but generally, we should be able to do a better job of meeting these needs.

Which of the existing livestock facilities in Columbus will move and which will stay or be phased out?

The beef and dairy units will move to the Yoder Farm. The swine evaluation unit will also probably go to the Yoder Farm because that's closer to the swine industry. The swine unit will go somewhere. The sheep unit may go or it may stay.

The swine and sheep units may go to the Yoder Farm or they may go to Wooster. Since we have to maintain facilities at Wooster for our faculty, why not consolidate them? Wooster already has a dairy herd, and relatively large beef cattle, sheep, and swine units. The horse unit will probably be moved to another farm in central Ohio, but that's uncertain at this time. □



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**Ohio State University Extension
Ohio Agricultural Research and Development Center**

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Humane Society Recognizes Animal Sciences Course

By Candace Pollock
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COLUMBUS, Ohio — An Ohio State University animal sciences course has been recognized by the Humane Society of the United States for its focus on animal welfare issues.

"Social Issues Concerning the Use of Animals by Humans," taught in the Department of Animal Sciences on Ohio State's agricultural campus, was honored during an awards presentation on Nov. 4. Instructors of the course — Glen Schmidt, J. Fred Stephens, David Zartman and Stephen Boyles — received a certificate of excellence along with a \$1,000 check. Lesley King, Director of Education and Animal Welfare of the Humane Society of the United States in Washington, D.C., was on hand to present the award.

"The Humane Society Animals and Society project promotes both the proliferation and ethics of courses related to animal ethics, animal rights and animal welfare," said King, during the presentation. "It is the excellence of the Ohio State course in regards to this that we recognize today."

The animal sciences course shares the spotlight with another college-level course in the "established course" category. The Humane Society also recognizes new college-level courses. This is the fourth year that the Humane Society has offered the awards.

"The recognition of the animal sciences course shows the breadth of the kinds of things we are doing in educating students from outside the college, as well as other departments within the college, about animal welfare issues in an unbiased manner," said James Kinder, chair of the Department of Animal Sciences.

Added Zartman, "We teach the students to examine all of the evidence, to examine both sides of the issue and through the education process, establish their own belief system."

Danyelle Dauch, an animal sciences major and senior from Bellevue, Ohio, who is taking the course, said that the issues the course raises show the different perceptions people have concerning animal welfare.

"The one thing the course has taught me is how other people see me as a hog producer. They already have this public perception before they even get to know me," said Dauch, who was raised on a hog farm. "That's kind of an eye opener and it's a really good motivation for me to go out there and change that perception."

Dauch plans to take her respect for animals and animal welfare responsibilities and apply them to an Extension education position upon graduation.

Also in attendance at the awards presentation were Bobby Moser, Dean of the College of Food, Agricultural, and Environmental Sciences; Keith Smith, Director of Ohio State University Extension; and Steve Slack, Director of the Ohio Agricultural Research and Development Center in Wooster, Ohio.

“It’s important for us and for society that we all work together to deal with animal welfare issues – to deal with animals in a proper manner and to do what’s right,” said Kinder. “Groups, like the Humane Society, that recognize courses that strive toward that goal give the courses greater credibility than would be the case otherwise.”

For more information on the Humane Society course awards, log on to <http://www.hsus.org/ace/11318> or <http://www.hsus.org/ace/11317>.

-30-



(From left) Ohio State instructor J. Fred Schmidt, Humane Society regional director Sandy Rowland, instructor Stephen Boyles, Humane Society director of education and animal welfare Lesley King and instructor David Zartman show off the Humane Society Animals and Society award. The award honors a Department of Animal Sciences course for its focus on animal welfare issues. Along with the award, the department also received a \$1,000 check.



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Vet-Med Opportunities with New Ohio State Degree Program

By Candace Pollock

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COLUMBUS, Ohio — A new academic program, being offered by Ohio State University's **Department of Animal Sciences** in collaboration with Columbus State Community College, is adding career opportunities for students interested in the field of veterinary medicine.

The dual degree program is a four-year curriculum that offers career options in the field of veterinary medicine without requiring a professional degree. Students who complete the program are trained for such positions as veterinary technician, animal behavior counselor, biomedical research technologist, laboratory animal manager, veterinary instructor, health technologist, specialty practice technician, and clinic or hospital team leaders and/or staff supervisors.

"Eighty-five percent of our first-year students majoring in Animal Sciences indicate an interest in pre-veterinary medicine, but only about 40 percent of them go on to apply for entry into a professional school. Over half of the students are changing their minds," said Amy Lahmers, Ohio State's Department of Animal Sciences student services coordinator. "This is the first time Ohio State is offering students the opportunity to obtain a veterinary technology degree."

Students enrolled in the veterinary technology program will complete their first two years at Ohio State as an animal sciences major. The third and fourth years are split between Ohio State and Columbus State with a focus on small animal medicine and the responsibilities of a veterinarian technician or technologist.

Students are also required to complete four 150-hour internships — one at Ohio State's Veterinary Teaching Hospital and three at private clinical practices, research centers, emergency/specialty hospitals, diagnostic laboratories or zoos. Graduates receive a Bachelor of Science in Agriculture from Ohio State and an Associate of Applied Science in Veterinary Technology from Columbus State. In addition, graduates become registered with the Ohio Veterinary Medical Licensing Board to become a registered veterinary technician in Ohio, and are eligible to take the Veterinary Technician National Exam that is recognized in more than 40 states to certify veterinary technicians.

"We are excited about the program and we think that it will serve students well," said Lahmers. "It's a unique program designed specifically to meet students' interest in working in an animal health field."

For more information on the veterinary technology program, visit: http://ansci.osu.edu/students_undergrad.html, or contact Amy Lahmers at lahmers.8@osu.edu, or Brenda Johnson, Columbus State Veterinary Technology Program Director, at bjohnson@csc.edu.

What is Animal Sciences?

Animal sciences is the study of the basic principles of science and their application to the biological, economic, and environmental aspects of livestock and poultry production, companion and recreational animals, and the processing of animal products. Students will receive a firm foundation in the basic science disciplines, which include animal breeding and genetics, nutrition, physiology (lactational, reproductive, and growth), biotechnology, and meat science.

In addition to learning the basic principles of science, the major also requires a broad understanding of the factors that affect livestock operations, the allied industries serving animal agriculture, and animal product processing plants. Among these factors are: economics including finance, marketing, and personnel management; soil and crop science; agricultural engineering; and environmental concerns.

Career Opportunities in Animal Sciences

Students may prepare themselves for a variety of careers with specific course emphasis which agrees with the student's goals. As a graduate with this major, a student has many employment opportunities. Many graduates work in the allied industries such as breed associations, artificial insemination organizations, feed companies, equipment companies, research laboratories, meat-packing and animal product processing plants, government agencies, biotechnical industries, and in the business aspects of chemical and pharmaceutical companies. Students may return to their home farm, start an operation of their own, or manage others' operations.

Many students continue their education for a professional or graduate degree. Veterinary medicine and graduate studies in the animal sciences are the two most common pursuits for further education, but some students have continued their study in law, human medicine, and dentistry. Some students find it advantageous to emphasize two professional areas, and they have concentrated on agricultural education or agricultural communication along with animal sciences.

Salary Trends

Beginning annual salaries for recent graduates have ranged from \$17,000 to \$30,000, with an average of about \$25,000 annually. Salaries are determined by the candidate's skills and the responsibilities of the job.

High School Preparation

Students should complete the college preparatory high school curriculum of 15 units with a minimum of four units of English, three units of college preparatory mathematics, two units of social sciences, two units of natural sciences, two units of foreign language, and one unit of visual and performing arts.

How to Major in Animal Sciences at Ohio State

Students admitted to the College of Food, Agricultural, and Environmental Sciences are qualified to enroll in the major. Admission to the college is on a competitive admission process. The primary criteria for admission are the applicant's high school college preparatory program and performance in that program. In addition, consideration is given to those applicants who provide cultural, racial, economic, and geographic diversity to the University, as well as those who possess outstanding particular talents.

Students admitted to the University have the option of directly enrolling in the college. Students are assigned a faculty adviser from the area of emphasis in which the student is most interested. Freshmen not participating in direct enrollment may enroll in University College and later transfer to the college and into a major. Transfer students who have indicated an interest in agriculture on their application for admission are admitted directly into the College of Food, Agricultural, and Environmental Sciences.

General Education Curriculum Requirements

Most students enter University College (UVC) upon enrolling at Ohio State and remain enrolled in UVC until they have qualified for and have been accepted into their chosen major and college.

While enrolled in UVC, students begin taking courses which will meet the General Education Curriculum (GEC) requirements. The GEC is a body of courses designed to ensure that each student becomes acquainted with the basic areas of academic study. To meet the GEC requirements, credit hours must be completed from the following eight areas of academic study: writing and related skills, quantitative and logical skills, foreign language and culture/international experience, social diversity in the United States, natural sciences, social sciences, arts and humanities, and the capstone experience.

Animal Sciences Requirements

In addition to the University's General Education Requirements in the foundations, natural science, social science, arts and humanities, international experience, and contemporary issues, students in the animal sciences major must complete Agriculture 100, 50 to 60 hours in

the major, 20 to 25 hours in a minor, and sufficient electives to make a total of 200 hours of credit for graduation.

Students in the major are required to take a core of six courses and sufficient credit hours to have a minimum of 50 credit hours. The required courses include: Introductory Animal Sciences, Principles of Animal Systems Physiology, Principles of Genetic Improvement, Principles of Animal Nutrition, a production course in the species of the student's interest, and a course to meet the capstone experience. In addition, a student must complete a third writing course, which may be part of one of the six required courses. Beyond these required courses, students work with their advisers to select a series of courses that will best prepare them for their career goals.

The student is also expected to select a minor which encompasses 20 to 25 hours. The minor should be a series of courses that provide breadth to education in agriculture or the development of a field outside of agriculture complementary to the major.

About Ohio State

The Ohio State University is recognized throughout the nation and the world for its innovative programs, exceptional faculty, and state-of-the-art facilities. In fact, Ohio State is consistently ranked among the country's best institutions for overall academic reputation. Because Ohio State is a major teaching and research university, our students receive excellent preparation for entry into top graduate/professional programs and the job market.

Offering over 170 majors and more than 11,000 courses, Ohio State allows students to tailor their education to their interests through double majors, minors, and personalized study programs. With more than 600 student activities and organizations, the university also offers a diversity of extracurricular experiences to those who want to be involved.

Cooperative Education and Internships

Job seekers, even ones with college degrees, sometimes find it difficult to get a job because they haven't gained any experience—but they can't get any experience because they don't have a job. Overcoming this "Catch-22" is what co-op and internship education is all about.

Ohio State's cooperative education programs offer students hands-on experience in their chosen fields. These programs offer the chance to apply the theory learned in class to real-world work situations. Currently, Ohio State has cooperative education

programs in many colleges and offers field or clinical experiences and internships in a variety of study areas.

For More Information

Contact Dr. Ray Miller or Mr. Thad Welch, Agriculture Administration, 100 Agriculture Administration Building, 2120 Fyffe Road, Columbus, Ohio 43210-1010; 614-292-6891. For more information about dairy interests, contact Dr. Peter Spike at 614-292-6564. For more information about meat animals, meat processing and horses, contact Dr. Tom Turner at 614-292-4528. For more information about poultry interests, contact Dr. Dave Latshaw at 614-688-3238.

Sample Curriculum

Freshman Year:

Course title	Credit hours
Agriculture Survey	1
Biological Sciences	10
Elementary Chemistry	10
College Algebra	4
General Physics	5
Introductory Animal Sciences	5
GEC (arts and humanities)	5
GEC (English composition)	5
GEC (social sciences)	5

Total hours 50

Sophomore Year:

Course title	Credit hours
Animal Systems Physiology	5
Course in minor	5
Data Analysis	5
Food and Resource Economics	5
Principles of Animal Improvement	5
Principles of Animal Nutrition	5
Professional support course	5
GEC (English composition)	5
GEC (history sequence)	10

Total hours 50

Junior Year:

Course title	Credit hours
Courses in minor	10
Feeds and Feeding*	5
Livestock Selection and Evaluation*	4
Principles of Meat Science*	3
Oral Expression	4
GEC (arts and humanities)	10
GEC (social sciences)	5
Electives	9

Total hours 50

Senior Year:

Course title	Credit hours
Physiology of Reproduction*	5
Animal Growth and Development* 4	
Course in minor	5
Production course in major	5
GEC (contemporary issues)	5
GEC (capstone)	5
Electives	21

Total hours 50

* Examples of courses in the major. Many different courses and pathways are available.

*This Major Series is provided for you
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