The weather

Fair to partly cloudy, with winds easterly at 5-8 mph. Low today 66; high today 90. Low tomorrow 68; high tomorrow 92.

The Battalion

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Brick oasis

Battalion photo by Steve Goble

Ed and Jason Crawford are just two of the many people who have found the brick fountain in North (Question-mark) Mall a welcome addition to the campus landscape. Since its activation, the fountain has become a gathering-spot on its end of the campus. Ed (the one with the hat) is a student at A&M.

Williams remains on critical list

Dr. Jack K. Williams, President of Texas A&M University, remains on the critical list in Methodist Hospital in Houston.

Friday afternoon, the hospital released a statement indicating that Williams' doctors were "encouraged" by his progress. However, a hospital spokesman said this morning that Williams had suffered a relapse over the weekend. He refused to elaborate. The spokesman said that Williams' doctors expressed "cautious optimism" about his condition.

The statement Friday afternoon said that the President's irregular heart beat had become less of a problem and that his respiration had improved. He had been able to sit up and take nourishment.

Williams underwent coronary bypass surgery two weeks ago. He had undergone cardiac surgery the previous night.

The President was admitted to Methodist Hospital July 10 after suffering cardiac arrest the day before while resting at his home in College Station. Williams was taken to St. Joseph's Hospital in Bryan and transferred to Methodist in Houston by helicopter.

Surprise — enrollment up again

Texas A&M University officials are predicting a fall enrollment of 27,800 to 28,000 students.

Such a registration would be another record. The projected gain of at least 2,500 students would be an increase of about 10 per cent over the 1975 fall enrollment of 25,247.

Estimates for this fall are based on the number of new undergraduate students approved for admission with the assumptions that the University's traditional acceptance-enrollment and retention rates will continue. Historically, about 70 per cent of new students who are accepted actually enroll.

Dr. Billy Gene Lay, admissions director, said Friday approximately 7,800 new undergraduate students — both freshmen and transfers — are expected.

For the first time in recent years, the University set a deadline, July 31, for admission of new undergraduate students.

Classes begin Aug. 30.

Radioactive carbon dioxide used to trace sugar in plants

Radioactivity may be responsible for food in your mouth someday.

Texas A&M University scientists and engineers are using nuclear physics as the key to unlock nature's secrets of food production. With radioactive material and facilities available at A&M (one of the few places in the world), they are tracing the genesis of growth in living plants.

"We hope to be able to understand how the plant allocates the sugar that it makes from carbon dioxide via photosynthesis," explained project director Dr. Don DeMichele, head of the Biosystems Research Division of the Texas Engineering Experiment Station (TEES) and the Department of Industrial Engineering.

"It is important to keep in mind that once the sugar is produced, it must be moved by the plant from the leaves to the fruits and root areas," he pointed out. "This, in many cases, can be the limiting step in producing food," he said. "Very little is known concerning how the plant moves its sugar, how fast, how much goes to the roots, or how much to the fruits."

Further, he says there are questions such as what controls the amount that goes to the fruit and can all that be changed. All these questions are being considered in this new series of experiments.

These important experiments have never been made before by anyone, anywhere to the knowledge of these researchers. The reason is that the study requires a group of bioengineers, biologists, nuclear chemists, agronomists and mathematicians with extensive computer facilities and the services of a cyclotron.

The Texas A&M Cyclotron is one of the most important research tools in high energy physics. The facility produces high-energy particles used for such diverse tasks as treating cancer patients as well as for exploring the structure of the nuclei of atoms. The team is now using it to probe the limits of plant growth and food production.

"High energy protons from the cyclotron are used to produce radioactive carbon dioxide which is fed to growing cotton plants contained in a special growth chamber deep in the cyclotron cave," DeMichele said.

"The radioactive gas is fed to the plant by a long tube running from the accelerator target chamber to the plant growth chamber."

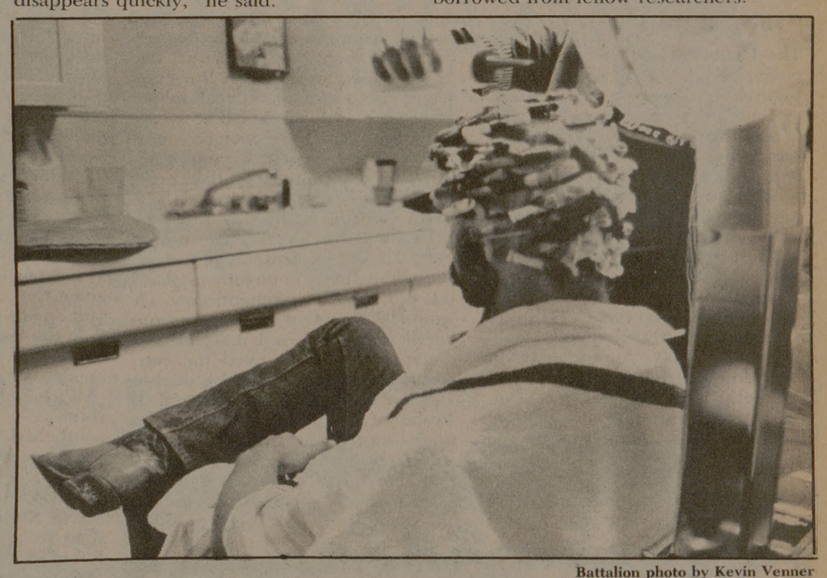
One leaf of the test cotton plant is enclosed in a special leaf chamber into which the carbon dioxide is introduced as a gas. The plant takes in approximately 74 per cent of the radioactive material which is converted by the photosynthesis to radioactive sucrose.

"A radiation detector is positioned, first at the base of the leaf, until the movement of the radioactive sugar is established," explained biologist John Goeschl. "The detectors are then moved to various positions along the stem and the velocity at which the radioactivity moves down the stem is measured. The intensity of this radioactivity tells how much sugar is inside the plant.

"One of the primary advantages of this type of experiment is that it may be run over again with the same plant, for the carbon radioactivity is very short-lived and disappears quickly," he said.

In subsequent experiments, the researchers plan to pulse the radioactive carbon such that these pulses of radioactivity will be observed moving through the plant. They plan to change the environment of the individual fruits to see whether this has any impact on how much of the sugar made by the plant is carried to that fruit.

Some aspects of this research are supported by the National Science Foundation, but much of it is being carried by the researchers themselves. Part of the experimental equipment has been built in garages and transported to the University. Other parts of the equipment have been borrowed from fellow researchers.



Battalion photo by Kevin Venner

Progressive country . . .

Chances are that this contemporary cowboy won't keep his hairstyle under a hat.

Solar energy seminar set Saturday at A&M

Area residents can view and examine solar energy equipment now available for homes and businesses at a special applied solar energy seminar to be held in the Rudder Center at Texas A&M University from 9 a.m. to 5 p.m. Saturday, Aug. 7.

Dr. Peter Jenkins, Texas A&M mechanical engineering professor and seminar chairman, said equipment on display during the seminar will include solar hot water heaters; swimming pool heaters; flat plate and concentrating collectors; and heating and cooling equipment. The display will be outdoors by the Rudder Center fountain.

The admission-free seminar is designed to acquaint architects, builders, homeowners, business persons and other interested individuals in the Brazos Valley area with solar equipment and methods available for this part of the country.

It is sponsored by the Energy Advisory Service for Texas, a new program of Texas A&M's Center for Energy and Mineral Resources, and by the Texas Engineering Experiment Station.

"Many persons think of solar energy as an exotic energy source for sometime in the future," Jenkins said. "Although solar energy will become increasingly important in the future, much solar energy equipment is available today to help homeowners and business persons alleviate some of their energy problems."

Solar energy specialists from several universities and private companies throughout the Southwest will speak in Rudder Center 701, beginning at 9 a.m.

A 90-minute lunch break will allow those attending to view the solar equipment displays and visit with the solar specialists. Individuals are also welcome to question the specialists at the end of the program.

Individuals attending the solar seminar need only fill out a registration form which will be available Saturday morning. Persons desiring additional information may call the Center for Energy and Mineral Resources at A&M at (713) 845-8025.

A&M cryosurgery leader

Texas A&M University's College of Veterinary Medicine has assumed a leading position in the use of extreme cold to remove tumors from horses' skin.

The treatment, called cryosurgery, destroys tumor tissue by applying liquid nitrogen to lower the interior of the tumor to a chilling minus 20 degrees Centrigrade, reports clinician Dr. Joseph R. Joyce.

Although cryosurgery is a technique that has been in use for 130 years, it has only recently been focused in the direction of large animal treatment.

Since he began working on large animal tumors three years ago, Joyce has worked on more than 100 separate tumors involving horses and cattle.

He says he is enjoying about 70 per cent success overall.

In the cases he has followed up, Joyce reports 74-86 per cent success among the horses he treated and 86 per cent success in cattle. Several of the recurring tumors were removed after a second treatment while the large majority of the others were adjacent to important anatomical structures, limiting use of cyrosurgery.

On large tumors, a meter is needed to monitor the temperature inside the tissue. Before the base of the tumor reaches minus 20, the surface temperature may dip to 150 below zero.

"That's so cold, it burns to even touch it," says Joyce.

The cost of the monitoring meter and the unit with which the liquid nitrogen is applied has been one of the major drawbacks to this treatment thus far, he said.

The advantages of cryosurgery are many, however," asserts Joyce.

"Minimal pain is associated with the freezing. Little, if any, hemorrhaging occurs and scarring is minimal. Instruments are easy to use and tumors can often be treated under local anesthesia. Tumor cells are not spread and circulating antibodies to certain types of tumors may be stimulated," he explains.

Following treatment, tumors usually dry up and fall off within one to two weeks. The largest tumors may require 10 weeks.

Danger to important organs, especially the eye, remains a problem in cryosurgery, Joyce cautions. But, he adds, some form of insulated shield can be used to lessen or eliminate the problem, thus avoiding permanent eyesight damage.

Vet graduation Friday

More than 120 College of Veterinary Medicine students will receive Texas A&M University degrees Friday during 8 p.m. ceremonies in Rudder Auditorium.

University of Wyoming president Dr. William D. Carlson, a former Veterinarian of the Year, will deliver the commencement address to those students ending three continuous years of professional work, announced Dr. George Shelton, dean of veterinary medicine.

Carlson, president of Wyoming University since 1968, graduated with a DVM degree from Colorado State University in 1952 and began a general practice for a year before accepting a position as assistant professor in the CSU small animal clinic.

He earned a master's from Colorado State in 1956 in conjunction with a two-year radiology residency in human medicine at the University of Colorado Medical Center. He completed his formal education by earning his doctorate from the University of Colorado in 1958.

Carlson founded CSU's Radiology and Radiation Biology Department, and was among founding members of the Educators in Veterinary Radiological Science organization and the American College of Veterinary Radiology.

In 1965, he served as president of the American Veterinary Radiology Society he helped found and two years later was selected Veterinarian of the Year by the American Animal Hospital Association.

The author of "Veterinary Radiology," now in its second edition, Carlson served from 1971-1975 as national consultant to the Surgeon General of the Air Force for Veterinary Affairs.

A member of Phi Kappa Phi and Sigma Xi honor societies, the 48-year-old administrator is on the Wyoming Interstate Commission on Higher Education, is director of the Association of Western Universities and serves in the senate of the president's council to the American Association of State Universities and Land-Grant Colleges.

College Station bike paths to be completed in month

College Station City Engineer Elrey Ash reported yesterday that the striping and signing of the city's existing bicycle pathways is underway and should be completed within a month.

Ash said the bike paths have already been striped, and the city staff is waiting for the delivery of 'Bicycle Path' and 'No Parking' signs.

He said the first shipment of signs which were ordered in several installments should arrive next week.

Ash said he hopes most of the signs can be erected before the start of school.

The improvements are being financed through the sale of a portion of the capital improvements bonds which were approved by College Station voters on June 29.

After the signs are in place, the police department will begin ticketing vehicles which are found parked on the bike paths, City Manager North Bardell said yesterday.

The city has received some complaints about vehicles parked in the bike paths, but Bardell said the city could not legally enforce the no parking in bike path ordinance until the lanes were striped and signed.

The following streets are involved in the improvements: Francis Drive from Texas Avenue to College Hills; Dominik Drive from Munson Avenue to Merry Oaks Drive; Kyle Avenue from Texas Avenue to Gilchrist Avenue; south side of Jersey Street from Wellborn Road to Texas Avenue.

Also involved are: Glade Street from Park Place to Southwest Parkway; both sides of Southwest Parkway from Madison Avenue to Welch Avenue; Southwood Drive from Southwest Parkway to FM 2818; Walton Drive from Nunn Street to Francis Drive.

The city has submitted an elaborate bicycle path plan to the federal government through the Texas Highway Department. City officials are hoping to receive federal funds to develop the plan which involves an underpass on University Drive and extensive off-street bike paths. Federal help on the plan is expected within the next year according to city officials.

Battalion staff photo by Steve Goble

Aggie Fantasticks

The MSC Dinner Theater cast of "The Fantasticks," which ends a successful four-night run with a performance tonight, includes (clockwise from lower right) James Hall as Henry, Thomas Owen as Mortimer, Boni Petersen as Louisa, Philip Hafer as Huckleby, Bruce Kates as Bellomy, Susan Rudd on piano, Vanessa Watts as The Mute, Michael Wilson as El Gallo and Brian McPherson as Matt. See Battalion Reviewer B. J. Strode's comments on the musical, page 3.