

June 22-26

June 22-26		Locals	Reg. Daily	Reg. Weekly	50 M's	Reg. Radio	X-List	Adj. Count	Hometowners	PSA's	Explanations
DATE	Stories and Outlines										
1-6-22-81	Angus Cattle	/	/		/						Duncan - Sp. Ag List, AS, 40, Dr. Robert Long
2-6-23-81	Elec. Eng. Portney	/									Preston
3-6-23-81	Outline "										"
4-6-23-81	Playwriting	/	/					/			Cheryl - specialists
5-6-24-81	developing national	/						/			Duncan
6-6-24-81	Project analysis dev. co	/									"
7-6-24-81	" Outline										
8-6-25-81	Red Raider							/			Harvey
9-6-25-81	air conditioning	/	/		/						Preston - sp. list



# Texas Tech News

UNIVERSITY NEWS AND PUBLICATIONS/P.O. BOX 4650/TEXAS TECH UNIVERSITY/LUBBOCK, TEXAS 79409/(806) 742-2136

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ATTENTION: Agriculture editors

LUBBOCK--Six registered Angus cattle have been added to Texas Tech University's teaching and research herd.

Professor Robert A. Long of Texas Tech's animal science faculty announced the purchase of the registered Angus breeding stock with a grant from Mrs. Floyce Masterson Bates of Guthrie.

Mrs. Bates operated the F Cross Ranch at Guthrie, which maintains a large commercial Angus herd certified by the American Angus Association.

Dr. Long selected and purchased the Angus stock from Greenway Angus of Ocala, Fla. The animals are from an inbred strain of Angus cattle line bred to the bull Ankonian Dynamo, winner of both the International and Denver Grand Championships.

"Ankonian Dynamo was the sire of more registered Angus calves in 1976 and 1977 than any other bull," Long said. "He is a superior sire, as shown by the American Angus Associations's field data sire summary."

Texas Tech's new Angus bull is Greenway Predominance, a grandson of Ankonian Dynamo on both his paternal and maternal sides. Miss Emulous B, the top performing cow in the former Ankony Angus Corp.'s herd, appears three times in the third generation of Greenway Predominance's ancestors.

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Long, former executive vice president of Ankony Angus Corp--the one-time owner of the largest Angus herd in the United States--has had a long association with Angus strains of Emulous origin.

"Inbreeding increases uniformity and predictability in cattle," Long explained. "But it can reduce size, vigor, growth rate and fertility unless the cattle are rigidly culled."

Greenway Predominance is an embryo transplant, an animal carried through gestation and birth by a cow that was not his mother. Because modern fertility drugs allow multiple conceptions in cows given artificial insemination, Long said, the fertilized eggs, or embryos, are transplanted to other cows at the same stage in the reproductive cycle as the dam. The multiple embryos of preferred breeding stock are then carried to term by other cows.

Texas Tech has 38 other Angus cows in its teaching and research herd, besides the five recently purchased. The new additions are all pregnant to sons of Ankonian Dynamo, which increases the inbreeding, Long pointed out.

The herd is maintained under a uniform nutritional and management regimen typical of the industry, the professor said. Faculty, staff and students maintain complete performance and production records. Animal science students have the opportunity to work with the herd and observe the breeding, feeding and management of cow and calf herds. They also learn methods of record keeping and evaluation procedures needed for improving herds and breeds, he said.

The new registered Angus breeding stock was on display at the Texas Tech Livestock Pavilion during the annual meeting of the Texas Angus Association June 18-20.

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LUBBOCK--A Texas Tech University electrical engineering professor and a former doctoral student have been recognized by the National Aeronautics and Space Administration for their development of a system to obtain and transmit physiological data on astronauts.

Dr. William M. Portnoy, a Texas Tech faculty member since 1967, and Lawrence J. Stotts of Fort Worth, a 1978 Texas Tech doctoral graduate, each received a \$100 honorarium and a certificate of recognition from NASA.

Portnoy and Stotts developed a miniaturized digital telemetry system for physiological data transmissions. The system was designed for use on astronauts performing duties both in and out of the space vehicle.

A report of the technical innovation was published as a NASA Tech Brief.

The award was the fifth time Portnoy had been similiarly honored by NASA for his work.

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2-6-23-81



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NASA AWARD--Texas Tech University Electrical Engineering Professor William M. Portnoy, left, accepts congratulations from College of Engineering Dean John R. Bradford for an award from the National Aeronautics and Space Administration. Portnoy and former doctoral student Lawrence H. Stotts were honored by NASA for their development of a physiological data transmission system for use on astronauts during space flights. (TECH PHOTO)

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3-6-23-81

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ATTN: Drama/Theater Editors

LUBBOCK--Emerging from a long pessimistic, absurdist period, theater is becoming more humanistic and optimistic about mankind, said playwright and author Sam Smiley.

Smiley, guest theater professor and author at Texas Tech University this summer, said craftsmanship also is returning to the theater and there is a larger, more varied market for playwrights in 1981 than ever before.

A serious problem for contemporary theater is, he said, the lack of an avant-garde -- "an experimental wing of playwrights making new waves."

"In the 1960s, we threw everything out on stage," Smiley said. "Total abandon has been done and is not original anymore. We need a new direction."

That direction may be that playwrights become more sensitive, more human or more religious, in a sense, he said.

"Plays today treat serious subjects," he said. "We see characters with serious problems that can sometimes be light and humorous, but remain serious. The audience can perceive through the character's problems, our own problems and learn to cope with them."

He cited "The Elephant Man," 1979 Tony award-winning play about a 19th Century Englishman suffering from a disfiguring disease, as representative of this group of plays.

Others, he said, include "Wings," about a stroke victim, performed this year by the Texas Tech University Theatre and "Children of a Lesser God," about a deaf girl, now being performed in Dallas.

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As guest professor this summer on the Texas Tech campus, Smiley is directing aspiring playwrights in the skills of his craft.

Teaching a six-weeks graduate seminar in playwriting and screenwriting, he directs 11 students to write every day and struggle to learn what action is and how to write it.

"Action and the process of change are the central features of a play," Smiley said. "Merely dialogue, confrontation and conflict are not drama. We need intention, discoveries, decisions and actions."

Although he believes a writer is a writer -- someone who perceives and creates with words, Smiley said the playwright is limited to dialogue alone.

If a writer wants to show active interaction between human beings, he will probably write a play, Smiley said. If the writer wants to penetrate people's minds, he will probably write fiction.

Smiley said the playwright has an advantage over other writers because he works closely with people.

"The playwright can't just write in a vacuum. He must realize there are actors, producers and directors out there who will make his writing come alive and make it better," Smiley said. "The fiction writer never sees that."

Smiley introduces his students to the realities of playwriting by inviting student actors to class to improvise scenes written by the class members. Critiques and comments come from the professor, the actors and the students, all in an effort to make something "pretty good" a lot better.

Smiley said there is a lot of admirable talent in the summer class made up of students from varied fields including political science, television production, English, music, theater arts and fine arts. Class members are each developing a full, one-act play to submit to Smiley at the end of the course.



Plays will be critiqued and returned by Smiley who will be back in Nashville, Ind., directing a summer play while students are finishing their course requirements. He is artistic director of Nashville's Brown County Playhouse.

Smiley is also director of the playwriting program at Indiana University in Bloomington, Ind.

He is writing a play, "I Am Sunlight," about a white man and an Indian woman who are married. He said the play is really about the American Indian. Under contract with a producer, Smiley recently finished a screenplay, "Spur," based on a novel.

His play, "Hoodman Blind" was performed last year in San Diego and another play, "Optical Illusions," was recently performed in Albuquerque.

Smiley was a guest professor and director at Texas Tech during the summer of 1975. He came to the university at the invitation of Dr. Richard A. Weaver, chairman of the Texas Tech Theatre Arts Division and a former student of Smiley's.

Smiley accepted the same invitation this year because he said he regards the Texas Tech theatre program as "one of the best in the Southwest."

"They produce excellent doctoral candidates and produce excellent dramatic work under the direction of Ronald E. Schulz and Dr. George W. Sorenson," he said.

Smiley's only regret is that summer sessions are too short to produce any of the work being developed in the summer class.



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LUBBOCK--Helping developing nations raise their standard of living may someday yield returns to American agricultural producers, a Texas Tech University agricultural scientist said.

Dr. William F. Bennett, associate dean for Texas Tech's College of Agricultural Sciences, said, "Only nations with higher standards of living than that of most developing nations can afford to buy the agricultural commodities produced by the American farmer."

Bennett stressed it is in the mutual interest of both developing and industrialized nations to raise Third World living standards. Cost-effective development projects are vital to this process, and developing nations with limited resources need project analysis to ensure the highest return for their investments in large-scale projects.

Bennett is one of four coordinators of a special six-week project analysis course for 14 government officials from developing nations involved in national or regional planning and development. The course June 4 through July 16 is being taught by members of Texas Tech's agricultural economics faculty.

Other coordinators of the course are Professor Sujit K. Roy, interim chairman of the Department of Agricultural Economics, and Professors Emeritus T.L. Leach of agricultural education and A.W. Young of agronomy.

Roy, who recently returned from a two-year leave of absence to the University of Khartoum, Sudan, explained that economic feasibility studies of proposed development projects are important in developing countries.

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"The formulation and analysis of development projects is the crucial responsibility of government ministries," Roy explained. "If a ministry gets money for a project, say for farming, livestock or irrigation, it needs to make a cost-benefit analysis before launching the project."

Course participants are from Egypt, Ethiopia, Indonesia, Jamaica, Kenya, Nigeria and Tanzania. All hold a minimum of a bachelor's degree in disciplines such as engineering, animal science or agricultural economics. Their participation is sponsored by the United States Agency for International Development, the Food and Agriculture Organization of the United Nations or by their own governments.

The project analysis short course is sponsored by the Office of International Cooperation and Development, U.S. Department of Agriculture. USDA officials invited Texas Tech to offer the course because of the high demand for this kind of training, Bennett said.

The intensive course includes classroom instruction, assignments and field trips. A field trip to Alamosa, Colo., coordinated by W.G. Kennedy Jr., former state economist for the Colorado Soil Conservation Service, is set for July 6-10.

Texas Tech faculty members teaching the course include Professors Aditi Angirasa, Bob Davis, Henry S. Foster, Rex P. Kennedy and Arthur L. Stoecker.



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VISITING OFFICIAL--Scanning a world map as they discuss development projects abroad are, from left, Professor Sujit K. Roy, interim chairman of Texas Tech University's Agricultural Economics Department; Gebremariam Berhanu, head of the planning and programming department, Ministry of Tea and Coffee Development, Ethiopia; and Professor Rex P. Kennedy of Texas Tech's agricultural economics faculty. Berhanu is at Texas Tech for a six-week project analysis course sponsored by the U.S. Department of Agriculture. Roy is course coordinator and Kennedy is an instructor. (TECH PHOTO)

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CONTACT: Harvey Landers

LUBBOCK--For Kurt Harris of Stratford 1981-82 will mark the fulfillment of a lifelong dream as he serves as the Red Raider, Texas Tech University's symbol of spirit and pride.

Harris, an honor student in Texas Tech's College of Agricultural Sciences, will ride Happy VI-II, a black Quarter Horse donated to Texas Tech by the late Anne Burnett Tandy, her daughter, Mrs. B.F. Phillips, and the 6666 Ranch, at football games and other public events.

In March Harris was named the 1981-82 Red Raider in a ceremony in Texas Tech's Jones Stadium.

He grew up on a farm and has been around horses all his life. He participated in 4-H horse shows and rodeos and was a member of judging teams in both 4-H and at Texas Tech.

Harris first saw the Red Raider when he was in junior high and dreamed of becoming the rider one day.

"I think the Red Raider actually encouraged me to come to Tech," Harris said. "I have always been a Red Raider fan and now I am the Red Raider."

Harris is president of the Pre-Vet Club at Tech and is a member of the Aggie Council, Alpha Zeta agriculture honor society and the Saddle and Sirloin Club.

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Harris has trained and shown halter, performance and running Quarter Horses. His showing career includes both 4-H and American Quarter Horse Association events. He has participated in the state 4-H Horse Show, been an instructor at State 4-H Calf Roping School and held clinics for young people. He has judged both on his local 4-H team and with Texas Tech's Livestock Judging Team. Last year he was high individual in the horse division and third, overall, at the Fort Worth Stock Show.

He has broken and trained colts for area horse owners and been a stallion and mare handler at Stratford Stallion Station. He also has been a veterinarian's assistant at the Stratford Animal Hospital.

To become the Red Raider, Harris had to pass a riding test, submit a written application stating his qualifications and interests and to undergo a personal interview.

The tradition of the Red Raider thundering around the sidelines before each game and leading the team onto the field began officially on January 1, 1954, at the Gator Bowl game between Texas Tech and Auburn. Texas Tech won that game and the Red Raider won a place in university history.

The previous Red Raider was Kathleen Campbell of Portland, Texas. When Campbell handed over the reins to Harris in March, it was the first ceremonial transfer of the title held since the Red Raider tradition started in 1954.

Campbell received a Red Raider jacket, a certificate of appreciation and a photo of herself with Happy VI-II.

Harris received a \$1,000 scholarship from the Texas Tech Student Foundation. This is the first time the Red Radier title has been accompanied by a scholarship.



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LUBBOCK--Between evaporative cooling's advantage of low cost and refrigerated air conditioning's superior cooling lies a great comfort and price void.

Texas Tech University Mechanical Engineer Jerry R. Dunn aims to fill that void with a cooling system that will lower both the indoor temperature on hot summer days and the cost of keeping cool. Although still in the experimental stages, Dunn's solution is simple in theory.

"Our idea is to combine the best of both systems," he said, "to get the lower initial and operating costs of evaporative air and the improved cooling of refrigerated air."

The experimental system uses water as an evaporative cooler does, the cooling coil of a refrigerated unit and an additional element--a heat exchanger. The functional difference between the system and a traditional evaporative cooler is the experimental unit does not humidify the air used to cool the residence.

Called a modified indirect evaporative cooler, the system and its concept have the potential of extending the geographic range of evaporative coolers from arid and semi-arid regions to more humid areas, Dunn said.

Crucial to the system is the heat exchanger which allows the transfer of heat from one air stream to another. Simply stated, two air streams are used--a primary one from outside the building and another one from inside the structure.

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The secondary air stream from inside the building is sprayed with water as it passes through the heat exchanger where it absorbs heat and cools the primary air stream passing through the other side of the heat exchanger. The temperature of the primary stream is further cooled by the condenser and coil of a conventional refrigerated system before it is blown into the room.

By combining the two air conditioning concepts, Dunn said the new system has two operating advantages. Less air flow is required than for a standard evaporative cooler, and less energy is used than in a refrigerated air system.

"We measured the performance of our laboratory system and then calculated by computer what our energy use would be," Dunn said. "We came up with more than a 50 percent reduction in electric consumption."

In the simulated performance, electric usage dropped from the 23.5 kilowatt hours required by a refrigerated system to 10 kilowatt hours. Those figures were calculated for a day when temperatures reached a 94-degree maximum and a 72-degree minimum and for a house with 2,100 square feet.

By refining the system, Dunn estimated electric consumption for cooling could be reduced to 7.5 kilowatt hours in an identical simulation. Although that is still more energy than an evaporative unit would use, the system performs better than evaporative cooling because it lowers the air flow requirements necessary to maintain comfortable temperatures and can operate in more humid climates.

Another major saving could be realized through lower initial equipment costs. Although it is hard to estimate all the savings that would accrue through mass production technology, Dunn said a 25-50 percent cost reduction from refrigerated air conditioning equipment "appears to be achievable."



Other factors could reduce energy and equipment costs further. Those being explored by Dunn and his associates include determining the best relative size between the refrigerated component and the indirect evaporative unit for best energy efficiency and deciding the minimum air flow requirements to maintain comfortable living conditions.

Other potential cost-cutting areas to be examined include an automatic system that would run the refrigerated component of the indirect evaporative cooler only when needed. Methods of storing the cool temperatures that could be generated at night and then retrieving them during the day also will be studied.

A step being considered for the next phase of the project is to install an indirect evaporative system in a residence or light commercial building. Because the equipment requires ductwork and does not have the capability of being added on to a conventional evaporative system, a new structure will be used.

A decision will be made later whether to build the experimental system in an arid or semi-arid area where evaporative cooling is used effectively or in a more humid area which does not lend itself as well to that type of cooling.

"If shown feasible in more humid areas," Dunn said, "the energy savings could be even more substantial, once indirect evaporative units are commercially available and widely used."

The cooling research has been funded by the Texas Tech Center for Energy Research and the Texas Energy and Natural Resources Advisory Council.



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LUBBOCK--Electricity from the Crosbyton Solar Power Project will be used to power radio transmissions during a weekend exercise by the Radio Amateurs at Texas Tech University.

The local radio club will be participating in a 27-hour nationwide drill Saturday through Sunday (June 27-28) and contacting other amateur radio operators in mock emergency drills.

Participants in the drill are not allowed to use conventional power sources so the Texas Tech club decided to use during daylight hours power generated by the university's solar project in Crosbyton.

The solar collector in March produced the first electricity ever generated from solar steam and sold commercially.

When power from the solar collector is not available during the radio drill, a 10-kilowatt portable generator will be used by the radio club.

The radio drill will run continuously from 1 p.m. Saturday until 4 p.m. Sunday at the solar facility south of Crosbyton. Ten club members will participate in the drill which will test emergency communication procedures.

The 65-foot diameter solar collector is the prototype of a proposed five-megawatt system of 10 200-foot diameter solar dishes that could provide much of Crosbyton's future electric needs.