The National

Future Farmer

Owned and Published by the Future Farmers of America

April-May
1967

The "golden" bullet in every Remington "Hi-Speed" 22 helps keep dirt and grit from fouling up your shooting.

Dirt, grit and lint have no business on the business end of a 22 cartridge.

But ordinary grease-coated 22 bullets pick them up just the same.

How can you beat it? Shoot powerful Remington "Hi-Speed" 22's. Their "golden" bullets have a specially formulated non-greasy coating that shuns dirt particles like the plague.

Result: Every "golden" bullet slides into your chamber clean. Zips out of your barrel with full power.

And there's more.

There's a special plating that resists nicks, scrapes and scratches. Gives you all the accuracy you paid for.

Plus Remington's exclusive non-corrosive "Kleanbore" priming.

And you get it all for the same price as ordinary grease-coated 22's.

Anywhere.

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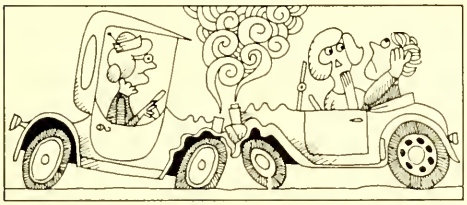
Do you know enough about accidents to avoid them?

Knowing the who, what, where, when, and how of situations that produce accidents can help you get through them safely. You're well on your way if you can answer these questions correctly.

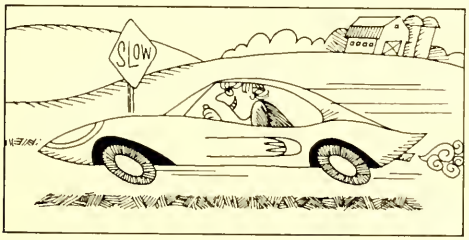
1 WHO has the most accidents?

Young people have more accidents than any other age group (16-year-olds have the most). The second largest group of accident-producers are people over 65.



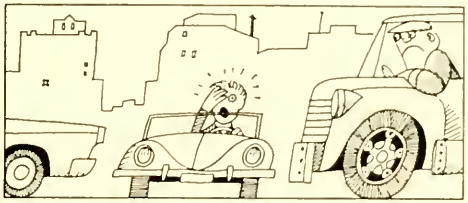
2 WHAT three driving errors cause the most accidents?

(1) Speeding. (2) Crossing the center line. (3) Failure to yield right-of-way.



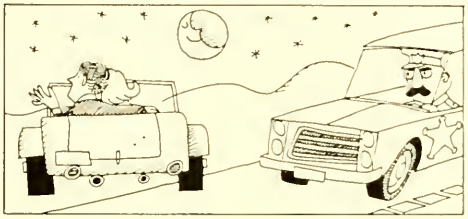
3 WHERE do most accidents happen?

A simple rule should help you . . . accidents are more frequent where there is the greatest chance for driver error. On lower speed highways, for example, where surfaces tend to be narrower. Or at intersections.



4 WHEN do accidents happen?

As you probably know, most accidents occur at night. You should also know that there are more accidents when the weather is clear and roads are dry.



5 HOW many accidents (per cent) are caused by driving errors? By equipment failure? By road conditions?

If you said 70% for driving errors, 10% for equipment failure, and 20% for road conditions, you'd be about right. But all three areas threaten your safety. Faulty brakes are just as dangerous as speeding.

To be on the safe side, let your nearby Firestone Dealer or Store give your car or your family's car a free safety check. And remember . . . Firestone tires are a leading choice for original equipment on most new cars and for replacement on used cars.

Firestone

YOUR SAFETY IS OUR BUSINESS

A Sponsor of National Student Traffic Safety Program, National 4-H Automotive Program and FFA

The National Future Farmer
Owned and Published by the Future Farmers of America

APRIL-MAY, 1967

VOLUME 15 NUMBER 4

THE MAGAZINE FOR YOUNG MEN IN AGRICULTURE

In This Issue

FEATURES

22 Management Guide For Today's Corn

EACH STAGE IN THE GROWTH OF A CORN PLANT CALLS FOR IMPORTANT MANAGEMENT DECISIONS. ILLUSTRATED IN FOUR-COLOR, WITH A UNIQUE DRAWING OF THE CORN PLANT, THIS ARTICLE WILL HELP YOU MAKE THE RIGHT DECISIONS AT EACH STAGE OF THE PLANT'S GROWTH. IT ALSO TELLS HOW THE CORN PLANT GROWS AND DEVELOPS.

28 National Officers' Goodwill Tour

FFA HISTORY HAS BEEN MADE, AND HERE IS THE FULL STORY OF THE TWENTIETH BIRTHDAY OF THE ANNUAL FFA GOODWILL TOUR. THE TOUR TOOK YOUR OFFICERS FROM COAST TO COAST FOR VISITS WITH MAJOR INDUSTRIAL LEADERS. IT ENABLED THE OFFICERS TO SAY "THANK YOU" TO THE DONORS OF THE NATIONAL FFA FOUNDATION.

64 The "Big O," Oscar Robertson

SPORTS EDITOR STAN ALLEN WHO WRITES OUR REGULAR FEATURE "SPORTRAIT" VISITS WITH THE "BIG O," OSCAR ROBERTSON OF THE CINCINNATI ROYALS. STAN SAYS THE NICKNAME CAN ONLY STAND FOR OFFENSE. OSCAR HAS BEEN AN OFFENSIVE STAR SINCE HIS EARLY HIGH SCHOOL DAYS. READ ABOUT HIS CAREER IN "SPORTRAIT."

20 He Challenges Each Acre
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25 National FFA Secretary
26 Float Fishing A Farm Pond
27 Partnership Way To Success
30 FFA Helped Me Get Started
32 Breaking The Entry Barrier
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Our Cover

Admiring his Ayrshire herd is Jerald Surber of the Mowrystown, Ohio, FFA Chapter.

Jerald was a Star Farmer of his local FFA chapter, Star Dairy Farmer of Ohio, and Star Farmer of Ohio.

He is now serving a hitch in the Air Force.

PHOTO BY BOB E. TAYLOR

THE NATIONAL FUTURE FARMER is mailed every two months on the following dates:

January 20	FEBRUARY-MARCH Issue
March 20	APRIL-MAY Issue
May 20	JUNE-JULY Issue
July 20	AUGUST-SEPTEMBER Issue
September 20	OCTOBER-NOVEMBER Issue
November 20	DECEMBER-JANUARY Issue

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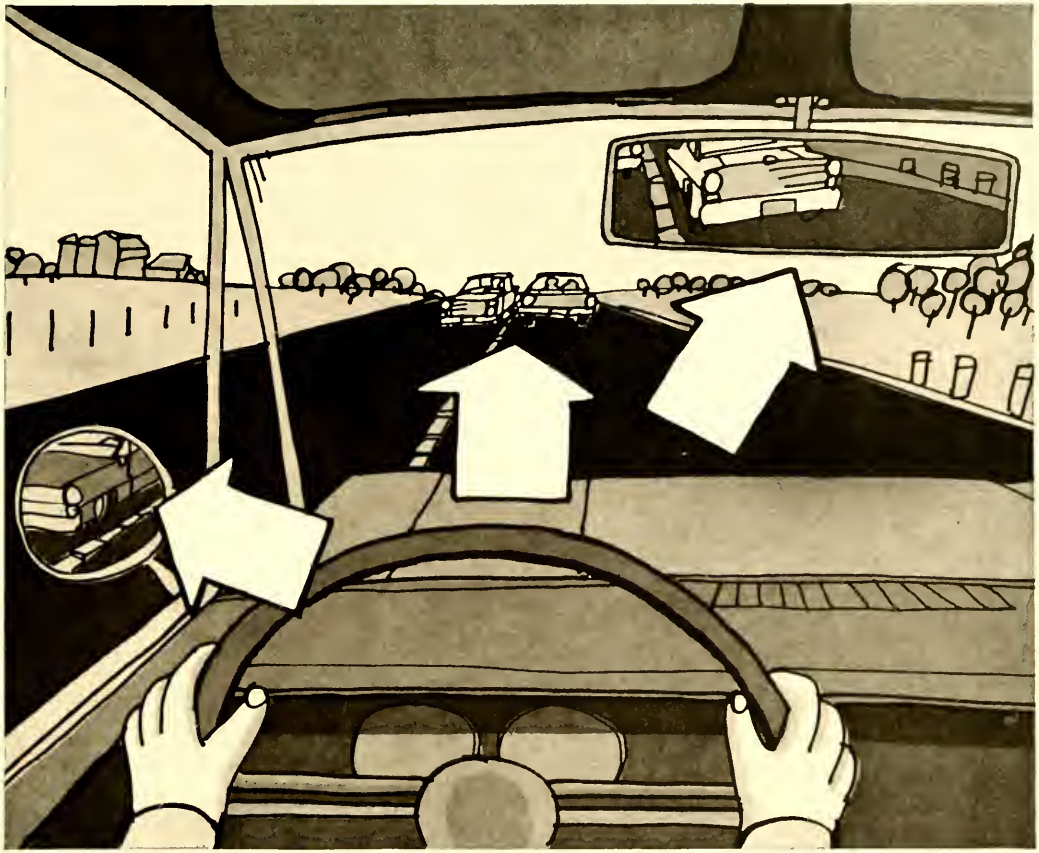
Good driving tips for teens



Keep your eyes moving when you drive

To become an expert at the wheel, learn to keep your eyes on the move as you drive.

The key to good driving is to shift your vision every two seconds. Keep checking near, then far and to both sides. Don't just focus on one object ahead. And remember to check your mirrors, too, at least once every five seconds. At night, try to see beyond the range of your headlights. Keep your eyes moving.

Shifting your vision as you drive keeps you posted on traffic conditions and other cars. It's a good seeing habit according to Harold Smith, originator of "The Smith System of No-Accident Driving." And—it will make you a better, safer driver.

Ford

FOR A SAFER AMERICAN ROAD

Looking Ahead

Livestock

CHAMPION HOG—Can you imagine a market hog with over 50 percent of his carcass weight in ham and loin? To a hog producer, that's like a no-hit, no-run World Series game. Believe it or not, the champion carcass at the Iowa State Spring Market Hog Show, just concluded at Cedar Rapids, was such a hog. He was a purebred 197-pound Hampshire entered by Iowa State University. He scaled 143 pounds carcass weight with a back-fat thickness of .67 inches. His carcass was 29.4 inches long and had a 6.18 square inch loin eye. And 50.42 percent of his carcass weight was in ham and loins.

MORE BEEF THAN EXPECTED—Recent releases of revised livestock numbers have taken the beef industry by surprise. Decline in numbers have been faster than anticipated for dairy cows, but beef cattle numbers have continued to increase. The inventory of 108½ million cattle and calves on January 1, 1967, explains the continued record volume of fed cattle coming to market. Also, there is still a large supply of feeder cattle available for replacement needs; but fewer steers one year old or older. A stepped-up demand for heifers as additions to breeding herds may partly offset the increased supply of cattle available for feeding.

HOW BIG SHOULD AN EGG BE?—Dr. D. H. Palmer, a University of Delaware researcher, has uncovered evidence that big eggs not only have a better chance of hatching, but mean bigger chicks, healthier chicks, and chicks that are eventually worth more money as processed broilers. He concludes: Large eggs are more valuable for hatching purposes than for eating, and broiler operators could justify paying a premium for big hatching eggs.

MARES' MILK LACKS NUTRIENTS—It has been a longtime assumption that a mare's milk supplied ample quantities of all necessary nutrients for the foal. However, recent studies by Dr. Richard J. Johnson of Washington State University show these surprises: Crude protein content of the mare's milk dropped from 19 percent within 30 minutes after birth of the foal to 4 percent 12 hours later. He warns: The available protein is barely sufficient for the foal and suggests a creep feeding program soon after birth.

DAIRY CONCENTRATES DON'T PAY—Feeding high-producing dairy cows less hay to encourage them to eat more concentrates doesn't pay, according to Maryland dairy nutritionists. Their trials show that this practice provides no more feed energy, results in no additional milk, and cuts the fat percentage of the milk. The results also show that it may not be necessary to feed more concentrates per pound of milk to high-producing cows than to low-producing cows.

Crops

HAY AND SILAGE STANDARDS SET—More than two billion dollars worth of hay and forage crops are harvested for feed each year despite the fact there have been no standards for evaluating these crops. At long last, however, the American Forage and Grassland Council has set standards which should eliminate the confusion. Standards are divided into two parts: (1) feeding value based on the ability of a unit of hay or silage to provide protein and energy, and (2) a score card for assessing the relative successes of the handler in properly harvesting and storing the hay or silage. For a single copy of pamphlet on standards, send 10 cents to American Forage and Grassland Council, Box 48, State College, Pennsylvania.

CROPS FOR SAFETY—A farmer in Minden, Nebraska, is all for safety. He knows that when his corn grows tall, motorists on nearby roads have trouble seeing other vehicles at intersections. So Roger Palmblade mows the corners off his cornfields, donating the acreage to the cause of traffic safety.

CAN YOU SPOT ALFALFA LEAF WEEVIL?—The alfalfa weevil is causing millions of dollars of crop damage. More than 7.3 million dollars were reported lost to this pest last year in Ohio. Because of the pest, West Virginia farmers have taken over 40 thousand acres out of production. The weevils usually begin hatching in April and May. However, many farmers have been mistaking the clover leaf weevil with the alfalfa leaf weevil. Clover leaf weevils cause little damage to alfalfa. They have brown heads, while alfalfa weevils have black heads.

WEED KILLER INCREASES PROTEIN LEVEL—A report given at the recent meeting of the Weed Society of America shows that the protein content of several food and forage crops has been increased by the application of the weed killer Simazine. Using small amounts of Simazine, the protein level of rye has been raised 50 to 80 percent in Michigan tests. It also allowed the plant to grow with lower amounts of available nitrogen.

Machinery

TAX FIGURES GIVE MACHINERY TIP—You can regroup the repair cost figures that you have collected for the April income tax deadline and use the repair cost patterns to predict future repair costs. This will take the guesswork out of field machinery replacement decisions. Illinois ag engineers recommend that this information be regrouped for management decisions so that maintenance, repair, major overhaul, and replacement costs can be grouped for management purposes and called restoration expenses.

NEW SEPARATOR FOR SEEDS—Oregon ag engineers have developed a new rotating screen separator that will separate seeds according to size and shape more efficiently. The separator also has a higher capacity per unit of screen area. Ultimate aim is to explore the possible use of the new screen in a combine.

A challenge for your present feeding program . . .

We say you'll get faster gains — and better bloom — with a Milk-Bank® Feed Program

Prove to yourself that the bank of milk nutrients pays.

Here's the bank of milk nutrients in Kraft Feed Boosters: dried whey, delactosed whey, hydrolyzed whey, cultured whey, cheese, dried buttermilk.

Kraft will help you prove on your own animals that a Milk-Bank feed program can give you better results than your present rations. We'll send you free feed formula books and performance charts so you can match Milk-Bank nutrition against any other program.

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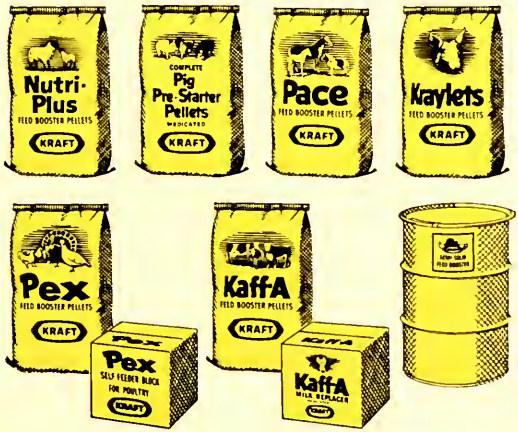
Milk-Bank feed formulas are built around the Kraft Feed Boosters—Pex for poultry, Kaff-A for dairy and beef cattle, Kraylets for swine, Nutri-Plus for sheep, and Pace for horses. These contain nutrients not usually found in ordinary feeds, milk nutrients.

They provide lactose, a hard-working carbohydrate, outperforming all other sugars . . . lactalbumin protein, among the richest in essential amino acids, plus minerals, vitamins and unidentified growth factors.

These give you a better-balanced ration, one that keeps animals healthy, on-feed, and growing. Gains are economical, too, because assimilation improves.

Your stock puts on solid, meaty gains and grade out higher. Bloom improves, and they show better. Milk and egg production go up, too, on Milk-Bank rations.

But prove it all for yourself. Ask your dealer for rations that include Kraft Feed Boosters, and send in the coupon below for the free Milk-Bank formula books and performance charts.



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Please send me free Milk-Bank feed formula books and performance charts for the following:

☐ Dairy cattle ☐ Swine ☐ Poultry ☐ Horses
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This is the day you learn about guts!

It's your first jump. You're up 1,200 feet waiting to go. But all the training and all the practice never quite prepared you for the way you feel right now. Your pack never felt heavier. Yet, you never felt stronger.

You're ready.

There are five guys ahead of you. Now four. Now three. No one hesitates. You won't either. You're sure of your training. You're sure of yourself.

In 21 days of Jump School something happened to you. You learned things you never thought you would. You did things you never thought you could. It was tough. But it made you even tougher.

Okay. You're next.

Go!

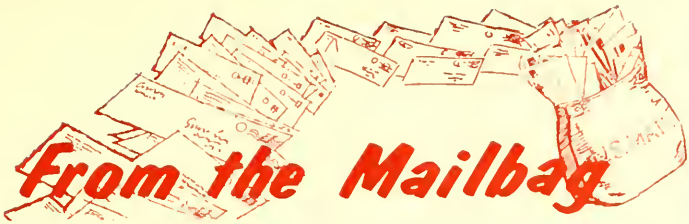
During the long seconds before you feel the welcome shock of your chute opening, you learn about another thing:

Men call it "Guts!"

And if that's all Army Airborne training gives you, you'll still be miles ahead. But there is more. You can become a trained specialist in one of many exciting fields: electronics, communications, equipment maintenance, to name just a few.

Have you got what it takes?

Army



Manhattan, Kansas

Copies of *The National FUTURE FARMER* in our reading room at Waters Hall make a fine addition to our reading materials which are educational and entertaining. Former FFA members in the College of Agriculture get a glimpse of "home" and familiar surroundings as they leaf through these publications.

I have been particularly impressed with the FFA's theme selections for National FFA Week. They have been telling the story which we in the College of Agriculture would like to see impressed on everyone's mind. Last year's "Agriculture—More than Farming" and this year's "Agriculture—Strength of America" have been particularly appropriate from our point of view.

Your story in the December-January, 1966-67, issue on the Lecks of Washington, Kansas, was read with particular interest. Since I am rather new to Kansas, I want to do some visiting in various areas of the state soon, and possibly my travels will allow me to meet the Leck family.

Congratulations on your encouragement and support to young agriculturalists. We enjoy a fine relationship with Mr. C. C. Eustace, state supervisor of vocational agriculture in Kansas, and are very supportive of their program.

Carroll V. Hess, Dean
College of Agriculture
Kansas State University

Sutton, Nebraska

Thanks go to you for providing an excellent Magazine for future agricultural leaders. We especially enjoy the cover pictures. Nebraska has had its share of them. Another feature we appreciate is the "Free For You" section.

Our chapter has a question. We have been learning the FFA creed, revised in 1965 as printed on page 15 of the February-March, 1966, issue of *The National FUTURE FARMER*. It has just occurred to us that the phrase "I believe we can safeguard those rights against practices and policies that are unfair" has been omitted. Also, we assume that the phrase "of our national life" in the last paragraph should have been "in our national life."

Sutton FFA Chapter

The FFA creed as revised in 1965 is correct as printed in the Magazine and is now worded this way in the FFA manual. The phrase "I believe we can safeguard those rights against practices and policies that are unfair" has been elimioated. Also, "in our national life" has been changed to "of our national life."—Ed.

Bien Hoa, South Vietnam

Vietnam is my current home, and your letter was most welcome here at Bien Hoa, just 25 miles north of Saigon.

I expect *The National FUTURE FARMER* would be appropriate here as we are in a great agricultural area. And there's no doubt about the youngsters here becoming farmers of the Vietnam future. For the long term—if your Magazine were able to effect some liaison with Vietnamese government to reach its youthful audience, I don't doubt the resultant contribution could rival the importance of a military success. The youth here have some Boy Scout units started, but nothing like your effort.

Best regards to you. Here it's artillery shells, whine of jet aircraft, and chatter of small arms fire.

Major Jim Mailler

Major Mailler was formerly on the liaison staff between the Army's recruitment advertising program and The National FUTURE FARMER.—Ed.

Savoy, Texas

I received my first copy of *The National FUTURE FARMER* this month. I must congratulate you on making this a most outstanding Magazine. The entire production of your Magazine was excellent.

I hope that your next edition is as interesting as this one. Everyone in our chapter enjoys the Magazine, and we are looking forward to the next edition.

Johnny Ortiz

Cherry Valley, New York

Thank you very much for the $10.00 second prize in the caption naming contest which I received recently.

Daniel West

Ijebu Ode, Nigeria

I just received the October-November, 1966, copy of your Magazine from a friend in New Zealand. I enjoyed it very much and greatly commend your efforts in the ways you help ambitious people wishing to become farmers.

I am a grade II teacher in a nursery school here. I am age 22 and wish to change my career to agriculture. It is my ambition to become a farmer and be able to turn many acres of land owned by my peasant parents into a large extensive, modern farm, thus improving my country's agricultural output.

I earnestly believe that it is only U.S.A. that can give me aid due to her world-wide reputation in this field

(*Continued on Page 10*)

How to get the facts about the Army Airborne.

Your local Army Recruiting Sergeant has the full story. He'll tell you what it takes to qualify for Airborne Training, and of all the opportunities it offers.

He's listed in the phone book under U.S. Government. Why not call him today?

Meantime, get a colorful, exciting 40-page booklet about Army life and Army opportunities simply by filling out and mailing this coupon. You're under no obligation, of course.

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Please rush me your 40-page booklet, "The Secret of Getting Ahead."

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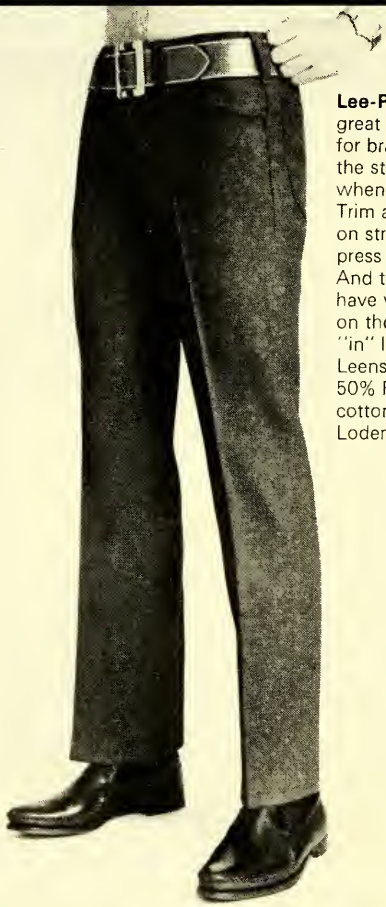
straight and narrow slacks
(not for the narrow-minded)



Lee-Prĕst Leens, with the great hip-huggin' look, are for brave guys who follow the straight and narrow only when it comes to slacks. Trim and rugged Leens come on strong with a permanent press that never needs ironing. And these low riding Leens have wider beltloops that take on those big belts for the "in" look. Shown: Lee-Prĕst Leens in Hopsack fabric, 50% Fortrel® polyester/50% cotton. In Brass, Bone and Loden. $8.

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Mailbag

(Continued from Page 9)

of agriculture. So I shall be grateful if you can publish my request for any American farmers or any of your members who will be able to help me both financially (as a loan if possible) and morally to come over there and be trained in agriculture.

Tunde Soyemi

The editors have printed this letter from Nigeria to show Future Farmers the interest and desires of young men in agriculture in other nations to learn and prepare themselves for the future.—Ed.

Wingo, Kentucky

I read the "Parliamentary Procedure" article that was in the February-March edition. I think that FFA has very good parliamentary procedure, but I honestly believe that our chapter at Wingo, Kentucky, has a superior parliamentary procedure team. This is a credit to our advisor, Mr. Edward D. Oakley, and our chapter officers.

Jim Weatherford

University Park, Pennsylvania

A review of the publication "Horseshoeing" was included in "Future Farmers' Bookshelf." The address given for this particular book is 203 Armsby Building, University Park, Pennsylvania 16802. Since this has been published, we have received several letters asking for this particular book. We do not publish the book in question here at Penn State. The only addition needed is the name of the person who wrote the book, and this is Mr. Butler.

Thomas L. Merritt
Associate Professor
The Pennsylvania State University

For the $3.00 book, write Mr. Doug Butler, Horseshoeing, 203 Armsby Building, University Park, Pennsylvania 16802. —Ed.

Fort Belvoir, Virginia

I would like to sincerely thank you and your staff for the very interesting tour of the Future Farmers Building. I would advise every FFA member that has the opportunity to drop in and see how their FFA Magazine and Supply Service operates. I want to thank you for the tour and explanation of your operation.

Jerry F. Williams

It is always a pleasure to have present and former members come by the office and see firsthand some of their facilities.—Ed.

North Scituate, Rhode Island

I think the free bulletins available to FFA members are most helpful in getting a better understanding about the agricultural field and job opportunities. My thanks to you.

Robert Clemm, Jr.

ALLIS-CHALMERS • THE TRACTOR PEOPLE • MILWAUKEE, WISCONSIN

"...said I couldn't stay on the row with 13 gangs—then I talked to Allis-Chalmers."

Everyone's an expert down at the coffee shop. You hear things like—too much tool-bar deflection for accuracy—or end whip and drift—or you have to worry about root pruning and knifing your beans.

If you've heard 'em and hesitated—better talk to your Allis-Chalmers dealer and look at that new 7000 Series Cultivator.

It features stabilizer wheels and a rugged 4-inch square tool-bar so strong you hold to the row like radar. Never worry about plowing out plants or controlling end gangs—even on early cultivations. All cross heads, ground-working shovels and sweeps and gauge wheels attach with the same kind of clamp. Easiest thing in the world to change depth and width patterns. Depth stops on parallel linkages and semi-pneumatic, self-cleaning gauge wheels control depth.

While you're at it, talk Allis-Chalmers One-Ninety XT. This is power—and comfort—that keeps your work in season. 93 turbocharged horsepower with three separate hydraulic circuits and exclusive console control.

See this high-production cultivator and tractor at your Allis-Chalmers dealer's. He'll help you plan the right tools and credit programs to build a complete bean system.

ALLIS-CHALMERS

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WATER!

Here's a prediction for the future that is sure to come true: Future farmers will need more water than ever before!

Modern farming calls for more water. Tomorrow the need will be even greater. Farms will be larger with more jobs for water to do.

This is why we say, THE FUTURE OF FARMING IS MEASURED IN WATER. This is why, you, as a future farmer should get to know MYERS . . . since 1870 the finest name in farm water systems.

Another prediction: Tomorrow... the most progressive methods and equipment for delivering all the water you need will come from Myers . . . just as they do today! So, stop in and see your Myers Dealer. He will be glad to furnish you with free literature on the finest in pumps and water systems.

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Your Editors Say...

THE FIRST step has been taken to develop a national archives for the FFA. The idea is presently in the planning stage but will no doubt be of interest to you. As presently conceived, the archives would house those items of historical significance to the growth and development of FFA.

Why have a national archives? Because having an orderly and accurate picture of the past satisfies our desire for objective knowledge and fulfills a need for unity and contact with former generations of Future Farmers.

Some of the preliminary work has been done by Mr. E. J. Johnson. He was asked by the national advisor to assume the initial responsibility of implementing the idea. As you may remember, Mr. Johnson was formerly an agricultural education specialist in the U.S. Office of Education and served for many years on the FFA Board of Directors before his retirement.

To launch the archives, an advisory council has been appointed and will hold its first meeting at the FFA Building on March 29. The group will conduct a discussion on tentative plans and delve into some of the problems connected with establishing the archives. Mr. Johnson will serve as chairman of the group, and other members of the council include H. N. Hunsicker, national FFA advisor; Dr. W. T. Spanton, past national advisor; W. A. Ross, past national executive secretary; Dr. A. W. Tenney, past national advisor and past executive secretary; J. J. Farrar, FFA director of public relations; J. C. Foltz, FFA Foundation coordinator; E. J. Hawkins, manager of the Future Farmers Supply Service; W. W. Carnes, editor of the National FFA Magazine; W. P. Gray, national FFA executive secretary; J. W. Lacey, program specialist in agricultural education in the U. S. Office of Education; A. H. Hollenberg, farm mechanics specialist; and W. N. Elam, former program specialist in agricultural education.

One of the first major problems was that of space to house the archives. This has been provided on a temporary basis on the first floor of the present FFA Building. Here a limited number of items can be put on display for visitors to the FFA Center.

What should go into the national archives? While many people will have different viewpoints on this question, there does seem to be general agreement that it should include only those items of significance to the national organization. This will include items from the development of the NFA as well as the FFA. No doubt, you will also have your own opinions, and your suggestions may be sent to the National Magazine which in turn will channel them to the advisory council.

While space will not permit a listing of all the items that have been suggested, here are the broad categories which have been proposed:

1. Published items of historical significance.
2. Illustrations, pictures, and paintings.
3. Movies, film strips, and music.
4. Objects of significance.
5. Award programs and contest items of recognition.
6. List of national officers of FFA, both members and adults.
7. Special projects in which FFA became involved over the years.

To develop a project of this scope will obviously take many years and is a never ending task. However, this initial effort should bring together many items regarding the history of FFA which will be a source of inspiration to those members who visit the FFA Center.

Wilson Carnes
Editor

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Leadership sessions like this one in Washington, D.C., provide an opportunity to see how members solve problems in their chapter.

Short Course in Leadership

WHILE THE FFA Board of Directors and national officers postponed until 1968 a national FFA leadership conference, new emphasis was given to subregional leadership meetings by the addition of two for 1967.

A national FFA leadership conference was postponed until 1968 to coincide with the 40th anniversary of the FFA. Purpose of the subregional conferences is to provide Future Farmers with an opportunity to learn how other members solve problems and carry out responsibility.

The leadership sessions are designed to aid delegates in becoming effective FFA officers. With attending members participating, presentations are given on the "how to's" of introducing people, public relations, preparing speeches, effective use of state and local executive committees, conducting a chapter banquet, and operations of the national FFA organization.

Regional FFA leadership conferences already planned include conferences at Kansas City, Missouri, July 12-14; Cherry Grove, South Carolina, August 15-17; and at the Tennessee FFA Camp, August 21-24. Additional conferences are planned for the North Atlantic and Pacific regions.

Foltz Named FFA Foundation Coordinator

JOHN C. Foltz has been named to the newly created post of coordinator of the Future Farmers of America Foundation, Incorporated, by H. N. Hunsicker, national FFA advisor.

In this position, Foltz will coordinate all national FFA Foundation activities, including liaison with donors and administration of the incentive awards program for FFA members. The Foundation was organized in 1944 to provide an opportunity for business and industrial concerns, organizations, and individuals to support the FFA through a program of awards designed to motivate members in their pursuit of education in agriculture.

Mr. Foltz has a background of working for the FFA and with business. Foltz is a former FFA member himself. He has been FFA information specialist and prior to that was advertising manager of *The National FUTURE FARMER.*

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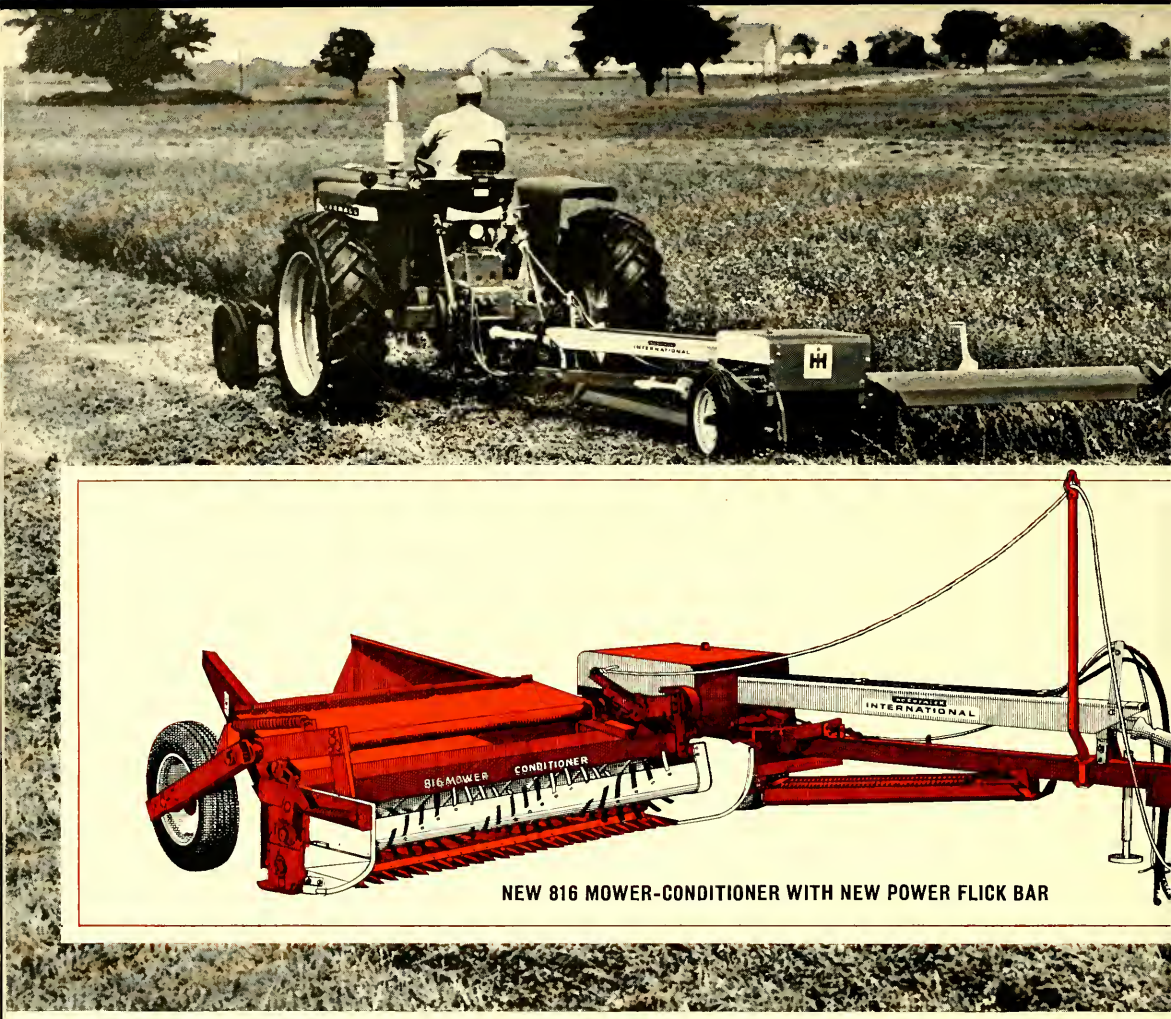
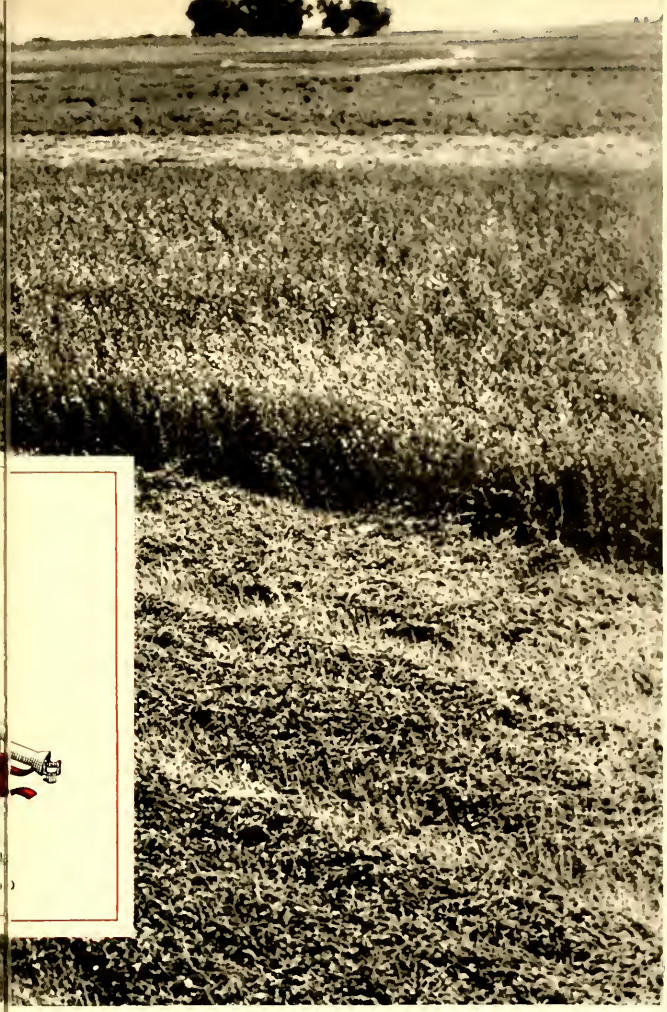


NEW 816 MOWER-CONDITIONER WITH NEW POWER FLICK BAR

new 3 jobs in one pass— mows, conditions and windrows



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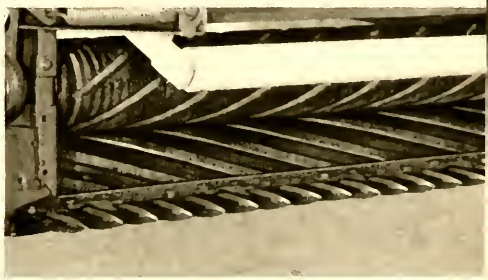

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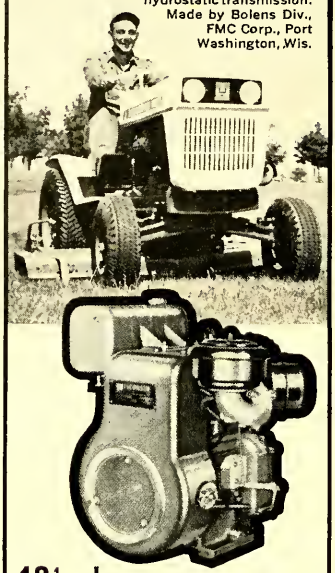

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What Industry Does NOT WANT

ARE YOU considering a career in agri-business? If so, Don Moeller, a long-time FFA supporter, offered some sound counsel in a recent speech. Mr. Moeller was formerly with Swift and Company, Chicago, Illinois, and is now with A. O. Smith Harvestore, Arlington Heights, Illinois. He sketched in certain terms what industry *does not want.* Here are his major points:

1. A man with a B.S. degree who wants a research job. Very few are qualified for it.

2. A chap who wants a job in one section of the country and never wants to move. We recommend that he work for a small company or start his own agri-business, a good farm business if he is fortunate enough to have the opportunity.

3. The man who is primarily interested in the "fringe" benefits and retirement program.

4. The young fellow who wants us to tell him how much he is going to be earning ten years from now and where he is going to be. We are not fortune tellers.

5. The chap who lets his wife run the family. Sometimes we think she is the one we ought to hire.

6. The "loner." A man must be able to work with other people.

7. Men who write sloppy application letters.

8. The man who wants a "marketing" job but not "sales." This is asking to have your cake and eat it too.

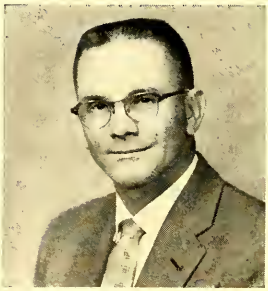
9. The fellow who has just been squeezing by all along the education ladder.

10. The "farm boy" just because he has been exposed to hard work. One big drawback is his lack of experience in working for someone besides his dad. This does not mean that farm experience is not valuable; it is a real advantage.

For young men who can qualify, Mr. Moeller sees expanded horizons.

"All the talk about the diminishing demand for farmers in the future is poppycock; it is shortsighted and dangerous thinking. That adjustments are in order is obvious. These adjustments have been in order constantly from the time vocational agriculture was conceived.

With three and one-half million farms as shown in the 1963 census and with the average farm owner's age at the 50-year level, I have difficulty visualizing a surplus of vocational agriculture students. Within 15 years we will have to replace at least half of the present farm owners, and I would like to think that we should have a surplus of trained food and fiber producers to draw from to fill the vacancies."



FFA Executive Secretary Honored

THE EATON, Colorado, FFA Chapter recently named their school ag building in honor of their former advisor, Mr. Wm. Paul Gray.

Mr. Thomann, superintendent of schools, presented Mr. Gray a bronze plaque which was hung above the door on the ag building.

Many former students and friends who work and farm in the community were on hand for a reception to honor the national FFA executive secretary. The chapter presented him a wall plaque in remembrance of the work and dedication he had given for the chapter and community.

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David Deason of Albert, Okla., is a member of the Oney FFA Chapter.

He Challenges Each Acre

Meet the boss of fully productive acres. He's David Deason, the FFA's national soil and water management champion.

ACRES, LIKE PEOPLE, have varying capabilities. It's up to the man on the land to challenge each acre to produce up to its full capability. A visit to the Deason farm, four miles south of Oney, Oklahoma, leaves little room for doubt about the skill of the farmers on this land. For this is the home of David Deason, FFA's national soil and water management winner.

Consider first the people. David lives with his parents, Jack and Maye Deason, and sister Jacqulyn on a 480-acre farm. An older brother, Mervin, is attending college. The Deasons rent another 800 acres. Part of this belongs to David's grandfather, and the rest is Indian land.

The Deasons' love for this land can be traced by the fine cattle that graze its 500 acres of native pastures. David explains, "Our Shorthorn cattle have a long history behind them. We have been breeding Shorthorns here for three generations. First, my grandfather started the registered program in 1933. In 1947 a big roan steer we called 'Big Boy,' that had been bred on our farm, was grand champion at the Chicago International Livestock Show. My father started his herd when he was a freshman at Fort Cobb High School as a Greenhand in the FFA. Now my brother and I have small herds as does my sister Jacqulyn."

In fact, David's father set quite a record in the FFA. He received his Junior Master Farmer Degree (State Farmer) at the age of 15, the youngest Oklahoman to ever receive this degree, and at the age of 16 received the American Farmer Degree and was Star Farmer of a three-state region.

It's not surprising then to learn that the Deason family was named Caddo County Farm Family of the Year in 1959 and 1965. "My father received the Tulsa State Fair award, 'Mr. Livestock Farmer' in 1964," David continued. "In 1951, he received the Bankers Soil Conservation award for completing his soil conservation agreement and is still working on another agreement with them. My brother and I have both worked with our father in completing these agreements and practices. This has also encouraged us in soil conservation public speaking and land and pasture judging."

David likes to talk about the land. He has participated in the Soil Conservation Service's (SCS) public speaking contest since he was a freshman. As a sophomore he won the state SCS contest.

He told about his farming operation. "My father, brother Mervin, and I farm 510 acres of cropland, 190 acres of which is irrigated. We raise wheat, cotton, milo, alfalfa, and peanuts. Five hundred acres are native pasture, and 270 acres are reseeded grasses. We raise all the alfalfa, hay, milo, and oats we feed our cattle. The milo and oats are stored at the local co-op elevator where we have our grain steam-rolled and mixed into a feed ration. In winter months, we pasture our wheat and cover crops."

Before David and the Deason family could put into mo-

David helped to plant these grass waterways and built baffles on farm as part of a plan to prevent soil erosion.

This is one of the farm's pastures which David reseeded. Mr. Bill Bearden is David's vo-ag teacher and FFA advisor.

tion a plan to bring each acre up to its full capability, they had to determine what each acre was capable of doing. As already noted, they did not hesitate to call on qualified technicians from the Soil Conservation Service to help make these judgments. Specifically, they determined the particular kinds of soil on each acre of their farm (topsoil, subsoil, and their varying qualities). The slope of the land and the amount of water available for plant and animal use, as well as the past use of the land, was considered.

With this background, David was able to undertake soil and water projects in three areas which would help bring each acre up to its full capabilities. One important goal was to rotate the right crops and livestock to build the necessary organic matter and bacterial action for continuously productive soil. To achieve this goal, David's program incorporates the following projects:

- He plants cover crops whenever practical.
- He plants legumes in a crop rotation plan once every five years on all land and raises alfalfa as a crop.
- He makes soil tests and fertilizes all crops according to recommendations.
- He has reseeded 240 acres of land to switch grass and sand lovegrass.
- He plows wheat straw and peanut hay under to build organic matter.
- He practices insect control to increase crop yields and to provide more residue to turn under.

A second goal has been the control of slopes. To achieve this objective, David farms all crops on the contour and prevents erosion by following a crop rotation program. He has also built terraces and planted grass waterways. At other sites concrete baffles have been built. To make use of slope runoff, he has helped plan and construct several farm ponds.

The final objective in bringing the land up to its full capabilities has been the proper treatment of the kinds of soil on the farm. In this regard, David has put into practice a range management program. By mowing pastures when needed and following proper stocking rates, he has improved the soil and thus the pasture. Yields and soil fertility have been greatly increased by the irrigation of all crops.

David's FFA activities include chapter president and reporter, state cotton improvement award winner, and chapter soil conservation winner for two years. He has been active in showing livestock, having won 40 trophies and medals plus over 160 ribbons by showing in nine different shows. He gives much credit to his vocational agricultural teacher and FFA advisor at Oney High School, Mr. Bill Bearden.

One of David's objectives has been the proper treatment of the kinds of soil on the farm. Here a soil test is made.

This is one of several farm ponds David has helped plan. They provide water control and water storage for cattle.

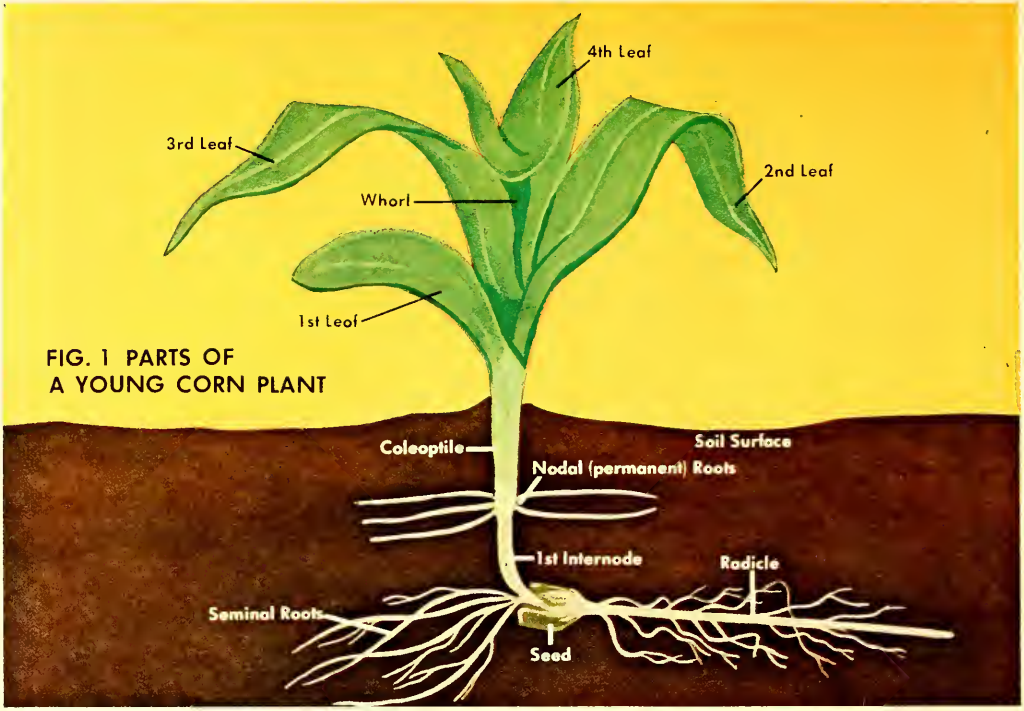


FIG. 1 PARTS OF A YOUNG CORN PLANT

Management Guide For Today's Corn

Each stage of growth calls for an important decision. Here's a stepping stone for making the right decisions and more money.

THERE'S MORE THAN meets the eye in a field of growing corn. For example, look behind the scene to see how the corn plant develops and functions. You will find ways of doing a more precise job of controlling forces that affect today's corn output. As output goes up so does profit.

Your understanding of the plant will also help you make the following decisions:

- Selection of the most suitable varieties.
- Timing of fertilizer applications.
- Timing of cultural practices for weed, insect, and disease control.
- Timing of harvest operations.
- Production planning for total corn production operations.

To help you make these decisions, Dr. John J. Hanway, Iowa State University, has outlined management guides for each stage of corn plant growth. Study the unique four-color illustrations accompanying this article and the stage-by-stage guide to greater output and profit. For an in-depth look at corn plants, the editors suggest you order a copy of Dr. Hanway's publication, "How a Corn Plant Develops." See Editor's Note.

All normal corn plants will follow the same general pattern of development, but the specific times between stages and number of leaves developed may vary between different hybrids, different seasons, different planting dates, and different locations.

Before you can follow these stage-by-stage management tips, you will need to correctly identify stages of growth. This can be done by counting the number of leaves that are fully emerged. This is not difficult during the first three weeks of growth.

However, when the stalk begins to grow, the first

(lowest) five or six leaves may be torn loose by stem enlargement and by development of the nodal roots (figure 1). After this occurs, the bottom leaf you see on the plant may not actually be the first leaf. To determine the oldest leaf, measure the length of the internodes (space between nodes where each group of leaves emerge) below the attachment of the leaf sheaf. Here's the key: The internodes below the first four leaves never grow longer, whereas the internode immediately below the attachment of the fifth leaf elongates to about one-half inch. This spacing continues to enlarge, and the space below the eighth leaf is about three and one-half inches.

Here's your stage-by-stage management guide:

Plant Emergence From The Soil—Depth of planting influences the length of time from planting to emergence. Seedlings from deep-planted seeds have a greater depth of soil to penetrate. In addition, temperatures are cooler at greater depths, and growth is slower. Depth of planting determines the depth at which the primary roots (radicle and seminal roots) develop but does not influence the depth at which the nodal (permanent) roots develop.

Nutrients and food reserves in the seed generally supply the young plant adequately prior to emergence. Fertilizer placed in a band to the side and slightly below the seed may be contacted by the primary roots before the plant emerges from the soil. Placement of too much fertilizer too near the seed can result in salt injury to the young plant.

Two Leaves Fully Emerged, One Week After Plant Emergence—In early spring, the root system is relatively small and the soil is cool so higher concentrations of fertilizer nutrients stimulate early plant growth. However, the amounts of nutrients required are relatively small. Fertilizer placed in a band where the primary roots (especially the radicle) will contact it will be effectively taken up at this stage. Roots are not attracted to this fertilizer band, so the fertilizer must be placed where the roots will grow.

Four Leaves Fully Emerged, Two Weeks After Plant Emergence—Cultivation too near the plant after this time will destroy some permanent root system. A frost or hail may destroy the exposed leaves but not damage the growing point below the soil surface and, therefore, usually results in very little reduction in the final yield.

Six Leaves Fully Emerged, Three Weeks After Plant Emergence—The nodal root system is now well distributed in the soil, so precise placement of fertilizer is less critical. However, the plant now begins to absorb greater amounts of nutrients, so fertilizer applications in amounts adequate to supply these nutrients which are deficient in the soil will be beneficial. Rootworms may destroy the developing nodal roots and thereby restrict plant growth. Later root development at successively higher nodes may result in plant recovery.

Eighth Leaf Fully Emerged, Four Weeks After Plant Emergence—Nutrient deficiencies at this stage seriously restrict leaf growth (see photo). Nitrogen fertilizer may be effectively side-dressed up to this stage if the fertilizer is placed in moist soil and if serious injury to the root system,

(Continued on Page 50)

Top photo: Eight leaves have fully emerged. The ninth, tenth, and eleventh leaves are full but not emerged.

Center: Here are the leaves removed from the plant. At this stage of rapid leaf growth, management is vital.

Right: A mature ear like this one will be your reward for following the management practices on these pages.

Shape of Tomorrow's Corn

This ear of corn will be considered out of date by tomorrow's farmer. Here's what to look for.

By Len Richardson

ONE THING IS sure, tomorrow's corn is going to be different. Take the ear of corn as an example. As a farmer of tomorrow, you will be proud to produce a two- or three-ounce ear. The development of high lysine corn, reported in your August-September, 1966, issue already, promises the corn you grow will have a higher nutritional value for both animals and humans.

At a press briefing for agricultural editors recently, scientists at International Minerals and Chemical Corporation sketched the shape of tomorrow's corn.

Basic studies on photosynthesis and from measurements of incoming solar energy indicates that, in theory, 71 grams of dry matter per square meter per day can be produced. It should be possible to increase this to 77 grams of dry matter per day on a bright sunny day by adding six grams of nutrient uptake. If all this converted energy went into grain, it would be possible to produce about 12 bushels of grain per acre each day.

On the average, grain is made in about 35 days out of the total growing period so the opportunity exists to produce about 420 bushels (35 x 12) of corn per acre. Of course, this figure has not been approached with present varieties and practices. Obviously, to approach this 400-bushel level, the corn plant must be changed. There are two possible ways to attain such corn yields without changing the fundamental process of photosynthesis: (1) change the shape of the plant to improve light interception, and (2) increase the length of the grain formation period from 35 days to 50 or 75 days.

Take a look at the typical corn plant you are now growing and note that it is about six to eight feet tall, dark green, and has horizontal, somewhat drooping leaves. This plant has about four times as much leaf area as compared to the ground area it occupies. This is referred to by scientists as leaf area index (or L.A.I.) of four. To improve the production unit, scientists have determined with models and computers that the leaf area index must be increased to perhaps eight.

In other words, on one acre of land an equivalent of eight acres of leaf surface, instead of four or less, would be produced. But when the leaf area index of these normal corn plants is increased by planting more plants per acre in narrow rows, the lower leaves are shaded; thus, instead of contributing to corn production, they detract from it. These shaded lower leaves may actually be parasites on the corn plant by using more carbohydrates than they produce.

Scientists in California and elsewhere have decided that to obtain a leaf area index of eight, the shape of the corn plant must be changed. The leaf angle must be changed to allow light to penetrate as deeply in the stand as possible. Yet, most of the light must be intercepted so that none is wasted. Vertical leaves should do the job. The shape of the corn plant of the future will be one of erect leaves. This new shape in corn plants will permit the higher populations that are required to produce an L.A.I. of eight. The erect design minimizes shading of the lower leaves; it increases light interception.

Equidistant planting will replace conventional corn rows you now plant.

This new plant will not work in our conventional farming system. Too much light simply falls between the rows on the bare ground, producing nothing but weeds. The plant is designed for a specific management system. Planting patterns will have to be carefully controlled.

Scientists in Canada and Iowa have gone one step further and selected a corn plant with erect leaves that only grows about four or five feet high. These semi-dwarf plants will eventually be designed to withstand population pressures of 100,000 plants per acre; four or five times the populations presently used. Again the L.A.I. will be eight or higher. The ears, of course, from these new semi-dwarf inbred plants will not resemble the conventional one-half-pound to one-pound ears that you so long have been accustomed to on your farm. They will be more like two- to three-ounce ears. Ears such as these are now considered runts. But remember, today you plant only about 20,000 plants per acre. In the future, you will plant 150,000 seeds per acre. The math is simple. Twenty thousand plants with one-half-pound ears will give you about 140 bushels of grain per acre. One hundred and fifty thousand plants per acre with three-ounce ears will give you about 400 bushels per acre.

Big ears will no longer be an important factor; the amount of grain you get per acre will be what counts. Whether you obtain this yield with a three-ounce ear or an eight-ounce ear will be immaterial.

New cultural techniques will be required. Equidistant planting (the spacing of plants so that all are an equal distance from one another), or something closely resembling equidistant

(Continued on Page 60)

Stationed by the Ear of Corn

"Without football, life just wasn't worth living." A candid interview with your National FFA Secretary Paul Tarpley.

A NEW VOICE will respond when the vice president calls the role of officers at national FFA meetings. "Stationed by the ear of corn," replies Paul (Tony) Tarpley of Trout, Louisiana. The words are barbed with a southern drawl and seem to add a dimension of excitement to Paul's personality. It makes you curious about this Future Farmer's struggle to the top.

Paul says, "I wanted to be a top athlete. I would sit and daydream of winning a game in the last seconds of play. I could see the pretty girls who looked on in admiration, and I was sure it would lead to fast cars, fine clothes, and big money of the professional."

When Paul boarded the school bus that warm September morning in 1960 to attend high school for the first time, he knew the chance he had been waiting for had finally come. He had made his choice. His goal was to make the varsity football team. He recalls telling a friend, "Man, this is really big-time sports."

With this in mind, Paul chose vocational agriculture as an elective his freshman year. He remembers thinking, "Having been reared on a farm, this should be an easy credit, and I'll need good grades to remain eligible for the football team."

Paul made the football team and was enjoying a very good season. His coach assured him that if he continued to improve he would someday be a great player. Then the sky fell in. During the last game of the season, he sustained a back injury, and the doctors told him he would never again play football. Said Tarpley, "Without football, life just wasn't worth living."

However, Tarpley's FFA advisor, Mr. J. R. Hodges, noticed his depression and encouraged him to try out for the parliamentary procedure team. "Mr. Hodges stressed parliamentary procedure, and when I made his team my interest in FFA and vocational agriculture intensified." Paul made explicit.

That summer he was chosen to spend a week at the state FFA leadership conference. Mr. Hodges urged him to run for a federation office, but he was defeated. However, he started off his sophomore year by being elected chapter vice president.

Declared Paul, "I no longer felt depressed. I had found a new interest in life. By studying and cooperating with other young men in FFA activities, I began to experience for the first time a lasting self-satisfaction instead of passing thrills. I read every agricultural book and magazine I could find."

Paul's sophomore year was also the real beginning of his farming program. "It all started with my purple hull peas," asserts Tarpley. From one acre of purple hull peas, young Tarpley made enough money ($224) to start the beef cattle enterprise that is the base of his farming program today. He explains, "Grandpa gave me five pounds of purple hull pea seed, and I spent $13.60 for fertilizer. That was the extent of my investment except for labor, and there was plenty of that. When the crop was ready for harvest, I would get up at 4 a.m., pick the peas, and take them to town to sell. By selling direct to the consumer, I increased my profits."

Today Tarpley's farming program consists of 18 head of registered Angus beef cattle, 9 acres of pasture, and 20 acres in a managed forest plot. Paul lives with his family, Mr. and Mrs. Paul Tarpley on a 50-acre farm where he and his father are in partnership. This fall Tony and his father plan to fence and improve 20 additional acres.

As a four-year member of the Jena High FFA Chapter, Paul participated at every opportunity. As he says, "I burned with determination and enthusiasm." A few of his activities included serving as president of his chapter, president of area II, area II state vice president, and a member of the parliamentary law and livestock judging teams. He was also a three-year rally student in agriculture.

Other high school activities included serving as president of Jena High School's student body and a member of the basketball and track teams. His injury did not prevent him from going out for basketball and track. He also received the high school's American Legion award.

Concludes Paul, "As a little boy, the cheer of the hometown crowd had sent tingling sensations up and down my spine. Now I have the same sensation when I wear the FFA jacket. During this year as a national officer, I hope to give back to the FFA what it has given to me."

FLOAT FISHING A FARM POND

By Russell Tinsley

THE OTHER DAY I was driving along a country lane when I happened to see a farm pond adjacent to a grain field. What made me notice this particular pond was the boat on it. A fisherman was standing in his craft and intently plugging about him in the small lake, which was no more than two acres in size. Standing up in a boat and clanking around like this on a small body of water is comparable to standing on a library table, shouting, and expecting everyone to ignore you.

Fish in small ponds are spooky. This is particularly true of bass. The bump of an oar against a boat will send them scurrying for cover. The silhouette of an upright fisherman or an unnatural moving shadow on the water will seal their lips. Yet it is often more productive to fish small waters this way, from the middle out toward the banks. Fish tend to forage near the shoreline, and a man away from the banks is least likely to frighten them.

So what's the answer to this dilemma?

I prefer to use an innertube float—for many reasons. For one thing, a commercial canvas float which completely encases an ordinary auto innertube costs less than $15.00 and is available at any sporting goods store. This makes it much more economical than even the cheapest boat. The angler is sitting in the water, in the saddle of the harness, and is thus low and less open to detection from below. The soft innertube is quiet, and the cautious angler can move about with little stir. The tube also is easily transported which is a convenience if you have several ponds to fish. And it can be deflated, folded, and stored conveniently when not in use. Any innertube that will hold air will do okay.

To move about on the tube, there are a couple of alternatives—wear rubber skin-diver flippers on your feet or tie a short paddle to the tube by a stout cord. Just an occasional pull of the paddle keeps you heading in the right direction.

The innertube float is stable and almost impossible for a person to tip over, since the point of balance is set low in the water. Anyway, should you somehow flip, just grab the tube. You've got a life preserver. But don't try to be economical and improvise your own float. The commercial canvas float is built to critical specifications to equally distribute the weight and keep the balance point low. This is an obvious safety factor.

For the average person, a float which goes over an ordinary auto innertube will do, but if you are on the large size physically, you can get a jumbo float designed for a truck tube. This one is larger and more stable.

Since there isn't much air pressure and the tube is covered with heavy-duty canvas, there isn't much danger of a puncture, even if you strike a sharp object like a protruding limb. But should you spring a leak, you'll still have plenty of time to paddle to shore before the tube deflates.

The float aids the fisherman in making big catches like this from a farm pond.

Some floats have zipper pockets on top where extra tackle can be carried; otherwise, a small canvas bag that hangs over one shoulder by a strap will do the job. A float is tricky to maneuver in the wind. (If the velocity is more than 20 miles per hour, you have no business fishing anyway.) It performs best on a calm surface or one with just a light ripple. Always try to fish with the prevailing breeze. This saves considerable leg work, and you can simply drift and hit all the likely spots. It is a leisurely, fascinating way to fish—and productive, too!

Partnership Way to Successful Farming

Former Future Farmer Dale Otte farms the land on which the first Federal Land Bank loan was ever made in U.S.A.

By Hank Parkinson

DRIVE INTO THE barnyard of the Dale Otte farm near Larned, Kansas, and roll the window down. The sound will quickly tell you this is not the typical Midwest farm.

The familiar sounds of chickens and ducks chattering have given way to the steady, excited yelp of dozens of Schnauzer puppies waiting to be shipped to owners all over the Western Hemisphere.

While the sale of these lovable long-haired pups is a welcome source of income, it is only another "cash crop" for the young Otte family.

"Nothing changes as rapidly as the farm picture," Dale, holder of the coveted American Farmer Degree for his FFA work in 1956, said. "Diversification is the way to maintain an income level needed to survive and grow."

FFA activity at an early age taught Dale much about the game of survival and growth.

It is interesting to note that many of the characteristics which Mr. C. C. Eustace, Kansas state supervisor of agricultural education, noted when visiting the Otte farm in 1956 describe Dale's farm today. In recommending him for the American Farmer Degree, he wrote, "Efficient operation of the farming program through mechanization and management was evident. When I arrived at the farm, Dale had just finished grinding and mixing feed for his and his father's hogs. The feed was being distributed into self-feeders with a self-unloading wagon."

Mechanization is a key in Dale's operation today. "I daily apply the farm shop skills I learned in vo-ag under Mr. Carl Heinrich," he pointed out. As a matter of fact, Dale had built that feed wagon in farm shop. His handywork continues to make his farming job easier. He pointed out a hydraulic lift, a feedlot scraper, and a hydraulic hay lift which he had built. His wife Karen added that at least half of their furniture was a result of Dale's custom workmanship.

Management is the other important key in Dale's farming operation. "Keeping records for my various projects is what really got me interested in making farming a career," he said.

Dale's wheat, ewe, and hog projects won him honors all over the Sunflower State. But like so many men who want to farm for a living, his limited capital made major purchases of land and equipment impossible.

Land Bank Month

The month of April has been designated as "Land Bank Month" in recognition of the golden anniversary of the Federal Land Bank System.

Supervised by the Farm Credit Administration, which operates at no expense to the taxpayer, the Land Banks are completely owned by farmers and ranchers who borrow from them. Today there are approximately 390,000 famers and ranchers who hold Federal Land Bank loans, and the loans themselves total more than five billion dollars.

The first Land Bank loan was made on a farm in Larned, Kansas. It should come as no surprise to learn that it is farmed today by Dale Otte, a progressive young farmer who learned the ropes as a member of the Future Farmers of America.

"It would have been great to go into business with my dad on his farm, but there just aren't enough acres there for both of us," Dale explained.

So armed with the knowledge and experience he had gained in vocational agriculture and FFA, Dale sought partnership with a large landowner.

His FFA credentials held him in good stead, and just three years out of high school his partnership, based on profit percentages, began with H. P. Theis, a Great Bend, Kansas, banker.

Now, nine years later, Dale works 600 acres of farm ground and 1,400 acres of grass land in the Kansas counties of Pawnee, Barton, and Gove. Three hundred acres are under irrigation, and the sorghum he raises is the principal feed for his 600 head of feeder cattle.

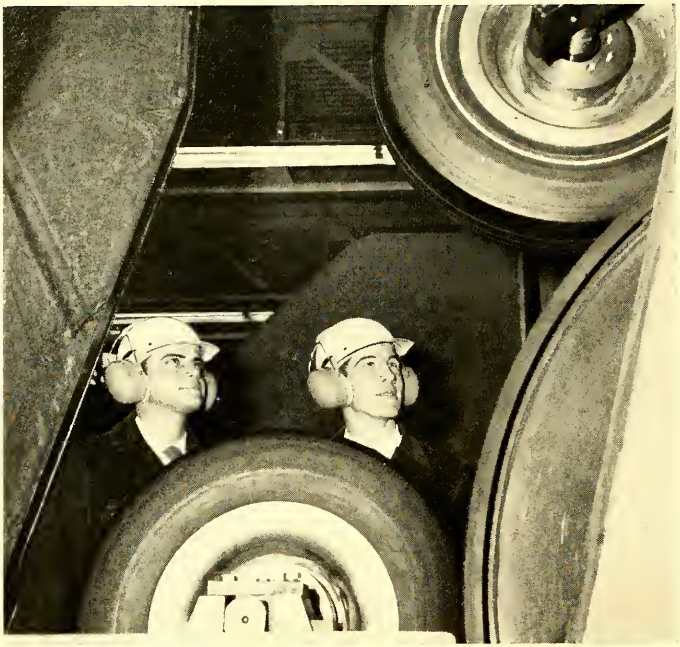
Most of this land belongs to his partner, although some is rented from other sources.

"This partnership arrangement is the only way I could have gone into farming on a scale a young person must these days," Dale said. "It has been a good relationship. I have built a good equipment inventory and have continued to grow."

Both Dale and Karen are active in Farm Bureau work. In fact, Dale is a former member of the Bureau's state young peoples committee.

The partnership arrangement has also given Dale the opportunity to firm up his future plans. "I will continue to rent additional ground and point to owning some of my own land," he concluded.

The Schnauzers, the cattle, the cash crops, and his partnership will help make this dream come true. But Dale's years of FFA work made the dream possible in the first place.



The Goodwill Tour is a trip quite out of range of the ordinary traveler. Paul Tarpley, left, and Gary Swan looked a bit out of the ordinary on this visit.

The

"A TRIP QUITE OUT of the range of the ordinary tourist." That's how a travelers' handbook might describe the FFA Goodwill Tour. Since 1949, only 120 lucky young men have been elected to make this important journey.

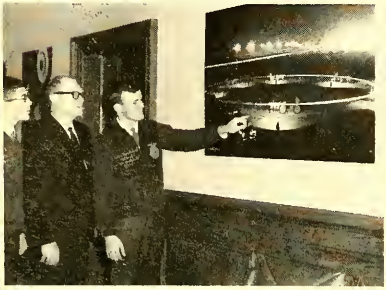
The history of the Future Farmers of America, "FFA At 25," records, "A first was marked up in 1947 when the national officers went on a Goodwill Tour visiting business and industrial concerns."

It seems that the Iron Curtain is not one of those inventions of which Russia may claim priority. There has always been a "straw curtain" between America's bread basket and its gun-gray melting pots . . . the city. This barrier is caused by a lack of understanding. The FFA creed makes the point, "I believe in . . . respect from others." Realizing that respect can be gained only through understanding, leaders of the FFA initiated the idea of sending its six top young men on a tour of America's largest cities to discuss farm problems with major industrial leaders. Since 1949 this has been an annual activity of the national FFA officers . . . making this the twentieth anniversary of the Goodwill Tour.

This effort has made a hole in the "straw curtain," but continual communication must keep this avenue of un-

Here your leaders see how scientific equipment helps the modern farmer.

Above: FFA Advisor H. N. Hunsicker and officers viewed a model farm of the future. Below: FFA officers learned how farm machinery and equipment is tested during this Goodwill Tour stop.



Would you believe eight "pea pickers"? The touring officers and Texas FFA president Marcus Hill met Tennessee Ernie Ford at Houston Livestock Show.

Goodwill Tour

derstanding open. Result: The Goodwill Tour message has never seemed more vital. The world population is getting younger and hungrier while the farm population gets smaller and smaller.

Because of this, the 1967 Goodwill Tour made stops at 15 cities in 12 states on a schedule that has taken your six leaders from coast to coast. Commencing on January 29 in Washington, D. C., the tour concluded on March 10 in Denver, Colorado.

The Goodwill Tour enables your national officers to say a personal "thank you" on behalf of all Future Farmers to the donors of the National FFA Foundation. Without their support, the FFA awards program would not be possible. More important, however, Gary Swan and his fellow officers left behind impressions that will give new meaning and better understanding of youth and agriculture.

This year's Goodwill Tour message was the official FFA Week theme, "Agriculture . . . Strength of America." The officers told how vocational agriculture has played a key role in the application of modern technology, and how it has made available a considerable work force to increase the total output of goods and services. Thus, agriculture has doubly contributed to making our country strong and free.

They further explained, "The Future Farmers of America takes its place among the vital forces which seek to improve agriculture. It will continue to help keep American agriculture strong through the development of competent leaders and people trained for careers in agriculture. FFA aids in bringing the many facets of agriculture closer together as it practices cooperation and serves the nation by preparing responsible citizens."

By following the pictures which accompany this article, you can trace many of the officers' important visits across the U.S.A. Because of this issue's deadline, it was impossible to include photos of West Coast visits.

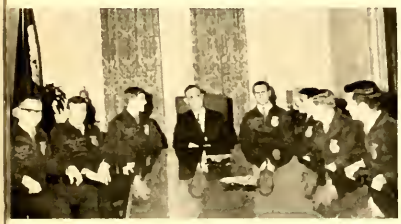
Like all good ideas, the Goodwill Tour idea has spread. Many state FFA associations now conduct state officer tours during FFA Week, and more and more chapter officers are doing the same. They visit with state and local business and industrial leaders. It provides an excellent opportunity to exchange views with these officials.

What of the next 20 years? Who knows—20 years from now the Goodwill Tour may include international visits with agricultural leaders in Europe and other agricultural producing nations. But the traveling officers of 1987 will probably sum it up in about the same words as the first group, "That was some trip!"

The touring officers viewed many educational exhibits like this one showing tire and rubber oddities.

Richard Engelbrecht, Star Farmer of America (second from right), makes a point at meeting with FFA donors.

Before leaving on tour, the officers met with Secretary of Agriculture Orville Freeman in Washington, D.C.



At left: The officers met with many state leaders. Here they meet with Virginia Governor Mills E. Godwin, a former FFA member. Below: FFA'ers were met by many company directors. This parley was at Montgomery Ward.

Below: An attractive tour hostess answers questions after company visit.

Here's how an early start helped Buddy Lashley (center) build an adequate resource base for farming. He is flanked by brothers Benny, left, and Tom. Both are FFA members.

"FFA Helped Me Get Started"

By Roy Alleman

ARE YOU ONE OF those who says a young man can't make a start in farming unless he has lots of money behind him? It's true today's Future Farmers must come up with more capital than ever, but some, like Buddy L. Lashley of Curtis, Nebraska, make it anyway. How? They get a head start toward an adequate resource base for farming, and if you want to follow his example now is the time to start making your plans!

Buddy began building his herds and agricultural resources while a freshman in vocational agriculture and FFA member at McCook High School. It didn't seem like such a big start for he owned only one cow, four sheep, two sows, and one old tractor.

In just six years, however, Buddy had mushroomed this beginning into a net worth of nearly $24,000 and was named Star Farmer of Nebraska. His inventory showed he owned 480 acres of land, 43 head of Angus cows and heifers, 12 head of dairy cows and heifers, and rented an additional 320 acres.

At the time of our interview, Buddy was applying for the American Farmer Degree. He had 19 farrowing sows, and his Angus cows had a better than 95 percent calf crop. His net worth had jumped to over $37,000, and his gross valuation was over $60,000.

Needless to say, Buddy received the American Farmer Degree at the National FFA Convention this past October.

"FFA sure helped me get started early," said Buddy as he and his wife Norma showed me their farm and livestock. "More important, I gained a lot of knowledge from vocational agriculture."

Mrs. Lashley was the former Norma Hansen, a neighbor girl whom Buddy married in 1963. Soon after, they bought the first portion of the 480-acre farm. Norma is just as interested in livestock, feed grains, and wheat as her husband. Wherever Buddy is, she is likely to be right beside him helping. She has won some honors of her own like the title of District Dairy Queen in 1962.

Together, they are busy as can be remodeling and repairing buildings and restoring the land with sound soil conservation practices.

"We have all the cattle we can handle now," said Buddy, "but we are expanding the hog business. We have six farrowing pens built and are adding six more. After this project is finished, a concrete floor and open shelter will be added."

At the time of this interview, Mr. and Mrs. Lashley were putting in an automatic livestock watering system. "I gave it to him for Christmas," laughed Norma. "It was just too much work to carry water to all those hogs."

Maybe the money for the watering system did come out of the farm budget, but Mrs. Lashley was not altogether wrong in saying she gave it to him for Christmas for it meant postponing new purchases for the home.

Soon after the Lashleys bought this farm, they secured a Great Plains soil conservation contract to help carry out needed soil improvement and land restoration.

Buddy has built 18 miles of terraces and a 4,000-yard stock dam. He has installed a livestock well, and 15 acres of overgrazed pasture has been interseeded with native grasses.

Stubble mulching and a flexible crop rotation program are contributing to higher crop yields and soil improvement.

Each fall during the hunting season, Buddy and Norma combine work with pleasure by running a hunters' guide service. The hunters are provided food and lodging and guided to the choicest pheasant hunting grounds in the rugged Frontier County hills. Buddy's brothers, Ben and Tom, cooperate in the hunting program.

Later in the hunting season they host deer hunters. Last fall each of them, including Norma, got a deer. "This is our vacation," she says.

Ben, a sophomore in the McCook High School, was elected Chapter Farmer, and Tom was recently named Star Greenhand. So they, too, are carrying on the FFA tradition.

Buddy's parents, Mr. and Mrs. Buddy M. Lashley, who live 14 miles south of them, were named Honorary State Farmers at the same time Buddy was named Nebraska Star Farmer.

Buddy's solid future in today's farming can be traced to this fact: He started building his farming assets early and took his vo-ag studies seriously. He then applied this knowledge to further sharpen the edge he had already gained toward establishment in farming.

Bureau of Reclamation Photos.

CHANGE and AVAILABILITY of FARMS

By Len Richardson

YOUR CHANCES OF breaking the entry barrier into farming will be affected first by the changes taking place in agriculture and the availability of farms. Here's a close look at these key factors.

Probably the most important change that will be required on your part is a change in attitude. At a recent briefing for members of the American Agricultural Editors' Association, Dr. C. F. Davan, Jr., manager of Agricultural Market Analysis for International Minerals and Chemical Corporation, outlined the key changes that are occurring in U.S. farming (see figure 1) and the resulting new attitudes (figure 2) that will be required if you are to successfully cope with these changes.

It is also likely that there will be a change in the way in which you will enter farming. In testimony on October 11, 1966, before the National Advisory Commission on Food and Fiber, Mr. H. G. E. Fick, president of Doane Agricultural Service, Inc., discussed the probable steps that would be required for entry into farming. Here's what he said:

"Essentially we are adding a step to the agricultural ladder and changing one label. The first step would be the young man working on a farm solely to gain actual production experience, a new step. The second step would be farming on his own but using other people's money, and under supervision of a professional manager to prove his ability. Not until the third step would he really begin to build equity for expansion or investment. The fourth step, of course, is ownership of at least part of the land in his operation."

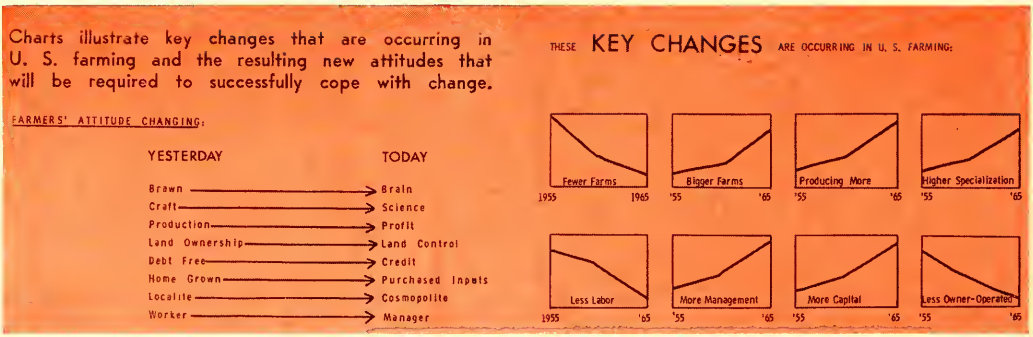
To accomplish these steps, Mr. Fick pointed out, the beginner must have (1) a credit source, (2) an education in the business field in order to operate, and (3) a chance to prove himself to both lenders and landlords. (These will be discussed in future articles.)

Where Are The Farms?

Only about 170,000 farms are vacated each year by operators who die, retire, or leave the farm for other reasons. Probably less than one-fifth of these farms are acquired by new farmers, many of them young men who take over the home farm from their parents.

Most of the remaining farms are bought or rented by established farmers. Half of the farm tracts sold each year are bought by established farmers to enlarge their farms.

Some land goes out of farming each



Breaking the entry barrier into farming will require new steps to land ownership.

year . . . into urban, industrial, highway, or other nonfarm use. A smaller acreage of land is brought into cultivation each year by irrigation and drainage. The net result: Total land in farms is decreasing.

In 1965 there were 1.155 million acres of land in farms. It is estimated that this figure will shrink by about 15 million acres in the next 15 years.

Free government land for farming is a thing of the past. Practically all available land suitable for farming is privately owned.

Although the federal homestead laws are still on the books, very few tracts of land suitable for farming become available any more. Those that do become available are "in the rough." Before one can make a living from them, he must put in a lot of hard work and spend much time and money.

Some land in Alaska may be homesteaded, some leased, and some bought. But before settling there, the prospective farmer should get information from reliable sources about climate, farming conditions, and markets in the area in which he is interested. Land may have to be cleared. Chances of success are limited by lack of markets and transportation facilities.

Resources Needed

How much land, labor, and capital does it take to farm? Harry I. Graham, legislative representative for the National Grange gave the National Commission on Food and Fiber this example of the high capital requirements which are making land too expensive to farm. He said, "The problem of capitalization was demonstrated by attempts to divide the Di Giorgio holdings in California. The time of the recordable contracts had expired, and about two years ago the government placed these smaller farms coming within the 160-acre criterion on sale. They were appraised at $160,000 to $325,000. Only one was sold, despite the fact that this was part of the most highly productive area in the world."

Total requirements for resources vary widely among different types of farms. Not only do the total inputs of each resource vary with type, but there is a great difference in the relative importance of each.

For example, compare two extremely different farms . . . a typical New Jersey farm producing eggs and a sheep ranch in the Southwest. The poultry farm has only ten acres of land; the sheep ranch 13,520. The poultry farm requires 5,030 hours of labor per year to care for 4,625 hens; the sheep ranch requires 5,390 hours per year to care for 1,350 head of sheep. Total capital invested is $44,740 in the poultry farm, and $217,220 in the sheep ranch.

For a list showing land, labor, capital requirements, and returns for 13 representative, operating commercial farms in different parts of the country, write *The National FUTURE FARMER*, c/o Breaking the Entry Barrier, Alexandria, Virginia 22306. You will receive this free information by return mail.

As Mr. Fick told the Food and Fiber Commission, "Corn Belt livestock farms require 132 percent more machinery and 100 percent more livestock than they did 15 years ago. Even if the beginner can rent land and buildings valued at $100,000 to $150,000, he still needs $17,000 for machinery on the grain farm and $27,500 for machinery and livestock on the livestock farm. Add to this his operating needs of $30.00 per acre on 250 acres of land operated, and we can see the very high initial capital the current beginner must be able to come up with."

While farm management specialists have long emphasized the importance of an adequate resource base, it is clear that beginners start significantly smaller. For example, beginners farming for the first time in Iowa between 1959 and 1960 operated units with a land base of 165 acres. On January 1 of the year of entry, beginning farmers owned crops, livestock, machinery, and equipment having a mean value of only $2,000.

In the same Iowa State University study, interviewers asked, "If you had known when you started farming what you know today, would you still have decided to farm?" Over 80 percent of the group said yes. Only 13 percent said they would have decided not to farm, and about 7 percent said they did not know what they would have done.

As a Future Farmer, you have the edge when it comes to breaking the entry barrier. Even with higher land, labor, and capital requirements, many Future Farmers do make a successful start in farming. Be sure and read "FFA Helped Me Get Started," on page 30 of this issue.

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This Nevada Future Farmer, Tom Duncan, has earned himself recognition among the top cowboys on the state rodeo circuit.

By Elliot Lima

High Riding Cowboy

TOM DUNCAN, a 6-foot 180-pound Future Farmer from Lovelock, Nevada, is one of the top ten cowboys on the state rodeo circuit this year. Besides winning the Nevada high school all-around championship his sophomore and junior years and the bulldogging championship when only a 14-year-old freshman, Tom competes in the regular circuit throughout the year. To finish off his 1966 rodeo year, Tom and his look-alike dad, Bud, won the team roping event at the Western States Championship Rodeo at Centennial Coliseum in Reno.

At Pershing County High School, Tom is senior class president, FFA president, plays defensive guard on the football team, and was a member of the championship livestock judging team in 1965.

Tom lives on a typical desert cattle ranch 20 miles north of Lovelock with his parents and his attractive sister Jeanie, who is a champion barrel racer and rodeo queen.

The ranch is operated in partnership with Bige Duncan, Tom's uncle. Together they run 600 head on 25,000 acres of leased and privately owned land.

During summer months, the cattle are driven up the Humboldt Range where they graze on native grasses and white sage. A great deal of riding is required in moving cattle and managing the range. This is rough country, and saddle horses are necessary.

In the fall, cattle are driven down the mountains to the Humboldt River where they graze on meadow grasses until calves are weaned and sold. After the calves are sold, cows are pastured on the foothills and flats. Here they spend the winter.

In April at calving time, spring roundup starts. Calves are castrated, branded, and sent back up to the high range.

Then rodeo season starts. It often turns out to be a Duncan show as far as winnings go. Bige, Sr., Tom's uncle, competes in calf roping and team roping as does Bud. Tom competes in bull riding, bulldogging, saddle bronc riding, team roping, and bareback riding. Jeanie is usually in the winners' circle in barrel racing.

Bige Duncan, Jr., Tom's cousin and ex-FFA'er, was Nevada's all-around champion for the past two years.

Tom's ambition is to win in the National High School Rodeo in 1967. He has competed in the Nationals in Minnesota, Nebraska, and Oklahoma, placing as high as third. This year with the final to be held in Elko, Nevada, he would like to climax his high school career with a win at home.

Lifetime ambition? Cattle ranching and, of course, the rodeo circuit.

Tom competes in the saddle bronc riding, bareback riding, team roping, bull riding, and (below) bulldogging events.

Tom and his dad joined forces to cop the honors in team roping event at the Western States Championship Rodeo.

"Been Putting on Weight, Myrtle?"

"It's easy on pasture. Go on. What's good for the soul is good for the sirloin.

"That's it... have some more brome, with a touch of clover to sweeten the cud. Ahh! Like heaven itself! This week on the north 40, next week on the south slope. Between us girls, this is really living, Myrtle.

"Know what gave the boss the idea of improving his pasture? Money, my dear, money! He's growing $4 where $1 grew before. Sure, it took some fertilizer, new seed and lime, just like corn ground. It certainly beats that thin, burned-out, old bluegrass. As well as the tight money situation.

"And confidentially, dear, I think the boss likes us a little on the plump side."

Now you can get the secret of how "the boss" is making more money without adding more acres. It's contained in a new booklet, "*New Pasture Management Ideas.*" You'll find it full of tips on ways to make pasture pay off better. Suggestions for beef and dairy cattle, hogs and sheep are wrapped up in one colorful volume. Send for your copy today. It's FREE. Address: Keystone Steel & Wire Company, Peoria, Illinois 61607.

The American Farmer: His Strength

"I made myself a plow...and I followed it for a million miles."

He fashioned the moldboard and the landside from oak. Stout hickory formed the frame, and he placed natural crooks where his hands would grip the guides. He forged an iron share. Then he assembled his plow and secured it . . . with wooden pegs.

Following his ox or his mule, reins tied behind his back, he drove this clumsy implement across his newly cleared land, matching his strength to the resistance of the stubborn soil.

He broke the ground. He planted. And later, he reaped his harvest.

The farmer of today doesn't make his own plow nor does he plow by hand. But his farm is many times the size of his great grandfather's. Indeed, he tills almost twice the acreage his own father tilled, often working late into the night, staring wearily ahead at the path of his tractor's headlights.

Like those who went before, today's farmer is a man of might.

Look backward with pride. Look forward with confidence.

Columbia: helping to maintain the American farmer's leadership through better fertilizers.

Columbia Nitrogen Corporation
Augusta, Georgia

A full-color reproduction of this painting (20¾" x 17½") suitable for framing will be sent to you on request.

Anglers Knots

If you like to take trout, bass, or other fresh water fish, you are bound to run up against the problem of how to attach a leader to a fly line. Here's help:

Illustrations by Stern Fishing Line.

FRESH WATER LEADERS

TROUT (Dry fly and nymph leader) 9 ft., tapered from 25-lb. (.018) to 4-lb. (.007 or 4X)

2 ft	2 ft	1½ ft	1 ft	6 in	2 ft.
25 lb (.018)	20 lb (.016)	14 lb (.014)	10 lb (.011)	6 lb (.009)	4 lb (.007)

TROUT (Streamer and bucktail leader) 9 ft., tapered from 25-lb (.018) to 6-lb (.009 or 2X)

2 ft	2 ft	1½ ft	1½ ft	2 ft
25 lb (.018)	20 lb (.016)	14 lb (.014)	10 lb (.011)	6 lb (.009)

PANFISH 7½-ft., tapered from 25-lb (.018) to 4 lb. (.007)

2 ft	2 ft	1½ ft	1½ ft.	6 in
25 lb (.018)	20 lb (.016)	14 lb (.014)	10 lb (.011)	4 lb (.007)

BASS 9-ft., tapered from 25 lb. (.018) to 10-lb (.011)

3 ft	2½ ft	2 ft	1½ ft.
25 lb (.018)	20 lb (.016)	14 lb (.014)	10 lb (.011)

*blood-knotted to p.l.b.

NORTHERN PIKE 9-ft., tapered from 25 lb. (.018) to 10-lb (.011) with 20-lb shock tippet

3 ft	2 ft	2 ft	1 ft	1 ft.
25 lb. (.018)	20 lb (.016)	14 lb (.014)	10 lb (.011)	20 lb. (.016)

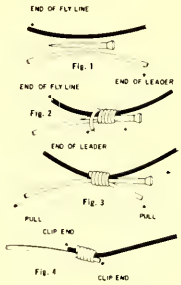
THE PERMANENT LEADER BUTT—The permanent leader butt is a three-foot strand which is tied permanently to the end of the fly line with a nail knot.

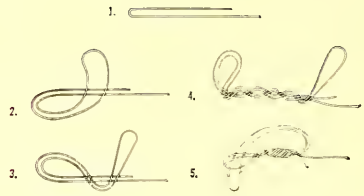
NAIL KNOT

The Nail Knot is used to tie the butt end of your leader to the forward end of your fly line. It is also used to tie backing to a fly line. This knot gives a smooth, streamlined connection and the flat-lying knot will move freely through the guides of your rod, and if tied properly this knot cannot slip, cut, or pull out.

This knot is tied using either a tapered nail or piece of small tubing. Here's how to tie it.

Hold the line, leader and tapered nail or tubing alongside each other as shown in Fig. 1. Allow ample overlap. Then wind leader downward around nail or tubing, line and itself six times and run end of leader back along nail or through tubing up under loops, Fig. 2. Pull both ends of leader tight. Slip knot down nail or tubing, tightening by pulling both ends of leader as it goes. Slip nail or tubing out and retighten by again pulling leader ends, Fig. 3. Finally, pull line and leader tight and clip end of line and leader close to knot, Fig. 4.





IMPROVED END LOOP KNOT—This knot can be used for tying a loop on the end of your line or leader. To tie this knot, first bend over the strand about four to six inches from the end so that you have a "U" bend as shown in figure 1. Then bend the "U" bend backwards and around itself at least three to five times, depending on the thickness of your line (figures 2, 3, and 4). Now insert the end of the "U" bend through the first loop made by its backward turn and pull it up tight (figure 5).

All the leaders shown above can be tied to the end of the permanent leader with a blood knot. Here is the easy step-by-step way of tying it:

1. Lap the ends of the strands to be joined and twist one around the other, making at least five turns. Count the turns made. Place the end between the strands, following the arrow.

1.

2. Hold the end against the turns already made, between the thumb and forefinger at point marked "X", to keep from unwinding. Now wind the other short end around the other strand for the same number of turns, but in the opposite direction.

2.

3. This shows how the knot would look if held firmly in place. Actually, as soon as released, the turns equalize.

3.

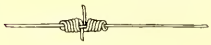
4. And the turns look like this. Now pull on both ends of the monofilaments.

4.

5. As pulling on the ends is continued, the turns gather as above and draw closer together (at this point the short ends may be worked backward, if desired, to avoid cutting off too much of the material).

5.

6. Appearance of the finished knot. All that remains to be done is to cut off the short ends close to the knot.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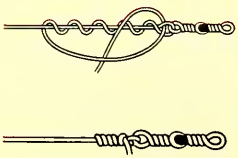

IMPROVED CLINCH KNOT—This knot is an excellent knot for tying flies, lures, and bait hooks to spinning lines or leaders. To tie, stick the end of the line through the eye of the hook or swivel and make five or more twists around the standing point of the line. Then thrust the end between the eye and the first loop and then back through the big loop as shown. Hold on to it and pull tight.

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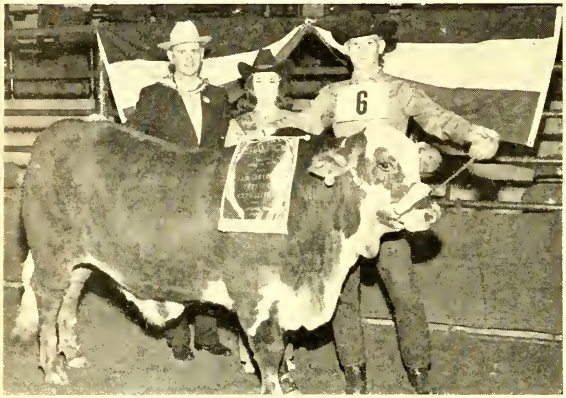
INTERNATIONAL® TRUCKS

Freshman Future Farmers at Winthrop, Minnesota, all place "A Future Farmer lives here" sign in a conspicuous place at the entrance to each FFA driveway.

FHA member Susan Combs is awarded prize for winning the Socorro, New Mexico, FFA-FHA pie baking contest.



Left: San Antonio, Texas, FFA'er Joe Hoyt poses with his champion steer at the San Antonio Livestock Show. Also pictured is Linda Bandy, FFA sweetheart at John Marshall High School where Joe studies agriculture.

FFA President Gary Swan meets the 1967 March of Dimes girl, Donna Dill. Gary was attending a volunteer leaders conference.

Marion, Indiana, FFA'ers developed a pageant for the grand opening of a local equipment company. Mr. Sam White, president of the Oliver Corporation, far right, spoke at this special FFA event.

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As an Army ROTC man, you'll spend a few hours each week in classes with men like yourself, men of an independent turn of mind, men who make their own decisions. Of course, you can wait to be told what to do. But if you'd rather do your own deciding, mail the coupon today. "WHERE THE LEADERS ARE" will show you how you can double your opportunities. There's no obligation.

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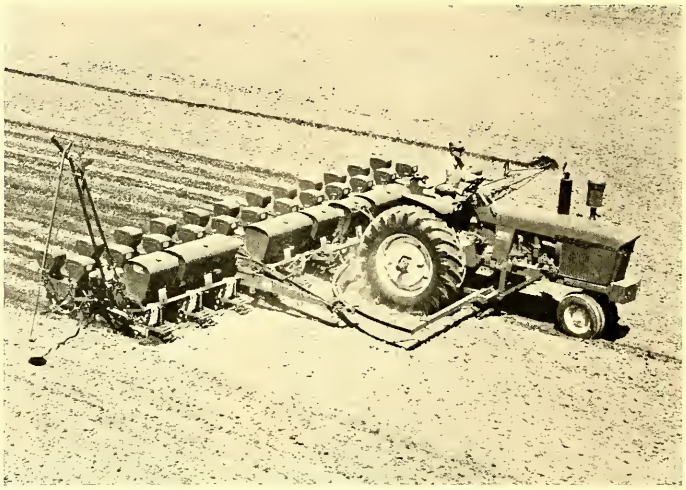

Taking care of a planter before and after planting can mean money for you.

Planter Care Can Mean More Corn

By Melvin Long

A TOO-OFTEN overlooked part of corn production is the actual planting operation. For example, if your planter misses one plant every ten feet, your yield will be reduced about 11 bushels per acre. A thorough inspection and adjustment of your planter before planting can help increase your yields. Best of all, in most cases, the only cost will be a little of your time.

First, clean off all accumulated dirt and rust and inspect carefully for any parts that need to be replaced or repaired. You will have more time for repairs now than in the midst of planting.

Use solvent or kerosene to remove old grease and dirt. Gasoline should not be used because of the fire hazard.

Check to see that all shafts turn freely and that all grease fittings are in place and taking grease. Be sure all sprockets or gears are properly fastened to their shafts.

Do the markers work easily and accurately? Be sure the shaft is straight and the marker is set for whatever row width you plan to use this year.

The wheel bearings and differential should be lubricated. Be sure that the clutch housing is free and working properly. Although it isn't absolutely necessary, it's a good idea to renew the lubricant in the gear case, drain, flush with kerosene or solvent, and refill with new lubricant. In either case, be sure your lubricant is up to the recommended level. There are some parts of the planter that should not be oiled. The seed plate drive gears and the check-head mechanism should run dry. Because these are exposed mechanisms, they will collect dirt if oiled.

The fertilizer distributors should have been cleaned when you finished planting last spring. If they weren't, they'll need extra attention now. Soak all the parts with kerosene. Then try loosening them by gentle tapping with a hammer. If this method doesn't work, it will be necessary to heat the parts.

After the parts have been freed and cleaned, wash the cans with hot water and a detergent. However, don't oil the cans. It will cause the fertilizer to cake.

Install the correct plates for the seed you're using this year. When handling plates, remember they are made of cast metal and can be easily broken. Be sure they are properly placed before you position the seed boxes.

Now make a trial run with your planter. Set it to drop at the desired rate and try it in your driveway at the speed you plan to use in the field.

Check the number of kernels each shoe is planting. They should all be planting at the same rate. Then calculate to see if you are getting the intended amount of seed per acre.

If you find skips or cracked seeds, check the cutoff and knockout pawls in the seedbox. Be sure they both have good, strong springs. Also look for cracked or undersize grains that have been caught beside the pawls, causing them to stick.

Check for a worn plate holder or false plate. A worn false plate has the same effect as one that is too large.

In the field, do not drive too fast. It can cause uneven stands. As speed increases, so does the chance of uneven planting. Fast driving can cause missing or bunching of plants.

At the end of the planting season, a little time spent working on your planter, some rainy day, can save you lots of expense in the seasons to come.

1. The planter should be thoroughly cleaned, greased, and inspected for worn or broken parts. If you're too busy at the end of the planting season to make these needed repairs, it's a good idea to make a note of things needed on a large shipping tag and wire this tag to the planter. Then when you do have time, you won't have to trust your memory as to what's needed.

2. If your planter has a fertilizer attachment, all the parts in contact with fertilizer should be taken apart, cleaned, and oiled. One easy way to care for small parts is to place them in a bucket and cover them with motor oil. The life of fertilizer hoppers can be greatly increased if they are painted on the inside.

3. If the planter has to be stored outside, it should be covered with canvas or other suitable material.

4. If tires are to be left on the planter, store it so that the tires do not touch the ground.

Since detailed construction and means of adjustment vary with each manufacturer's planter, your owners' manual is your best guide for specific directions. But these general principles apply to all planters.

the tea bag test

Find out once and for all just how water-soluble your fertilizer really is.

As you know, before your fertilizer can work for you, it has to be dissolved by the moisture in your soil. The sooner it dissolves, the sooner it will start feeding your crops.

Now you can find out how much of your fertilizer will dissolve. And you can do it in less than five minutes.

Just fill a glass with water.

Take a tea bag, snip off a corner, pour out the tea and pour in some of your fertilizer. (Fill the bag about one-quarter of the way full.)

Then dunk the tea bag in and out of the water for a few minutes.

We tested Ammo-Phos® Fertilizer the same way:

A tea bag of Ammo-Phos versus a tea bag of another leading fertilizer.

The results are shown above.

Look what happened. After about four minutes, Ammo-Phos (the fertilizer on the right) dissolved. The other fertilizer didn't.

Will your fertilizer dissolve and work for you as quickly as Ammo-Phos?

Pick up a sample bag from your local Olin agent and test it against your own fertilizer.

And if it turns out that Ammo-Phos isn't the most water-soluble fertilizer you can buy, boy, will we be surprised.

Olin

PRESENTING...

"HONORING EXCELLENCE"

from the 1968 OFFICIAL FFA CALENDAR

Future Farmers profess a belief "in the future of farming with a faith born not of words, but of deeds."

Every Future Farmer is taught basic skills ranging from farm mechanics and bookkeeping to growing livestock and crops. An application of the basic skills derived from vocational agriculture and FFA stimulates action.

Indeed to be eligible to receive the coveted Star Farmer of America award (or any other award in the FFA), there must be plenty of hard work and action. Deeds must be done. The nearly half-million Future Farmers of America are continually at work to improve, to accomplish their purposes, and to succeed.

Then, honoring excellence, one member is presented this award each year at the National FFA Convention. But only one! The others are at work.

Thus the 1968 Official FFA Calendar tells this same story. The original painting "Honoring Excellence" by artist Arthur Sarnoff appears on the 1968 calendar. There are also color pictures of Future Farmers in action to go with each month.

Every chapter in the nation may participate in the calendar program and can use this painting and the calendar to tell the complete FFA story in their community. Will your chapter use this popular tool for FFA public relations (and fund-raising too)? Your advisor may send for the 1968 Official FFA Calendar Kit with samples and a new Chapter Action Guide.

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28—Should You Go Into Agriculture?—If you have asked yourself this question, you will find this seven-page booklet written especially for you. The author is Dr. O. Burr Ross who is dean of the College of Agriculture and vice president of Agricultural Sciences at Oklahoma State University. He provides a realistic picture of what you can expect. (New York Life Insurance Company)

29—Water Management And Fishing For Fun—A guide that will give you information on the renovation of your body of water for more pleasure and recreational use. The ideal water improvement program outlined in this 12-page booklet includes renovation, stocking fish, and water management. The section on kinds and number of fish to stock should be especially helpful. (Sears, Roebuck and Company)

30—Dairyman's Guide Book—A 40-page booklet compiled and edited by the Farm Economics Research Institute which provides tips for profitable dairying. Of special value is a section on planning for loose housing. Includes layouts and specifications for several loose housing systems. (Chore-Boy Manufacturing Company)

31—Agri-business Selling—This 45-page booklet discusses career opportunities in one important area—agricultural selling. You already have one big qualification for agricultural selling—your knowledge of the needs and problems of farmers and stockmen. This booklet should help you evaluate the opportunities and qualifications for this important career. (Sales and Marketing Executives-International)

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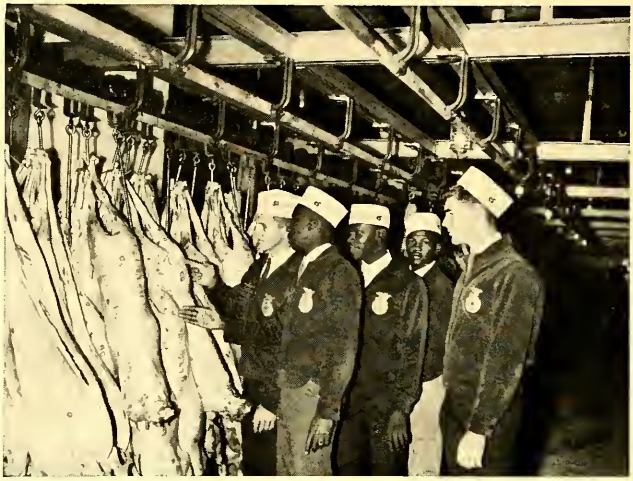


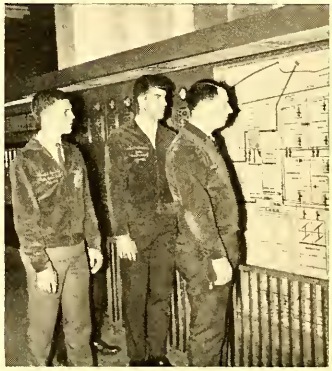
One interesting stop during the tour of Atlanta was the Colonial Stores warehouse operation. The visit included this look in the freezer rooms.

State Goodwill Tours

MANY STATE FFA associations and even some local chapters we've heard about have discovered the popularity of a Goodwill Tour. These special visits provide better understanding between FFA members and business and industry. Those who give support and encouragement to the organization learn more about FFA members, their goals for the future, and their present programs. Future Farmers can take this first-rate opportunity to say thank you to these people and, at the same time, learn more about behind-the-scene phases of the industrial segment.

Here is a pictural story of a tour by officers of the Georgia FFA Association in the city of Atlanta.

The city of Atlanta provided a bus for the tour. Officers viewed the chart of the city's Water Treatment System.



A visit to the R. L. Mathis Dairy was a highlight of the week-long tour. The visit here included a trip to the farm.

We go to the moon many times to get there once.

Making the inertial guidance systems for the Apollo mission is a big responsibility. More than two hundred tests are performed on every system before it goes into an Apollo vehicle. Some of these tests go the full distance. All 600,000 miles. These flight simulations include the initial shock of launch, directional changes, temperature extremes, space radiation effects, vibration produced by aerodynamics and the rocket's engines, even the shock of landing.

The company that does the testing is the one that does the building. AC Electronics Division of General Motors, Milwaukee, Wisconsin.

An inertial guidance system functions as the eyes of the Apollo spacecraft. After being set by an astronaut, it's on its own. A speck of dust, an oily fingerprint or a little moisture in this system's delicate instruments could ruin the mission. That's why the people in the picture are wearing "bunny suits." Suits that keep dust, dirt and moisture out of assembly and testing rooms. Rooms that are kept cleaner than hospital operating rooms.

The "Bunnies"? The one in the glasses is an engineer. He's explaining test procedures to James Meyer on a recent AC tour. Jim's a sixteen-year-old junior at Whitnall High School, Hales Corners, Wisconsin, and majors in science and mathematics. After college he would like to teach in one of these areas. Outside interests? What else? A science seminar group.

AC Electronics Division of General Motors is just one of many GM divisions solving problems in defense and space.

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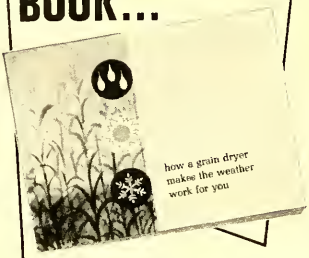

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Guide for Corn

(Continued from Page 23)

through root pruning, is avoided. Removal of all of the unfurled leaves at this stage (by frost or hail) may result in 10 to 20 percent reduction in final grain yield. Spraying with 2,4-D may cause the developing stalk to be brittle, and the stalks can be easily broken at the soil surface. Corn borer eggs begin to hatch at this stage. Watch for leaf feeding and treat if necessary.

Tenth Leaf Fully Emerged, Five Weeks After Plant Emergence—Moisture and nutrient deficiencies from this stage on will markedly influence the growth and development of the ears. Since the root system is extensive and the soil is warm, banded high concentrations of nutrients are not essential. But the nutrients must be in moist soil to be absorbed. Thus, plowed-under fertilizer is preferred since surface-applied nutrients (especially phosphorus and potassium which do not move any appreciable distance in most soils) may be in dry soil and unavailable to the plants. The stalk is now growing well above the soil surface. Plants broken over below the growing point will not recover. Yield losses from hail or leaf damage are greater than at any previous stage.

Twelfth Leaf Fully Emerged, Six Weeks After Plant Emergence—This is a critical period in determining the size of the uppermost ear (or ears). Moisture or nutrient deficiencies at this time may seriously reduce the potential size of the ear. The potential size of the harvested ears is also related to the length of time between this stage and the silking stage. Earlier maturing hybrids, which progress through these stages in a shorter time than the later maturing hybrids, usually have small ears and must, therefore, have more plants per unit area to produce the same grain yield.

Fourteenth Leaf Fully Emerged, Seven Weeks After Emergence—The number of ovules which develop silks, and thus the number of kernels, is being determined. Any nutrient or moisture deficiency or injury (hail or insects) may seriously reduce the number of kernels that develop.

Sixteenth Leaf Fully Emerged, Eight Weeks After Plant Emergence—Moisture stress or nutrient deficiencies usually increase in intensity from the top to the bottom of the plant and will delay silking more than tassel emergence and pollen shedding. Complete leaf removal (by hail) at this stage will result in essentially complete loss of grain yield. Removal of half of the leaves would result in 25 to 30 percent yield loss.

Silks Emerging, Pollen Shedding, 66 Days After Emergence—The number of ovules that will be fertilized is being determined at this stage. Moisture stress (hot, dry days) or nutrient deficiency may result in poor pollination and seed set. Earlier planting and other management practices should be followed so this stage will occur when climatic conditions are most likely to be favorable. Watch for corn rootworm beetles feeding on silks. Treat if necessary. Potassium uptake is essentially complete, and nitrogen and phosphorus uptake are rapid. Leaf analysis for nutrients in the plant at this stage is highly correlated with final grain yield and yield response to fertilizer application.

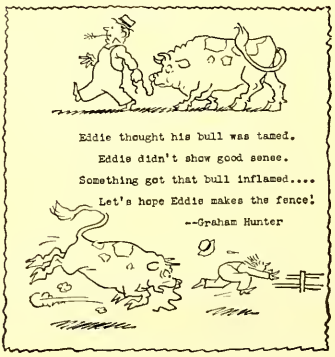
Blister Stage, 12 Days After Silking—This is the beginning of rapid increase in grain weight. Where possible, irrigate to assure adequate moisture for grain production. Loss of leaves from hail or other unfavorable conditions at this time will result in unfilled kernels, usually at the tip of the ear.

Dough Stage, 24 Days After Silking—This is the period of rapid increase in grain weight and development of the young plant in the embryo of each seed. Unfavorable conditions or deficiencies of nutrients such as potassium will result in unfilled kernels and "chaffy" ears.

Beginning Dent Stage, 36 Days After Silking—The rapid increase in grain weight and development of the young plant in the embryo of each seed continues.

There is relatively little increase in grain weight after all kernels are fully dented (48 days after silking) and no increase after physiologic maturity (60 days after silking). You are ready for the payoff. If you have followed these management practices, you should harvest a bumper crop.

Editor's Note: For a copy of Dr. Hanway's publication, illustrated in four-color, send 25 cents to Publication Distribution Center, Morrill Hall, Iowa State University, Ames, Iowa 50010. Ask for Special Report 48.



Du Pont research creates products for better farming

Will you be in the better farming picture in the future?

Du Pont's line of agricultural chemicals grows steadily. More than 100 such products are sold around the world. Most of them fall into six major groups: weed killers, insecticides, fungicides, seed protectants, nitrogen fertilizers, and feed supplements.

Should you decide to make a career of operating a farm, many of these products, and others still to be discovered and developed, can help you to farm better and more economically. You can put yourself into the better farming picture by using the products created by Du Pont to boost crop yields and improve the profit to the grower.

Should you decide to make a career out of Agribusiness—that part of agriculture devoted to serving the needs of growers—the increasing diversification of agricultural chemicals also creates opportunities for Ag college students who may be interested in research, development and marketing assignments with Du Pont after graduation. Du Pont is part of the picture for better future farming that includes *you*.

DU PONT

Better Things for Better Living...*through Chemistry*

Will Feeder Pigs Pay?

CHANCES ARE IF you have an FFA swine program you are concerned with feeder pigs. You may have several gilts and plan to sell feeder pigs, or you may be considering purchasing some to grow out to market weight. In either case, you have some important money decisions to make. Here are factors that will help you make the right decisions.

Right off, it appears that the demand for feeders will be strong, and a good manager should make money. The same also appears to be true for the finisher though you are probably in a better profit position if you have already purchased your pigs (see "What to Expect in 1967" in your February-March issue).

There are several advantages of raising feeder pigs as compared with growing hogs to market weight:

- There is a more rapid turnover in the volume of pigs that can be handled each year. It takes only about two months to get the pigs to market from the time they are farrowed.
- It provides an opportunity to use efficiently a maximum amount of labor.
- Less grain is required per dollar of product sold.

On the minus side, however, is the fact that a feeder pig operation demands year-round labor, a strict sanitation and disease control program, and assurance of a satisfactory market. The smart feeder pig finisher no longer buys on impulse from the first "pig peddler" that comes along. Producing large litters of high quality pigs that are free from disease and parasites and are uniform in type and size is essential.

Raising Feeder Pigs To Sell

First let's assume you are going to raise feeder pigs to sell to a finisher. You probably have a graded feeder pig sale sponsored by your state swine producers association as a market. Let's imagine, too, that you can provide the kind of breeding herd management and new born pig care necessary to grow and sell 40- to 60-pound feeder pigs. Look at these dollar pointers:

Wean more pigs and your costs will go down. If you wean 12 pigs per litter, your per pig cost will be around $6.40. But, if you wean only two pigs, your costs shoot up to a profit stealing $20.84.

To get a picture of the cost and profit potential involved, let's say you have just sold seven smooth, vigorous, heavy-hammed, meat-type grade A pigs out of a litter of nine. You have kept back two gilts to grow out to slaughter weight since it's easier to select gilts for your breeding herd at 200 to 215 pounds than it is at 40 pounds. One Future Farmer we know makes a deal when he sells his feeder pigs so that he has an option on the gilts when they reach market weight.

The seven pigs averaged 59 pounds and brought $12.77 per pig. You will probably get about 50 cents less, because selling costs will be subtracted. For the purpose of these calculations, we will assume your feed costs were $3.76 per hundredweight or $75.20 per

RESULTS OF FEEDER PROGRAM

	3-1	3.5-1	4-1
Feed conversions (Pounds of feed per pound of gain)			
Feed costs	$16.92	$19.74	$22.56
Sale value of your pig	$12.77	$12.77	$12.77
Total cost of pig and feed	$29.69	$32.51	$35.33
Price per hundredweight to cover pig and feed	$14.14	$15.48	$16.82

TOP PRICES THAT AN *ABOVE AVERAGE* FARMER CAN PAY FOR FEEDER PIGS AND STILL BREAK EVEN

(An *above average* feeder raises a 40 lb. pig to 215 lbs. on 3.5 lbs. of feed per pound of pork produced. Other major costs per pig include $1.60 for labor, $1.85 for buildings and equipment, and $.32 for hiring feed ground and processed.)

Price of Corn per Bushel	Selling Price for 100 lbs. of Live Hogs[1]	Price Per Head When Pig Weighs[2]						Price Per Hundredweight When Pig Weighs					
		40 lbs.	50 lbs.	60 lbs.	80 lbs.	100 lbs.	120 lbs.	40 lbs.	50 lbs.	60 lbs.	80 lbs.	100 lbs.	120 lbs.
$ .90	$14	12.25	13.00	13.75	15.50	17.25	19.00	30.50	26.00	23.00	19.25	17.25	15.75
.90	16	16.25	17.00	18.00	19.75	21.50	23.25	40.50	34.00	30.00	24.75	21.50	19.25
.90	18	20.50	21.25	22.25	24.00	25.75	27.50	51.25	42.50	37.00	30.00	25.75	23.00
.90	20	24.75	25.50	26.25	28.00	29.75	31.75	61.75	51.00	43.75	35.00	29.75	26.50
.90	22	28.75	29.50	30.50	32.25	34.00	36.00	71.75	59.00	50.75	40.25	34.00	30.00
.90	24	33.00	33.75	34.50	36.50	38.25	40.00	82.50	67.50	57.50	45.50	38.25	33.25
1.00	14	11.25	12.00	13.00	14.75	16.50	18.50	28.00	24.00	21.75	18.50	16.50	15.50
1.00	16	15.25	16.25	17.00	19.00	20.75	22.75	38.00	32.50	28.25	23.75	20.75	19.00
1.00	18	19.50	20.25	21.25	23.00	25.00	27.00	48.75	40.50	35.50	28.75	25.00	22.50
1.00	20	23.75	24.50	25.50	27.25	29.25	31.00	59.25	49.00	42.50	34.00	29.25	25.75
1.00	22	27.75	28.75	29.50	31.50	33.25	35.25	69.25	57.50	49.25	39.25	33.25	29.25
1.00	24	32.00	32.75	33.75	35.50	37.50	39.50	80.00	65.50	56.25	44.25	37.50	33.00
1.10	14	10.25	11.00	12.00	14.00	16.00	18.00	25.50	22.00	20.00	17.50	16.00	15.00
1.10	16	14.50	15.25	16.25	18.25	20.00	22.00	36.25	30.50	27.00	22.75	20.00	18.25
1.10	18	18.50	19.50	20.25	22.25	24.25	26.25	46.25	39.00	33.75	27.75	24.25	21.75
1.10	20	22.75	23.50	24.50	26.50	28.50	30.50	56.75	47.00	40.75	33.00	28.50	25.50
1.10	22	26.75	27.75	28.75	30.75	32.50	34.75	66.75	55.50	48.00	38.50	32.50	29.00
1.10	24	31.00	31.75	32.75	34.75	36.75	39.00	77.50	63.50	54.50	43.50	36.75	32.50
1.20	14	9.25	10.25	11.25	13.25	15.25	17.25	23.00	20.50	18.75	16.50	15.25	14.25
1.20	16	13.50	14.25	15.25	17.25	19.25	21.50	33.75	28.50	25.50	21.50	19.25	18.00
1.20	18	17.50	18.50	19.50	21.50	23.50	25.75	43.75	37.00	32.50	26.75	23.50	21.50
1.20	20	21.75	22.50	23.50	25.75	27.75	30.00	54.25	45.00	39.25	32.25	27.75	25.00
1.20	22	25.75	26.75	27.75	29.75	32.00	34.00	64.25	53.50	46.25	37.25	32.00	28.25
1.20	24	30.00	31.00	32.00	34.00	36.00	38.25	75.00	62.00	53.25	42.50	36.00	31.75
1.30	14	8.25	9.25	10.25	12.50	14.50	16.75	20.50	18.50	17.00	15.50	14.50	14.00
1.30	16	12.50	13.25	14.50	16.50	18.75	21.00	31.25	26.50	24.25	20.50	18.75	17.50
1.30	18	16.50	17.50	18.50	20.75	22.75	25.00	41.25	35.00	30.75	26.00	22.75	20.75
1.30	20	20.75	21.75	22.75	25.00	27.00	29.25	51.75	43.50	38.00	31.25	27.00	24.25
1.30	22	25.00	25.75	26.75	29.00	31.25	33.50	62.50	51.50	44.50	36.25	31.25	28.00
1.30	24	29.00	30.00	31.00	33.25	35.25	37.75	72.50	60.00	51.75	41.50	35.25	31.50

[1] After marketing costs are deducted.
[2] Based on seller paying vaccination charges.

Example of How to Use Above Table: When corn is worth $1.20 a bushel and slaughter hogs bring $18.00 per hundred pounds after marketing costs are deducted, an above average farmer can pay up to $17.50 a head for a 40 pound pig and $21.50 for an 80 pound pig and still break even. If he wants to make a certain profit per pig after all costs are paid, he will have to deduct this amount from each price shown in the table.

ton. If your feed costs are less, use this guide. Feed costs usually run 50 percent of the total cost of producing pigs to weaning weight, and at least 199 pounds of total feed are required. Now see chart for results of your feeder program. Note how feed conversion rates affect the outcome. In our example, we will make believe that your pigs had a feed conversion of 3.5. Going by the prices used on the chart, feed costs are $19.74 plus the sales value of your pigs. Looking at the chart, it is easy to see that you lost money, because you needed a selling price of $15.48 to cover feed and pig costs. Keep in mind that this is only an example. Using March prices, your pigs would have probably sold for $17.00 or $20.00. That would have kept you in business and paid for the cost of keeping your sow.

Finishing Feeder Pigs

Now suppose you are a feeder pig finisher. That is, you buy feeder pigs and grow them to market weight. True, the risk may be greater, but you can measure your possible returns precisely.

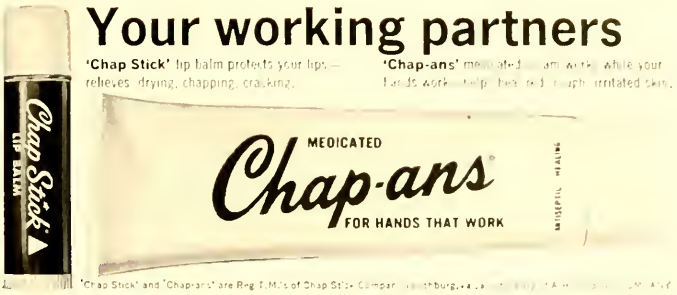
Dr. R. H. Blosser and C. C. Bowen, agricultural economists at Ohio State University, have prepared a handy table that will answer the question "What to Pay for Feeder Pigs." It shows the highest prices an above average farmer can pay and still break even (see chart). This means you must be able to raise a 40-pound pig to 215 pounds on 3.5 pounds of feed per pound of pork produced. Other major costs per pig include $1.60 for labor, $1.85 for buildings and equipment, and 32 cents for hiring feed ground and processed.

If an above average farmer wants higher returns for labor and capital or wants to make a profit on each pig after he pays all costs, *he must pay less than the prices shown in the table.*

Pig prices were determined by subtracting the cost of raising the pig after it was purchased from the selling price of a 215-pound slaughter hog. Marketing costs were also deducted.

These feeder pig prices were calculated from 148 cost records kept by commercial hog farmers in west central Ohio.

How To Use Table. When corn is worth $1.20 a bushel and slaughter hogs bring $18.00 per hundred pounds after marketing costs are deducted, an above average farmer can pay up to $17.50 a head for a 40-pound pig and $21.50 for an 80-pound pig and still break even. If you want to make a certain profit per pig after all costs are paid, deduct this amount from each price shown on the table. In this example, you would have made money had you purchased those seven feeder pigs at the selling price of $12.77 per pig.



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You've come a long way since you were born, and so has Comfort. Maybe we can both go farther together. If you have an idea that you think might help American agriculture do its job better, why not get in touch with us. Win, lose or draw, you can be sure that we'll give your suggestion our most thoughtful consideration in a fair and careful manner.

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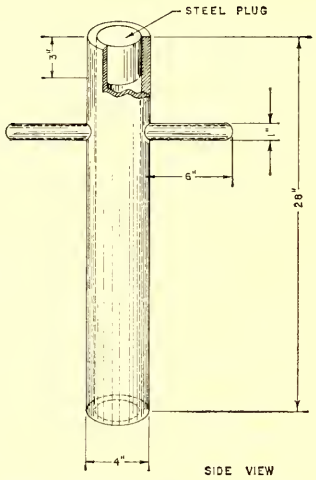
Make A Post Driver



MAKE yourself a new post driver for this spring. The instructions are easy to follow, and the materials are not expensive. This little device will make fence building a lot less effort. The plans for the post driver were submitted by Mr. Curtis R. Weston, associate professor of agricultural education and agricultural engineering at the University of Missouri.

Bill of Materials

1 — 4″ by 28″ black pipe.
2 — 1″ by 6″ black pipe for handles.
1 — 4″ by 3″ plug.

Construction Procedure

Construct plug by using pipes of smaller sizes and weld both ends solid. Cut handles to set at an angle and weld in place. Round off ends of handles. Weld end solid which receives the 4″ plug. Paint with rust inhibiting paint and finish with an enamel paint.

POST DRIVER

TOP VIEW

Farm Shop Feature

Future Farmers of Tonga

MR. KEITH Albrecht, who was president of the Utah Vocational Agriculture Teachers Association last year, is now teaching in the Tongan Islands. Here is his story of how the boys in his new department organized a Future Farmers chapter.

The Future Farmers of Tonga was organized by 27 boys in an agricultural class at the Liahona High School of the Tongan Islands. A constitution was patterned after the FFA in the United States. The chapter officers were elected from the class. There are plans to build a program of activities when school starts in January, 1967. There are three degrees in the chapter—Chapter Farmer, Liahona Farmer, and Tongan Farmer. The chapter has also written a creed and made an emblem. Our emblem is built around the cross section of a coconut since coconut is the chief crop grown here.

The Liahona High School is sponsored by the Latter Day Saints located on the Island of Tongatapu on the Tongan Islands. School enrollment has been set at 600. Main crops grown are coconut, bananas, watermelon, lemons, pineapple, mango, and some root crops. There are chickens, hogs, and a few cattle but no sheep. Average rainfall is 68 inches per year. All land is owned by the king. He leases land to the nobles, and they in turn sublease it to the common people. The average size of an api or farm is eight acres. The government owns a few pieces of equipment and a few tractors, but the main equipment an api holder has is a hoe.

The first paragraph of the FFT creed, patterned after the FFA creed, is "I believe in the future of farming in the Tongan Islands. I believe we have been blessed with some of the best crops in the world. I believe I have a responsibility to improve upon the agriculture of our islands. I believe I must work efficiently and think clearly with such knowledge and skills as I can secure in order to improve our Tonga agriculture."

Mr. Keith Albrecht, former vocational agriculture teacher in Utah, is shown with his agriculture class of the Tongan Islands that has organized the FFT.

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The M66 SuperSingle lever-action shotgun comes in 12, 20 and .410 gauge. Special Youth models with shorter stock and Ithaca Anti-Recoil Pad are made in 20 and .410—just the thing for younger or lighter shooters. And for the bigger game, there's the Buckbuster Model, equipped with rifle-type sights, available in 12 and 20 gauge. Beginners and "Old Pros" alike go for the Super-Single, especially the price: just $32.95 to $39.95!

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Farm Food Factory Of the Future

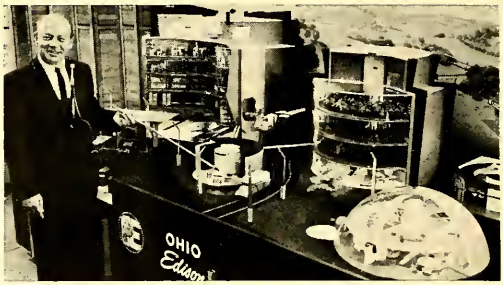
BECAUSE OF increasing specialization and rapidly diminishing availability of good farm land, the future will probably find farms as we know them today being replaced by "farm food factories." The farm pictured on this page was designed by Ohio Edison Company and depicts operations similar to some found today, and probably like many you may see in the future.

Complete control of the entire food factory will be centered in an operations center. The farm manager, by using computers and the closed circuit TV monitor screen, will be able to see and "feel" the pulse of every activity. Manual observation and labor will not be eliminated entirely, but now it will be programmed by computers.

Located atop the operations center would be a heliport. The future may find the helicopter a popular method of family travel, commercial delivery, and farm food factory maintenance.

In a plant growth and storage building, inclement weather would not affect the operation of the factory as all climatic conditions will be automatically controlled.

All purchased feed will be delivered to this building by helicopter, monorail, or magnetic trucks. Only the top floor of this building would be used for feed storage on the model farm. Protein supplement for livestock feed would be grown on the lower three floors. Methods might include hydronics, algae, or fungi culture. When the plants reach the end of a conveyer line, or growth cycle, they would be harvested automatically and either fed to livestock or marketed. Beneath the growth floor would be a completely automatic processing or packing area.



The man who conceived the idea of a model farm food factory is Harold Oyster of the Ohio Edison Company.

In the future, round high-rise buildings similar to the one pictured may be used for livestock. These buildings are economical in construction, efficient in operation, and use the land to its fullest advantage. In fact, some have already been built and are operating successfully.

The livestock operation in the farm food factory will be equipped to handle animals in complete confinement with no more trips to the pasture or watering troughs. Although several livestock enterprises are shown in the picture, tomorrow's farmer will be a specialist, concentrating on only one type of enterprise.

You'll open up your world when you own the one with meaning!

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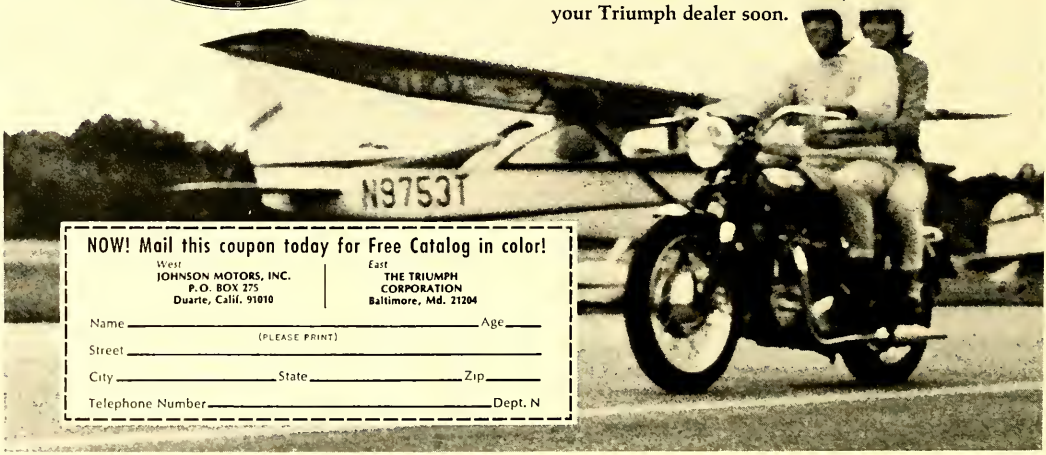

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One morning Bill Gill scooped up some Texas soil and solved a 200-acre cotton mystery.

He's a Shell representative.

Year after year the problem had been the same—poor-doing cotton growing in good, well-fertilized soil.

Root rot was suspected. So was excess soil salinity. Nematodes were known to be present in the area, but weren't considered important.

Bill Gill thought otherwise—because he knows nematodes, and how often they're to blame.

So he put a quart of the soil in a container and had it analyzed. That cleared up the mystery; analysis showed a serious infestation of reniform nematodes.

Bill advised fumigation with Nemagon® Soil Fumigant and the grower agreed to try it on part of his acreage.

Down went the Nemagon, killing nematodes as it moved through the soil. The cotton came up and grew with a vigor unseen in previous crops. Yield results showed that the Nemagon had paid for itself and returned a substantial extra profit on each treated acre. All 200 acres can now be farmed for full production...without the undermining attack of nematodes.

This kind of story is not an unusual one at Shell. *All* Shell Chemical sales representatives are fieldmen. They are continually gathering and working with firsthand information in their area. They're specialists who know their crops and their products.

People who sell or use Shell Agricultural Chemicals for cotton, corn, fruit, vegetables or livestock automatically get the benefit of products and techniques that are continually proven by men in the field as well as the laboratory.

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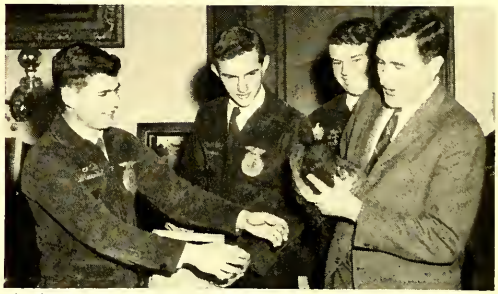
SHELL

IOWA—Wendell Toggart, a member of the Audubon Chapter, has a sideline to his vocational agriculture program —auctioneering. To advertise his sideline, Wendell was a business firm sponsor for the chapter's Official FFA Calendars.

THE FFA IN

Thousands of FFA chapters and all state associations celebrated National FFA Week during February. Here are some of the varied activities Future Farmers conducted to tell the nation about their organization and that "Agriculture is the Strength of America."

Princess Kay of the Milky Way joins these Future Farmers in telling Minnesota Governor Harold LeVander about the dates of FFA Week just before he signed the proclamation.



Rhode Island Governor John Chaffee gets a live memento from the delegation lead by Bruce Cole, state president, as part of the state association's FFA Week celebrations.

Arizona Future Farmers accepted an FFA Week proclamation from Governor Jack Williams to kick off their activities including a statewide FFA Recognition Day.

The state newsletter used this picture of Johnny Spann, Mayewood, South Carolina, to remind fellow members that plans for FFA Week should be made in advance.

ACTION

Above, Frank Guido is honored for his work with Quarter Horses. At right is Frank Mello, honored for his community service work achievements.

NEW YORK—Members of the Greenwich Chapter believe in lending plenty of support to community activities. They have recently contributed $500 to the community scholarship fund. This check brings the total donations for the year to $900 for the FFA.

The FFA chapter is the third contributor to the fund since it was established last year. All donations remain in the bank, and the interest is used to further the education of graduates from Greenwich Central School.

The chapter has 76 projects in its program of activities. Some of these are fund-raising ventures such as selling field and vegetable seeds, soil sampling for area farmers, 15 acres of cropland, and a forest plot.

Greenwich FFA gives $500 for a community scholarship.

CALIFORNIA—Two California Future Farmers have received recognition for their activities in agriculture and community service.

Frank Guido of the Covelo (Mendocino County) FFA Chapter was awarded the annual Konocti Ranch Quarter Horse Achievement Award. The award is a $500 stud service to the famous War Chant. It is presented to a youth in the Covelo area who has made outstanding achievements in Quarter Horse activities such as participation in horse shows and work in promoting the Quarter Horse breed.

Frank Mello, former California state FFA reporter, was awarded the "Young American Medal in Community Service" by the Attorney General of the United States. He was nominated by his governor.

Frank's FFA record includes the American Farmer Degree, positions of leadership at local and state levels, and awards in meats judging and parliamentary procedure. He represented the state association on the Governor's Youth Planning Committee and has served as a member of the Teen Advisory Council for the Western Fairs Association. Frank's farming program centers around a flock of registered Suffolk sheep.

He is presently studying agriculture in college and is active in student affairs such as the National Conference on Smoking and Youth. His active interest in mental health has earned him the position as vice president of Fundamental Living Incorporated, a mental health center with over 90 patients.

OHIO—In your October-November issue you read about Future Farmer Don Larkin's Charolais bull calf which set a world PRI record with an adjusted 205-day weaning weight of 1,010 pounds. Now comes news that a calf owned by Olentangy Charolais Farms, Waldo, Ohio, has topped that record by 35 pounds.

The young bull, "Master Rey," had an official adjusted PRI 205-day weaning weight of 1,045 pounds. His actual weight was 1,005 pounds for a gain of almost five pounds per day. Olentangy Charolais Farms is owned by Donald and Harold Demorest. Both were active members of the FFA and received the State Farmer Degree in 1937 and 1941. Donald Demorest has three sons who were active FFA members, and two received the State Farmer Degree. Harold's oldest son is a junior and an active member of the FFA.

Gaining records is not unusual for the Demorest team. Their herd holds the world record weaning weight and yearling weight for heifers, they own a world record progeny bull (whose 27 calves at 205 days averaged 754 pounds), as well as having the top five PRI progeny registered cows of all beef breeds in their Charolais herd.

This young champion gained five pounds per day and set the world record for adjusted weaning weight.

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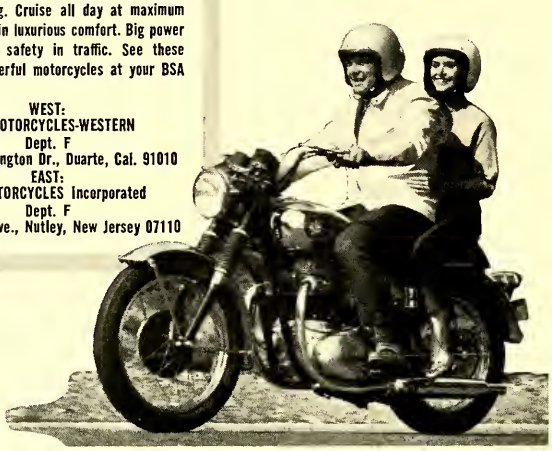

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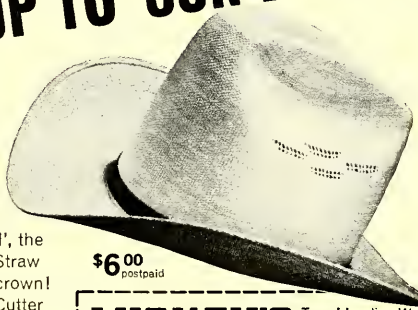

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Shape of Tomorrow's Corn

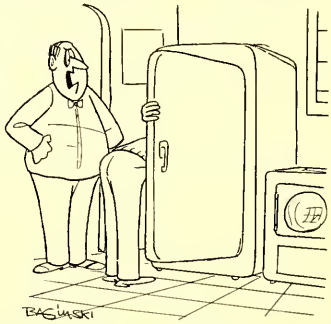
(Continued from Page 24)

planting, will replace conventional corn rows. Corn will be planted with precision planters and harvested with a modified reel-type combine instead of the usual corn picker.

The second possibility for increasing yields is to increase the duration of the grain growth period (the portion of the life cycle of the plant when corn grain is actually being produced). Every increase of one day will increase yields by approximately 3 percent, even with today's varieties and hybrids. Although most corn grown in the U.S. seems to have about the same length of grain formation period, there must be some variation among the many varieties found in the diverse climates of South and Central America. The possibility of using chemicals to extend grain formation also appears as feasible.

So, in theory at least, the grain filling period via genetics or growth regulators can be increased from about 35 days to something like 75 days. Then scientists can combine this feature into varieties with erect leaves, and you should have a corn plant with the potential of producing over 600 bushels of corn per acre. In the South, because of the longer growing season, it should be possible to produce over 1,000 bushels per acre. In fact, it is not too unlikely to foresee a possible shift of the major corn producing areas to the South as new varieties or hybrids are developed to take advantage of longer frost-free growing seasons.

Corn is the truly American crop . . . its development has been closely interwoven with American history since the days of the Indian civilization. This look at the shape of tomorrow's corn indicates that it will have an even greater role in the future of our country.



"See here, young man, Mary Lou Miller and her family moved from this house four months ago!"

Parliamentary Procedure

By

Dr. Jarrell Gray

HAVE YOU EVER been in an FFA meeting where a parliamentary rule was being violated and you weren't sure what to do about it? Or have you ever been in a meeting where a parliamentary mistake was made, then another, and another, until finally things were in such a state of confusion that business transactions came to a halt?

On the other hand, have you been in a meeting where mistakes were immediately corrected in an orderly manner and, as a result, business was dispatched quickly and efficiently?

How, then, may one call attention to a violation of the parliamentary rules or a mistake in procedure? This is done by rising to a point of order.

Both the president and members have an obligation to insist upon correct procedure being followed. The president should call members out of order when they are in error. Likewise, members should rise to a point of order when they note an error in procedure or a violation of a parliamentary rule.

A point of order must be made at the time the breach of order occurs. Exceptions to this would be in situations where the motion was in violation of the constitution, standing rules, or of fundamental parliamentary procedure so that, if adopted, it would be null and void. It is never too late to rise to a point of order.

If a member rises to a point of order and does not agree with the decision rendered, he may appeal the decision.

Sometimes a point of order is used incorrectly as a means of determining what is correct. For example, it should not be used to determine if a main motion requires a second. The official parliamentary guide used by the FFA chapter will specify whether a second is required. The point of order should be used to determine whether a second had been offered. (A parliamentary inquiry may be used to determine what the reference states about a second being required.)

A point of order does not require a second, is undebatable, unamendable, may not be reconsidered, and may interrupt a speaker.

Assume that a main motion had just been offered, and a member thought that it had not received a second.

Member (without obtaining recognition): "Mr. President, I rise to a point of order." (Takes seat.)

President: "State your point."

Member (rising): "The main motion did not receive a second."

President: "The point is sustained. The main motion did not receive a second. Is there a second?"

A member wishing to appeal the decision must do so at this time.

If the president is in doubt, he may, instead of making the decision, ask the chapter to decide. In this case, there can be no appeal.

Using the point of order properly does much to assure that correct parliamentary procedure is followed.

(Next issue: "Parliamentary Inquiry")

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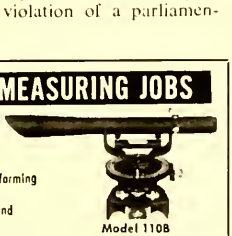

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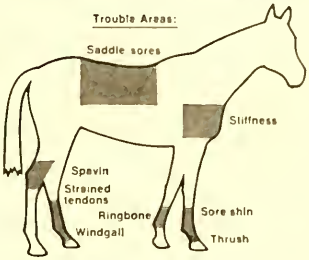

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(Act of October 23, 1962: Section 4369, Title 39, United States Code)

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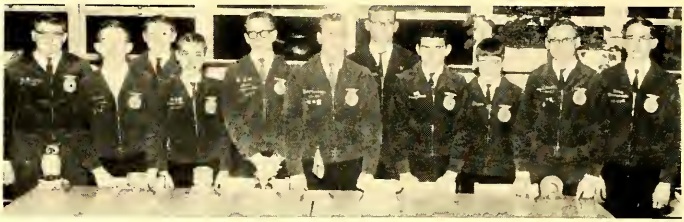
	Average No. Copies Each Issue During Last 12 Mo.	Single Issue Nearest To Filing Date
A. Total number of copies printed	286,825	283,500
B. Paid circulation		
1. Sales through dealers and carriers, street vendors and counter sales	None	None
2. Mail subscriptions	278,699	276,177
C. Total paid circulation	278,699	276,177
D. Free distribution by mail, carrier, or other means	7,835	7,034
E. Total distribution	286,534	283,211
F. Office use, left-over, unaccounted, spoiled after printing	291	289
G. Total	286,825	283,500

I certify that the statements made by me above are correct and complete.

V. STANLEY ALLEN, Business Manager



Top photo shows members of the Dillsboro, Indiana, FFA Chapter who have been active in parliamentary procedure contests. Lower left photo pictures the FFA musical group of Charles Dennis. Lower right photo shows Dillsboro float.

What Makes A Chapter Grow?

OUTSTANDING FFA chapters aren't an accident. They are planned with as much care as a crop of soybeans or a dairy herd development program. If you want to know what makes a chapter grow, visit an outstanding chapter. Here's your chance.

The Dillsboro, Indiana, Chapter was started in 1958 when a member of the high school's board of trustees, Mr. Carl Martin, decided the school needed training for farm youth. He succeeded in persuading Mr. Robert Henman, who was then employed by the Soil Conservation Service, to return to teaching vocational agriculture.

Shortly thereafter, 21 young men unanimously organized into an FFA chapter. Officers were elected and application was made to the state of Indiana for an FFA charter. By the second year the chapter's membership had grown to 34 members. The big problem now was not members but money.

The new FFA'ers met the money problem head on. Through their own efforts the members raised enough money to purchase a used hot dog machine for $65.00 and a used refrigerator for $15.00. They were now prepared for the refreshment business at all local meetings and school activities.

Straightaway it was clear the FFA wasn't just another school organization. Today's enrollment is proof of that fact. Now two-thirds of all boys in the high school are enrolled in vocational agriculture for a total enrollment of 50 students. More important, all vo-ag students have chosen to become active members of the FFA.

With a growing membership, the FFA officers felt the need for a system that would encourage every member to take part in all activities sponsored by the chapter. They discussed the development of some kind of point system but knew it would mean little without attaching a goal. The program which finally developed works like this:

At the end of the school term, all points earned by each FFA member are totaled. The four highest contestants are awarded a five-day trip through the Smoky Mountains. A representative trip includes a visit to a Kentucky race horse farm, Henry Clay's home, Morgan's home, Cumberland Falls State Park, Cumberland Gap National Park, and Norris Dam. While in the Smoky Mountains, they tour Gatlinburg and a Cherokee Indian village. The time left is taken up by swimming, fishing, boating, and just plain fun. It's a goal every FFA member can aim for.

The FFA officers feel that the system has encouraged their members to participate in most of the following chapter activities:

- Preparing local and state fair exhibits.
- Presenting a family night program.
- Taking FFA field trips.
- Joining in FFA fund-raising activities.
- Building floats for the local parade.
- Preparing news articles.
- Maintaining scholarship grades.
- Participating in local chapter contests.
- Attending officer training camps and recreational activities.

One way to judge a chapter's success is to see what it has done for an individual FFA member. Chapter advisor Mr. Robert Henman introduced Charles Dennis. "Just call me Charlie . . . and spell it with an 'ie,'" says the young man who has gained FFA fame for playing the ukulele.

Mr. Henman explained, "One summer a few years ago, this young man moved into our community from Downingtown, Pennsylvania. He was a lad curious to see what he could do for the FFA instead of what the FFA could do for him. He accepted the learning and the principles of the FFA creed. The freshman public speaking contest was a challenge, and his speech won fourth in the district. These experiences inspired Charlie Dennis to work on a hidden talent for writing ditties and verses to rhyme. He was always practicing and singing these in the corridors during the school noon hour."

Encouraged by fellow FFA members, he put these songs to music with his ukulele and entered the district talent contest. Charlie won not only the regional, but the state contest. In the fall of 1965, he was invited to the National FFA Convention where his original songs brought down the house with calls of "more, more, more."

In the spring of 1966 Charlie selected an organist who also played the clarinet, Karl Henman, and a guitar player, Dennis Atkinson, to form a group. They went on to win the district contest. Charlie was invited back to the National Convention, and Karl played in the National Band.

"Charlie's life hasn't always been as pleasant," pointed out his mother, Mrs. Nancy J. St. John. "We accepted the fact that Charlie was blind at three months of age." However, in 1959 he was fitted with telescopic glasses. Says Charlie, "Because of FFA, I have learned that I can make people happy, and I would like to become a minister of the Gospel.

It makes you glad the Dillsboro FFA Chapter has grown.

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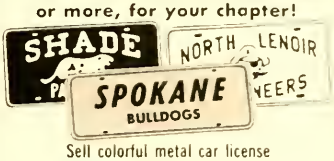

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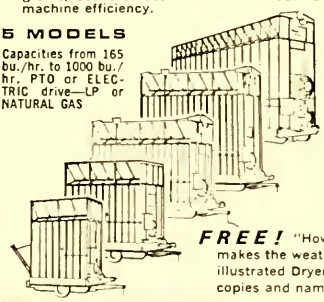

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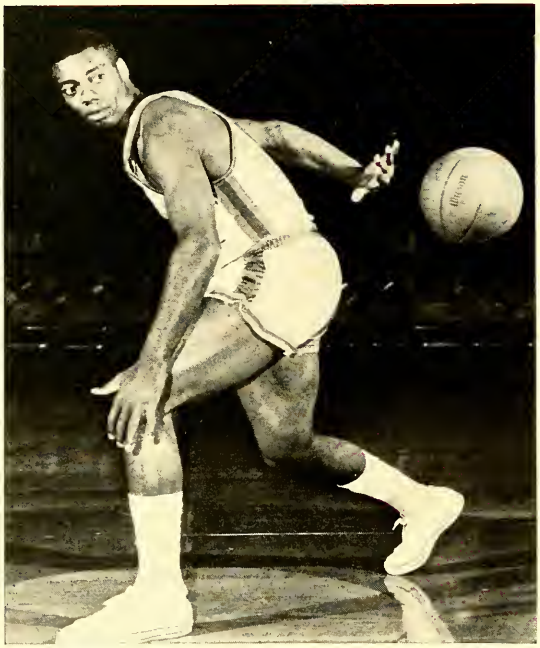

"Big O" Oscar Robertson makes the high scoring lists again.

By Stan Allen

THE "BIG O," Oscar Robertson of the Cincinnati Royals, ranks high on the scoring lists again this year. He is currently in second place with 1,885 points for a 30.4 scoring average. Robertson has averaged over 30 points a game in five of his six years in the National Basketball League.

The "O" in Robertson's nickname of "Big O" can only stand for offense. For Oscar has been an offensive star since his early days at Crispus Attucks High School in Indianapolis, Indiana. Oscar was born on a farm in Charlotte, Tennessee, but moved to Indiana at an early age. He led the Attucks High School team to two state titles, and their 1955 title was the first won by an Indianapolis team. Their team was also the first Indiana high school team to record an undefeated season with 45 straight wins. Oscar won All-State honors in all three of his high school seasons.

Oscar received a basketful of scholarship offers after his fine high school career, but he finally chose the University of Cincinnati since it was close to home. He continued his outstanding game for the Bearcats, winning All-American honors in three years of varsity play. He scored 2,972 points for a three-year average of 33.8 points a game, and hit for a .571 field goal average. These were all records at the time. Oscar was the first Sophomore and first Junior to lead the nation in scoring. He was also the first collegiate player to lead the nation in scoring three straight years. He led his team to national prominence with a three-year record of 79 wins against only 9 losses. The Bearcats had won 52 and lost 22 games the previous three years. Cincinnati retired Oscar's number 12 in honor of his excellent collegiate career. To further prove his ability, Oscar dominated the 1960 U.S. Olympic Trials.

Robertson was a natural draft choice of the Cincinnati Royals and reported to them in 1960. He turned in a fine rookie season even though he had to switch positions from forward to guard. The "Big O" sank 2,165 total points for a scoring average of 30.5 points per game. He passed off to teammates for 690 assists and even grabbed 716 rebounds off the backboards. In Robertson's first playoff series, he scored 115 points in four games. Oscar was named to the 1961 All-Star first team and helped the West win with 23 points. His play won him the All-Star Most Valuable Player award. He came back strong in his second season to score 2,432 points for a 30.8 average with 985 rebounds and 899 assists. The "Big O" accomplished all of this after missing five games with an eye injury.

Oscar's shooting average dropped to 28.3 points a game in 1962, the only time it dropped below the 30 mark, but he brought it up to 31.4 in 1963. Making good on 800 shots in 938 tries, he led the league in free throw percentage with .853. He also topped the league in assists with 868 (11.0 per game) and found time to pull down 783 rebounds. He was named to the All-Star first team for the fourth straight year as a pro and won the game's Most Valuable Player award for the second time.

Oscar Robertson is 6 feet 5 inches tall and weighs 200 pounds, a good size for a guard. He is blessed with peripheral vision, great speed, and good reflexes. Many players and coaches agree that he is the most versatile player to lace a pair of sneakers. He is a fine shooter as his average indicates and one of the best playmakers in professional basketball. Opposing players respect his game as indicated by the fact that he was the most fouled player in the league last year, next to Wilt Chamberlain. He earned 793 free throws compared to Wilt's 880.

Oscar was as good as ever last year, scoring 2,378 points for a 31.3 average and third place league honors. His 861 assists (11.5 a game) also topped the league as did his 20 assists in one game against the New York Knicks. He was named to the All-Star first team for the sixth straight time. As of February 21 this year, Oscar had scored 1,885 points to raise his lifetime total to 15,883 points. That makes him the eighth leading scorer in NBA history. He is averaging 30.4 points a game this year which is also his lifetime average. Oscar once said he would like to top the great Bob Cousy's career assist record of 6,494. Oscar Robertson at 28, with 4,923 assists at the end of last season, should get his wish with ease.

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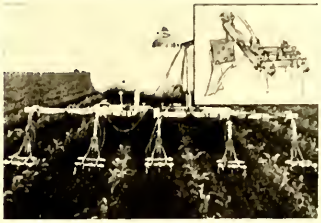

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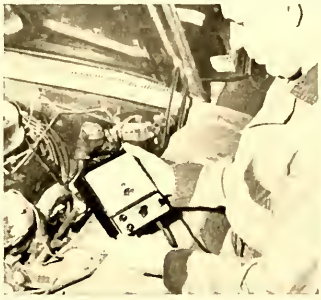

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HAVE YOU HEARD THE ONE ABOUT

Daughter: *"Dad, why can't you dance the jerk?"*

Dad: *"One reason may be that my go-go has gone-gone."*

Ray Parrish
Roundhill, Kentucky

Father looking over his son's report card: *"One thing is in your favor. With this card, you couldn't possibly be cheating."*

Roger Atwell
North Tazewell, Virginia

Two young volunteers were being interviewed for the Navy and were asked: *"Do you know how to swim?"*

They both looked puzzled, and one of them replied, *"What's the matter—aren't there enough ships?"*

Dan Eagen
Genesee, Idaho

An old mountain man who had never seen a mirror before found one. He looked into it and thought he was seeing a picture of his father. He took it to a trunk in the attic and put it away. His wife saw him and sneaked in later to see what he had put there. She peered into the mirror and exclaimed, *"So that's the woman he has been running around with."*

Henry Taylor
Marlow, Oklahoma

Bill: *"I am glad to be back from my rainy vacation."*

Ted: *"It couldn't have rained much. You have a nice tan."*

Bill: *"That's not a tan. It's rust."*

Steve Turner
Rose Hill, North Carolina

Judge: *"The last time I saw you, I told you I didn't want to see you here again."*

Prisoner: *"That's what I tried to tell these policemen your Honor, but they wouldn't believe me."*

Stan McCoy and Mike Woods
Humansville, Missouri

"I got a cookbook once," said the confirmed bachelor to his friend, *"but I soon pitched it on the scrap heap."*

"Too much fancy work in it, eh?"

"You said it! Every recipe began the same way: 'Take a clean dish. . . .' How unrealistic can you get?"

Francis Sturm
Minneota, Minnesota

Gloria: *"Clarence, I baked two kinds of biscuits. Would you like to take your pick?"*

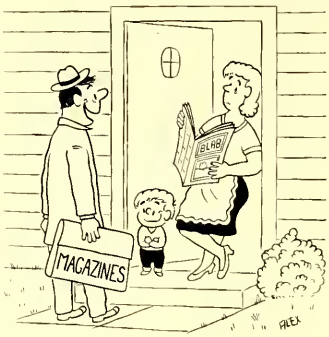
Clarence: *"No thanks. I'll just use my hammer."*

Clarence Knowles
Ringgold, Louisiana

Bowlegged cowboy upon completion of Army physical: *"Well Doc, how do I stand?"*

Doctor: *"That's what I'd like to know."*

Wendell Lambert
Climax, Georgia



"In no time at all you'll have a mountain of old magazines, and your son can win first prize in the school paper drive!"

Charlie, the Greenhand

"Got to run, Alice. When Charlie finds two people, he practices his public speaking contest speech."

After observing for some time the fact that his neighbor had his hair parted from ear to ear, Jim couldn't keep from mentioning it any longer and said, *"Don't you get quite a bit of comment on the way you part your hair, Gerrit?"*

Gerrit: *"Yes, but the only time it makes me mad is when somebody tries to whisper in my ear."*

Randy Porter
Hospers, Iowa

Two youngsters were walking home from Sunday School after having been taught a lesson on the devil.

One little boy said to the other: *"What do you think about all this devil business?"*

The other thoughtfully replied, *"Well you know how Santa Claus turned out. It's probably just your dad."*

Lynn Westmoreland
Sidney, Arkansas

Stern father: *"I understand you want to become my son-in-law?"*

Suitor: *"No sir, I don't. But if I marry your daughter, I don't see how I can get out of it."*

Jerome Lettenmaier
Sanborn, North Dakota

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there are some pretty big decisions to make. Among them is the choice of a college. Are you willing to risk the training of your life, the shaping of your concepts, to the hands of the unconcerned, the unskilled, the unfit? Certainly not!

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