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

CONTACT: Dan Tarpley

Dr. Cecil Mackey, president-elect of Texas Tech University, and Mrs. Mackey will be honored at a public reception from 5-6 p.m., Friday, (Aug. 6), at the Ex-Students Building on campus.

Announcement of plans for the reception was made jointly by Glen Cary of Dallas, president of the Texas Tech Ex-Students Association, and Clint Formby, chairman of the Board of Regents of Texas Tech University and the Texas Tech University School of Medicine. The Ex-Students Association and the regents are co-hosts.

Formby and Cary emphasized that the public is invited to the reception to meet Dr. Mackey and Mrs. Mackey. He will assume the presidency of Texas Tech Sept. 1. He comes to Texas Tech from the presidency of the University of South Florida, Tampa. Dr. Grover E. Murray retires from the presidency of Texas Tech Aug. 31 after 10 years of service.

-30-

2-8-2-76

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

CONTACT: B. Zeeck

LUBBOCK--Dr. Anson R. Bertrand, dean of Texas Tech University's College of Agricultural Sciences, was notified by the White House Monday (Aug. 2) that President Ford has named him to serve on the seven-member Board of International Food and Agriculture.

Bertrand had been notified previously by the office of Rep. George Mahon that his appointment was expected.

The International Development and Food Assistance Act of 1975 called for the establishment of the board under its famine prevention and freedom from hunger provision. Four members of the board hold university related positions and three represent the public sector.

The board will participate in the planning, development and implementation of agricultural programs and initiate regulations for and the monitoring of those programs. It will participate in formulating basic policy, procedures and criteria for project proposals, and it will review and monitor projects.

It will also keep a roster of universities and organizations interested in and capable of participating in the work authorized by the board.

Bertrand is the immediate past president of the Soil Science Society of America and earlier this year he was named to represent that organization on the board of directors of the Council for Agricultural Science and Technology (CAST), established to serve national policy setting groups, including Congress, needing agricultural expertise.

-more-

Bertrand was named dean of agricultural sciences at Texas Tech in 1971, coming from the University of Georgia where he was chairman of the agronomy division.

For three years, 1964-'67, he was the administrative and technical supervisor of soil and water management research for the U.S. Department of Agriculture in nine southeastern states and Puerto Rico. He was director of the Southern Piedmont Soil and Water Conservation Center in Watkinsville, Ga., from 1961 to 1964.

Prior to his service with the Department of Agriculture, Bertrand taught at Purdue University where he earned the doctoral degree. He is a graduate of Texas A&M University and earned the master's degree at the University of Illinois.

He is a member of the editorial board of the Journal of Soil and Water Conservation, a member of the executive committee of the American Society of Agronomy, one of two Texas Tech representatives on the board of the Organization for Tropical Studies, a member of the American Academy of Sciences Committee on Education for Agriculture and its Committee on Research to Meet World Food Needs.

He is the author of 44 scientific publications and co-author of a book, "Soil Conservation," published by McGraw-Hill and translated into both the Russian and Slavic languages.

-30-

1-8-2-76

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

CONTACT: Dan Tarpley

David Murrah, assistant director of Texas Tech University's Southwest Collection, has completed an advanced workshop on College and University Archives at Case Western Reserve University, Cleveland, Ohio.

The session provided intensive study related to acquisitions, preservation and maintenance of college-related historical manuscripts and records. Nationally recognized university archivists presided over several sessions.

The Southwest Collection, which serves as a regional manuscript repository, houses more than two million leaves of university-related material.

-30-

3-8-2-76

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

CONTACT: Charley Bankhead

Dr. James Culp, Texas Tech associate dean of arts and sciences, has been elected to the nominating committee of the National Council of Teachers of English (NCTE).

Culp was elected to a one-year term. He will take office after the NCTE annual convention, which will be held in Chicago in November.

The NCTE will sponsor a series of conferences, institutes and other meetings related to the teaching of English during the academic year, first of which is the Southwest Regional Conference on English in the Two-Year College, San Antonio, Sept. 23-25.

-30-

4-8-2-76

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

CONTACT: B. Zeeck

LUBBOCK--A lecture and film series on Africa, presented at Texas Tech University especially for persons interested in working in Africa, has been opened to the public.

The series has been arranged by the International Center for Arid and Semi-Arid Land Studies. Deputy Director Idris R. Traylor said the series was so unusual it was decided to invite any who might be interested. Programs are free.

Dr. Ralph Faulkingham, an African specialist who has lived and worked in Africa, will give two lectures, one at 3 p.m., Thursday, Aug. 5, and the other at 10 a.m., Friday, Aug. 6, both in room 117 of the chemistry building.

The first lecture will deal with the historical and cultural setting of Africa and the second With cultural constraints in agricultural development in Niger.

Faulkingham is a member of the anthropology faculty at the University of Massachusetts and is currently doing research at the University of California, Berkeley.

Another lecture at 3 p.m., Tuesday, Aug. 10, in room 5 of the chemistry building will deal with the problems of rural development in Africa.

-more-

ICASALS africa series/add 1

Three brief films on African village life will be presented at 1:30 p.m., Monday, Aug. 9, and a full length film (one and a half hours) will be presented at 1:30 p.m., Wednesday, Aug. 11, in the chemistry building auditorium. The longer film, "Mandabi," illustrates the impact of new technology on Africa.

-30-

6-8-3-76

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

CONTACT: Charley Bankhead

Dr. Herald W. Winkler, chairman of the Texas Tech University department of petroleum engineering, has received the Society of Petroleum Engineers (SPE) Lester C. Uren Award.

The award is presented annually by SPE to recognize achievements in petroleum engineering technology. Winkler received the award for his work in subsurface applications, an artificial lift method of petroleum extraction.

Winkler will be recognized at the SPE Awards Luncheon later this year in New Orleans. SPE represents some 25,000 members world-wide.

-30-

7-8-3-76

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

CONTACT: B. Zeeck

LUBBOCK--Dr. S. M. Kennedy, University Professor at Texas Tech University, is in Washington, D. C., today (Thursday, Aug. 5) for a ceremony promoting him to the rank of brigadier general in the U. S. Army Reserve.

The ceremony will take place in the office of Rep. George Mahon of the 19th Texas Congressional District.

Kennedy serves as deputy chief for mobilization to the chief of the Army Reserve, Maj. Gen. Henry Mohr.

At Texas Tech University, Kennedy formerly served as vice president for academic affairs. He is a political scientist who earned the bachelor's, master's and doctoral degrees at Texas Tech.

-30-

11-8-4-76

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

CONTACT: B. Zeeck

LUBBOCK--Dr. Billy I. Ross, chairman of Texas Tech University's department of mass communications, has been elected president of the American Society of Journalism School Administrators.

His election came at the annual meeting of the society, Aug. 1-4, held at the University of Maryland in conjunction with the Association for Education in Journalism. The society has approximately 100 members.

Other officers are President-elect Joe Milner, Arizona State University; Vice President Ronald Farrar, University of Mississippi, and Secretary-treasurer Donald Grubbs, University of Northern Illinois.

-30-

20-8-5-76

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

CONTACT: B. Zeeck

ATTENTION: SPORTS EDITORS

LUBBOCK--Anne T. Goodman, who has 13 years' experience in competitive swimming, has been named swimming coach at Texas Tech University.

Miss Goodman's appointment becomes effective at the start of the fall semester, Aug. 30, according to Jeannine McHaney, director of women's athletics.

The newly appointed coach is returning to Texas Tech from Indiana University where she was an associate instructor in the department of physical education for women and manager of the Indiana University men's swimming team. She earned the master's degree at Indiana and the bachelor's degree at Texas Tech. She was an honor student at both institutions.

During the 1971 and 1974 summers she coached the Richardson, Tex., Texas Swimming Team including approximately 200 boys and girls, ages 6 to 18 years. For three years she was a lifeguard for the city of Richardson and then, in 1973 and '74, she was a swimming pool manager for that community.

While at Texas Tech she was president of the Physical Education Majors' Club, 1974-75, was named the university's outstanding senior athlete, captained the Tech swimming team and was state champion and National Association for Intercollegiate Athletics for Women (AIAW) qualifier in swimming.

In addition to swimming, Miss Goodman's special interests include calligraphy and bicycling.

-30-

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

CONTACT: Charley Bankhead

LUBBOCK--The sight of hot gingerbread or fresh-baked cookies is enough to tempt almost any child. But imagine the disappointment of a 4-year-old child who does not know how to ask for gingerbread, cookies or other delights.

The use of gingerbread and cookies is just one aspect of a program initiated at the Texas Tech University Speech and Hearing Clinic to help pre-school children overcome speech and language disabilities.

The program is called Interactive Language Development Teaching. The program was organized at Texas Tech by Dr. Patty Dukes, assistant professor of speech pathology, and initiated in June.

Interactive Language Development Teaching involves oral and visual presentations to the children. Clinicians ask questions and present model statements. The children respond to the statements and attempt to give answers similar to the model statements.

"The emphasis is more on sentences and syntax (sentence structure) than on individual sounds," said Dr. Dukes. "For example, on a particular day we might emphasize adverb placement.

"Previously, the emphasis of speech pathology has been on individual sounds. But now we try to teach children about the relationship of one word to another. We also try to determine different language rules used by the children."

-more-

The children attending the pre-school clinic are 3-5 years of age. The clinic is divided into two groups of four or five children each. The children are divided more or less by age, with the older children in one group and the younger, and "linguistically" less mature children, in the other.

Children meet at the clinic from 11 a.m. until 1 p.m., Monday through Thursday. The younger children begin the day with 45 minutes of individual training while the older children participate in group training. After lunch, the older children train individually, and the younger children are in groups.

In individual sessions, clinicians and children focus on specific problems of each child. In groups, children concentrate on stories, puppet shows and demonstrations. The children also participate in field trips.

During lunch, children and clinicians continue to concentrate on language development. Clinicians work individually with children, encouraging the children to respond and ask questions. For example, the children might have to identify what they brought for lunch. Even when the children wash their hands before lunch, the emphasis is on language development and improvement. Each child must ask for soap, towels and other equipment.

"It's been a completely different experience for most of these children," said Dr. Dukes. "Most of them have never had to ask for things at home. They would simply point or make a noise to indicate what they wanted.

"Some of the children have been teased about not talking. At the clinic, we try to show the children the positive, functional side of language. We try to show them how using language can be a pleasant experience."

Some days, clinicians and children might make cookies or candy or gingerbread. The children talk with clinicians about how to make the foods. Then the children must ask for a piece of candy or a cooky.

Parents also are involved in the training. They have individual sessions with clinicians to discuss the children's speech problems. The parents also observe clinic sessions to understand more about the problems and how to improve and develop their children's speech.

"Individual parents feel better knowing they aren't the only people who have children with language disabilities," said Dr. Dukes. "We try to teach parents some instruction skills they can use with the children at home."

Dr. Dukes said the causes of language disabilities are numerous. Some children might lack motivation to talk. Older brothers and sisters talk for the children in some instances. Another cause is children do not learn to abstract rules of speech. The children might imitate or echo speech, but do not recognize patterns of sentence and word structure.

Ear infections that prevent good hearing, brain damage that affects speech but not intelligence, cerebral palsy and brain surgery are other factors that might affect language development.

-more-

"There is nothing mentally wrong with these children," said Dr. Dukes. "For some reason, they just have not developed language skills."

Dr. Dukes said the children at the clinic have come from all kinds of backgrounds. She said the parents range from welfare contacts and migrant workers to professionals and skilled workers.

The Tech speech pathologist said a child's chances of developing normal language skills depend upon how early the problems are detected and the severity. Generally, the earlier the problems are recognized and treated, the better are the chances of improvement.

According to Dr. Dukes, the children participating in the program this summer have made dramatic improvement.

"Some of these children attended the speech clinic the entire spring semester and never spoke a word," she said. "These same children are now talking and interacting with one another and with the clinicians.

"I think the difference has been Interactive Language Development Teaching. We now focus on a deeper level of language and language development, rather than surface structure and sounds."

Dr. Dukes said parents who think their children might have language disabilities can arrange for diagnostic testing at the Speech and Hearing Clinic. The clinic telephone number is 742-3908.

Fall classes will be arranged according to the university calendar. Enrollment will be limited by the number of clinicians available. The clinicians are graduate and undergraduate speech pathology students.

22-8-6-76

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

CONTACT: B. Zeeck

LUBBOCK--Dr. Judson F. Williams, El Paso business leader and three-term mayor of that city, was elected today to succeed Clint Formby of Hereford as chairman of the Board of Regents of Texas Tech University and the Texas Tech University School of Medicine.

Robert L. Pfluger, San Angelo area rancher, was elected vice chairman.

Williams, who is serving his second six-year term on the Texas Tech board, spent 15 years in higher education before leaving for a career in business. He is president of Uptrends, Inc., a real estate corporation, and an investment and management consultant.

He served from 1963 to 1969 as mayor of El Paso and from 1967 to 1969 as president of the Texas Municipal League. He is a member now of the boards of directors of Mountain Bell Telephone Co., Arkansas Western Gas Co., Southern Union Co., Southern Union Production Co., State National Bank, First Savings and Loan Assoc., Business Products & Services, Inc., New Mexico Gas Co., and Lee Moor Children's Home.

Williams earned the bachelor of arts degree at Hardin-Simmons University, the bachelor and master's degrees in journalism at the University of Missouri and his doctoral degree at the University of Texas.

-more-

He was named director of public relations and journalism instructor at Texas Western College--later the University of Texas at El Paso--in 1940. He later served as dean of students and professor and department chairman of journalism - radio - T.V.

In 1956 he joined the White House Department Stores in El Paso as executive vice president, but he continued his interest in higher education.

He was chairman of Texas Western College's Mission 73 which made an intensive study of the institution and presented recommendations to the University of Texas Board of Regents.

He is a senior elder in the First Presbyterian Church, El Paso.

Pfluger serves on the executive committee of the Mohair Council, is a delegate to the American Sheep Producers Council, past vice chairman of the Miss Wool of America Pageant, and is a director of the Texas Sheep and Goat Raisers Association.

He was graduated with honors from Texas Tech in 1951. His degree is in animal husbandry.

He is a member of Committee 50 which has been making an intensive study of Texas Tech in order to make recommendations for its future to the Board of Regents.

Pfluger is the third member of his family to serve on the Texas Tech Board of Regents. His grandfather, Lee Pfluger, served from Sept. 1, 1944, until his death in 1945, and his uncle, Raymond Pfluger , served from 1949 to 1955.

Pfluger is a member of the Lutheran Church.

Formby had served two terms as chairman and Williams two terms as vice chairman prior to the election of new officers Friday (Aug. 6).

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

ATTN: AGRICULTURE EDITORS

CONTACT: B. Zeeck

LUBBOCK--Texas Tech University has been named the lead institution for a $1.7 million Agency for International Development (AID) project to help the Sahelian nation of Niger acquire the technical skill, land practices and trained manpower to become self-sufficient in cereal production.

The project contract is with a seven-university Consortium of International Development (CID) which chose Texas Tech to lead the project because of its special interest in the world's dry lands--through its International Center for Arid and Semi-Arid Land Studies--and its expertise in the international scene in providing technical assistance to developing countries.

While the project will be coordinated through the International Center at Texas Tech, primary responsibility for its success will fall to Tech's college of agricultural sciences. Two members of the agricultural sciences faculty, two visiting professors at Texas Tech, and faculty from Utah State University, the University of Arizona and Oregon State University will go to Niger for a two-year period.

Niger is in north central Africa. Major countries bordering it are Algeria, Libya, Chad, Nigeria, Upper Volta, and Mali. It is a plains nation, the northern area a part of the Sahara and the southern portion an arable savannah.

-more-

Calvin H. Raullerson, executive director of the International Center, said that the project in Niger is aimed at achieving a production and distribution capability that can provide enough cereals at reasonable prices to feed Niger's population, even under adverse conditions.

Niger was among the African nations suffering disastrously as the result of a recent six-year drought. A team led by Texas Tech President Grover E. Murray visited Niger in 1974 to develop a proposal for a million-acre ranching scheme for AFRICARE, the private agency working to alleviate the drought problems.

Through assistance to the Niger agricultural research institute, called INRAN, the CID project will develop superior varieties of millet and sorghum and recommend cultural practices. It will establish a system for seed production. It also will help Nigeriens to organize an agricultural extension service to conduct demonstration and training and monitor the use of selected seed, fertilizers, insecticides and other farm materials. A credit and cooperative union of Niger will get project support to enable it to deliver the products of increased agricultural activity, and training will be provided to establish a pool of qualified Nigerien technicians to continue the work of the project.

The CID cereals production project is only one of several in a large scale endeavor by AID to address problems in the drought-ridden areas of the Sahelian Zone of Africa, Raullerson said.

Already started at Texas Tech is a French institute where eight specialists who are going to Africa and their families are learning the French language. It is sponsored by CID and conducted by Tech's department of classical and romance languages working through the Division of Continuing Education.

Dr. Anson R. Bertrand, dean of Texas Tech's college of agricultural sciences, will have the primary responsibility for the technical quality of the cereals program.

James Williams of the University of Arizona will be chief of party.

Texas Tech faculty members who will be going to Niger are Dr. Clark Harvey, plant and soil sciences faculty, Dr. Eugene Foerster, agricultural engineering faculty, and two specialists who have accepted visiting faculty positions, Dr. Cyril Brown, agronomist, and Dr. William Hall, seed production specialist.

Also in the Niger program will be Cao Quan, Utah State University credit and cooperative specialist, and Rodney Todd of Oregon State University, who is serving as an assistant extension trainer.

Dr. Ben Wood, assistant professor of botany and range science at Brigham Young University, is the eighth specialist in the language institute. He is to participate in a different development program in Chad.

Texas Tech's department of political science has participated in the training for the team by coordinating a lecture series on Africa. Dr. Richard Vengroff, a member of the faculty who has lived and studied in Africa, arranged for lectures and films.

In addition to institutions that are sending representatives to Niger, other CID members are the University of California and Colorado State University.

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

AUGUST 6, 1976

ATTN: NEWS EDITOR

CONTACT: Worth Wren

POST--Red Raider Jess Wall atop the coal black quarter horse Happy V will ride in the Post Stampede Rodeo parade Thursday, Aug. 12.

The 21-year-old junior agriculture education major from Perryton was chosen Texas Tech University's mascot from among 13 applicants this past spring. (cq) Wall is the son of Mr. and Mrs. Carol Wall.

The parade begins at 5:30 p.m. and kicks off the annual rodeo.

A former rodeo performer himself, Wall has been busy all summer riding in rodeo parades and grand entries and even in a Bicentennial Longhorn cattle drive. And Happy V, the Red Raider mount, has been along in each case for the ride.

-30-

2-8-9-76

Texas Tech News
UNIVERSITY NEWS AND PUBLICATIONS / P.O. BOX 4650 / TEXAS TECH UNIVERSITY / LUBBOCK, TEXAS 79409 / (806) 742-2136
CONTACT: Margaret Mintkenbaugh

LUBBOCK--Four plays, ranging from a newly completed comedy to an ancient drama, will comprise the 1976-77 season of the Texas Tech University Theatre.

The season opens with Edward Albee's newest work, "Seascape," which will run Oct. 8-13. This bright comedy will be directed by George Sorenson, associate professor of speech and theatre arts, a new member of the Texas Tech faculty.

Peter Shaffer's "The Royal Hunt of the Sun," which will run Nov. 19-23, is the University Theatre's entry for the American College Theatre Festival, Dec. 1-4. This play relates the story of the Spanish expedition under Pizarro to the land of the Incas, and the resulting destruction of a god and a people. Professor of speech and theatre arts Ronald Schulz is the director.

Musical comedy will begin 1977 with "A Funny Thing Happened on the Way to the Forum," Feb. 25-March 2. Romance, scheming, mistaken identity and an outrageous hero will provide the comedy in this play, directed by Richard Weaver, associate professor of speech and theatre arts.

The 1976-77 season will close with the great Greek tragedy, Sophocles' "Oedipus Rex." Dr. Schultz will direct the play, which runs April 22-27.

Season tickets for the 1976-77 year will be available beginning Sept. 1 at the University Theatre. These tickets, which entitle the holder to attend every show are priced at $8 for the general public, $7.50 for Texas Tech faculty and staff. Ticket prices for Texas Tech students are usually $1 per show.

-30-

4-8-10-76

Texas Tech News
UNIVERSITY NEWS AND PUBLICATIONS / P.O. BOX 4650 / TEXAS TECH UNIVERSITY / LUBBOCK, TEXAS 79409 / (806) 742-2136
CONTACT: B. Zeeck

ATTENTION: FARM EDITORS

COLLEGE STATION--Swine accustomed to a soybean-sorghum diet mixed to produce gain, feed efficiency and good taste may in the future find a new flavor in cottonseed flour.

Researchers at Texas Tech University have completed a study which indicates the superiority of the cottonseed flour to soybean meal when the flour is used in small amounts.

The nation's only cottonseed flour mill is located in Lubbock, Texas Tech's home city, and the animal science researchers used the flour in a three-part study to determine palatability, growth rate and feed efficiency.

The mill uses the Liquid Cyclone Process (LCP) which extracts gossypol from the cottonseed as the flour is produced. Gossypol is a cottonseed pigment acceptable to ruminants, like cattle or sheep, but highly toxic to animals with simple stomachs, including pigs or poultry.

When in full production, the mill is expected to produce a high protein cottonseed flour for human consumption, and it is important that flour meeting only the highest standards go for human use. Flour which does not meet the stringent standards for humans could be used in feeds for domestic animals, providing it meets specifications required by livestock growers.

Engaged in the research were Dr. A. Max Lennon, chairman of Texas Tech's department of animal science, Dr. L.F. Tribble of the animal science faculty, R.G. Cooper, a graduate student, and Dr. Fred Buddingh, pathologist and director of vivarium services at the Texas Tech University School of Medicine.

-more-

The desirability of cottonseed flour over soybean meal is in the protein content, Lennon explained. While soybean meal is 44 to 49 per cent protein, cottonseed flour has 60 per cent protein. In both products the protein is of high quality.

In their first studies, the researchers found that, given a choice of a soybean-sorghum diet or a cottonseed flour-sorghum feed, weanling pigs chose sorghum blended with cottonseed flour. When more than 10 per cent of the feed was cottonseed flour, the pigs rejected the diet and chose the soybean mixture instead.

By making pellets of the rations, the pigs would accept more of the cottonseed in their feed.

In further studies, the researchers discovered that growing pigs would accept a diet containing 4 per cent cottonseed flour, and finishing pigs would accept a diet containing 5 per cent cottonseed flour with no decrease in performance.

Results of the study will be used by the Lubbock mill in setting prices for cottonseed flour to be used in domestic animal diets. The results were reported at the 68th annual meeting of the American Society of Animal Science, held Aug. 15-18 at Texas A&M University in College Station.

Cooper used the study for a master's thesis. He now is at the University of Kentucky, working toward the doctoral degree in animal science.

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

ATTN: FARM EDITORS

NOT TO BE PUBLISHED OR BROADCAST BEFORE AUGUST 17, 1976

CONTACT: Prabhu Ponkshe.

COLLEGE STATION--Protein rich sorghum-soybean swine meal can be supplemented with synthetic lysine, an essential amino acid, to provide adequate nutrients for early weaned pigs.

But the supplemented diet is not significantly useful for growing-finishing hogs.

This was determined by two separate studies conducted recently by animal scientists at Texas Tech University.

The study using early weaned pigs was conducted by Dr. Donald E. Orr, assistant professor in Texas Tech's department of animal science. Dr. Leland Tribble, professor in the same department, investigated the effects on growing-finishing hogs. He, however, used fat and lysine additions.

Orr used two basic levels of protein in the sorghum-soybean meal and studied the effects of adding two levels of synthetic lysine on a total of 154 pigs weaned at four weeks of age.

"Producers have recently shown an interest in reducing the protein levels in early weaning diets with supplemental lysine. Young pigs may be prone to have scours if they are fed high levels of protein. Besides, if the price of soybean meal goes beyond $200 per ton, it is usually more economical to replace a portion of the soy with synthetic lysine. We were therefore investigating alternative diets for early weaned pigs, measuring their performance and reviewing possible subsequent economic benefits," Orr explained.

-more-

Orr's study indicates that pigs weaned at four weeks of age and fed a 16 per cent protein sorghum-soybean meal ration supplemented with lysine had similar daily gain and feed efficiency as pigs receiving the 18 per cent. There is no consistent effect on feed utilization when lysine is added to the 18 per cent diets.

Lysine and fat were added to the traditional hog diets in the other study conducted by Dr. Tribble. He studied the effects of different levels of fat combined with lysine levels.

"Sorghum is lower than corn in energy, and so we are trying to increase the energy content of sorghum diets by adding concentrated energy through fat. Four and eight per cent fat supplements were tested along with lysine," Tribble said.

"Among younger pigs, the fat and lysine supplemented diets increased the digestibility, but there was no significant effect on finishing hogs. Heavier hogs tend to eat less feed when fat is added to the ration. However, added lysine has no effect on their performance," he said.

Drs. Orr and Tribble reported the results of their studies at the 68th annual meeting of the American Society of Animal Science Aug. 15-18 at Texas A&M University.

Dr. C. B. Ramsey, professor of animal science, and a graduate student, S. H. Ingram, worked with Dr. Tribble. The chairman of the animal science department, Dr. Max Lennon, and Dr. Tribble were co-investigators for Dr. Orr's study.

-30-

7-8-10-76

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

CONTACT: Dan Tarpley

Mark Byard, recipient of a Master of Science degree in wildlife biology from Texas Tech University in 1976, has been employed as a western regional biologist for the game division of the Oklahoma Department of Wildlife Conservation.

The Kansas native earned a BA degree in wildlife biology at Kansas State University in 1973. His thesis at Texas Tech was on the effect of high intensity-low frequency grazing by cattle on deer movements. He was a laboratory assistant at KSU and a graduate assistant at Texas Tech in the department of range and wildlife management.

Byard serves as the consultant on the effects of grazing on rangelands for the game division of the Oklahoma Department of Wildlife Conservation.

He is a member of the Society for Range Management and has held memberships in the Texas and Kansas chapters of the Wildlife Society.

-30-

5-8-10-76

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

CONTACT: B. Zeeck

LUBBOCK--The Lubbock Lake Site lived up to its reputation as a storehouse of variety for archeologists this week as the 1976 dig drew to a close.

Archeologists this year have made major finds in the Clovis, Folsom and late Paleo Indian eras, and three especially interesting tools were found in one day, Tuesday, Aug. 10, in a Texas Tech University project.

The tools were man made from stone--a knife from the Folsom period, 10,000 to 11,000 years ago, a projectile point and a scraper probably from the Paleo Indian Plainview culture, in the vicinity of 9,000-10,000 years ago. The beveled knife was chipped from chalcedony, a fine quality material. The scraper and point are alibates.

Field director for the project, supported by the National Science Foundation, is Dr. Eileen Johnson. She said none of the stones used for implements are native to the Lubbock Lake Site although they could have been found in gravels in the river which once flowed through the site, or early Indians could have traded for the material.

One probable reason so few stone tools are found at the Lubbock Lake Site, she said, is that there were no good materials for making tools to be found there.

-more-

"It seems that the stone tools were used for skinning animals, and then bone tools were made to complete the butchering job." Because of this, the archeologists have acquired for The Museum of Texas Tech University a fine collection of early bone tools.

This year, however, they have found an excellent blade and a large knife from the Paleo Indian period in addition to the three major finds Aug. 10.

Thirty workers dug at the site this year under a $45,000 grant made to Texas Tech University by the National Science Foundation. It is the fourth year on the project which is unusual in many respects.

Dr. Johnson and Dr. M. Elizabeth King are the co-principal investigators for the project this year. They explained that at the Lubbock Lake Site, the process used is slow but meticulous with all dug out materials washed, screened, and searched for the tiniest evidence of times past.

Because of this, the environment as well as the activity of man from 12,000 years ago to the present day can be learned. Bones, large and small, are as important as man-made artifacts.

This year the bones of a butchered mammoth, or prehistoric elephant, were found at the Clovis level, representing life about 12,000 years ago. With these bones also were found a toe bone of a large prehistoric saber-toothed cat and an extinct bear, Arctodus. This may be the first time that the saber-toothed cat or the bear has been found in relation to man, Dr. Johnson said.

Also unusual was the discovery of the bones of either an insectivore or a bat -- either of which would be highly unusual because these animals are not found in the area today. They were found in the Late Paleo Indian level, or 8,000 to 10,000 years ago.

"The Lubbock Lake Site is important because it is so rich in material," Dr. Johnson said, "but it also is unusual as a dig because we work year around, examining in the winter 100 per cent of the material we have screened out from the summer digs.

"I would think that it will take another six years to complete this phase of the study," she said.

Although the site has been known since 1939 when workers, digging the site to provide a city reservoir for Lubbock, uncovered the first bones, this is the first broad-based scientific examination of the area.

The site is horseshoe-shaped and covers approximately 110 acres with 18 specific subsites subjected to the meticulous meter-by-meter scrutiny of scientists.

The city and county of Lubbock, along with the NSF, have given support to the project.

-30-

10-8-11-76

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

FOR RELEASE SUNDAY, AUG. 15

CONTACT: B. Zeeck

A world of learning opens for busy people Aug. 18 with the start of special registration at Texas Tech University.

Evening students can register for any of about 270 courses offered for the fall semester, many of them for beginners. Registration will continue from Aug. 18 through Aug. 24, from noon to 8 p.m. weekdays and 8 a.m. to noon on Saturday, Aug. 21. Late registration will take place Monday and Tuesday, Aug. 30-31, but students are reminded that class numbers are limited and some will be closed at this time.

Special registration is held in the offices of the Division of Continuing Education, X-15, which is south of the Municipal Auditorium parking lot in Lubbock.

Dean C. Thomas Reese of the Division of Continuing Education said that persons enrolling for the first time can profit from counseling, and this is available at the time of registration or before.

All courses are offered for credit, he said, and students may work toward a degree on the undergraduate or graduate level "or take courses just for the enjoyment of learning something new."

The cost of a 3-hour course is $82.50 or two for $114.60; or one 4-hour course is $99.40 -- all with a $7 property fee added but refundable at the end of the semester.

-more-

Persons over 65 years of age may audit courses free, Reese said, but most of these people find daytime instruction more suitable to their lifestyles. Special counseling and registration for senior citizens is the same as that for evening classes.

Undergraduate courses offered include a wide variety from art to zoology.

People tuned in to gardening or house plants might take a course in botany or plant science. Beginners are welcome in such diverse areas as astronomy, economics, drawing, biological sciences, English, American history, photography, physics, American government, interpersonal communication, an introduction to computers in business, nutrition and food, and personal and family management.

Many of the courses are at the graduate level, and it is possible to earn an advanced degree at Texas Tech without attending daytime classes. Although by no means limited to the college of education, advanced courses for teachers are particularly popular in the evening classes program, Reese said.

Among the newer degrees offered and available through the evening program is the master's degree in interdisciplinary studies. This permits students to take coursework for master's degree credit in a wide variety of subjects. Anyone holding the bachelor's degree is eligible to apply for this program.

-30-

11-8-11-76

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

CONTACT: B. Zeeck

LUBBOCK--Changes in farm operations and in the look of the landscape throughout the world--but particularly in America's western states--will come about in future years as agriculturists learn to manage irrigation water with increased levels of salt.

An international conference dealing with the problems on a global basis will take place at Texas Tech University Aug. 16-20, drawing participants from 20 countries and seven southwestern states.

The problems of saline water are increasing in West Texas, particularly in the Pecos area, but they have international implications including disputes between nations relating to salt pollution of rivers common to two or more countries.

Seven cooperating organizations are supporting the Texas Tech conference on managing saline water for irrigation and planning for the future. They are the International Society of Soil Science's Subcommission on Salt Affected Soils, the Soil Science Society of America, the U.S. Environmental Protection Agency and the U. S. Salinity Laboratory and three universities: Texas Tech, Texas A&M and New Mexico State.

Dr. Harold E. Dregne, who has long made special studies of the use of saline water for irrigation, is chairman of the organizing committee. He is director of Texas Tech's International Center for Arid and Semi-Arid Land Studies.

-more-

Approximately 100 delegates are expected to attend, but persons professionally concerned with the management of irrigation systems are welcome.

Tuesday's session will be highlighted by the first official presentation of a world map of salt affected soils by Istvan Szabolcs of Budapest, Hungary, president of the subcommission on salt affected soils of the International Society of Soil Science.

The map has been in the making for several years under the sponsorship of the United Nations' Food and Agriculture Organization and UNESCO. At this international conference, delegates will have an opportunity to suggest any needed changes before the first printing of the map.

Wednesday's sessions will also have special significance in future planning for agriculture. They will deal with the special problems of salinity in irrigation return flows.

Water taken from a river for irrigation and then returned to the river increases the salinity of the stream. Mathematical models have been developed to predict the increases in river salinity, and the Wednesday sessions will analyze field results achieved from these mathematical models.

The problem is important in the United States from the Plains states to the Pacific coast, Dregne said, and is the basis for international disputes between Mexico and the United States and between India and Pakistan as well as in other parts of the world.

-more-

Dr. Dregne said that in West Texas the increase in salinity of the irrigation water has, in the westernmost counties, caused some farmers to quit irrigating because of increased costs.

"In all areas it will demand changes in management of irrigation farming," he said. "How it will change depends on the composition of the salts in the water and the soil characteristics but wherever salt is present, more water is used."

He said the increase in the amount of water is necessary to wash the soil and keep the salt content down. The irrigation increase results in increased energy costs.

West Texans could expect to continue to produce cotton, which is a salt tolerent plant, and sorghum and wheat which are moderately salt tolerant.

Soybeans, corn and other vegetables are salt sensitive, Dregne said, and cannot be expected to do well as the salt in irrigation water increases.

Dregne said that the conference will not deal with desalination of irrigation water because that is not economically sound.

The conference is important worldwide, Dregne said, because the increased need for food demands that more of the world's marginal agricultural lands be brought into production.

"Many of these will be dependent upon saline irrigation water," he said.

Conference participants will attend from the United States, Hungary, Iran, Iraq, Venezuela, Yugoslavia, Israel, Italy, France, India, Spain, Egypt, the Netherlands, Canada, West Germany, Romania, the Soviet Union, Greece, Yemen and Mexico. States represented include Texas, California, Colorado, Utah, New Mexico, Oklahoma and Hawaii.

All sessions will be in the Business Administration Building at Texas Tech.

-30-

12-8-12-76

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

CONTACT: Margaret Mintkenbaugh

LUBBOCK--The John Meigs Collection of American Quilts and Coverlets from 1780-1974, representing a domestic art form ranging over two centuries, will be on display at the Museum of Texas Tech University Aug. 15-Sept. 26.

Quilt-making, a popular craft of the 19th century, was sometimes referred to as "mudwork," because muddy roads caused long periods of isolation. To fill the time, creative quilts and coverlets were made. Other forms of needlework such as mottos and needlepoint became popular. In the late 1800's, shadow boxes and fretwork were common.

The John Meigs exhibit is a cross-section of these crafts, concentrating on quilts and coverlets. A quilt differs from a coverlet. The quilt consists of a front piece of material, a back piece, and a layer of padding in between. The coverlet has little or no padding, and is intended for decoration rather than warmth.

The West Texas Museum Association hosted a premiere opening for the collection exhibit on Aug. 12.

-30-

15-8-13-76

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

FOR RELEASE AFTER 3 P.M. AUG. 16

CONTACT: B. Zeeck

ATTENTION: Agriculture Editors

COLLEGE STATION--Time was when a farmer could talk about "slopping the hogs," but that time is long past. The problem now is to formulate a feed which will produce the greatest gain at the lowest cost.

Even to speak of a "protein rich" diet could mean little, in the future, as swine specialists refine their understanding of protein quality and as producers demand more precise formula feeds.

At Texas Tech University a group of researchers has been studying individual amino acids found in protein and their availability to animals fed on a grain sorghum diet.

Reporting at the 68th annual meeting of the American Society of Animal Science in College Station, the team said it found an availability of 89 per cent of threonine in sorghum and 92 per cent availability for tryptophan, two of the 10 essential amino acids found in sorghum protein.

Making the report was Dr. Johnny L. Copelin who developed the study as a part of his doctoral dissertation at Texas Tech. Animal Science Prof. Leland F. Tribble and Drs. Charles T. Gaskins and C. E. Sasse were co-authors of two papers Copelin delivered.

In the research casein was used as the measure of 100 per cent availability of all 10 amino acids.

-more-

Tribble said that earlier research indicates that lysine is the least available of the amino acids in a sorghum diet. Its availability was measured at 63 per cent. This indicates, he said, that any sorghum diet must have large amounts of lysine added from other protein sources to provide maximum growth in swine.

These precise measurements could be important in feed formulations in the future, Dr. Tribble said, in helping the swine producer to reap the greatest gain from his investment in feed.

Right now, feed formulations are based on a less exact process, adding protein rich soybean material to the grain base but without any precise measurement of protein in relation to the availability of the amino acids.

"As scientists understand the more precise measurements," he said, "they can contribute to the formulation of better feeds at the least possible cost."

Tribble said that all swine nutrition studies are eventually of use in understanding human nutrition because of the similarity between the swine digestive system and that of humans.

-30-

14-8-13-76

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

FOR RELEASE AFTER 3 P.M., AUG. 16

CONTACT: B. Zeeck

ATTN: AGRICULTURE EDITORS

CCLLEGE STATION--Tradition be hanged! If a cattle judge comments that one animal has a longer rump or loin than others, what he really means is that he's looking at a bigger animal.

Texas Tech University researchers have completed studies to determine if differences exist in body proportions from one animal to the next.

Engaged in the studies were Profs. C. Boyd Ramsey, Robert C. Albin, and Robert A. Long of the animal science faculty and a graduate student, M. L. Stabel. Dr. Ramsey reported the results at the 68th annual meeting of the American Society of Animal Science, Aug. 15-18 at Texas A&M University.

"The traditional concept of selecting certain breeding herd replacements because they are longer-loined or longer-rumped, for example," Ramsey said, "appears unfounded."

He said there are definite size differences. Some cattle are larger and longer in all skeletal measurements than others, but the cattle differ little in body proportion.

"We should be talking about cattle size, not type," Ramsey said.

-more-

When measurements were expressed as a per cent of either carcass length, body length -- shoulder to pins -- or leg length, nearly all differences between sexes, types or feeding time were removed, he said. The differences between sexes, types or feeding method were very small and generally averaged less than .5 per cent.

Exceptions were in heifers that proved to be deeper chested than bulls, Ramsey said.

Bulls were longer than steers and steers longer than heifers in all skeletal measurements, but the bulls also were heaviest in weight and heifers lightest in weight at slaughter. The larger animals were longer in nearly all skeletal measurements than medium weight animals.

Although cattle judges traditionally look for variation in body proportion, Ramsey said, the data from the Texas Tech studies suggest that such a conception is false.

In the Texas Tech experiments 103 animals -- Hereford bulls, steers and heifers from one Texas ranch -- were used. Half were considered to be large types and half considered to be medium types. However, all measurements were in the same proportion. Part were slaughtered after 224 days in the feedlot and the remainder -- 36 bulls and heifers -- were slaughtered after 420 days.

Measurements taken included the length of cervical, thoracic, lumbar and sacral vertebrae; shoulder to pin length; carcass length -- the first rib to the pelvic bone, and hind leg length -- femur plus the shank bone. The chest depth was taken at the fifth rib.

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

FOR RELEASE ON AUG. 17 OR LATER

ATTN: AGRICULTURE EDITORS

CONTACT: Worth Wren

COLLEGE STATION--Research and management programs have improved every stage of swine production in the last 15 years--that is, every stage but one, fertility, according to Dr. Leif H. Thompson, animal science professor at Texas Tech University in Lubbock.

Dr. Thompson is presenting results of one of his swine reproduction studies during the 68th annual meeting of the American Society of Animal Science at Texas A&M University Aug. 15-18.

Studies by Thompson and his associates indicate swine reproduction probably could be improved if more emphasis were placed on selecting herd replacement gilts for stress resistance and fertility characteristics.

Less emphasis should be placed on growth rate when selecting gilts to rebuild herds, Thompson said.

"Especially in swine production, the trend has been to breed the well-muscled animals," he said, "but the fact is these well-muscled animals are often poor reproducers--especially under stress conditions."

Thompson said the ideal situation would be to breed a gilt with low susceptibility to stress, high tendency to bear large litters and acceptable muscling qualities. However, since breeding in recent years has aimed at feed-weight-gain efficient hogs and carcass traits and not at the other two traits, a gilt with all four qualities is difficult to find, he said.

-more-

ACTH levels in swine/add 1

A recent study of hormone levels and fertility shows that gilts more susceptible to stress such as confinement prove to be late breeders while under the stress conditions, the animal scientist said.

"Reproductive cycling in confinement is the problem because the gilts have to be taken to outdoor breeding facilities to begin the estrous cycle. If gilts were selected for stress resistance, then the cycling might occur without need for moving the gilts," Thompson continued.

Prior research had shown that environmental stress causes more of a hormone labeled ACTH--for adreno corticotropic hormone--to be circulated in animals.

Thompson hoped to determine whether increased amounts of ACTH in gilts decreased levels of the fertility hormones and thus delayed or reduced reproductive performance in the gilts.

Two groups of crossbred gilts were used in the study. One group of 21 was reared in confinement but moved to outdoor breeding facilities after 189 days. Another group of 28 was reared in confinement but moved only to four pens in the same confinement finishing house after 186 days. Blood samples were taken, immediately refrigerated and checked for levels of ACTH at two specific times following each move.

The confined group was also moved to the outside breeding area after 31 days in the four pens. Again ACTH levels were checked at two specific times following the move.

-more-

Results of the tests show that the higher the ACTH in the gilts' blood, the longer period of time required for gilts to reach puberty, Thompson said.

However, he said, the relationship wasn't as strong as the scientists would have liked.

"Levels of ACTH are constantly changing, and the mere handling of the hogs and collecting of blood could have caused some increases in ACTH in the hogs," Thompson said.

In another effort, now underway, Thompson and his associates are taking urine samples from groups of gilts in order to check levels of a second stress related hormone, cortisol. Cortisol formation is stimulated by the presence of ACTH, Thompson said, but cortisol is much easier to collect than ACTH, and the collection does not disturb the normal activity of the hogs.

"Stress susceptible animals should produce five times as much cortisol as those hogs non-susceptible," he said. "We should find an even more negative relationship between cortisol and reproductive performance in stress situations."

-30-

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

ATTN: Farm Editors

CONTACT: Prabhu Poinkshe

LUBBOCK, Tex.---A Master of Agriculture degree program will be offered for the first time at Texas Tech University this fall.

"The new program will permit students to gain advanced knowledge in any area of their interest, along with general agriculture," Dr. Anson R. Bertrand, dean of Texas Tech's college of agricultural sciences, announced Monday, Aug. 16.

The new degree is a 36-semester-hour program and students will be advised by faculty members on the selection of courses.

"We are currently in the process of working out all the academic procedures for administering the new program, and will be ready to accept students this fall," Bertrand said.

The new program will not require the hiring of any additional faculty members, the dean said.

At present the college offers the Master of Science degree in 13 major fields and a Master of Education in agricultural education. The college has seven departments and two sections. They include: agricultural economics; agricultural education; agricultural engineering and technology; animal science; park administration and landscape architecture; plant and soil sciences, and range and wildlife management. The two sections are entomology and food technology.

-more-

The Coordinating Board, Texas College and University System approved the new program in May.

The college has 175 graduate students at present and Dean Bertrand expects that at least 25 to 30 additional students will enroll for the new program.

-30-

1-8-16-76

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

CONTACT: B. Zeeck

LUBBOCK--Breezy West Texas with its dry winds, 90 degree summers and blue norther winters, used to be quite a different place.

Thomas Stafford, geologist for the Texas Tech University scientific explorations now going on at the Lubbock Lake Site on the South Plains of West Texas, can map the terrain and describe the climate for eras as long ago as 20,000 years.

His ability to do that is the result of 104 trenches he has dug this summer at the Lubbock Lake Site and an intensive study of the sediments deposited there over the ages.

The Yellow House Canyon which meanders through the northern portions of the city of Lubbock was formed in the recent past--within the last 500,000 years, Stafford said. His primary interest in the Lubbock Lake Site dates back to 12,000 or 13,000 years ago, at a level where archeologists at the site are uncovering traces of human culture labeled Clovis.

But even before man began using the site as a butchering area for hunting trophies--mammoth, bison, horse and other animals large and small--the Yellow House Valley was being formed, with a width measuring from 60 to 250 meters (a meter being about 39.4 inches). This was 20,000 years ago, the geologist said.

Between that time and this, approximately 10 meters of sediment have filled the valley, and in most places this is now farm or range land.

-more-

In the time of Clovis Man, there may have been as much as 25 or 30 inches of rainfall per year, compared with 18 inches expected annually in the 1970s. The country might have looked much like the Texas-Louisiana border land today, with warmer winters and cooler summers than man now experiences.

After Clovis Man, the stream which had flowed at a fairly steady rate changed, and what is now the Lubbock Lake Site was indeed a lake.

"Some obstructions blocked the stream and caused the water to back up," Stafford said. This was the period of Folsom Man, 10,000 to 11,000 years ago, and it continued until the time of Plainview Man or the late Paleo Indian period, 8,000 to 9,000 years ago.

This happened all along the stream; so there were many lakes that were fed by springs and by rainfall.

Then came a prolonged drying sequence, and it was no ordinary drought.

Folsom Lake became a brackish or saline lake, and finally it dried up. This period is marked by an abrupt jump to a dry climate that lasted from about 6,000 years ago to about 3,000 or 4,000 years ago.

This is determined, Stafford said, partially by noting the high concentration of calcium in the soil strata for this period. If there had been heavy rains, the calcium would have been washed out.

Although there was human activity at the Lubbock Lake Site during this period, there appear to be fewer bone beds with the artifacts usually found in them.

-more-

Following this period, there is a gap with not enough sediment being deposited to leave any geologic clues to the climate, but another abrupt change took place starting in about 1250 A.D. and lasting almost to the present day.

The Yellow House stream bed became a swamp. While there was no standing water, the ground was saturated, fed by rain and underground springs. This marsh was about three feet thick and made the area a rich source for today's archeologists; for it is a massive bone bed with horse, antelope and modern bison among the remains most commonly encountered. There also are masses of cultural material--grinding stones, bone beads, pottery and projectile points.

At this time man was living on higher ground, leaving evidence of his life in pottery and hearth sites in the red sands on the uplands. Soil developed on the top of these sands, and it is on this soil that farmers grow today's crops.

The marshland still was evident in the early 1800s, and the springs were evident until the 1940s and 1950s when irrigation on the South Plains became so intensive that the underground water table was lowered, and the springs disappeared.

Lubbock Lake Site studies are funded this year by a $45,000 National Science Foundation Grant to Texas Tech University. Principal investigators are Dr. Eileen Johnson, project director and a zooarcheologist, and Dr. M. Elizabeth King, professor of museum science at The Museum of Texas Tech University and also an archeologist. The city and county of Lubbock also support the work.

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

CONTACT: B. Zeeck

LUBBOCK--Approximately 100 delegates to the International Conference on Managing Saline Water, meeting at Texas Tech University Aug. 16-20, Monday heard a review of the history and future of irrigation on the Texas High Plains.

Dr. Dan M. Wells, director of Texas Tech's Water Resources Center, told the delegat that "It is likely that nearly half of the water that was stored in the Ogallala Aquifer -- which provides High Plains irrigation water -- in 1930 has already been recovered."

The cost of producing water in the High Plains, rather than the lack of available water, Wells said, will lead to the cessation of irrigation.

"When profits resulting from increased crop yields from irrigated land are negated by escalating water costs," he said, "ration farmers will discontinue irrigation, even though millions of acre-feet of water remain in the Ogallala."

Wells' discussion of the High Plains was scheduled to acquaint visitors from about 20 different countries with the site of the conference.

It followed introductory remarks by Istvann Szabolcs, president of the Subcommissio for Salt Affected Soils of the International Society of Soil Science and assistant secretary general of that society, and director of the Research Institute for Soil Science and Agricultural Chemistry of the Hungarian Academy of Sciences.

Conference delegates were welcomed by Dr. Glenn E. Barnett, executive vice presiden of Texas Tech, Agricultural Sciences Dean Anson R. Bertrand, and Dr. Harold E. Dregne, born Professor of plant and soil science and director of the university's International Center for Arid and Semi-Arid Land Studies.

Wells told the delegates that about 80 per cent of the irrigated land in Texas is in the High Plains area.

-more-

salinity conference/add one

"The future of irrigation in the state is heavily dependent upon the availability of an outside source of imported water to the High Plains," he said. "Little possibili exists for substantial increases in irrigated acreage in other areas of the state, and the amount of land irrigated in this region will begin to decline in another five or 10 years unless a supplemental source of water can be found for economical import to the region."

Wells predicted that as the remaining water becomes expensive to produce and less available to produce at any price, High Plains farmers, "who are among the world's most progressive," will find better and better ways to utilize the available supplies to maximize production.

He said that already municipal wastewater from about 80 municipalities on the High Plains is reused for agricultural or other purposes.

"We are mining our water," he said, "but we are attempting to be very careful that all of it is being used in the most efficient manner possible."

Wells recently was elected to his second three-year term on the Board of Directors of the Universities Council on Water Resources. He is Horn Professor of civil engineeri

Sponsors of the conference are the Subcommission on Salt Affected Soils of the International Society of Soil Science, the Soil Science Society of America, New Mexico State University, Texas A&M University, Texas Tech, the U.S. Environmental Protection Agency and the U.S. Salinity Laboratory.

-30-

3-8-16-76

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

CONTACT: Charley Bankhead

LUBBOCK--If you're looking for a trumpet or a violin or a guitar, you always can find a variety to choose from in music and pawn shops. But where can you go if you're in the market for a good gamba?

People in Lubbock can visit the little old gamba-maker, Dr. Judson Maynard.

Maynard is a professor of music at Texas Tech University. In his spare time, he builds gambas, which are stringed musical instruments similar in appearance to cellos.

Gamba is the Italian word for "leg." Gambas are played while resting on the musician's legs. The instruments were popular during Medieval, Renaissance and Baroque music periods, but have not exactly been household words since early in the 18th Century.

Maynard began building gambas about six years ago. He now has five, including bass, treble and tenor. In addition, he has built a lute and is working on a Baroque flute. He explained his hobby simply.

"I've always been fascinated with viols (the English term for gambas and other stringed instruments)," said Maynard. "I read about them. I got some drawings and materials, and I just started building them."

-more-

Maynard does most of his work by hand, including carving the decorative heads. He begins with a piece of maple or other hardwood to make the ribs (sides) and back. He uses spruce to build the belly. The fingerboard and tail pieces may be made of rosewood or ebony.

The time required for construction varies. Maynard built his first gamba in about a year, using only his spare time. Construction generally requires at least several months of spare time.

"Materials for a gamba cost about $100," said Maynard. "But time is the major factor. I would guess I could build a gamba in a month if I worked on it continuously and not just in my spare time."

Maynard said each of his gambas has a distinct tonal quality. He considers his greatest building accomplishment his bass gamba. But he has never sold any of his instruments. He said he thinks his gambas would bring a good price.

"Some people I know have seen another bass gamba in town and appraised it at $800-$1,200," he said. "They also agreed that mine is better.

"If you want a violin, you can go to any pawn shop and buy one. But it's not that easy to lay your hands on a good gamba, especially for less than $1,000 or so."

Like most musicians, the Tech music professor handles his instruments carefully. But the dry West Texas weather tends to crack the wood of the gambas. Maynard repairs the cracks the best way he knows how.

-more-

"I cry a lot," he said.

He has repaired several gambas by using caulking or shims, but dislikes having to remove the belly to do the work. He uses damping devices to prevent the wood from drying and cracking.

Both Maynard and his wife play the gambas. The instruments have been used in public performances. Last spring the gambas were used in a performance of Texas Tech Collegium Musicum. Collegium Musicum is a group of student and faculty musicians (of which Maynard is a member) which performs music from Medieval, Renaissance and Baroque periods, using instruments popular during the periods.

Maynard said he does not have much gamba-building competition although gambas are gaining some popularity.

-30-

2-18-16-76

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

CONTACT: Margaret Mintkenbaugh

LUBBOCK--Richard N. Combs, chemical researcher, has recently joined the staff of the Chemical Processing Department of the Textile Research Center (TRC) at Texas Tech University.

With James E. Loughlin, head of the TRC Chemical Processing Department, and six other professionals and technologists, Combs will be involved in dyeing and finishing, as well as chemical research related to a variety of textile materials.

Prior to his position at Texas Tech, Combs was employed in the Dyestuff Division of the Allied Chemical Corporation in Charlotte, North Carolina, as a chemical researcher. He also gained broad experience as a manager of dyehouses in Ohio, New Jersey and Puerto Rico.

Combs received his bachelor's degree in chemistry from the Philadelphia College of Textiles and Science in 1950.

-30-

3-8-16-76

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

A belly dancing workshop, Thursday, Oct. 28, featuring Meara will be sponsored by the dance division of the department of health, physical education and recreation at Texas Tech University.

All classes for the workshop, which is open to the public, will be in room 108, Women's Gym, Texas Tech. A fee of $1.50 per session will be charged, according to Diana Moore, dance chairman.

Classes will be: 9:30-10:30 a.m., open to the public; 10:30-11:30 a.m., open; 2:00-3:30 p.m., dancers and dance teachers only; 7:00-8:00 p.m., open.

Meara will perform at 12 noon in the courtyard of the University Center.

She has been awarded the gold medal for excellence by the Dance Teacher's Association of Britain. She has performed in England, New York, and Canada and for the Houston Museum of Fine Arts, Texas State Fair, Dallas Press Club and the National Shriner's Centennial Convention, among others.

Belly dancing has been acclaimed as an art form that has evolved into an effective means of losing weight, toning up muscles and gaining confidence and coordination.

For further information, contact Diana Moore, (806) 742-3362.

-30-

5-8-16-76

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

CONTACT: Worth Wren

ATTN: AGRICULTURE AND FEATURES EDITORS

LUBBOCK, Tex.--Sheep ranchers could use confined sheep operations to augment their range operations and to offset range hazards such as noxious weeds, cold weather and predators, according to a Texas Tech University animal science professor.

Confined operations, however, may also prove desirable in major cotton and grain growing regions such as the Texas High Plains, the professor, Dr. Leif H. Thompson, said.

Thompson is taking a new look at sheep production and breeding economics in both confined and range operations. His studies at Texas Tech have been underway about three years.

"Where crop production has top priority such as here on the Plains, totally confined sheep operations could become a major new industry--much the way the cattle feedlot industry has developed," Thompson said.

"We have all the ingredients: Sources of cheap crop residues for mass feeding and the proximity to sheep markets and a steady supply of ewes," he said.

"If 3,000 ewes can be raised in confinement, we'd have an efficient operation, and I believe it can be done," Thompson said. Only an economical feed and a prolific, hardy ewe can make this possible.

-more-

The cheap feed and the prolific, sturdy ewe are needed by the sheep raiser however he intends to use feedlot operations--instead of or in addition to range operations, the professor said.

Range conditions for sheep ranchers may be poor for varying reasons, dry weather, increased noxious weeds such as bitterweed or an upsurge of predator sheep-kills. During these periods, confined operations might be the answer ranchers need to maintain flocks and profits, Thompson said.

"By maintaining sheep in a feedlot during the winter, a rancher can increase his flock during the grass growing season because he doesn't have to save grass for winter grazing," he commented.

Feeding cotton burrs along with a nutritious supplement such as sorghum and cottonseed meal could be the answer to the cheap feed need, Thompson continued. Cotton burrs sell from $4 to $10 per ton, and that's the kind of economy needed in a confined operation, he added. Both alfalfa and silage are too expensive, and cotton burrs are plentiful in the Plains region of Texas.

Assuming a ewe will need 300 pounds (an outside estimate) of supplemental feed per year, a 3,000-ewe flock would require about 500 tons of supplements annually. Costs would run to about $120 per ton of supplement.

Estimates involving both burrs and supplements put the rancher's maintenance costs at comparable to lower prices than those required to maintain ewes on the range, Thompson said.

The estimates don't include labor costs, he explained, but two factors would offset these additional costs.

First, from 60 to 70 per cent of the cotton burr material is digestible, allowing efficient feed use. Second, manure accumulations of about 1,200 tons annually in a 3,000-ewe operation could be sold for fertilizer and soil mulch.

As for the hardy, prolific ewe needed for confined operations (or any operation, for that matter), Thompson is crossing several breeds, including the efficient meat-producing Suffolk. He hopes to show that more lambs can be produced and maintained in confinement to bring feedlot operators profits comparable to those earned by sheep ranchers.

He compared problems of sheep production in range conditions with those in confinement:

In range conditions, sheep reproduction depends heavily on the quality of grass, the lack of predators and the absence of toxic weeds. And then, lamb survival rates may be low. In confinement, the predator, weed and grass problems can be eliminated. Variable diets can be introduced.

Under average range conditions, ranchers usually assume six ewes need about the same acreage for grazing as one cow. For a 3,000-ewe flock, a rancher could require a 60,000-acre ranch. And that's a $1-million investment at today's land prices. At 6 per cent interest, that investment would require at least a $60,000 annual return.

Small confined acreages would not require as heavy an initial investment, Thompson pointed out. In cropland areas, feedlots would be the only way to go, and mass feeding of crop residues would eliminate wastes and increase profit potentials of farms, he said.

If the 3,000 ewes could be maintained part of the year or all year in confinement, most of the rancher's investment could be spent on sheep and feed supplies. Increased use of facilities and labor in controlled conditions cuts wasted manhours, and thus part of production costs, he said.

A look at the profit from a sheep operation shows that about 20 per cent comes from the sale of wool from ewes and about 80 per cent from the sale of lambs. If confinement increases lamb survival rates, sheep feedlots should build profits, Thompson said, whether used all year or just part of the year.

Thompson's research continues on feeding and lambing results in confined flocks.

-30-

7-8-16-76

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

ATTENTION OIL EDITORS

FOR RELEASE FRIDAY, AUG. 20

CONTACT: B. Zeeck

SYDNEY, AUSTRALIA--The discovery of rich oil fields in the rugged jungle country of northern Guatemala and southern Mexico, and the promising geological conditions between the two, are described in one of the papers prepared for the 25th International Geological Congress meeting Aug. 16-25 in Sydney.

Designated to present the paper is one of its three co-authors, President Grover E. Murray of Texas Tech University.

The discovery in Guatemala in 1975 marks the first time oil and gas have been found in that country in quantities sufficient for commercial production. The Mexican Reforma fields are about 350 kilometers northwest of the Guatemalan exploration area, with many geological similarities between the two areas.

Dr. Murray is an official delegate to the International Geological Congress, representing Texas Tech and the State of Texas, by appointment of Gov. Dolph Briscoe.

His co-authors for the paper on "New Oil Province, Guatemala and Southeastern Mexico," are two Shenandoah Oil Corp. executives, Otto J. Buis, vice president for international operations, and W. Kenneth Hall, exploration manager for international operations.

-more-

A consortium of three companies has exploration rights over approximately 325,700 acres in northern Guatemala where the discovery of major accumulations of oil and gas have been found in what is called the Coban formation on the Tortugas salt dome and the Rubelsanto anticline.

Consortium members are Shenandoah Guatemala, Inc., Saga Petroleum A/S & Co. of Norway and Basic Resources, International S.A. of Luxembourg.

The Rubelsanto and Tortugas structures are roughly in the center of the exploration rights and are about 150 kilometers north of Guatemala City, Dr. Murray said. Mexico's new Reforma fields lie to the northwest in the state of Chiapas.

While the economic promise of the discoveries already made is great, Dr. Murray said, the future promise held out for the land between the two new fields is even greater.

"Because the reservoir rocks in both areas are of similar Cretaceous age and because there is essentially a continuous series of large en-echelon anticlines of apparently the same age and origin between the Reforma fields and the Rubelsanto field in Guatemala," he said, "the inference can be made that a major, petroliferous region exists across southeastern Chiapas and Guatemala."

Fast development cannot be expected, however, according to Dr. Murray. The area, as shown in slides he used to describe the site, show coastal plain and low mountainous topography densely covered with jungle. Personnel and some equipment can be flown in during either the dry or rainy season, but most of the needed heavy equipment must wait for the dry season between late December or January and early May.

-more-

In time, he said, all-weather roads will be constructed and production rates accelerated.

Also representing Texas Tech University at the congress will be geosciences Prof. Rae L. Harris Jr.

The congress is held every four years. Dr. Murray was an official U.S. delegate to congresses held in Scandanavia in 1960, India in 1964, Czechoslovakia in 1968 and Canada in 1972. He is a former president of the Society of Economic Paleontologists and Mineralogists and the American Association of Petroleum Geologists and was chairman of the U. S. National Committee on Geology from 1958-1964.

-30-

13-8-17-76

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

CONTACT: Charley Bankhead

The Museum of Texas Tech will display a variety of contemporary craftworks of the Western Hemisphere Aug. 22 through Sept. 19 in its exhibit of "Contemporary Crafts of the Americas."

The exhibition consists of approximately 70 works produced by artists in North, South and Central America. Included in the exhibition are ceramics, fibers, metals and mixed media. The works range from a silver and coconut loving cup from Jamaica to a weaving of a nude in a bubble bath from the United States.

Works included in the exhibit were selected from competition organized by Prof. Nilda Fernandez Getty of Colorado State University. The traveling exhibit is sponsored by the Smithsonian Institution Traveling Exhibition Service.

-30-

11-8-17-76

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

CONTACT: B. Zeeck

LUBBOCK--For seven students at Texas Tech University life will change drastically this week (week of Aug. 15) when, with newly learned French, they depart for a two-year stay in Africa.

The seven, several with their wives and one with two sons, are enrolled in an institute, giving them an intensive six-week course in the French language.

With the eight-hours-a-day instruction, they expect to be able to communicate with the people they will be working with in Niger and Chad.

The institute was organized by Texas Tech's International Center for Arid and Semi-Arid Land Studies and the university's Division of Continuing Education. International Center Deputy Director Idris R. Traylor and Continuing Education Associate Dean Michael Mezack developed the course with members of the faculty in French: Dr William T. Patterson, Prof. Beatrice Alexander and special instructors Laura Ballew and Dr. Curtis Bradford.

The Consortium for International Development (CID), responsible for the agricultural project in Niger in which six of the students of French will be working, supported the institute with an $18,000 grant with the stipulation that it include cultural as well as language instruction.

-more-

The students and their families expect to depart this week for Niger and Chad. Those in Niger have made a two-year commitment to assist Nigeriens in developing technical skill and land practices to make the nation self-sufficient in cereal production. Another phase of the project will be the development of trained manpower.

Texas Tech is the lead university in the $1.7 million project supported through CID by the U.S. Agency for International Development AID support also has made possible the work of two Nigerien graduate students at Texas Tech. The students are Jada Gonda and Mounkaila Amadou, whose major interest is in plant breeding.

Engaged in the intensive language institute at Texas Tech are project leaders: James Williams, chief of party, University of Arizona, and Mrs. Williams; Dr. William Hall, seed production specialist, and Mrs. Hall; Dr. Cyril Brown, agronomist, and Mrs. Brown; Dr. Clark Harvey, agronomist, and Mrs. Harvey; Dr. Eugene Foerster, agricultural engineer; Dr. Benjamin Wood, botanist and range science specialist, Mrs. Wood and their two sons; and Rodney Todd, assistant extension trainer for the project, Oregon State University.

Harvey and Foerster are members of the Texas Tech faculty and Hall and Brown are visiting Texas Tech faculty members. Wood's assignment in Africa is in Chad.

-30-

14-8-18-76

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

ATTN: FARM EDITORS

CONTACT: Prabhu Ponkshe

LUBBOCK, Tex.----Soil scientists around the world will soon be able to exchange technical information on irrigation methods and agricultural production for salt affected soils.

Efforts are underway to classify and map saline soils throughout the world, and one such map of the African continent is being considered by participants at an international conference of soil scientists at Texas Tech University, Aug. 16-20.

"There are different kinds of salt affected soils and once the typing is completed, scientists can exchange data on irrigation techniques for similar salt soils," said Dr. Istvan Szabolcs, Hungary, president of the subcommission on salt affected soils of the International Society of Soil Science. Szabolcs opened the conference Monday, Aug. 16.

Saline water changes the osmotic pressure in the root system and that affects the absorption of nutrients by the roots, Szabolcs explained.

The African map was plotted by Dr. G. Aubert, Paris, chief of the pedology section of the Office of Overseas Research and Technology, and his associates.

-more-

Aubert said the standardized color code that is being used for the world map will help in identifying the salt soil in any country. Europe and Australia have already been mapped, he added.

Tuesday's session marked the presentation of the first official salt map of Africa. The map has been in the making for several years under the sponsorship of the United Nations' Food and Agriculture Organization and UNESCO. Delegates have the opportunity to suggest changes before the first mass printing of the map.

Approximately 100 delegates from 20 countries are attending the conference.

The purpose of the conference is to focus international attention on problems in the use of saline water for irrigation and on procedures for predicting the impact of irrigation on soil salinity and the salinity of irrigation return flows.

In addition to invited and volunteer papers, sessions have been scheduled to present Food and Agriculture Organization guidelines for predicting salinity and alkalinity hazards.

"The maps will help soil scientists estimate the extent of salt affected soils in the world. Right now, no one can make an intelligent guess about that," said Dr. Harold Dregne, director of Texas Tech's International Center for Arid and Semi-Arid Land Studies.

"We feel that 25 per cent of irrigated land in the U.S. has the salt problem, and if salinity can be reduced in those areas, our agricultural yield would increase by about 20 per cent," he added.

-more-

In some countries in the Mideast, Dregne said, agricultural production could be doubled, or even tripled, if the effects of salinity were minimized.

In Texas, there are some salt affected areas in the High Plains region and in the South. The Pecos river, El Paso, and the lower Rio Grande valley have the salt problem, he concluded.

-30-

16-8-18-76

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

CONTACT: B. Zeeck

LUBBOCK--When a farmer looks for land, he looks for the best of soils. But as world population increases the less desirable lands--many of them salt-laden--can be expected to produce crops for economic benefits, according to experts meeting at Texas Tech University.

"We are studying the possibilities of cultivating certain areas of saline lands with salt tolerant plants that can be important economically, the non-conventional crops that could provide raw materials, for instance, for industry," Dr. M. A. Zahran of Egypt told delegates Thursday.

Zahran is one of about 100 delegates from 20 countries attending the International Conference on Managing Saline Water for Irrigation, meeting Aug. 16-20, at Texas Tech.

He described for delegates his work with two varieties of rushes which, in his research, he has cultivated in the saline lands of Egypt which occupy vast coastal areas along the Mediterranean and Red seas.

These are not traditional farmlands, and salt-sensitive crops cannot be harvested from them. Zahran said, however, that the two species of rush he has planted in the area can be made to flourish with proper fertilization, and they can produce fiber for high grade paper while their seeds may be used as a source of medicinal drugs and oils.

-more-

In his experiments along the shores of Manzala Lake in Egypt, Zahran used two species of rush, Juncus rigidus and Juncus acutus, and found a higher vegetative yield with Juncus rigidus both with and without fertilization. He found also that excess phosphorus in the soil could hinder growth. Juncus grows in the United States, even along lakes on the High Plains.

An added benefit of the plant is that it takes up salt from the soil and reduces salination, Zahran said.

His was one of more than 60 papers prepared for presentation at the meeting dealing with current and future management of saline soils.

Cooperating to organize the symposium were the Subcommission on Salt Affected Soils, International Society of Soil Science, the Soil Science Society of America, the U.S. Environmental Protection Agency, the U.S. Salinity Laboratory and three universities: Texas Tech, New Mexico State University and Texas A&M University.

Dr. Harold E. Dregne, Horn professor of plant and soil science, and director of the International Center for Arid and Semi-Arid Land Studies at Texas Tech, was chairman of the organizing committee. Persons interested in obtaining the printed proceedings of the meeting should write to Dr. Dregne at International Center, Texas Tech University, Lubbock, Tex. 79409.

Zahran is a member of the botany faculty in Mansoura University, Mansoura, Egypt.

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

CONTACT: Kay Hoard

"What arrangements can be made for a pet duck?"

Questions like this, and other more conventional ones, are tackled by the Texas Tech University Freshman Center, located in the lobby of the Tech library, in an effort to reduce confusion for students--all students.

"Primarily, the Freshman Center (FC) is an academic program," said Theo Lemaire, coordinator. The purposes are to make students feel more at home at Texas Tech, make the administration seem less impersonal and to help the student avoid confusion when dealing with the administration.

"Many times," said Lemaire, "we don't know the answer to the question asked, but we find out personally. We do not simply transfer calls or direct the student to another department to find the answer himself. We find out for him or her and occasionally accompany him through the different offices until the problem is solved."

This is sometimes resented by departments on campus, who prefer that the student be directed to the right office.

"They consider us a middleman," said Martha Vogel, one of the workers at the Center, "but if we do it that way, we never know if students found their way or found what they needed to know."

-more-

Academic programs this fall sponsored by the FC will include: tutoring in mathematics, English and science courses and an exit interview system, to interview all students leaving Tech during the semester to learn why they are leaving and to make recommendations from this study.

Another academic program available is Freshman Coordinators, staffed by deans or associate deans in each college. If a student is having an academic problem or conflict with a professor, the Freshman Center can bring the situation to the attention of the dean of the student's college.

Other programs are directed toward making the transition from a small town high school to a large university easier,

This summer, a home visitation program began. Freshmen attending freshman conferences were selected randomly to spend an evening in the home of a faculty member.

This allows the student to know at least one professor on campus and gives him an opportunity to meet other freshman students in his major field of interest.

Plans are now being made for a resources and activities curriculum, in which a graduate student will learn what activities are happening, on and off campus, and what organizations need manpower and try to get the freshmen involved.

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

CONTACT: B. Zeeck

LUBBOCK---Irrigation management specialists not only can speculate about the future with the precision of mathematical formulas, they also can simulate future conditions so that farmers and ranchers can plan for the future.

An example is the work done on yield declines anticipated in the year 2000 as salinity increases in the Colorado River in California. That river is used for irrigation in the highly productive Imperial Valley.

Dr. Frank E. Robinson, water scientist in the Department of Land, Air and Water Resources, University of California - Davis, reported to a world conference at Texas Tech University that, as salinity increases in irrigation water, production declines can be anticipated. Some of these can be offset by better water management.

In the Imperial Valley, Robinson said studies indicated snap bean production stands to decline about 34 per cent although a drop of only 5 per cent can be expected in wheat production by 2000 A.D.

In the past two and a half years, researchers have tested future production of onions, carrots, beans, cabbage, wheat and alfalfa. For some test plots they used irrigation water just as it comes from the Colorado with 880 parts per million salinity. For others they have -- over the 2.5 years -- added 44 tons of salt to bring the content up to the 1,350 parts per million anticipated for 2000 A.D.

-more-

The salts in the Colorado include gypsum, epsom salts, bicarbonate of soda and the sodium chloride commonly used as table salt.

Robinson addressed an International Conference on Managing Saline Water for Irrigation: Planning for the Future' at Texas Tech University. Approximately 100 delegates from a score of countries attended the week-long meeting which ended Friday (Aug. 20).

In the study on which Robinson made a report, a U.S. Department of Agriculture mathematical model was applied. It was produced by the USDA Research Services Salinity Laboratory at Riverside Calif., to predict the affects of salinity increases on production of conventional crops in the Imperial Valley.

The model proved to be accurate, Robinson said, "and we learned a great deal about irrigation water management."

He said that most irrigation in the Imperial Valley is now furrow irrigation and that the UC-Davis study indicated that sprinkler irrigation would be more efficient.

"Although there is more evaporation with sprinkler systems," he said, "the evaporation provides a benefit in keeping crops cooler."

The greater salinity anticipated in the irrigation water could be offset to some degree, he said, by more frequent irrigations -- washing the salts through the soil at a faster rate.

Robinson said he expected that efficiency of irrigation methods would help offset the costs of more frequent applications of irrigation water.

The UC-Davis study indicated that a 7 to 16 per cent reduction in onion production could be anticipated, a reduction of approximately 5 per cent in wheat, 34 per cent in beans, 6 per cent in cabbage and 13 to 15 per cent reduction in carrot production. A decline in alfalfa production should be expected, he said, but it will not be very significant.

A West Texas area field trip Friday afternoon ended the conference except for extended field trips to western states where important irrigation projects will be visited by some participants.

The symposium at Texas Tech was sponsored by the Subcommission on Salt Affected Soils of the International Society of Soil Science, the Soil Science Society of America, the U.S. Environmental Protection Agency, the U.S. Salinity Laboratory, and three universities: New Mexico State, Texas A&M, and Texas Tech.

The organizing committee included: Harold E. Dregne, Texas Tech, chairman; A.G. Hornsby, EPA; Jan van Schilfgaarde, U.S. Salinity Laboratory; C.W. Wendt, Texas A&M; and P.J. Wierenga, New Mexico State.

-30-

18-8-20-76

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

CONTACT: Kay Hord

A new aquatic center, backpacking, canoeing, kayaking and racquetball are part of the expanded Texas Tech University recreational sports program, expanded from and now including intramural sports.

The aquatic center, which is under construction and should be finished by approximately Sept. 15, is on the west end of the Texas Tech campus, near the commuter lot.

The facility will be a 50-meter-by-25-yard, indoor-outdoor pool with an adjacent grassy sunning area. It will be open to students with a valid identification card; no entry fee will be charged.

Some of the events scheduled for the pool include; beginning swimming class, Oct. 2; class to improve swimming strokes, Nov. 2, 9 and 16; midnight swim, Sept. 18; recreational early morning swim, Oct. 11, 12 and 13; synchronized swimming demonstration, October date to be announced; and all-university water play day, Dec. 5.

Registration for basic canoe instruction will be Oct. 1-2 at the pool.

Recreational clinics scheduled are: intermediate-advanced tennis, Sept. 14 and 16; beginning tennis, Sept. 11; and bowling, Sept. 17.

A backpacking seminar will be held Oct. 5; women's fitness and exercise, Sept. 13 or 14; and beginning racquetball, Sept. 9.

-more-

Equipment for backpacking, canoeing, rafting or kayaking can be rented from the recreational sports office for the day, weekend or week.

"Our biggest thrust," said Joe MacLean, director of recreational sports, "will be our outdoor program and equipment. The cost of the equipment is one of the biggest problems for people who want to get into the outdoors."

Recreational sports will also supervise the formation of sports clubs at Texas Tech. Presently there are clubs for bowling, gymnastics, hockey, lacrosse, rifle, sailing, soccer, softball and wrestling; and new ones can be formed.

-30-

1-8-23-76

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

CONTACT: Dan Tarpley

A seminar on the Darwin, Australia, disaster of Christmas Day, 1974, and the related meteorology, warning and aftermath will be conducted at 3 p.m., Thursday (Aug. 26), in Room 233, Geosciences Conference Room at Texas Tech University.

The speaker will be R. L. Southern, regional director, Bureau of Meteorology, Perth, Australia. The seminar is sponsored by the Institute for Disaster Research and the departments of geosciences and civil engineering, all at Texas Tech.

Southern has special interests and background in tropical cyclone warning and preparedness systems. He was regional director for the Bureau of Meteorology in Darwin, 1962-'71, where he set up warning systems and directed programs aimed at disaster mitigation.

He will discuss cyclone warning systems in Australia and Cyclone Tracy, which forced the evacuation of Darwin in December, 1974.

He is a graduate of the University of Western Australia and has had a long career with the Bureau of Meteorology.

-30-

2-8-23-76

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

CONTACT: Kay Hord

Paintings, sculptures, prints, drawings and photographs will be exhibited by more than 20 TTU faculty members in the art department's annual Art Faculty Exhibition.

Opening from 2:00-4:00 p.m., Sept. 5, the exhibition will be shown through Oct. 1 at regular gallery hours, which will be announced at the opening.

Works will include: watercolor and acrylic paintings, clay, metal, stone or fiber sculptures, prints in the screen or intaglio process, and pieces of jewelry and works in textiles and glass.

Exhibitors include: Future Akins, Peggy Bright, Bill Bagley, James Broderick, Frank Cheatham, Ken Dixon, Don Durland, Wayne Greene, Yvonne Greene, H.B. Greer, Paul Hanna, Jim Howze, Clarence Kincaid, Lynwood Kreneck, Deborah La Mar, Mary Lou McCarroll, Terry Morrow, John Queen, Donna Read, Steve Reynolds, Francis Stephen, Martha Sykes, Randy White and Bruce Zwingelstein.

-30-

3-8-24-76

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

CONTACT: Prabhu Ponkshe

LUBBOCK, Tex. ---They all speak English, but with 60 different accents!

More than 120 international students representing 60 countries already had arrived in Lubbock last week for the fall semester at Texas Tech University.

"We are expecting about 150 new international students this fall," said Ann Morgan, director of international programs at Texas Tech.

The number of foreign students, old and new, is expected to total approximately 650, representing more than 65 countries, Ms. Morgan said.

Welcoming the new students, Dr. Robert H. Ewalt said, "We are glad to have so many different international groups here at Tech. It helps local students to learn more about foreign cultures through interaction. The diversity of cultures is beneficial to the campus." Ewalt is vice president for student affairs at Texas Tech.

"This year we are faced with a slight housing problem. The university's dormitories have all been occupied and so are most private apartment complexes and houses near the campus," said Jennie C. Anderson, international programs' student advisor.

-more-

Individual international student organizations take care of students coming from their countries, Mrs. Anderson said, "but we would certainly welcome any housing vacancies near the campus."

The new students will be welcomed at a reception in the El Centro Room of the college of home economics on Friday (Aug. 7).

"Now that they have arrived in Lubbock, there is a need for additional local American students to participate in the Host Student Program," said Judy Shepard, chairman of the program. The HSP pairs international students with local students in an effort to introduce them to American culture.

The international programs office and the Lubbock community also administer the Host Family Program. Mrs. Anderson said that additional families also will be needed to host the new students. The local residents are expected only to invite the students once in a while during American festivals or at other times, she explained.

Three African countries, Zambia, Cameroon and Liberia, are being represented for the first time at Texas Tech this year. Most of the new arrivals this year are from Nigeria or Taiwan, Morgan said.

Their academic interests are mainly business administration, chemistry, physics, mathematics and food and nutrition, she said.

A proficiency test in English was held for entering students earlier this week to determine if they lacked understanding of grammar or spelling.

"Some international students speak perfect English, but their native accent makes it difficult for them to communicate well," Ms. Morgan explained. It takes a couple of months to add a touch of West Texas to their speech, she added.

The students also have received pre-registration instructions, as well as a brief introduction to West Texas and the university.

An orientation program offered them details about insurance, registration and campus and community programs.

They will go through personal interviews with Mrs. Anderson and immigration interviews with Dr. Deanna Fitzgerald, immigration counselor during the rest of this week. Pat Spiegelberg, chairman of the student international affairs council, will also talk with entering students to find out their interests in sports and hobbies.

International student enrollment at Texas Tech has grown from 302 in the fall of 1972 to 550 in the fall of 1975. The last count in spring, 1975, covered 63 countries.

-30-

4-8-24-76

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

CONTACT: Kay Hord

Four new history professors, Drs. James Eastgate Brink, Thomas F. X. Noble, Jayme A. Sokolow and Charles L. Wood, have joined the Texas Tech University faculty.

Each has a special area of interest on which he will concentrate: Brink, representative institutions in the French Renaissance; Noble, medieval history; Sokolow, American and European intellectual and cultural history; and Wood, agricultural history.

Their classes will concentrate on history's humanities--how people thought, acted and why--rather than simply the "traditional lining up of kings, queens and popes," the teachers said.

History should not be taught as a technical discipline so that it is only understood by history majors; it is an integrated subject that takes all of the courses in the university and puts them into context, agreed Brink, Sokolow, Wood and Noble.

Sokolow received the bachelor degree in 1968 from Trenton State College and master and doctorate degrees from New York University. He has published articles on American reform, American utopias and 19th Century British history. Before coming to Texas Tech, he spent six years teaching high school studies in New York City.

-more-

Brink earned the bachelor degree from the University of Kansas in 1967. He served as a Peace Corps Volunteer in Chile. Following that, Brink received the master and doctorate degrees from the University of Washington.

Noble, who earned the master and doctorate degrees at Michigan State University, was a Fulbright Fellow to Brussels and Louvain, Belgium. He also was awarded a fellowship by the Medieval Academy of America. His publications include the history of the medieval church and the age of Charlemagne.

Wood received the master and doctorate degrees from the University of Kansas. He taught history at the secondary public school level and at the University of Kansas. Publications include articles on American agricultural history.

Some of the courses to be offered by these professors include "The World Since 1945," dealing with current topics, for advanced levels; "Ancient Civilization," concentrating on such cultures as the Greek and Roman, as well as the rise of Christianity, open to all classifications; "Agricultural History," on western agriculture primarily, including government land policies, types of crops and machinery; and "Reformation," dealing with social, political and theological aspects of the rise of Protestantism in western Europe.

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

CONTACT: B. Zeeck

LUBBOCK--A basic and an advanced course in legal secretarial skills are offered this fall through the Division of Continuing Education at Texas Tech University.

Both six-week courses will be taught by a Lubbock attorney, Yvonne Faulks. Each will meet weekly from 7 to 9 p.m. in room 203 in Texas Tech's School of Law.

The basic course, starting Sept. 7, will cover legal terminology, paperwork procedures, time elements in litigation, wills and probate, real estate transactions, operation of the law office and legal ethics.

The advanced course, for persons who have completed a basic course or those who have five years' legal experience, will cover substantive law in the areas of personal injury litigation, wills and probate, corporations, and law office management.

Registration fee is $25. Books and workbooks will be available for purchase after the first class meeting.

Additional information is available by calling the Texas Tech Division of Continuing Education, 742-3739.

-30-

7-8-26-76

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

CONTACT: Charley Bankhead

Tornado researchers at Texas Tech University have received a $66,723 grant from the Nuclear Regulatory Commission to develop regional standards of tornado risk.

The scientists also will study characteristics of tornado windfields, or components. Drs. James R. McDonald, Joseph E. Minor and Kishor C. Mehta of the Texas Tech Institute for Disaster Research and Dr. Richard E. Peterson of the department of geosciences will participate.

McDonald said a major objective is to determine tornado risk for different geographical areas of the United States. "Risk" refers to the probability of a particular windspeed occurring in a tornado in a given year.

The researchers will study data from different sources and attempt to develop it into a consistent set. The information might include the number of tornadoes in a particular region, when and where they occurred, tornado path length and width, extent of damage and estimates of maximum windspeeds.

"There has been a limited amount of work in this area, but nothing as comprehensive as what we're trying to do," said McDonald. "A person might get different answers to questions from different sources. We hope our work will help develop some consistent answers."

-more-

In addition to studying geometric characteristics of windfields, the researchers will attempt to determine maximum windspeeds for tornadoes and components. McDonald said they will study damage and debris patterns and existing documentations of tornadoes. They also will perform additional documentations during tornado season next spring.

According to McDonald, the Nuclear Regulatory Commission will use information from the study to plan and design nuclear power plants and facilities that process nuclear material. He said the information also could be used in the design of schools and other structures.

Information gained from windfield studies will be used to develop structural design criteria.

"We need to know the make up of a tornado and its components before we can design structures to withstand the punishment," said McDonald. "We don't know too much about component speeds of tornadoes. We hope that from our study we will be able to deduce what are good and poor structural practices."

The tornado researchers began work on the project in July. McDonald said the project is funded for one year.

-30-

8-8-27-76

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

CONTACT: B. Zeeck

LUBBOCK -- Ronald A. Johnston has been appointed to the new position of director of Moody Planetarium at The Museum of Texas Tech University.

He has just completed an internship in planetarium administration and education at Morehead Planetarium, Chapel Hill, N.C.

Dr. James V. Reese, interim director of The Museum, said that creation of the new position will allow development of a much richer program for school children, the university and the public.

Because of Johnston's background in education and science, he will assist in making possible broader offerings in Texas Tech's master's degree program in museum science, Reese added.

Johnston was planetarium director and science teacher at Weed County Schools in Parkersburg, W. Va., when he was granted a fellowship and named the first intern for a unique 24-month training at Morehead Planetarium.

He is working toward the doctoral degree in science education at the University of North Carolina. He holds a master's degree in earth science from the University of Houston and earned the bachelor's degree at West Virginia University. He also has studied astronomy and planetarium operation in a National Science Foundation summer institute at San Diego State College, Calif., and done additional work at Ohio University, Athens.

Reese said that Mrs. Jay Harris will continue as planetarium consultant.

10-8-27-76 -30-