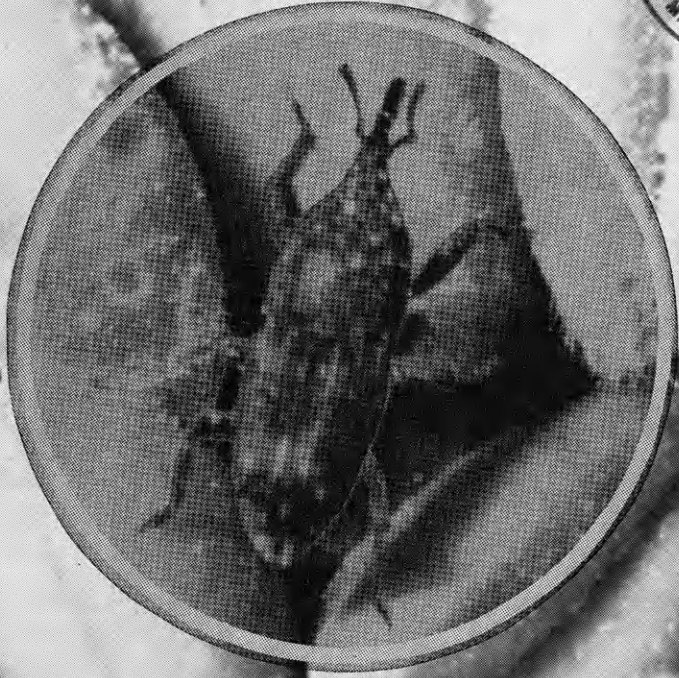


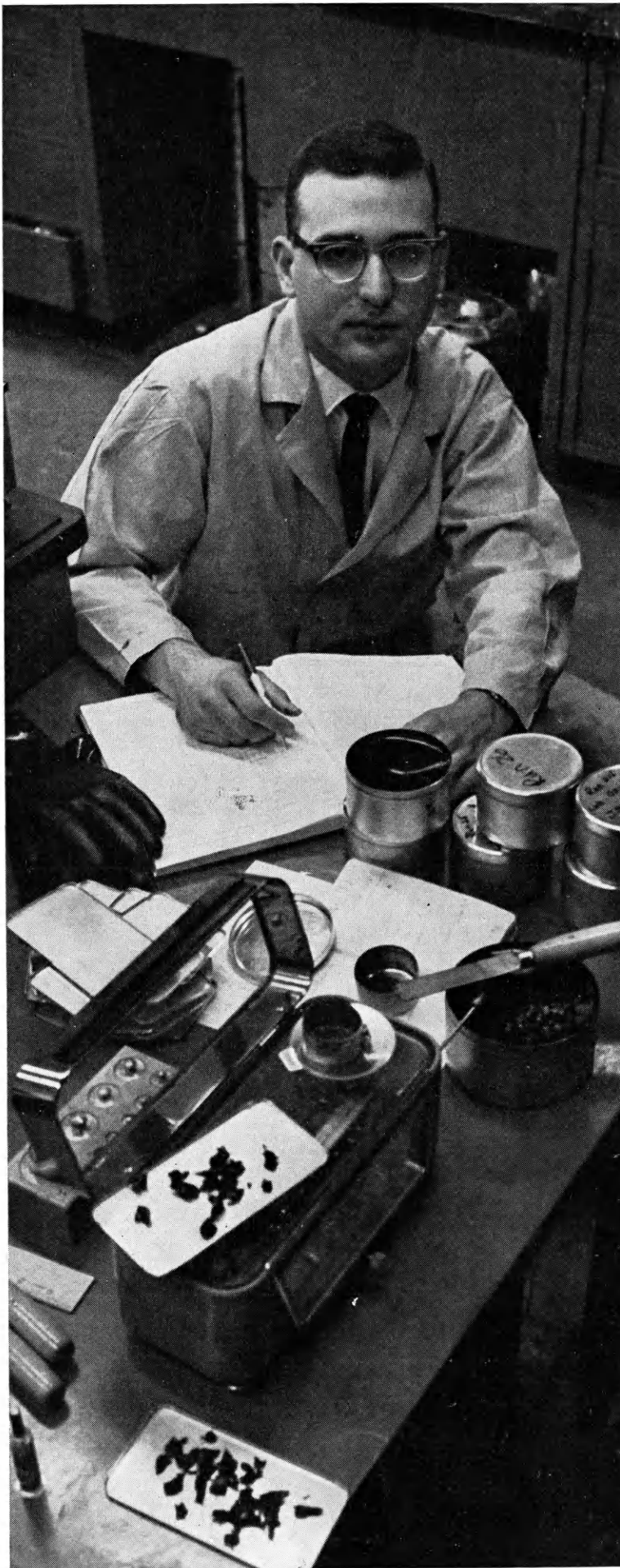
S  
K3  
38/6

SP5

KANSAS STATE UNIVERSITY  
**AG STUDENT**  
MAY 1962



Evaluate Before  
You Fumigate . . . page 10



*I chose a career,  
not a job!*

*by Pete Vossos*

"I found a satisfying job right from the beginning —and more important, American Oil is diversified enough to offer varied opportunities for the future."

Peter Vossos earned his Master of Science degree at Iowa State, '58. As a physical chemist, Pete's immediate project is studying fundamental properties of asphalts with the objective of improving their performance in roofing and industrial applications. About his 2½ years at American Oil, Pete adds, "This is a company that's big enough and dynamic enough to be doing important work, but not so mammoth that you get lost in the crowd."

Many ambitious and talented young scientists and engineers like Peter Vossos have found challenging careers at American Oil. Their choice could have special meaning to you. American Oil offers a wide range of research opportunities for graduate chemists, chemical engineers, mechanical engineers, physicists, mathematicians and metallurgists.

If you are interested in a career with the Research and Development Department of American Oil Company, write to: D. G. Schroeter, American Oil Company, P. O. Box 431, Whiting, Indiana.

---

IN ADDITION TO FAR-REACHING PROGRAMS INVOLVING FUELS, LUBRICANTS AND PETROCHEMICALS, AMERICAN OIL AND ITS ASSOCIATE COMPANY, AMOCO CHEMICALS, ARE ENGAGED IN SUCH DIVERSIFIED RESEARCH AND DEVELOPMENT PROJECTS AS:

New and unusual polymers and plastics • Organic ions under electron impact • Radiation-induced reactions • Physicochemical nature of catalysts • Fuel cells • Novel separations by gas chromatography • Application of computers to complex technical problems • Synthesis and potential applications for aromatic acids • Combustion phenomena • Solid propellants for use with missiles • Design and economics: New uses for present products, new products, new processes • Corrosion mechanisms • Development of new types of surface coatings.



**STANDARD OIL**

DIVISION OF AMERICAN OIL COMPANY

NATIONAL MARKETING AFFILIATE OF STANDARD OIL COMPANY (INDIANA)

KANSAS AGRICULTURAL STUDENT





**Dr. Glenn H. Beck**  
Dean of Agriculture

reared on a livestock farm in Iowa, and received his B.S. and M.S. degrees from Iowa State University, and Ph.D. from Oklahoma State University, with major work in animal nutrition. He was on the Oklahoma State faculty for two years, then returned to Iowa State in 1955 to teach and do research in the animal science department.

Since 1958, Dr. Acker has been in charge of the farm operation curriculum at Iowa State and has taught animal science and animal nutrition courses. He was named "professor of the year" by College of Agriculture students there in 1959 for his outstanding classroom instruction.

When Dr. Acker assumes his responsibilities June 1, Dr. C. Peairs Wilson, present dean of resident instruction in the School of Agriculture, will move over to director of the Kansas Agricultural Experiment Station. Dr. Wilson will fill the position left by Dr. Glenn H. Beck when he became Dean of Agriculture. Dr. Beck

was appointed Dean of Agriculture after Dean A. D. "Dad" Weber was granted leave for work in India, November 1, 1960.

The appointment of Dr. Acker and Dean Wilson's move to Experiment Station director will enable Kansas State University to more effectively fulfill its three basic functions as a land-grant institution, of research at the experiment stations, resident instruction



**Dr. A. D. "Dad" Weber**  
Former Dean of Agriculture

for Kansas youth in the School of Agriculture, and dissemination of information and adult education for Kansas citizens through the Extension Service. After June 1, those three branches of Agriculture will be headed by Dr. Wilson, Dr. Acker, and Dr. Harold E. Jones, respectively.

Continued cooperation among these three branches of Agriculture will help Kansas State University maintain its position as a leader in the field of agricultural technology.

## Dr. Duane Acker Joins Agricultural Administration

by Ken Hofmeyer

**J**UNE 1, Dr. Duane Acker of Iowa State University will become director of resident instruction in the School of Agriculture at Kansas State University. On behalf of the students enrolled in agriculture, the Ag Student extends Dr. Acker a warm welcome to Kansas State University, and congratulates Dean C. Peairs Wilson on his appointment as director of the Agricultural Experiment Station.

Dr. Acker, like the administrators he joins, has a solid background of land-grant college experience. He, Dean Glenn H. Beck, Dean Wilson, and Director Harold E. Jones all grew up on farms and went through Ph.D. programs at land-grant universities. Dr. Acker was

**Dr. Wilson, Research**



**Dr. Acker, Instruction**

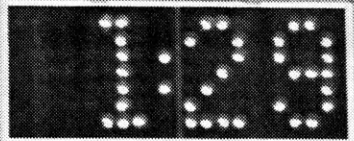


**Dr. Jones, Extension**



# UNION NATIONAL BANK

TIME



TEMPERATURE

4% GUARANTEED  
ON CERTIFICATE OF DEPOSIT

THE BANK THAT WANTS  
TO SERVE YOU  
IN  
MANHATTAN, KANSAS

Tom Griffith, Chairman of the Board

# KANSAS STATE UNIVERSITY AG STUDENT

Vol. XXXVIII

May 1962

No. 6

## In This Issue

Dr. Acker Joins Agricultural Administration .....	3
From the Dean's Office .....	5
Watch for Streak Mosaic .....	6
Prepare Your Child for a Visit to the Doctor's Office .....	8
Ultrasonic Device Measures Beef Quality .....	9
Evaluate Before You Fumigate .....	10
Crop Barriers Reduce Wind Erosion .....	12
Your Winter Clothes Need Special Care .....	14
Labels Answer Your Clothing Care Questions .....	16
Adding Superphosphate Doubles Manure Value .....	18

### EDITOR

Ken Hofmeyer

### BUSINESS STAFF

John Divine                      Henry Payne  
Larry Scott                      Gerald Wagner  
Larry Woodson

### ASSISTANT EDITORS

Marcellus Gilmer                      Ann Carlin

### CIRCULATION

Clinton McDiffett                      Frank Scoby

### PHOTOGRAPHERS

Owen Brewer                      Rick Solberg

### STAFF WRITERS

Gordon Bieberle                      Merle Jones  
Darrell Garner                      Loren Zabel  
Linda Kernohan                      Paul Vincent  
Nancy Jane Smith                      Tom Kay  
Sharon Stauffer                      Grace Volle

### FACULTY ADVISER

Lowell Brandner

### BUSINESS MANAGER

Joe Reed

PHOTO CREDITS: Owen Brewer, cover, 8, 14; Claude King and Rick Solberg, 6, 7; Department of Entomology, 10, 11; and rice weevils for cover; Bill Fryrear, 12, 13; Donice Hawes, symbols page 17.

The Ag Student Magazine is written and edited by students interested in agricultural journalism, and is published by the Agricultural Association of Kansas State University of Agriculture and Applied Science, Manhattan, Kansas, in October, December, February, March, April, and May. Subscription rates \$1.50 a year; 2 years, \$2; single copies by mail, 30c; at office 20c.  
Second class postage paid at Manhattan, Kansas.

# COLLEGE CLEANERS

AND

# SHIRT SALON

DRY CLEANING

SHIRTS LAUNDERED

Phone 8-2390 1216 Moro

## FARMERS CO-OPERATIVE ASSOCIATION

AUTO, TRUCK AND TRACTOR NEEDS

PETROLEUM PRODUCTS

FEEDS

PAINTS

*Propane*

*Anhydrous Ammonia*

130 Pierre, Manhattan, Kansas

Phone 8-2423



Assistant Dean F. R. Carpenter

## From the Dean's Office

by Assistant Dean Carpenter

**M**AJOR CHANGES in Agriculture Curriculums were reviewed recently at a meeting on the Iowa State University campus. At the meeting, Dean C. Peairs Wilson and Assistant Dean F. R. Carpenter heard reports on the consolidation of courses.

A review, "Student Use of Time" by Dr. Wessels of Illinois, showed that students who continuously go home on week-ends lose 40 per cent of their study time. Some schools are asking outstanding students to explain their study habits to freshmen. A record kept by students on the use of their time showed that time spent loafing ranged from 10 to 40 hours a week.

A report on placement and salaries showed that 28 per cent of Ag graduates are going into education, including graduate study; 12 per cent to farming and farm management; 26 per cent to private industry; 9 per cent to government work; and 18 per cent to the military service. The average beginning salary in 1961 for Ag graduates with B. S. degrees was \$438 per month. Greatest demand is in sales, industry, and agricultural business (feed, food, and chemical). The trend toward

employing agriculture graduates is stronger now than in 1961, and stronger than seven years ago, the two periods used for comparison.

In the Belle Plaine, Clay County Community, and Riley County high schools we have recently had the opportunity to explain the possibilities of employment in farming and agricultural occupations off the farm.

Recent presentations of the "Land-Grant Program" have been given at Mankato, Jetmore, Hanston, Rolla and Elkhart. This program highlights the Land Grant College centennial and the opportunities that exist through higher education.

Measured in any terms, Ag Science Day was a real success. The 13 displays of the various Agriculture Department Clubs were extensive, interesting and educational. During the morning assembly program, visitors heard Miss Deborah Dick, 1962 Ag Queen, talk on enthusiasm. Assistant to the Dean, Robert Bohannon, spoke on "The Answer Is Know." Visitors included parents, teachers, FFA boys, 4-H Club members and others. The Little American Royal concluded the day's activities.

The State FFA Convention and State High School Vocational Ag Contests were held on the Kansas State University campus again this year. In June, Kansas 4-H-ers will again be coming for their annual round-up. We welcome these young people to our campus.

You can help your younger friends by informing them of the tremendous opportunities that await them through higher education. During the summer months, give encouragement to a younger person who has the capacity to do university work.

# Woody's

*Haberdashers*

*for K. S. U.*

*in*

*Manhattan's*

*Aggieville*

*Shopping Center*



# Watch for **Streak Mosaic** in Your Wheat

by *Nancy Jane Smith*

**W**HEAT streak mosaic, the virus disease that caused enormous damage to the Kansas wheat crop in 1958-59, may be a special threat again this year in southwest Kansas. Wheat samples taken from Meade, Seward, and other counties show infestation of the disease.

If your wheat is infested, the first symptoms you are likely to notice are greenish-yellow streaks on the leaves. These streaks vary in length and usually enlarge and become more yellow with age. Older leaves may eventually turn bright yellow and die. The yellow stage, however, does not occur often. Usually the leaves retain their greenish-yellow streaks

and may have greenish-yellow to light green mottling.

Wheat planted in the fall usually does not show symptoms. Symptoms appear in the spring with the beginning of warm weather. In addition to leaf symptoms, you may notice stunting or sprawling of the plants. Death may occur, but is not common in wheat.

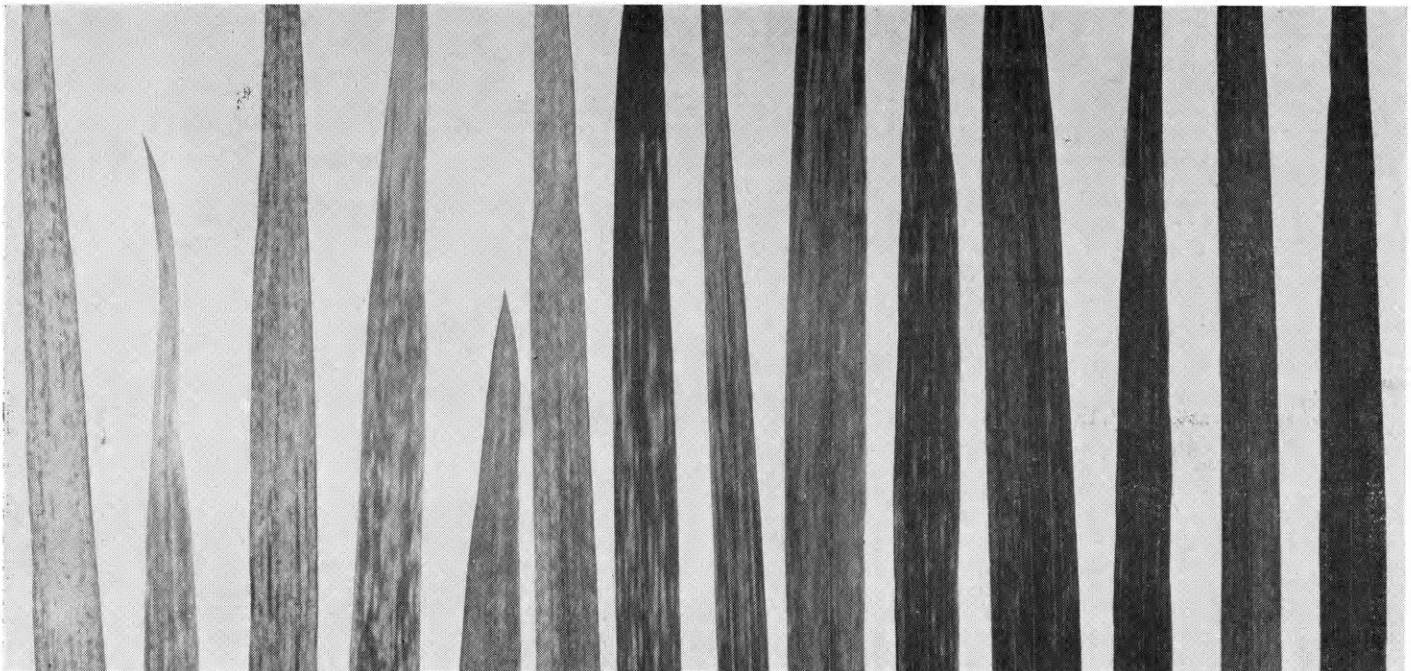
Depending on variety, environment, and other variables, you will probably see one or a combination of the following symptoms as the plants approach maturity: (1) decrease in vigor, root deterioration, and drouthy appearance, (2) varying heights in tillers, giving plants a ragged, uneven appearance, (3) reduced test weight as a result of shriveled kernels, (4) some prevention of heading and sterile heads, and

(5) poor filling of heads and partial sterility.

A relatively small number of the members of the grass family are infected by the virus. Wheat, rye, millet, oats, corn, and barley are among the grasses which become infected. Only wheat and millet are susceptible enough to be damaged badly. Foxtails and wild ryes as well as a few other native grasses may be naturally infected. These plants probably help carry the virus from wheat harvest to wheat planting time. Johnson grass, sorghum, western wheat grass, Sudan grass, and smooth brome grass are immune to the virus.

## **Mites Spread Mosaic Virus**

Wheat streak mosaic virus is spread primarily by a cigar-shaped



Yellow streaks and spots in wheat leaves are symptoms of streak mosaic virus. The leaf on the far right is from a healthy plant.



The plant on the left is healthy. The other three plants show varying degrees of stunting due to wheat streak mosaic. Some plants heavily infected with the virus may die.

mite. This mite is always present where mosaic is found and is present in populations so large it is hard to imagine. However, even though the mite is present, it does not necessarily carry the disease. Any environmental factor which increases the mite population and virus host plants increases the virus hazard if there is a virus source near.

Warm weather makes the disease more severe because plant symptoms become worse at higher temperatures. The virus invasion seems to develop more rapidly and severely under these conditions.

The virus usually gains entrance to wheat plants through wounds in leaves and other above-ground parts of the plant. The puncture and feeding of the mite is usually sufficient to infect the plant. Direct rubbing

action from infected to healthy plants may occur in strong, lashing winds. The virus is present in all parts of the plant.

California scientists reported that a rod-shaped particle of extremely small size is associated with wheat streak mosaic. These are always connected with the virus infection in some way.

#### Early Plantings Show More Damage

Winter wheat must be infected when young (in the early tillering stage or before) in order to be severely damaged by wheat streak mosaic. This means (in Kansas) that the wheat you planted early will be the most severely infected. Fields planted or emerging after October 1 have never been severely infected. If your plants are infected in the late

fall, they are usually damaged less by the virus. If infected in the spring when plants are older, little yield reduction is realized. The mite may be present and transmit the mosaic in the fall, spring, or summer. It may also overwinter as an adult in the crown of the wheat plant.

The virus may pass the winter in the diseased wheat and sometimes in barley, a few perennial grasses, and rye. The following spring it is carried by the mites from overwintering diseased wheat to grasses and early volunteer wheat. It oversummers until early fall planting begins. The mites carry the disease from over-summering plants to the new wheat crops. The disease must develop in the living plant. It cannot remain in seed, stubble, soil, or other dead plant tissue. The virus is not transported in seed, soil, blowing soil, grazing or trampling by livestock, or farm machinery.

#### Control Is Possible

Two cultural control measures which you can use are known to reduce but not eliminate wheat streak mosaic. These are (1) systematic eradication of all over-summering volunteer wheat, (2) retarded planting (the Hessian fly free date). If your plantings are retarded, the mites don't have long periods to feed or build up large populations before winter. Destroying volunteer over-summering wheat eliminates most of the plants in which the virus may live during the summer.

Chemical control methods for wheat streak mosaic are not yet successful. Resistance of wheat varieties has not been found to be good in many cases. Kiowa and Triumph may be classed as tolerant and will often give a good yield even though diseased. Concho and Bison are also tolerant.

Claude L. King, extension plant pathologist at Kansas State University, says many western and central Kansas counties had volunteer wheat in August and in September during wheat seeding time. This makes the 1962 crop open to attack. Not much can be done now to reduce the mosaic threat this year, but you can help protect next year's crop by destroying volunteer wheat in adjoining fields and in fields to be planted. When you plant, use resistant varieties and plant as late as is practical.



# Prepare Your Child For a Visit to the Doctor



A doctor's office, special equipment and white uniforms may frighten your child. By telling him what to expect when he visits the doctor, many of these fears can be avoided.

by Linda Kernohan

**Y**OUNGSTERS need to be properly prepared before they are taken to visit their doctors. Otherwise they may develop a long-lasting fear of the medical profession.

Dr. Hilbert Jubelt, Manhattan pediatrician, and Dr. Ruth Hoeflin, head of Kansas State's Department of Family and Child Development, offer many helpful suggestions to make this visit to the doctor's office as pleasant for your child as possible.

Be honest with him. Going to the doctor isn't one big picnic, so tell him in simple terms what to expect. Tell him, "The doctor will probably look in your throat and ears. He'll count how fast your heart is beating. He may even give you a shot—stick you with a needle and put some medicine into your body." Knowing what may happen bolsters his self-confidence and his faith in you.

## Act Out Office Visit

A helpful way to prepare your child for his visit to the doctor's office is to act out the coming experience with him. Make a game out of it. You need only a few common household objects to play doctor. An ice cream bar stick becomes a tongue depressor. A flashlight and mirror are the only other "instruments" needed for a throat examination. Use your imagination to imitate other equipment the doctor will use. Dolls can become ill for the occasion, and pets make amusing patients—if they'll sit still for the examination.

Because of the pre-visit dramatization, your child can look forward to seeing the doctor do all the things he's been shown. Instead of scream-



ing, he's likely to ask the doctor questions about his equipment.

Don't tell your child that the doctor won't hurt him. Sometimes the doctor does cause pain. If this happens, the child's faith in his parents is lessened. Tell him the shot may hurt for a minute, but then the pain will go away.

Don't tell your child that he won't get a shot when there's a chance he will. Sometimes a mother thinks it's easier on her child if she lies to him about what will happen rather than to tell him the truth. If you lie, he may get the impression that the doctor is so terrible that his mother has to lie to get him to the office. This unfavorable impression may carry over into adult life and, needless to say, destroy the child's faith in his mother.

#### **Don't Offer Bribes**

Never bribe your child to cooperate with the doctor when he's trying to examine or treat him. Be realistic about the matter. Life is full of unpleasant things, but sometimes they are necessary and we have to do them. A child has to learn this too, and getting an examination or a shot are necessary things that must be faced.

Don't say, "I'll give you some candy if you don't cry." Asking him not to cry if something hurts is expecting too much of him. Instead, say, "We'll get an ice cream cone on the way home"—whether he cries or not. You should make this experience as pleasant for your child as possible, and being able to associate the visit with ice cream—or something else he likes—may be one way of doing it.

Get your child used to seeing people in white uniforms so the sudden appearance of the doctor won't upset him. One young doctor used to change to a cowboy suit every time he worked with youngsters so he wouldn't frighten them. He soon found there just weren't enough hours in the day for all the costume changes, so he now uses the traditional white uniform.

#### **Show Confidence in Doctor**

Let the doctor handle the child. After all, he's had lots of experience with youngsters. Don't be offended if he asks you to leave the room. Go cheerfully. Often a doctor can ac-

complish far more with a fearful child when there's no audience.

Explain to your child that the doctor is his friend. Be casual about it, however. Don't give him the idea that he HAS to like the doctor. Such a relationship can't be forced.

Remain calm yourself at the doctor's office. Your uneasiness may be transferred to your child. You have to remain composed if you expect him to do so.

You may want to read a book to your child to prepare him for the experience. A highly recommended book is "Johnny Visits the Doctor" by Josephine Abbott Sever. Other

good books are Ellen Paullin's "No More Tonsils," and two Golden Books—"Doctor Dan at the Circus" by Pauline Wilkins and "Nurse Nancy" by Kathryn Jackson.

Remember though, all books need to be interpreted to your child in language that he understands. Read the book yourself before reading it to your child so you can anticipate questions he may have and be prepared to answer them.

If you follow these suggestions chances are you'll help your child establish a friendly relationship with the medical profession that will continue throughout life.



## Ultrasonic Device Measures Beef Quality

by Tom Kay

SCIENCE has come to the aid of the livestock judge. Characteristics of live animals which denote meat quality can be determined with an ultrasonic device. The device, called the sonoscope, measures the thickness of the fat over the 12th rib and indicates the size of the loin eye muscle. The instrument also indicates the amount of fat that is intermingled within the lean.

Ultrasonic means sound waves of higher frequency than can be heard by the human ear. To take a reading, the probe of the sonoscope is placed on the back of the animal. Sound waves penetrate painlessly into the animal's body. When they hit the boundaries between the fat and the lean, they bounce back, and a reading is taken of the distance which the waves bounced—thus making it possible to determine the thickness of fat and lean.

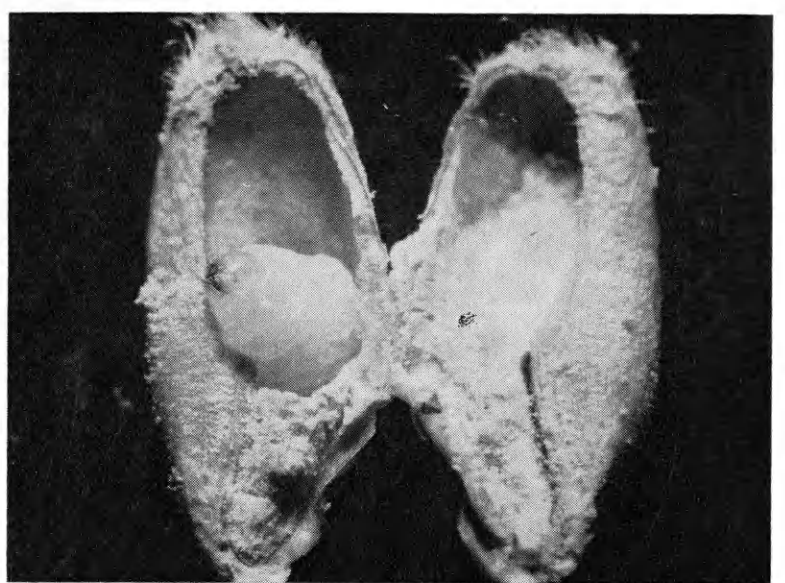
The instrument was used at Kansas State University during the National Hereford Congress last February. Al-

though the results were good, the machine is not yet perfected. However, it has been tested to be 93 per cent accurate.

Dr. H. Kildee, emeritus dean of agriculture at Iowa State University, studied the results made by the device and made the following conclusion: "Although it is not yet perfected to give us as complete a picture of the animal as we would like to have, it is, nevertheless, a valuable supplement to the eye and hand in judging beef cattle."

If perfected, the sonoscope could mean a great deal to livestock producers. Since herd replacement prospects cannot be slaughtered to determine their desirability, the device would be of tremendous value for selecting breeding stock.

If the sonoscope is perfected, it will revolutionize the art of livestock judging, and you, as a producer, will no longer need to depend solely on your sense of touch and sight to pick the animals you want in your herd.



An X-ray of a wheat sample shows the infestation by rice weevil larvae. The rice weevil in its larval stage of life causes the greatest damage.



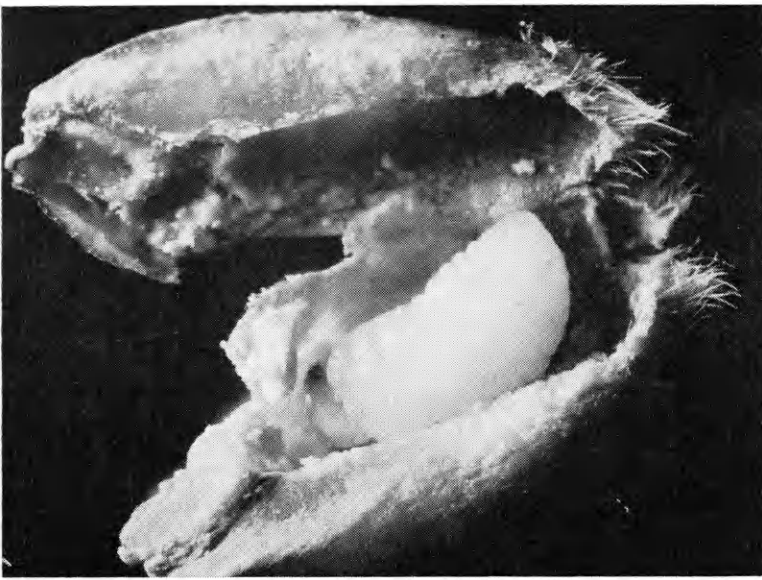
# Evaluate Before You Fumigate

*by Paul Vincent*

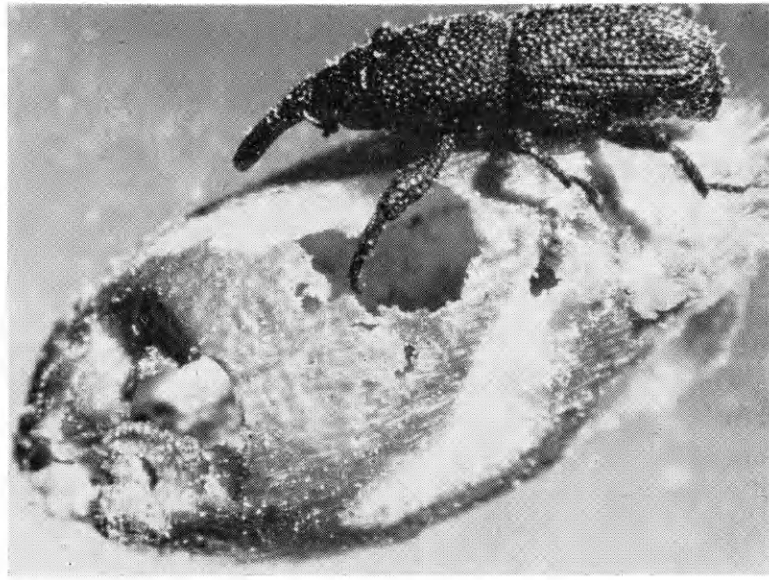
A storage bin should be sealed to reduce the loss of fumigant chemicals. A compact spraying unit can be carried in the back of a pick-up truck.







This pre-pupa is near the second change in the weevil's four-stage life.



This adult rice weevil has just chewed his way out of the wheat kernel.

**F**UMIGATION can save you money. And research at K-State shows that savings can be increased by revising some rule-of-thumb fumigating practices.

"Many farmers are fumigating when it is not actually necessary," claims W. Keith Whitney, Agricultural Experiment Station entomologist. "And many popular rule-of-thumb practices are costing farmers unnecessary losses and expense."

There are many fumigants on the market and most of them are made of basic toxic chemicals. Chloroform ( $\text{CHCl}_3$ ), carbon tetrachloride ( $\text{CCl}_4$ ), carbon disulfide ( $\text{CS}_2$ ), ethylene dibromide (EDB), and ethylene dichloride (EDC) are some of the chemicals commonly used. All of these chemicals have individual properties or abilities which tend to make one more favorable than another in different situations.

Effective and economical fumigation practices depend on your specific needs. You should first determine these needs, and then select a chemical or combination of chemicals which fit your requirements and will do a good job at a minimum cost.

The size, shape, and condition of your storage bin should be considered. A bin which is airy requires a

combination of chemicals having strong absorption and holding properties, chemicals such as chloroform, EDB, and EDC. A deep bin such as an elevator needs a deep penetrating fumigant, as carbon tetrachloride or carbon disulfide.

Test your grain to be sure you actually need to fumigate. There are many tests which will tell you if insects are present. A grain probe allows you to check for free-living insects. The temperature and odor of the grain are also good indicators. Grain temperature will rise if insects are at work, and some insects produce a distinct odor. Tests for insects inside the kernels are available at most elevators. These include staining techniques, flotation tests, and X-raying.

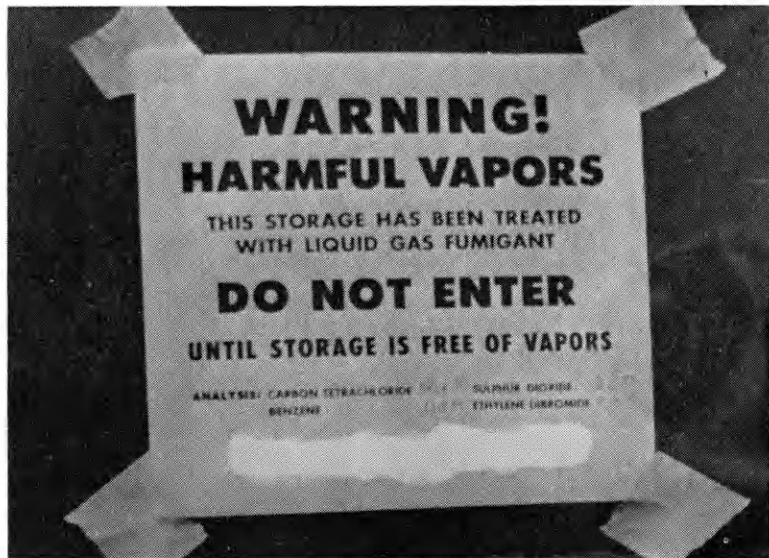
"The fumigant should be allowed to stand as long as possible. Some insects will recover after a four- or five-day exposure. Our tests show that for a maximum kill the fumigant should stand for at least two weeks," Whitney stated.

Grain losses due to insects can be successfully eliminated by proper use of fumigants. And remember, effective and economical fumigation depends on the grain and storage conditions.

Always wear a mask equipped for organic gases when using fumigants.



Fumigants can kill humans and livestock as well as insects. Be careful!



Research Indicates

# Crop Barriers Reduce Wind Erosion

Velocity and Direction  
Of Winds Determine  
Erosion Losses

by Gordon Bieberle

**I**F YOUR FARM is subject to wind erosion you are no doubt interested in a way to end the problem. Research by Bill Fryrear, agricultural engineer at Kansas State University, indicates that crop barriers can be effective in reducing wind erosion.

Gusty winds cause erosion, explains Fryrear. Gusty winds are any winds with a fluctuating velocity, winds with periodic blasts.

By learning the direction and velocity of the winds and their gustiness, researchers can tell you how and

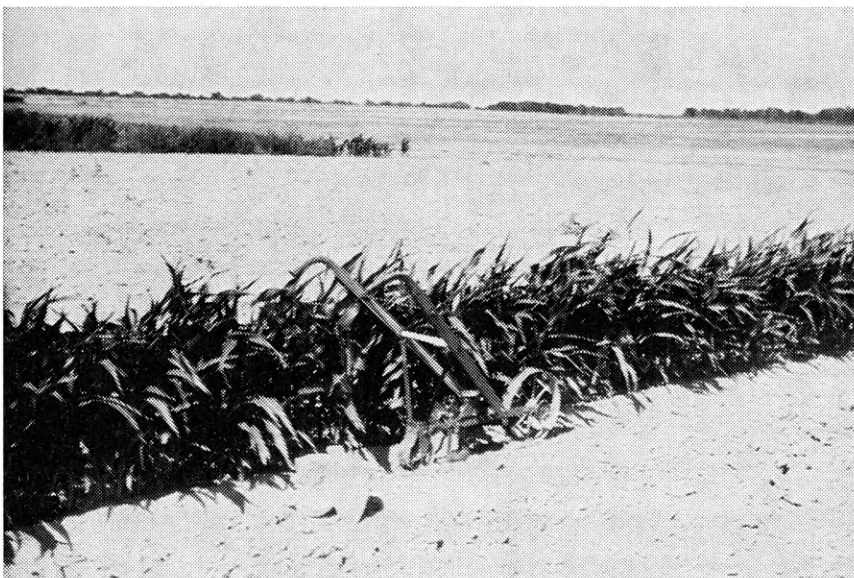
where to plant barriers to get the best results. The more turbulent or gusty the wind, the greater the amount of erosion. If the wind velocity is steady, the amount of erosion will be less than if the wind is gusty. However, steady or not, all winds that cause erosion are gusty.

To determine the direction and velocity of wind, researchers use anemometers. Anemometers are devices for measuring the wind's velocity for a relatively short period of time. The data is recorded with special cameras which take a picture of the anemometer dials every six seconds.

Fryrear explained that during his field testing he has used seven anemometers with all the dials recorded on the same picture. By using the pictures he could see the fluctuation in the wind's velocity. He usually took 15-minute samples of the wind velocity at 1, 4, 8, 14, 22, 31 and 40 feet above the ground.

## Wind Directions at Manhattan

Wind velocity tests were taken on a 40-foot tower north of Manhattan from January to May, 1961. Previous research indicates that this five-



**Grain sorghum barriers will protect an area ten times their height from erosion.**



month period is the windy period for most of Kansas.

Samples taken on clear, cloudy, rainy, warm and cold days and before and after storms reveal that the Manhattan area seldom receives wind from the northeast, occasionally from the east or west, but generally from the north, northwest, southwest or south.

### **Sudangrass Is Best Barrier**

By planting crop barriers or strips throughout the field you can reduce the wind velocity and prevent erosion from starting. The best type of barrier discovered so far is two rows of Sudangrass. Fryrear said that sorghums make good barriers too. Both crops are adapted to Kansas and grow well here. Since these barriers offer protection to an area about ten times their height, they should be planted in rows approximately 30 feet apart.

Kenaf, a fiber crop grown in Florida, has been successfully grown in Kansas. This crop may prove to be good barrier material because of its height and ability to resist weathering.

If you choose sorghum for your barriers (preferably a hybrid variety for its thick growth and shortness), a triple purpose will be served. First, the barriers will prevent wind erosion. Second, they will trap snow and hold the moisture on your field, and third, since the heads must be clipped to keep them from breaking down, you will get some extra grain. (The heads may be clipped with a combine.)

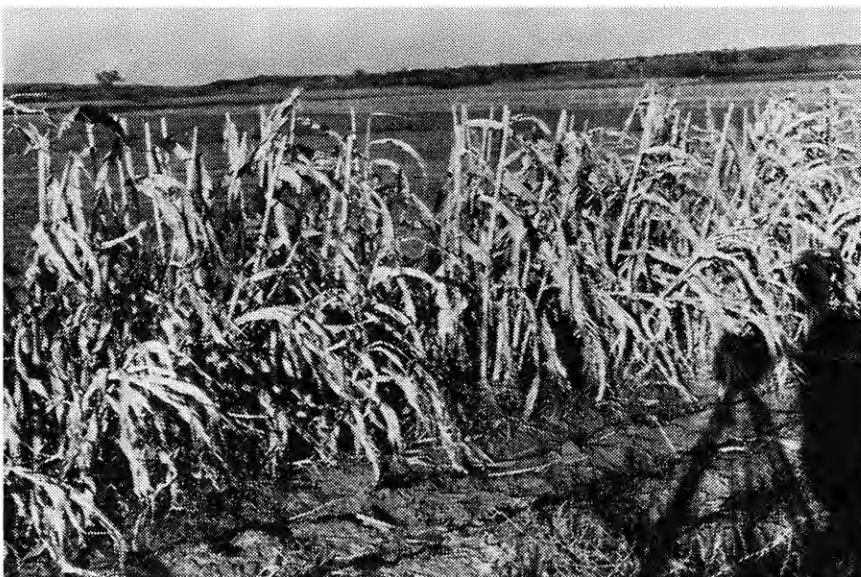
### **Barriers Are Successful in Kansas**

A few Kansas farmers have already started to use the barrier method of preventing wind erosion. Fryrear said that farmers near St. John have used the method for a relatively long period. He remarked that they are evidently getting good results because they replant the barriers every year. Farmers near St. Francis have also had good results with the system.

Will the barriers need to be hand-planted if you decide to use them? No. A surface planter, which operates similar to a lister, can be used. This implement, often used for planting other types of crops, is being used by farmers in western Kansas, according to Fryrear. He explained that a wheat drill with some of the holes plugged would also make a suitable planter.



**Sudangrass (left) or broomcorn and sudangrass mixed provides sufficient protection.**



**Grain sorghum heads must be clipped to prevent the stalks from winter breaking.**



**Crop barriers provide year-around protection from erosion plus retaining snow.**

*During the Summer*

# Your Winter Clothes Need Special Care

by *Grace Volle*

**I**T'S MUCH easier to push your winter clothes to the bottom of a drawer or the back of a closet than it is to store them properly. But your clothes deserve the best care you can give them. By taking a few simple precautions, you can safely store your winter clothes over the summer months.

Clean and mend all apparel before

storing. An accumulation of grime, body oils, perspiration and stains are more difficult to remove when they remain in fabrics and leathers over a period of time, and may cause fiber deterioration.

Furs, many wool and wool blend fabrics, and chemically treated materials require dry cleaning. To help prevent shrinkage when washing garments which have not been chemically treated to resist shrinking, use a minimum amount of rubbing and agitation.

Sweaters and similar hand-washable items are often abused by home washing. When washing sweaters, squeeze the water and suds through the garment; rub only to remove stubborn spots. Never wring sweaters—gently squeeze the water from them. Remove excess water by wrapping sweaters in an absorbent towel, and spread them on a flat surface to dry at room temperature.

## **Size and Shape Are Easily Retained**

The original size and shape can be maintained more easily if you trace the outline of the sweater on a piece of heavy paper before it is washed. After washing it, and while it's still damp, place it on the outline and smooth it to fit the original shape. Sweaters can also be dried on frames or blocked for shape retention.

In recent years many new soaps and detergents, especially adapted for hand-washable items, have been released to the consumer. Some of them help retain the original fluffiness of the garment, and help retain its shape.

After winter clothes have been cleaned and mended, store them unpressed. Garments that contain animal fibers and have not been treated with a permanent mothproofing substance at the factory, should be protected from insect attack.

## **Chemical Treatment Kills Insects**

Mothproofing substances may be used to kill eggs, larvae and moths in three ways: by treating the sur-

**In Kansas, carpet beetle larvae cause more damage to stored clothes than any other insect. Paradichlorobenzene crystals or naphthalene flakes protect clothes from carpet beetles.**





faces of garments and places where eggs might be laid or larvae and moths might crawl with spray solutions; by fumes from paradichlorobenzene crystals and naphthalene flakes; and by direct application or contact with spray solutions.

The United States Department of Agriculture has developed a liquid, EQ-53, for application to wool garments during the wash cycle which will protect fabrics in storage from moths for one year or until they are washed. If you use EQ-53, wash your hands after handling wet, treated wools and wear rubber gloves to prevent skin irritation.

Dry cleaned fabrics may be protected against moth damage by spraying with a five per cent solution of DDT. This will protect stored garments for several years and garments which are worn for a season or until they are cleaned. Spray garments lightly and uniformly with the DDT solution. If the spray is applied heavily, white deposits will form as the spray dries. After the garments are dry, store them in containers or closets which have been mothproofed.

Avoid breathing the spray and wash hands and face with soap and water after using the DDT. Keep the spray away from utensils and foods. When infants' clothing has been treated with EQ-53 or DDT, dry clean or wash garments before using.

Fluoride solution sprays withstand several dry cleanings and protect wools from feeding damages by insects, but will not kill the insects. Fumes from paradichlorobenzene crystals and naphthalene flakes or balls kill both clothes moths and carpet beetles. Use one pound of crystals, flakes or balls in a trunk-sized container or for each 100 cubic feet of closet space. Treated areas should be airtight for maximum effectiveness.

Disinfecting closets and containers with a five per cent DDT solution will protect against moth damage only. A two per cent solution of chlordane or one-half per cent solution of lindane will kill both moths and carpet beetles. Treatment should be done before clothes are stored.

#### **Proper Storage Is Important**

Hang garments on padded hangers, pin or fasten all openings shut and balance the garments evenly on

hangers to avoid hard-to-remove wrinkles being pressed into them. Do not crowd them together when storing. Heavy garments may be stored in zippered bags, but you should store knitted and jersey garments in boxes or drawers, as they stretch when hung. You should put tissue paper in each fold of garments which are stored in boxes, trunks or drawers.

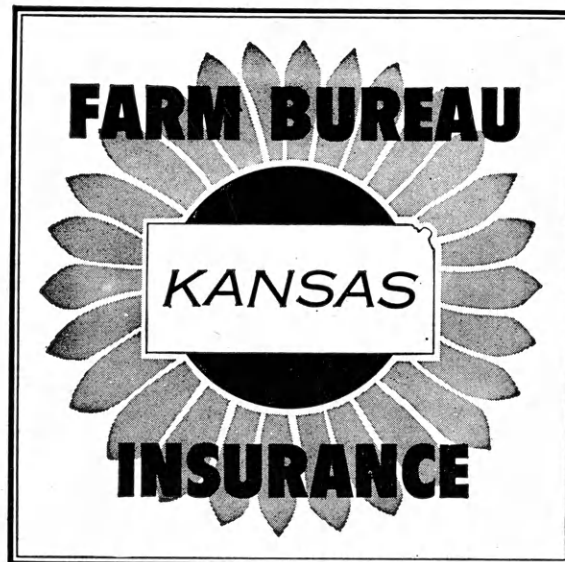
Crush tissue paper into the crowns of hats and store in tissue-lined boxes and drawers or on hat stands, depending upon the style of the hat.

When storing leather articles,

especially in damp climates, guard against mildew by storing them in closets with good air circulation. Burning electric lights or placing open containers of calcium chloride in closets will help eliminate moisture damage.

Keep a list of all items and their storage location. Label each container to prevent unnecessary opening and resealing.

Next fall, remove your clothes from storage, air and press them and you'll be ready for winter with a minimum amount of fuss and bother.



## The Symbol of Security

With agents in all  
Kansas Counties ready to  
serve the Kansas farmer.

**FARM BUREAU MUTUAL  
KANSAS FARM LIFE**  
*Insurance Companies*

HOME OFFICE  
MANHATTAN, KANSAS

Fiber? Finish? Fade? Shrinkage?

Washing? Drying? Ironing?

# Labels Answer Your Clothing Care Questions

## 'Sure Care Symbols' Help You Give Each Piece of Clothing The Right Treatment

by Sharon Stauffer

**I**T LOOKED just like any other white shirt. The instructions on the hang-tag said "shrinkage controlled," so you washed it as usual. It turns out one size smaller and much too snug to wear.

Inadequate and inaccurate labeling may have caused you needless trouble and expense. Labels on a garment will tell you a great deal about it; therefore they should be examined carefully before making a purchase.

The only mandatory label on the garment describes fiber content. Since March, 1960, the Federal Trade Commission requires the "family"

name (refers to the origin group such as cotton, silk, linen, rayon, nylon, etc.), and the percentage of each fiber constituting five per cent or more, be placed on a label. In addition, imported textiles must list the country of their origin. Further information, such as trade name (Dacron, Orlon, etc.), is optional.

This label is of limited value to you, because little can be determined about the performance or care of the garment.

### 'True' or 'Sweet' Label

Donice Hawes, extension specialist in clothing and textiles at Kansas State University, refers to the label with good information as a "true story," since it is factual and important to the consumer. A "sweet story" is her name for a wordy, little informative label.

You can handle the garment with greater ease and better results if you can read a "true story" label and find out about the special finishes, color fastness, shrinkage and stretch control, and care.

Because the same finishes may not apply to all fabrics of a similar type, the label should identify the finish for that particular garment.

Finishes on textiles fall into three categories. Renewable finishes require that you replace the finish after the first washing or cleaning. Starched fabrics and some water-repellent materials need re-application because the cleaning method removed the finish.

Durable finishes diminish in their effectiveness after each laundering or dry-cleaning although some last almost the lifetime of the garment. Crease resistant and wrinkle recovery fabrics gradually lose their crispness and stability.

Permanent finishes remain unchanged by dry cleaning or washing throughout the life of the garment. Waterproofed garments are non-porous and are wiped clean—hence the finish is never destroyed.

The information "colorfast" should indicate whether the color will fade in light or by washing and dry cleaning or both. Jacket linings may fade from perspiration and linings in suits may discolor the blouse or shirt worn with it.

Per cent of shrinkage and stretch control should be stated on the label. "Preshrunk" or "shrinkage controlled" are not reliable descriptions. Two per cent or more shrinkage in a garment should also warn you that the product may be faulty.

### Symbols Describe Care Required

Care of a garment should be described adequately on a label. A good label will tell you how the article is to be cleaned, pressed, temperatures for washing and ironing, and special precautions to note. Fabric, fiber, weave, and finish all determine the care you will give the garment.

An innovation in the field of garment care labels is the symbols compiled by fiber companies to help you. These consist of small pictures of a washer, dry cleaner, a hand, an iron, and letter B for bleach. A large X through a symbol would indicate that you couldn't use the pictured process. Washers have the temperature of the water and also the method of drying printed on them. Temperature for pressing is shown by letters placed on the face of the iron. The symbols for care are found on a label permanently attached to the garment so you can refer to it easily.

Clothing that requires special attention each washing may send you looking for the label that came with them. Since the small hang-tags,



wrappers, or cards pasted on the garment are easily misplaced, you may want to use a file card system to keep them handy. With each new wardrobe addition, take the label and attach it to an index card. On the card, write the name of the article, the date purchased (guarantees may depend on accurate dates), and where it was bought. File the cards in a small metal box near the laundry center. When laundry time arrives,









an easy check will assure you that you are using the correct procedures for cleaning.

Miss Hawes says, "It's important to have labels: if we read and compare them, we will be able to judge price in relation to quality. Labels should help judge hidden qualities such as shrinkage and finish, and if we check them carefully, we ought to be making wise selections that will suit our needs."

**Editor's Note:** The National Retail Merchants Association helped develop this list of symbol labelings, and recommends the use of the symbols for labeling textile goods.

## SURE CARE SYMBOLS

Follow these symbols to WASH or DRY-CLEAN and IRON your clothes or home furnishings with satisfactory results. Look for the labels with these simple guides to happier washdays.

 you may wash by machine or by hand	<b>B</b> use bleach carefully  do not use bleach	 you may dry clean	 do not dry clean
 wash by hand	 do not wash	 may be ironed	 do not iron





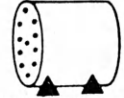




### RECOMMENDED WASH TEMPERATURES:

- 160°** hot water with any soap or detergent
- 120°** medium hot water with any soap or detergent
- 105°** warm water with mild soap or mild detergent
- CW** use cold water; it lessens the danger of staining and shrinkage
- WS** wash separately; it lessens the danger of staining and shrinkage

- H** hot iron
- M** medium hot iron
- C** cool iron
- S** steaming iron
- L** little or no ironing

- TD** you may tumble dry
- DD** drip dry
- DR** dry rapidly (for example remove excess moisture between towels)
- LD** hang on line to dry
- DF** dry flat

### HERE ARE HOW THESE SYMBOLS MIGHT LOOK ON LABELS: WHAT THEY TELL YOU.

			Wash by machine or by hand in hot water with any soap or detergent. Use bleach carefully. Tumble dry. Do not dry clean. Iron with hot iron.
			Wash by hand in warm water with any soap or detergent. Do not bleach. Dry clean. Little or no ironing.
			Wash by hand in lukewarm water with mild soap or detergent. Do not bleach. Dry rapidly. Dry clean. Do not iron.

*If it's an  
Important  
Picture*

*You'll see it  
at the  
Campus  
Theater*

**TAP  
ROOM**

*we are privileged  
to have you for  
our guest*

**BIG JOHN**

PR 6-9889 1112 Moro

## Adding Superphosphate

# Doubles Manure Value

by Darrell Garner

**I**F YOU'VE been looking for a way to increase your fertilizer applications but are pinched for operating capital, here's an idea that may help you. By applying superphosphate to fresh manure, the crop-producing value of the manure can be approximately doubled. This will allow you to make better use of farm resources with small additional cost.

Today's farmers find it too expensive to furnish all their crops' fertilizer needs in the form of manure because manure is generally an expensive source of plant food. However, if you have sources of manure, why not take full advantage of them?

Unprotected manure may lose as much as 60 per cent of its original nitrogen content over a four-month period. The best way to guard against this loss is to add superphosphate to the manure. This not only increases phosphate content, but helps absorb the ammonia gas that would otherwise escape during the fermentation process. It is just good business for dairymen, poultrymen, or other livestock producers to make full use of the manure produced on their farms.

An average ton of fresh manure contains about 10 pounds of nitrogen, 5 pounds of available phosphate and 10 pounds of potash. This is the equivalent of 100 pounds of a 10-5-10 commercial fertilizer. But when nitrogen loss is considered, a ton of manure is probably equal to 100 pounds of 3-5-10 fertilizer. Adding 50 pounds of superphosphate per ton of manure will conserve nitrogen and increase the nutrient content to

equal about 100 pounds of 10-15-10 fertilizer.

Adding superphosphate is not enough to insure against nutrient loss. Careless handling and delay may cause the loss of as much as one half the plant food value of the manure. Scientists suggest these steps for handling manure to preserve its value.

- Use enough bedding to absorb the liquid portion which contains nearly half the nitrogen and about 60 per cent of the potash.
- Add superphosphate to balance the plant nutrient content and absorb ammonia.
- Store in covered building or shed, preferably with a tight floor.
- Permit livestock to tramp the manure, if possible. Compaction excludes air and retards fermentation.
- Spread in the field as soon as possible after it is produced, and incorporate promptly into the soil.

Superphosphate may be spread in gutters, on barn floors, droppings boards, or directly on the spreader where manure is spread in the field daily. Proper application of superphosphate should approximately double the value of manure. Increased returns should be four to eight times the actual cost of the superphosphate. Several side benefits are also realized. Among these is a reduction of barn odors because the ammonia gas given off by manure is absorbed. Superphosphate will also act as a sanitizing agent in barns and animal enclosures.

By adding superphosphate to manure produced on your farm you can: (1) save nitrogen and improve the phosphate content of manure, and (2) save money by making better use of your resources.

## WE FRAME PICTURES

*200 Molding Samples  
to Choose from*

We make frames  
and mats to fit the  
individual picture.

## Aggie Hardware & Electric Co.

G. W. GIVIN

1205 Moro

Phone 82993

## General Auto Repairs

Motor Tune-Up

## SCHWERDT Motor Co.

1125 MORO

Al Schwerdt

Phone PR 8-4325  
Manhattan, Kansas





FOR SPRING SERVICE  
AT ITS BEST

**JERRY NOLL'S  
TEXACO SERVICE**

Clafin and Denison  
(At NW Corner of Campus)

Anti-Freeze — Lube — Gas — Oil — Wash — Ice



# KITE'S

IN  
AGGIEVILLE

## SENIORS

A PERFECT  
REMEMBRANCE

Your  
Cap and Gown  
Portrait

by

### Studio Royal

1200 Moro

Dial 83434



GOOD SEED DOESN'T COST—IT PAYS.

The **K**ansas **C**rop **I**mprovement **A**ssn.  
Manhattan, Kansas

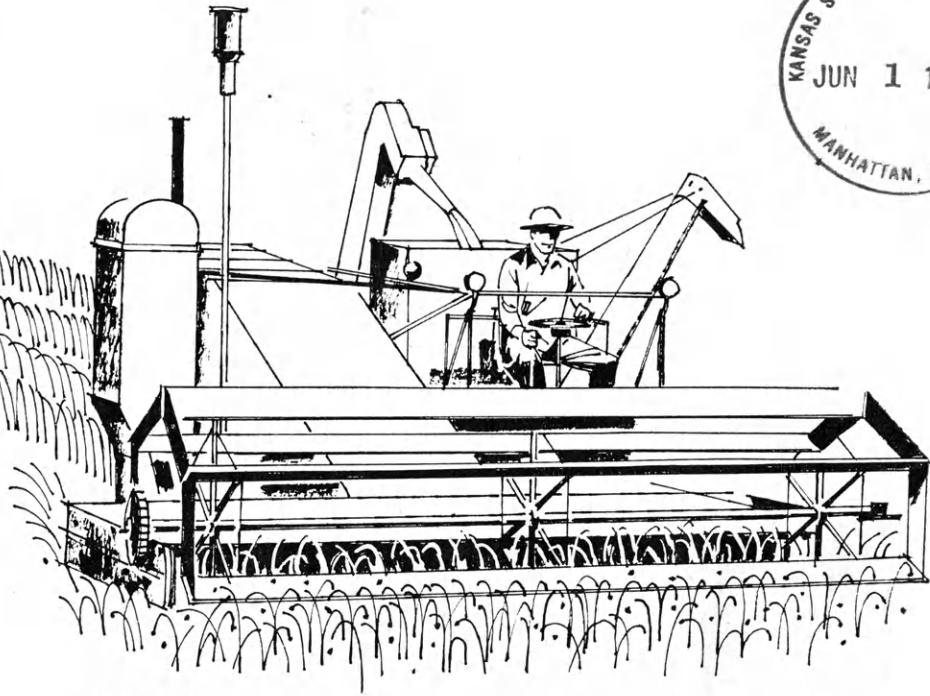
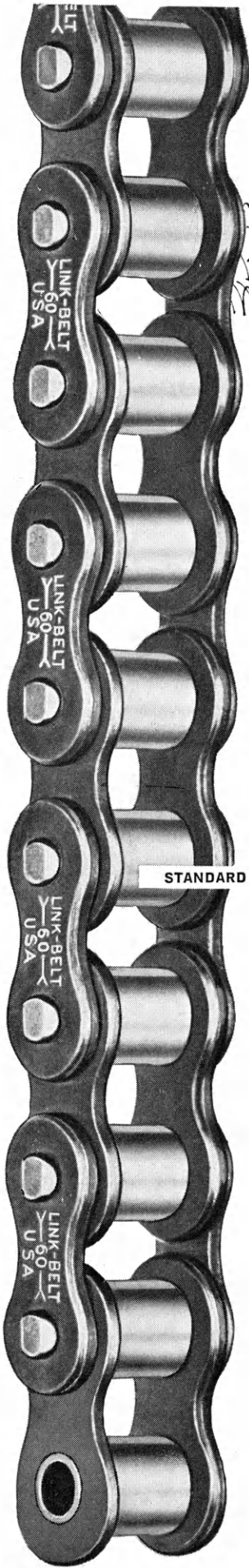
## CLEAN CLOTHES

*are a man's  
Best Friend*

your friendly  
cash and carry cleaners  
in  
Aggieville

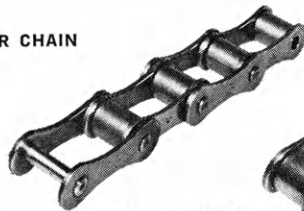
## STICKEL CLEANERS

714-716 North 12th



# For transmitting power...or conveying nothing does it like Link-Belt chain

STANDARD ROLLER CHAIN



DOUBLE PITCH AGRICULTURAL ROLLER CHAIN



STEEL REPLACEMENT ROLLER CHAIN



STEEL DETACHABLE CHAIN

For day-in, day-out service, nothing can match Link-Belt chain's strength and endurance . . . its positive efficiency . . . which add to the reliability of farm equipment drives and conveyors.

Today, over 300 farm machine manufacturers obtain this reliability from Link-Belt. Experience has shown them that chain marked with the double-arrow  $\rightrightarrows$  trademark is made to high standards . . . has consistent quality and pitch uniformity . . . will maintain rated performance and efficiency on their machines.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services that aid the designer, improve the design: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!



CHAINS AND SPROCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants and Warehouses in All Major Industrial Areas and District Sales Offices and Stock Carrying Distributors in All Principal Cities. Export Office, New York 7; Australia, Marrickville (Sydney); Brazil, Sao Paulo; Canada, Scarboro (Toronto 13); South Africa, Springs; Switzerland, Geneva. Representatives Throughout the World.

15,794