



# **A**cademic **A**ngus

*Angus herds play important roles in teaching, research and beef production at six major universities across the country.*

*by Janet Mayer*

The University of Georgia is located at Athens in the northeastern part of the state. This land grant university was established in 1801. Georgia was the first state in the developing nation to grant a charter for a state-supported university.

The 43,000-acre campus (including experiment farms) has an undergraduate student body of approximately 27,000 students with 1,162 enrolled in the Agriculture College. A total of 155 students are animal science majors.

The university's Angus herd has been maintained at the 984-acre Wilkins Beef Unit in the Piedmont region near Rayle since 1983. Operational support for the unit comes from the Georgia Agricultural Experiment Station and extramural grants from agricultural industries.

According to Terry Kiser, professor of animal science and coordinator of the purebred beef cattle operation, the main purpose of the Wilkins Beef Unit is to produce cattle for use in research. Another important objective, however, is to breed representative Angus cattle that are suited to the Southeast's environment.

A second important function of the Angus cattle is their use for teaching. A small group of Angus is designated as the "teaching herd." They are kept for the sole purpose of providing hands-on experience for university students.

The students are largely responsible for the cattle's care and management. Through these activities, students gain first-hand experience in the management of a purebred cattle operation.

The Angus herd is also used as an educational tool, with industry groups and foreign visitors viewing the cattle each year

**The base of Georgia's Angus herd of 150 cows and 50**



*University of Georgia animal science students practice A.I. at the Wilkins Beef Unit*

*Terry Kiser, (left) University of Georgia purebred beef coordinator, discusses Angus performance data with David Gazda, (right) American Angus Association regional manager, and Brice Nelson, Wilkins Beef Unit manager*



replacement heifers can be traced back to Spur Emulous Master 37, a herd sire purchased in the early 1970s from Spur Ranch. Other sires playing a major role in the performance improvement of the herd are PS Power Play and Shearbrook Shoshone.

Donations of cattle to be used in reproductive physiology research have come from Moccasin Hollow Angus, Graham Angus, Wil-We Angus and Wehrmann Angus.

The Angus Sire Summary has been used at Georgia since 1980 as a major means of genetic improvement. In recent years, embryo transfer has been added to the program to accelerate genetic progress.

A recent flush of Rita 5H11 mated to Leachman Fullback,

in cooperation with Wehrmann Angus, New Market, Va., produced 12 embryo calves. The calves' EPDs were recorded as: birthweight (BW) -7.6; weaning weight (WW) +41.1; yearling weight (YW) +63.4; and milk, +25.1.

The University of Georgia now has the largest single group of Leachman Fullback daughters in the nation,

An ongoing university research project, generating considerable interest among Angus breeders, is a study evaluating low and high birthweight bulls. The first phase of this study was concluded last year, with the results published in the *Livestock Production Science*, Volume 25, under the title, "Selection for Low Birthweight

and High Yearling Weight in Angus Beef Cattle."

The second phase of this research started in 1990. It involves stacking pedigrees within the low and high birthweight lines.

Current EPDs for Angus in the birthweight research project (actual and pedigree estimate of unborn calves) are: Cow herd — BW +2.1; WW +16.4; YW +26.3; milk +5.4. Unborn calves — BW +3.0; WW +28.5; YW +52.1; milk +12.7.

While the above data is a composite of both low and high birthweight lines, this clearly illustrates the progressive increases in both growth and milk traits that occur when stacking pedigrees for these traits. ■



✦ Kansas State Angus history goes back to the early 1900s. This Angus steer, King Ellsworth, was grand champion steer at the 1909 Chicago International. Shown with K-State's prize animal is R.J. Kinzer, a K-State professor.

A Kansas State student grooms an Angus bull for the Special K Edition Sale. ✦



ALAN ISTIAS PHOTO

## Kansas State

The 6,400-acre campus of Kansas State University is located at Manhattan in the north-central part of the state. This land grant school, established in 1863, has a student body of 21,000. Of this number, 1,400 are enrolled in agricultural studies. A total of 389 students are majoring in animal science and 165 in pre-veterinary medicine.

The university's herds of Angus, Herefords, Polled Herefords and Simmentals are maintained at the Purebred Beef Teaching Unit, conveniently located adjacent to the main campus. Here, 80 to 100 females of breeding age are maintained. The offspring of these females are used principally for class work, extracurricular judging, and as demonstration animals for local, state and national field days.

All Angus are A.I. bred, with calving season in mid-February through April. Bull calves are evaluated at weaning. Those considered

acceptable for merchandising as breeding bulls are put on feed and offered for sale the following spring at the yearly production sale.

Heifer calves are halter broken for class work and carried through the winter on a good growing ration. Students also use both bulls and heifers for fitting and showing in the Little American Royal, a student-sponsored livestock contest every April in Manhattan.

After their use in teaching and research programs, herd replacements are selected and the remaining animals are offered for sale at the Special K Edition Sale. This production sale is managed by approximately 60 animal science students, who do all jobs except serving as auctioneer.

Miles McKee, coordinator for the beef teaching herd, says these annual sales serve two important purposes. One is to provide the students with a learning experience and the other is to merchandise the

cattle properly to help maintain the teaching herd.

All money used to maintain the breeding herd and offspring must come from the cattle sale. There are no appropriations for herd maintenance.

**At one time**, K-State's cattle were shown extensively in national shows, but the practice was stopped about 10 years ago. Probably the most notable show animal was Manhattan Gal, who earned supreme champion at the 1976 Angus Futurity as well as grand champion Angus female at the American Royal, the North American and the National Western Stock Show.

The Angus herd at K-State has quite an interesting history. According to records at the school, the university has been credited with establishing the second breeding herd of purebred Aberdeen-Angus in Kansas.

The original purchase of a heifer, Eyebright 4th 7131 (7446), and a bull, Falerion

7655 (2096), was made by E.M. Shelton, K-State's first professor of agriculture, in 1881.

The school maintained a herd until 1897, at which time the Kansas Board of Regents ordered the school to dispose of all purebred livestock. Two factors were largely responsible for this order: one being that approximately one-third of the cattle had reacted to the tuberculin test; the other that the college and the regents were severely criticized for maintaining purebred instead of "practical farmer's livestock."

The reacting cattle were slaughtered and buried, and the remainder of the herd sold at public auction.

However, by 1901, at the encouragement of Kansas Angus breeders, the college re-established the herd. A sizable Angus herd has been maintained since that time. ■

# Maryland's Wye Herd

Originating in 1856 as Maryland Agriculture College, the University of Maryland has the third oldest College of Agriculture in the western hemisphere. The 1,539-acre campus of this land grant university lies within the metropolitan area of Washington, D.C., at College Park. Its student body numbers 22,553, with 800 enrolled in agriculture majors.

The Wye Angus Herd, owned by the university, is kept about 50 miles from the main campus at Wye Research and Educational Center in Queenstown. The 1,200-acre center, formerly Wye Plantation, is situated on a peninsula formed by the Wye River's tributaries, not far from Chesapeake Bay.

The historic plantation and famous Wye Angus herd were donated in 1978 to the University of Maryland Foundation by owner Arthur Houghton Jr.

Maryland students work full time for Wye Angus to gain practical experience. The cattle are also used for Ag Day activities and judging team practice. Block & Bridle

members assist in preparation of cattle for the spring production sale, which generates income to aid in the center's funding. Other funding is derived from an endowment from Arthur Houghton, sale of excess crops, sale of slaughter animals and from the university.

James Lingle managed the Wye Herd from its inception in 1938 until his retirement in 1971. Under his supervision, the Angus herd of today descended from the original 18 heifers. No outside females were ever brought into the herd.

The male side of the herd was closed between 1960 and 1989.

The herd has been reduced to a core group that contains 150 of the herd's best cows, says Dean Bryant, beef program manager. About half are bred to outside carcass sires; the other half bred to Wye sires to maintain a closed herd line. Outside A.I. bulls used in 1990 were SA Direct Drive 83, Scotch Cap, Premier Independence KN and Paramount Ambush 2172.



✦ A group of bred Angus heifers carry on the Wye Angus Herd tradition for the University of Maryland.

**The Wye Angus Herd is** described by Bryant as easy calving, moderately framed, easy keeping, problem-free cattle with adequate growth and milk production. The females are feminine, fertile cows with good sound udders and excellent mothering ability.

"Wye cattle are remembered by many people as the big growthy cattle that helped change the Angus breed during the late '60s and early '70s," Bryant says. "However, they're surprised at the small appearance of the Wye cattle today."

Actually, the Wye cattle of

today are larger and growthier than the Wye cattle of that era in terms of hip height and yearling EPDs. "They just haven't changed as much as the Angus breed in general," he says, "for the following reasons:

1. The herd remained closed until 1989, which limited the selection differential compared to the general Angus population.

2. Practical production traits, such as calving ease, fertility, mothering ability and fleshing ability were emphasized along with growth under a forage-based management system." ■

# Michigan State



✦ MSU Miss Burgess 8752, an Angus heifer owned and exhibited by Michigan State, brought several championship awards to the Spartans in 1988.

**F**ounded in 1855, Michigan's land grant university at East Lansing is located almost in the center of the state. The 5,500-acre campus has a student body numbering 42,000, with 2,500 students enrolled in agriculture majors. Of that number, 195 are in animal science.

Purebred Angus and Polled Hereford cattle are maintained at the 450-acre university farm. Their main purpose is for students to gain hands-on experience in all areas of the

beef business.

The herds also provide examples of modern, high-performance cattle for selection and evaluation courses and give staff members the opportunity to demonstrate breeding programs for genetic improvement of seedstock.

Dave Hawkins, Michigan State beef cattle coordinator, says the part of their beef program that sets them apart from other universities is the MSU purebred livestock fund.

When most universities sell

cattle, the sale revenue usually goes into a general account and is dispersed throughout different departments. At Michigan State, a revolving account allows the staff to use sale profits to apply toward buying improved foundation cattle.

This revolving account came about in the '40s when the university needed a method to upgrade its cattle quality. As a result, Michigan State has become competitive in breeding top-notch cattle.

Michigan State's Angus herd dates back to 1909, when two females were acquired from the herd of Jim Bowman of Guelph, Ontario. Approximately 50 Angus cows are maintained at the purebred unit today.

Since 1955 performance records, including heights, lengths and conformation scores, have been kept on the herd. They are used to select replacement heifers. In the late '60s the MSU animal science staff responded to the



✦ The average EPD of Michigan State's Angus cow herd ranks in the top two percent of the Angus breed for weaning weight.

major shift toward large-frame cattle by replacing most of the original cow herd with larger females from performance tested herds.

In 1979 an embryo transfer program was initiated to generate increased numbers of offspring from superior females identified in the herd. Bulls from some of the top performance herds in the country have been mated with

the cows, resulting in rapid progress toward producing fast-growing structurally sound cattle that are trim, large-framed and well muscled.

**The university is** especially proud of the fact that the average EPDs of their Angus cow herd ranks in the top two percent of the breed for weaning weight; the top three

percent for yearling weight; and the top five percent for milk.

The Michigan State staff is constantly searching for outcross sires that can be used to complement the breeding program. Sires of 1990 progeny include Brost Dan Patch, Dameron Linedrive, GFSB Excel, Grubbs MacKenzie, Harmony Hill Concorde, Hoff Hi Spade SC 491, Manhattan of Indian Creek, Nelson Bold Ruler, Pine Drive Big Sky, Premier Granada, Scotch Cap and R&J Maxima.

"Even though we're involved in a lot of industry activities, we are first an educational institution," Hawkins says. "Teaching and classroom instruction take precedence. With the purebred breeding programs developed at Michigan State, not only can we fully meet the challenge of education, but hopefully also benefit the entire beef industry." ■

## Cal Poly

**F**ounded in 1901, California Polytechnic State University is a university located midway between San Francisco and Los Angeles on California's central coast.

The school has one of the largest campuses in the nation. It's comprised of a compact 400-acre main campus and an additional 5,651 acres of rolling campus devoted to student farming, experimental architecture and other outdoor laboratory study.

Cal Poly, primarily an undergraduate school, has an enrollment of 17,500 students. Approximately 3,500 are agriculture majors, with 500 in an animal science program.

Mike Hall, senior beef cattle specialist, says Cal Poly takes a hands-on approach to education.

"In the animal science

department we don't hire herdsmen or technicians, but utilize the students to do all the work," Hall says. "This, of course, is done with close supervision by our animal science faculty. I feel that because of this type of experience, our graduates have a real edge in the job market."

Cal Poly's beef division offers four projects that give the students the hands-on experience Hall describes: show steers, commercial feedlot production, bull and progeny test cattle, and the commercial beef breeding program.

Funding required to support these extra-curricular agriculture enterprises is supplied by the Cal Poly Foundation. The Foundation finances the total operation, requiring only that students



✦ Cal Poly students learn to vaccinate cattle for the Escuela Project.

share one-third of profits with it.

In the event of financial loss, the Foundation absorbs all monetary losses with no loss to the student. Hall says without this funding, Cal Poly couldn't exist.

**Cal Poly maintains** registered Angus, Hereford

and Shorthorn herds on campus for classroom instruction in beef management and production. The Angus herd is the largest of the purebred herds with 50 cows.

The Angus herd dates back to 1942, when Ed Biaggini Sr., a local breeder, donated three

bred registered heifers to the school. He repeated the gesture the following year and, under the direction of beef cattle specialist Lyman Benion, the Angus herd was under way.

Prior to 1968, all bull calves were castrated and shown by students. One steer well remembered is Tiger V, the grand champion steer at the 1968 Grand National Stock

Show in San Francisco.

That same year, under the direction of Frank Fox, the new beef cattle specialist, all but two of the foundation females were sold. In an effort to improve the herd, 20 heifers were bought from the Tehama and Sequoia Angus herds in California. All were daughters of either K40 or Bob 12 of the Emulous line. The present herd is Emulous linebred

females, using Ankonian Dynamo or one of his sons.

Hall says they've been fortunate to work with leading breeders throughout the country who donate semen to their program. Sires that have been used in the Cal Poly program in recent years include: Power Play, Mr. T, Extra, Scotch Cap, Equalizer and High Spade. The top end of bull calves are entered in

Cal Poly's own performance bull test each year. This gives them a good comparison trial with other leading herds in the West.

Cal Poly's main goal with its purebred beef herds is two-fold, Hall says. The first is to use them as a teaching unit. The second is to produce top performance tested bulls, using a balance of traits in selection decisions. ■



In 1855 a four-year college inappropriately named "The Farmer's High School" was formed. The school, centrally located in Pennsylvania, was officially renamed Pennsylvania State College in 1874 and again to Pennsylvania State University in 1955.

The 1990-91 enrollment at this land grant university is 38,779 at the main campus, with 2,105 students in the School of Agriculture and 180 in animal science.

The primary mission of Penn State's beef herd is teaching, says Erskine Cash, coordinator of the purebred beef cattle. Herds of purebred Angus, Polled Hereford and Simmental beef cattle are maintained at the University Beef Center, located near the main campus.

Courses in livestock selection and evaluation, carcass evaluation, production, management and merchandising utilize the cattle. These courses provide students the opportunity to obtain actual cattle and meats experience.

The cattle are also used in research and Extension programs, as well as for 4-H and FFA judging contests.

Students are provided the opportunity to obtain first-hand marketing and merchandising experience through purebred cattle production sales. Sale proceeds are placed in a revolving

livestock improvement fund under animal science department control.

The original department of animal husbandry was officially organized in the School of Agriculture in 1907. Angus was the first purebred cattle breed to arrive at Penn State. Between 1910 and 1920, a small group of heifers was purchased in the Midwest and bulls were selected from the finest herds in Pennsylvania.

In 1911, the college joined the American Aberdeen-Angus Breeders Association. Membership at that time numbered 2,198.

**From its inception,** through the '40s the herd was expanded and shown in livestock shows primarily in the East.

A revitalization of the Penn State Angus program began in the '50s under the leadership of Herman Purdy. With the use of Bardolier bred bulls and a lot of dedication, Penn State successfully showed and sold cattle all over the United States and Canada.

Following Purdy's retirement in 1972, Cash continued the program, concentrating on breeding show quality cattle that also would excel in performance traits. Over the last four decades, the herd has developed into one of the most highly respected Angus herds in the country.

The breeding program



Students visit with breeders and share information prior to the Penn State Angus Sale of Performance Graduates.

resulted in two All-American Angus Futurity supreme champions, PS Power Play 197 and PS Princess 117. PS Power Play was the No. 1 sire in number of calf registrations in 1984 and ranked in the top five Angus sires from 1981-86. He was the No. 1 sire of Pathfinder daughters in 1988, 1989 and 1990.

In the present Angus herd the emphasis is on optimum performance in economically important traits, such as fertility, calving ease, milk production, growth and carcass. Since the herd is relatively small, and there has been a rigid selection program for two decades, the range of

within-herd ratios is narrow.

The Penn State breeding program has been based on utilization of bulls with balanced EPD information. The current average EPD status of the cow herd is as follows: number of cows, 66; BW +4.3; WW +26.2; YW +41.2; milk +9.3.

Penn State participates in Pennsylvania and West Virginia performance bull tests. Herd bulls are currently standing at stud at Atlantic Breeders Cooperative, Select Sires Inc., Sire Power Inc. and 21st Century Genetics. ■