

Agronomists Study Functions Of Clay

The Department of Agronomy is using infrared light rays to study the still-mysterious function of clays in soils.

The light used in this research is the same kind produced by household suntan lamps sold in drug and department stores. But that is about the only similarity.

Appearance-wise, the infrared instrument looks like anything but a suntan lamp. It is encased in gray metal and has an assortment of knobs and switches. In short, the machine doesn't look much different from other electrical equipment found in modern laboratories.

THE INSTRUMENT, known as a spectrophotometer, is being used by Dr. George Kunze, agronomy

professor whose special research field is soil mineralogy and chemistry.

Kunze says there is still much to be learned about clays in soil.

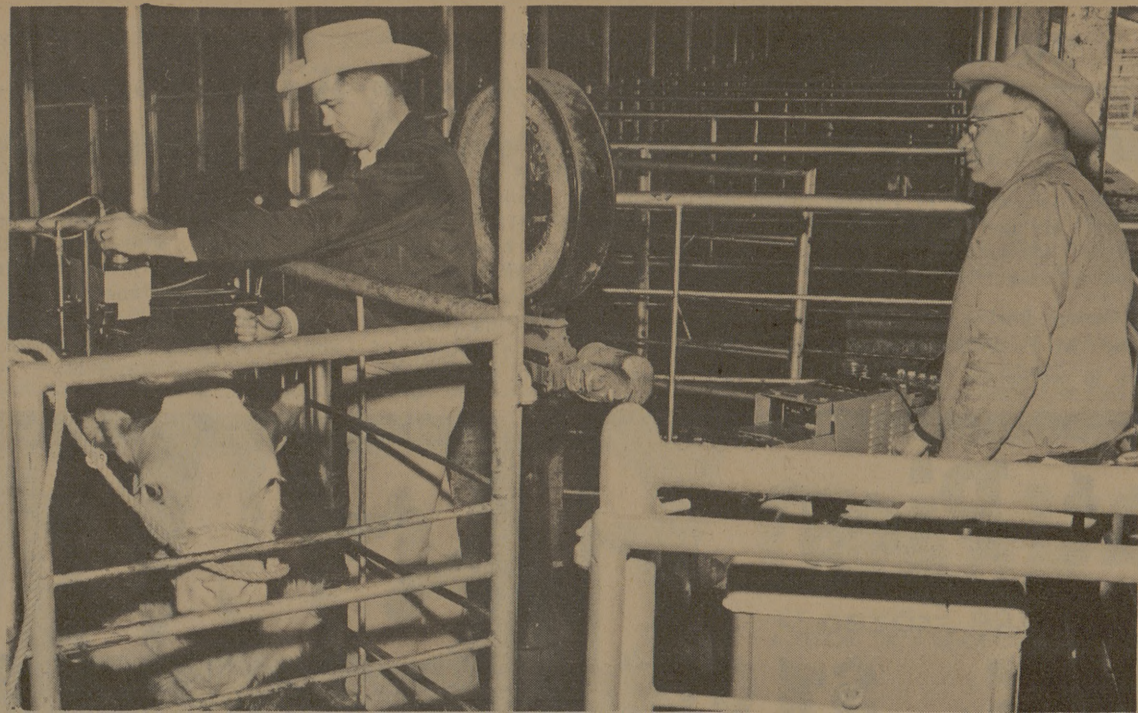
"We are kind of like a doctor who knows his patient is sick but frequently can't pin down the specific bug causing the ailment," he explained.

The agronomist has been working for a number of years with X-ray diffraction of clays, an identification system based on the distance between planes of atoms in clay. With the spectrophotometer, he now can look at clays from another angle and study the energy of bonds between the atoms.

To use the instrument, Kunze places a clay sample behind a little glass window, throws a switch, turns a knob or two, and the spectrophotometer hums into action.

Various infrared light beam frequencies are directed at the sample until one of the frequencies is absorbed. When this happens, the vibration frequency of the bond between the clay atoms is equal to that of the light.

All this is automatically recorded on graph paper by the machine.



SOUNDING OUT A LIVE BEEF STEAK
L. D. Wythe Jr., left, and USDA official, Dr. Robert Temple, operate Somascope.

Ultrasonics Used To Measure Beef

The progressive beef cattleman of the future might be using the science of ultrasonics to help breed meatiness into his animals.

Ultrasonics is the scientist's name for high frequency sound, the kind that can't be heard by human ears. Ships and submarines use the principle to bounce sound off of distant objects for detection on sonar scopes.

And now researchers have developed an ultrasonic system to bounce high frequency sound off layers of fat and muscle to measure how much meat a breeding animal has under that layer of hide.

MEATINESS is about 50 percent heritable in beef cattle, so it's easy to see that a method of quickly determining the characteristic would be a valuable tool in a breeding program.

Dr. Robert S. Temple of Knoxville, Tenn., investigation leader for the U. S. Department of Agriculture's Southern Regional Beef Cattle Breeding Project, has just finished demonstrating the system at A&M.

The device is called a Somascope. Temple says the beauty of using ultrasonics is that a measurement can be made of meatiness just as the live animal stands there in a holding chute. Only a few minutes per animal are required.

Before, the only way to determine actual meatiness was to slaughter the animal and take measurements on the important cuts.

"And that kind of wear and tear is hard on breeding animals," Temple pointed out.

THE USDA OFFICIAL says the Somascope is most often to sound out the ribeye muscle and the fat around it, but the round and other meat and fat areas also can be tested. The ribeye is the main part of a T-bone steak.

The Somascope looks much the same as other complex electrical apparatus often found in science laboratories. There is the usual array of vacuum tubes, lights, dials, buttons and toggle switches. The whole thing can be placed on a card table.

Food Preservation To Be Emphasized By Technologists

New ways of food preservation will be emphasized here when the Texas Section of the Institute of Food Technologists holds its fifth annual meeting March 20-21 at the Ramada Inn.

Dr. Fred Gardner of the Department of Poultry Science, program chairman, said the session opens at 1:30 p.m. March 20 with a talk on "Principles of Food Dehydration." J. J. Wingenbach of the American Sterilizer Company at Erie, Penn., is the speaker.

Another member of the sterilizer firm, Morton M. Raymond, will discuss "Applications of Food Dehydration."

The last speaker of the afternoon is Ricardo Arrendondo of the United Fruit and Food Corporation at San Carlos. His subject is "Commercial Consideration of Food Drying and Food Preservation."

Gardner said a meeting highlight will be a 6:30 p.m. dinner talk by a A&M scientist who worked with Russian scientists aboard a ship. He is Dr. Guy Franceschini of the Department of Oceanography and Meteorology.

March 21 discussions start with "Principles of Irradiation" by Dr. G. M. Krise of the Department of Biology. Next are "Nutritive Value of Foods Sterilized with Gamma Radiation," Dr. L. R. Richardson, A&M Agricultural Analytical Service; and "Enzymatic Approach to Fish Processing" by Dr. W. W. Meinke of the A&M Chemurgic Research Laboratory.

Gardner said the public has been invited to hear the discussions.

City Lawmen To Assemble Here Monday

Lawmen from approximately 25 Texas towns will be on campus next Monday through Friday for the second annual Justice of Peace and Constable's Institute, Wallace D. Beasley, coordinator of police training here, reported.

Conference speakers include attorneys and law enforcement officials, who will discuss subjects relating to the justice court.

Registration will begin at 8:30 a.m. Monday, followed by Beasley's talk on the institute's objectives. The Texas Law Enforcement Foundation and Texas Association of Justice of Peace and Constables cooperate with A&M in holding the institute.

FIRST KEY SPEAKERS will be Norman A. Stewart, attorney and associate professor of business administration at A&M. His talk is entitled, "The Rights of the Accused from the Prosecutor's Viewpoint."

David B. Cofer, Bryan attorney, will discuss the accused's rights from the prosecutor's viewpoint Monday.

Albert L. Lee of Humble, justice of peace, will outline the need for suitable courtroom facilities. D. C. Betts, supervisor of A&M's Polygraph Examiners School, will discuss law enforcement, including lie detector use.

OTHER SPEAKERS will be W. B. Groce of Bryan, Texas Liquor Control Board agent; Lonny F. Zwiener of Austin, assistant attorney general; Robert S. Evans of San Antonio, Parks and Wildlife Department conservation chief; W. C. Davis of Bryan, Brazos County judge.

Japan Air Base Sent Stuffed Bat

A&M University's wildlife management people recently filled a far-away request for "a stuffed bat."

Airmen stationed at an U. S. Air Force Base in Japan, after reading an article in the Stars and Stripes military newspaper that A&M had undertaken a long range study of bats, decided A&M would be a good source for a mascot.

They contacted Capt. Lester R. Hewett Jr., of the university Department of Air Science who, in turn, relayed the plea to wildlife management.

High School Choir, Talent Due Tonite

High school talent will be exhibited at the A&M Consolidated High School auditorium Thursday night when a talent show and a choir concert will be held.

Co-sponsored by the Bengal Belles and the A&M Consolidated Speech Department, the talent show gets underway at 7 p.m.

At 8:15 p.m. the Killen High Concert Choir will perform. The group, participating in its fourth annual tour of the state, will be making its first appearance at the local high school.

Directed by Don Pugh, the choral unit has been a consistent first division winner in University Interscholastic League contests for several years.

The 40-student organization will be making stops at Huntsville, Conroe and Houston before concluding their present tour.

The A&M Consolidated Concert Choir is sponsoring the Killen singers who have performed with the San Antonio symphony and the North Texas State University symphony.

No admission will be charged to the concert.

Christian Citizenship Series Set Monday

The A&M Baptist Student Union will sponsor a "Contemporary Campus Christian" program Monday through Wednesday at 7 p.m. in the First Baptist Church of College Station.

Dr. William Pinson, professor of Christian ethics at Southwestern

Baptist Theological Seminary in Fort Worth, will speak Monday on "Contemporary Campus Christian: American Citizen."

Tuesday night's topic is "Contemporary Campus Christian: World Citizen." William Lawson, coordinator of religious activities

at Texas Southern University and pastor of Wheeler Street Baptist Church in Houston, will speak the second night.

Dr. Ralph Langley, pastor of Willow Meadows Baptist Church in Houston, is slated for Wednesday's talk.

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