

ANIMAL NUTRITION

Turkeys Fed Vitamin Keep Fresh Longer in Storage

► **TURKEYS FED** high vitamin E diets stay fresh longer in cold storage, Prof. Agnes Fay Morgan of the home economics department at the University of California's College of Agriculture has found.

The vitamin, tested at various amounts for different periods, produced best results at the rate of 0.1% of the total feed for 35 days prior to killing for storage.

The vitamin E slows down fat breakdown in the birds during cold storage. The more vitamin present in the bird, the less rancidity was found by taste panels testing birds stored as long as nine months. Greater retention of vitamin E was found at low level feeding for 35 days than feeding large amounts for two and a half days prior to killing.

The vitamin was mixed with the regular feed during the tests. Commercial feeding of extra vitamin E by turkey growers would depend on the cost of the vitamin.

The birds actually retained a small fraction of the total vitamin eaten. Storage of the vitamin is greatest in the liver, with the breast, gizzard, leg and breast muscles following.

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ARCHITECTURE

Melting Snow Dangerous To House Roofs and Walls

► **WINTER SNOWS** melting on house-tops because of heat-leaky roofs may damage ceilings, interior and exterior walls, or even the roof itself, William A. Russell reported to the Housing and Home Finance Agency.

A structural engineer for the Agency, Mr. Russell said poorly insulated roofs allowed escaping heat to melt the underside of the snow blanket on the roof. The melted snow often is kept from running off because ice dams form farther down the roof near the eaves where no heat escapes.

Thus blocked, the water backs up under roof shingles and may seep through the roof itself to damage ceilings, walls, paints and wall paper on the inside of the house.

The problem is encountered particularly in areas where prolonged cold weather combines with heavy snows and warm roofs to form the ice dams. Good ventilation, proper insulation and extended flashing were suggested as solutions.

Properly ventilated attics, he said, are almost as cold as the outside. When spring comes, the snow melts on the upper side of the blanket and runs right off.

Thorough insulation of the ceiling just under the roof minimizes heat loss into the attic. Outside walls also should be insulated to prevent heat from escaping.

Flashing, an alternative to proper ventilation and insulation, is a metal strip

placed wherever the roof angles, such as over protruding windows. It should be extended several feet up from the eaves of the house and be made unusually wide in the roof angles.

However, flashing is costly, uses critical metal and does not save heat or increase summer comfort as proper ventilation and insulation do, Mr. Russell pointed out in "Housing Research," a quarterly publication of the agency.

Screened or louvered ventilators should contain at least one square foot of area for every 150 square feet of ceiling. Vent-holes should be spaced near the top of the attic walls and also near the eaves so air can circulate through the attic, keeping it cool.

Science News Letter, March 29, 1952

MEDICINE

Cortisone and ACTH Prolong Leukemia Victims' Lives

► **CHILD LEUKEMIA** victims have recently had their lives prolonged, on the average, three to four months by giving ACTH or cortisone after anti-folic acid chemicals no longer helped, or by the reverse, giving the anti-folics after the hormone chemicals failed.

The hormones apparently have a different primary mode of action on the leukemic process from the anti-folic chemicals. Using first one and then the other of these chemicals does not cure, but the method may be important of sensitivity to the first chemical tried can be reestablished. The studies are reported by Drs. Elizabeth M. Kingsley Pillers, Joseph H. Burchenal, Leonard P. Eliel and Olaf H. Pearson of Memorial Hospital and Sloan-Kettering Institute, New York, in the *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* (March 22).

A new treatment of cancers of hormone-producing tissues such as sex glands and adrenal glands may result from discovery in gland cancers of an enzyme that changes relatively inactive body compounds into hormones. This discovery was made by Drs. Leo T. Samuels, M. L. Helmreich, M. B. Lasater and Hans Reich of the University of Utah Medical College at Salt Lake City. It was announced by the American Cancer Society which financed the research.

TEM, short for triethylene melamine, shows more versatility than other chemicals used in treatment of the leukemias, Hodgkin's disease and other malignant disorders of white blood cell forming tissues. Studies showing this are reported by Drs. Jay H. Silverberg of Pittsburgh and William Dameshek of Boston in the *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* (March 22). TEM is related to the nitrogen mustards but has the advantages that it can be given by mouth and causes less frequent and less severe reactions. It is not a cure but produced long periods of improvement in some patients.

Science News Letter, March 29, 1952

IN SCIEN

PUBLIC SAFETY

Plan Safety Program For Home Gardens

► **WHILE YOU** are planning your home garden, plan a safety program for yourself and your family. Farmers, also, should start now, before their busy season, to set up precautions for cutting down the number of accidents that are otherwise so likely to come on the farm.

Take a look around the place and see if you can spot potential accident and fire hazards and then eliminate them. Here are some simple precautions to follow:

Have a place for things and keep them there.

Avoid storing loose materials overhead in the rafters.

Keep things out from underfoot as much as possible. It is easy to trip over a pitchfork handle.

Farm buildings with lights should have the wires inspected. Have a dry place to stand when throwing switches.

If using a lantern, hang it outside the barn and provide a secure place to hang it.

Avoid smoking or lighting matches around the barn. (Remember this, those of you who plan to work on farms this summer.)

Do not store gasoline or kerosene in the barn.

Oily rags or waste should be burned.

And here are some additional pointers: Learn to lift heavy objects correctly to avoid strains, sprains, and ruptures. The trick is to use leg instead of back muscles. Keep your back as nearly vertical as possible, feet close to the object being lifted and about 10 inches apart. Keep the hips lower than the shoulders and the arms straight. Don't try to lift something too heavy for your strength. Get help or rig a block and tackle.

Science News Letter, March 29, 1952

INVENTION

Air Conditioning for Drive-In Theaters

► **NOW AIR CONDITIONING** is coming to the drive-in theater. Main purpose of the invention, according to William S. Oftebro and William E. Fleming, Stockton, Calif., is to provide heat for automobiles without the danger from keeping the automobile engines running. Fresh air blower assemblies are placed between two cars. Hoses bring air into the cars and small electric heaters, attached to the car ends of the hoses, heat the air. The automobile air conditioner received patent number 2,588,756.

Science News Letter, March 29, 1952

CE FIELDS

MEDICINE

Pale Lips No Guide To Anemia in Children

► PALE CHILDREN are no more anemic than those with normal color, says Dr. John Yudkin, professor of physiology at London University, London.

Prof. Yudkin studied 1,200 school children and found there was no association between the color of a child's cheeks, lips and eyelids and the level of hemoglobin in its blood.

Nor were the pale-faced children in any way inferior to their rosy-cheeked brothers and sisters in such things as susceptibility to nose and throat infections, soundness of teeth, intelligence, educational standing, vital capacity, endurance, bone development and sharpness of eyesight.

On the other hand, the pale children were, on the average, five pounds lighter and two-thirds of an inch shorter than the children who were not pale, and the strength of their grip was almost two pounds weaker. Pale children also seemed to be less well nourished.

Details of Dr. Yudkin's study are reported to fellow physicians in the *LANCET*.

Science News Letter, March 29, 1952

NAVIGATION

Navigation Device Tells Distance to Destination

► A NAVIGATIONAL device that automatically tells pilots not only where they are, but exactly how far they are from their destination and the direction in which to proceed to reach it, has been developed by Capt. Robert Jasperson, U. S. Navy (retired).

"While designed primarily for use in high-speed aircraft, the system may be employed in surface craft, or to fix the position of any point on the earth's surface," Capt. Jasperson reported at the Institute of Navigation meeting in Annapolis.

Developer of an automatic pilot that uses true celestial navigation to hold a guided missile to its course, Capt. Jasperson reports that once his new device has been set on two stars, the system will continue to function although one or both stars may be obscured temporarily.

The Jasperson device is based primarily upon the Zerbee Celestial Fix Finder. This instrument for solving several spherical triangles simultaneously was patented by Louis J. Zerbee of Bellefontaine, Ohio, in August of 1950. The Zerbee device uses the declination, Greenwich hour angle and altitude of two selected celestial bodies to get instan-

taneously the observer's longitude and latitude at a given instant. The observer's position is accurately located within a mile.

Two additional factors are incorporated in Capt. Jasperson's device. One gives the latitude and longitude of the pilot's destination, the other mechanically joins the plane's present position with his destination. The plane's course and distance from its point of destination are determined instantly.

To eliminate the bothersome task of manually setting the stars' declination and sidereal hour angle each time the fix finder is used, Capt. Jasperson incorporates two star viewers to simulate the apparent motions of the chosen stars. These must be checked from time to time, of course, to be sure the selected stars are centered in the viewer.

Science News Letter, March 29, 1952

ARCHAEOLOGY

Fifteenth Century Helmet Plowed Up in New Mexico

► AN INDIAN plowing his garden in New Mexico turned up a strange looking object.

This has now been identified by Harold L. Peterson, expert of the National Park Service, as a helmet such as was worn by fighting men back in the days of bows and arrows.

Although San Gabriel del Yunque, on the site of which settlement the helmet was unearthed, was not established until 1598, the helmet itself may date back as far as 1480, Mr. Peterson announced.

This is not to be wondered at, Mr. Peterson explains. Don Juan de Onate, founder of San Gabriel, had to supply his expedition largely at his own expense and did so out of "surplus," purchasing much obsolete equipment.

"The helmet as received was badly corroded and very fragile," Mr. Peterson reports. "Magnet tests indicated that there was very little, if any, metal left, and that almost nothing but oxide remained. Very careful treatment was required to protect and strengthen it. A reduction bath such as is often given to excavated objects would have been useless because of the lack of a sound metal base.

"Since virtually nothing but oxidation remained, the helmet was soaked first in tepid water to loosen clay and dirt and to leach out salts which had collected in corrosion. The loosened materials were then removed with a very soft brush. Then followed a washing with a neutral detergent.

"Thereafter it was dried thoroughly in an oven in which the temperature was gradually raised to the temperature of melted wax in which it was immersed for 15 minutes. The wax serves both as a preservative, to prevent further deterioration, and as an adhesive, helping to hold the oxidation particles together."

Science News Letter, March 29, 1952

PUBLIC SAFETY

Check Home Electric Appliances

► SOME OF the electric appliances used regularly in the home may carry a hidden hazard. The home freezer, ironer and washing machine are among these.

The danger is that of electric shock if these and other appliances used with water or in damp places are not grounded.

"Without this special protection, a stray current, seeking the easiest way to the ground, may run through your body," warn specialists of the U. S. Department of Agriculture.

Be sure an electric washing machine is safely grounded, they advise. Some manufacturers equip their washers with a cord that grounds the machine whenever it is plugged in. Such a cord has a 3-prong plug and requires a 3-hole outlet to fit it.

Some other washers have a 3-wire cord with a regular 2-prong plug that fits the usual 2-hole outlet. The third wire, for grounding, branches off the cord near the plug and goes into a tiny socket that replaces one of the screws that hold the cover plate on the outlet.

This is a good "ground" if the wire is metallic cable. With non-metallic cable, used in many farmhouses, it does not give protection unless the outlet itself has a good "ground."

If a washing machine has only a 2-wire cord, it is not grounded, but should be. Here's how to do it: Attach one end of a separate length of insulated wire to the frame of the electric motor and the other end to a water pipe which will carry the current to the ground. Use a clamp fitting to keep each end firmly attached. The wire should be bare where it is clamped.

Science News Letter, March 29, 1952

MEDICINE

Malaria Preventive Used On 1,000 Korean Veterans

► A THOUSAND soldiers returned from Korea will be the human guinea pigs this spring and summer for a test of primaquine as a malaria preventive.

The 1,000 men have all been exposed to malaria, but none of them, so far as his history shows, has had any attacks of this chills and fever disease. And none of them has had any of the relatively new anti-malaria drug. Consequently some might be expected to come down with a malaria attack this coming summer. So the 1,000 will get a dose of primaquine every day for 14 days and then be watched all summer to see whether malaria develops.

If none of them gets malaria, scientists in the Office of the Surgeon General of the Army will consider it proof that primaquine can prevent malaria under these conditions.

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