THIS WE BELIEVE!

Our age is characterized by an appalling lack of discerning intelligence.

Alarminglly, people are coming to believe what they are autocratically told to believe. This is the stuff of which totalitarian systems are made.

Bob Jones University students are taught to recognize important issues when they see them. If the issue is religious, chances are you will find this graduate on the side of Scriptural truth with the Word of God for his authority; if the issue is political or social—on the side of hard common sense and moral principle.

Make no mistake about it; while confused and illogical thinking may be a prevailing characteristic of the day, it is not the mark of a Bob Jones University graduate. Maybe that is just one more reason why this is the "World's Most Unusual University."

"Understanding is a wellspring of life unto him that hath it." (Proverbs 16:22)

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Music, speech, and art without additional cost above regular academic tuition. Institute of Christian Service, Academy, and seventh and eighth grades in connection. Graduate Schools of Religion and Fine Arts.

GREENVILLE, SOUTH CAROLINA
23°-angle bars make shoulder-to-shoulder contact, to distribute the load over more rubber. Squirming and cupping out are virtually eliminated. Long, even wear is assured.

The bar is thicker, too. Just measure it and see. And Firestone puts more rubber at the base of the 23°-angle traction bar to keep it stable. The rubber throughout the tire is a whole lot tougher—it's Firestone's special long-wearing Sup-R-Tuf compounds.

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The bar is thicker, too. Just measure it and see. And Firestone puts more rubber at the base of the 23°-angle traction bar to keep it stable. The rubber throughout the tire is a whole lot tougher—it's Firestone's special long-wearing Sup-R-Tuf compounds.

The Firestone Deep Tread tire, designed for your highest-horsepower tractors, gives you the extra traction and work-power of 23° single traction bars. The Field & Road tire offers all the advantages of the traction bars at an actual saving over other replacement tires.

That's only half the story. The tire experts at your nearby Firestone Dealer or Store will show you that 23° tires pull better in the field, too. Ask them about convenient crop terms.
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Our Cover

Randy Islam, 16, of Clare, Illinois, proudly shows his champion steer, Boty, to new Star Farmer of America, Floyd Dubben, left, and American Royal Queen, Miss Deborah Fowler.

Randy's steer won the FFA division honor in his first appearance at the American Royal.

PHOTO BY W. L. CLOVER

THE NATIONAL FUTURE FARMER is mailed every two months on the following dates:
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The two trophies above, modeled after the famous Danforth Farm Youth statues at Gray Summit, Missouri, and in Washington, D. C., will be offered again this year by the Ralston Purina Company to outstanding young men and women across the country.

Ask a Purina dealer or a Purina salesman for details on these awards, or write Dept. 259, Ralston Purina Company, Checkerboard Square, St. Louis, Missouri.
On July 1, 1965 the new McCulloch MAC-10 series made all other lightweight chain saws overweight & out-of-date

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Power unit only, dry, less bar and chain.

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LEADERSHIP THROUGH CREATIVE ENGINEERING

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Your
Editors Say...

THE CURTAIN has come down on another National FFA Convention. It was one you can look back on with pride. Some very outstanding FFA members received awards and made headlines across the country. We are all quite proud of their achievement. Yet it seems that all who attended were winners in the eyes of many observers.

One of the compliments about FFA members I cherish most was made by a lady working at the registration desk. She asked, "How do you get them to have their hair cut? I haven’t seen a Beatle haircut among the group."

I first noticed this at a state FFA convention last summer. It seems odd that something as insignificant as a haircut could become a source of pride. Yet it is one more characteristic—like dressing neatly, wearing your jacket properly, shining your shoes—that indicates a young man who knows where he is going. Such a young man does not have to attract attention by adopting some way-out style of clothing or personal appearance.

Magazine to Use Computer

In an effort to give you the best service possible and to take advantage of the most modern equipment, your national magazine is in the process of converting the mailing list maintenance to a computer. This is the process of putting your name on when you subscribe and taking your name off when your subscription expires. The change-over to a computer will be gradual, and all of you will not see it at first—only the new subscribers and those who have already renewed.

This new system offers many advantages, and I won’t go into all of them here. The change most noticeable to you will be a more legible address and a big, long number above your name on the address label. The more readable address will help insure that your magazine gets to you, and the big, long number will help the staff keep your name in the files correctly.

New Staff Member

A former FFA member from Illinois has joined the staff of your National Magazine as a regional advertising manager. He is John Pitzer, who came to the Magazine after discharge from the U.S. Army at Fort Knox, Kentucky, where he has been a post food advisor and commissary officer.

Born and raised on a farm near Toulon, Illinois, John studied vocational agriculture in high school and was an active member of his local FFA chapter. He went on to receive his State Farmer Degree and was elected a state vice president of the Illinois Association.

John attended the University of Illinois where he gained experience working on the agronomy news staff and the Agriculture Extension editorial staff. He majored in agriculture communications, graduating in 1963. He was a member of BYMAC (agriculture communication society) and was elected an officer and chapter news editor of Theta Xi fraternity.

John’s previous experience in advertising was with the Hampshire Herdman Magazine, official publication of the Hampshire Swine Registry, and the Sears-Roebuck Company of Champaign, Illinois.

Wilson Carnes
Editor

The National FUTURE FARMER
"The less money I spend on that tractor... the more I make"

You can say that again! Your Texaco Farm Service Distributor knows a fuel-guzzling, oil-burning tractor steals profits. It's been proved that the motor oil you use can make a big difference in costs. Particularly when it's Havoline—the heavy-duty motor oil that stops deposits. Your Texaco Farm Service Distributor can show you why you need it.

How much you pay to run your farm equipment can often be too much. For one thing your tractor may be using more fuel than it used to. Or you've been running up extra expenses for repairs or replacements. What's the answer?

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Ask your Texaco Farm Service Distributor about Havoline. Ask him also about Texaco's complete line of products that can help make lubrication much easier, much more economical for you.

Trust Texaco Farm Service

Anchorage, Alaska

Please send me one Desk Calendar and one Home and Office Booklet Style Calendar as you have advertised. I am on active duty with the Army here in Alaska, so I would appreciate it kindly if you would send the calendar to my address here.

Arthur K. Fries

We are glad you can find a use for the FFA calendars—even in the Army.—Ed.

Fulton, Kentucky

I belong to the Fulton County High School FFA Chapter. This is my second year in the FFA, I thoroughly enjoy being in such a fine club, and I think you publish a wonderful magazine.

I am writing to state my astonishment and displeasure upon reading many of the letters in “From the Mailbag.” Boys, we in the FFA have a club all our own for the young men of our generation, not for the young women! As we all know, they have a club of their own, namely the FHA. All we men hear today is gripes about the work women have to do. Well let me tell you, washing dishes is nothing like cleaning a dairy barn or pig parlor; nor is cleaning a house equal to cleaning out a stock barn. And preparing a hearty meal for the men is not comparable to plowing, disking, harrowing, or cultivating a field of corn. Young men are being prepared for farming by vocational agriculture and the FFA. It is their place to provide for their family, not the place of the wife.

I wish to suggest to you, the young men of the FFA, that we put it to a vote. We could vote in each chapter and have the chapter secretary send in the results. The editors of this magazine could set a deadline. When all the votes are in, we could send the results to every chapter. Then if the chapters want to allow girls to join their chapters, at least they would know they were either in the right or wrong according to the national decision. I feel that this is the only way we will ever settle this controversy.

Regarding the creed, I feel that it should be left as it is. We are studying to be farmers, not agriculturists.

Danny Kyle

White River, Arizona

I have been in the FFA for three years. This is the first year I have been receiving The National FUTURE FARMER. I am writing to tell you what a fine magazine you publish. I look forward to each issue.

Lately I have been seeing a lot of letters in the “Mailbag” about girls joining the FFA. I do not believe girls should be permitted to join the FFA. I believe the FFA is a neat organization for farm boys only, and it should stay that way.

Leonard Burnett

Permission granted.—Ed.

Windsor, Missouri

I am an FFA member who enjoys reading your magazine, but I enjoy most the “Mailbag” section. I agree with the girl from Seguin, Texas (October-November issue), that FHA and FFA have two completely different aims. If these two organizations intermix, all benefits will be lost. How would it look if girls went on FFA activities such as an FFA all-night camping trip? Besides, it’s a matter of pride to all FHA (MALE) members. It’s a national organization for BOYS. If girls were in FFA, it would be an invasion of privacy. If girls want to join an organization with boys in it, let them join 4-H.

Gilbert Powers

Gordon, Nebraska

I was reading my brother’s magazine, and when I read “Mailbag,” I was very much surprised at the topic that was being discussed. The topic was about letting girls join FFA. Here’s my opinion. There are many girls who work in the field and who are interested in agriculture. I think any girl who is sincerely interested in agriculture should be allowed to join FFA. After all, FFA stands for Future Farmers of America. Therefore, this organization is for farmers, not necessarily boys. (Who says girls can’t be farmers?)

Name withheld

Las Vegas, Nevada

I have been thinking very seriously about joining the FFA for some time. I am very interested and I would like you to send me all the information you possibly can about the Future Farmers of America.

Mike Mullern

To become a member, you must be a student of vocational agriculture. Since there is not a department at Las Vegas, you might write Mr. J. R. Peddicord, State FFA Advisor, State Department of Education, State Capitol Building, Carson City, Nevada 89701, for suggestions and the nearest department.—Ed.

Wilmington, Ohio

WMWW Radio is in the process of strengthening its farm information bloc in the morning. We would appreciate a blanket editorial “O.K.” to quote from The National FUTURE FARMER on occasion, rather than clear each usage from your office. If and when we used material from your publication, we would certainly afford proper credits.

Francis J. Stratman

Gurley, Alabama

After reading the October-November issue, I am for girls joining FFA. I agreed very much with James W. Thiele and also Harold Necaise. (They were for girl membership.)

I would like to thank you very much for such a wonderful magazine. My brother gets it, and I enjoy reading each issue.

Alice Phillips

Princeton, Missouri

I have truly enjoyed your past two issues of such a fine magazine. I only wish it came more often. I especially enjoyed reading about the national FFA officers visiting Congress.

I am against girls in the FFA and smoking in the FFA jacket. Changing the name of our organization might cause much confusion, but if America grows, we must change and grow with it. This doesn’t mean I am ashamed of being a dirt farmer.

Raymond Rogers

SHARING CONVENTION EXPERIENCES

At the recent National Convention, Future Farmers, advisors, and guests who visited the Magazine’s booth in the Exhibit Hall were asked to share their convention experiences with you by entering a “Mailbag” contest. They were to write a letter to the editor on one of two subjects: “What the National Convention Meant to Me” or “A Funny Thing Happened on the Way to Kansas City.” There were many excellent letters received. Following are the top prize-winning letters in each category. Thirty other letter writers received special merit prizes of Supply Service merchandise.

FIRST PRIZE $15

Inspirational Category

It is hard to express in words what the National Convention has meant to me. There is a certain amount of excitement in the air for me when I meet a boy who lives thousands of miles away from me and I can talk to him as though he were my neighbor. This helps me as well as the person I meet. We find out that we are alike in many ways, and this not only brings our organization closer together but also brings our country closer together. As I look back on the 1965 National FFA Convention, I think of the future—a future in farming—and I know that there are over 450,000 FFA members throughout the United States extending a hand of friendship. This unforgettable National Convention marked the beginning of a new era for me. To make a success of this era, I must climb many steps, and now I feel I have moved up one step, this step being friendship and understanding people. Without the National Convention, I could have never accomplished this step so fully.

Billy Rutherford Decatur, Texas

(Prize Winning Letters—Cont. page 15)
MAKE A RATION WORK HARDER with Milk-Bank Feed Boosters, made with milk by-products.

How do you measure the effectiveness of your feeding programs? Cost per pound of gain? Appearance of your flock or herd? Health?

Any way you look at it, the Milk-Bank Feed Boosters from Kraft make any ration work harder. These feed boosters—Pex for poultry, Kaff-A for dairy, sheep and beef, Kraylets for swine, and Pace for horses—are made from milk-by-products rounded out with other important nutrients. They supply elements that are not usually found in ordinary rations. These not only balance a feed, they help the animal get more good out of the other nutrients he takes in.

RICH IN MILK SUGAR

Milk-Bank Feed Boosters are rich in lactose (milk sugar). Lactose helps keep digestive tracts in good condition. This permits poultry and livestock to assimilate more of the feed—resulting in a better rate of gain and fewer digestive upsets.

IMPORTANT PROTEIN

When you give an animal a ration that includes a Milk-Bank Booster, you’re giving him a good, healthy supply of protein, as well. This milk protein consists of lactalbumin and lactoglobulin which are among the richest in essential amino acids. They play an important role in balancing out the protein in a grain ration.

These milk proteins build soft tissues and disease-fighting antibodies, and promote vital nitrogen storage.

VITAMINS AND MINERALS

The Milk-Bank Feed Boosters supply calcium, phosphorus, potassium, sulphur, and magnesium, as well as trace elements such as manganese, iodine, copper, iron, and cobalt.

When you feed Milk-Bank Boosters, you get milk vitamins—members of the B complex. Finally, there’s an extra bonus in the Milk-Bank Boosters: the important growth factors of milk which help improve feed efficiency and speed healthy gains.

All these elements are blended and balanced in the Milk-Bank Feed Boosters to give your poultry and livestock the nutrition it takes to develop more of the genetic potential bred into them.

And for your dogs try new, complete Kraft Dog Food . . . balanced with the Milk-Bank Boost.

Ask a Kraft feed dealer for details, or write KRAFT FOODS AGRICULTURAL DIVISION, Dept. 51, 500 Peshtigo Court, Chicago, Illinois.
NEW STRATEGY PROBED FOR REDUCING HUNGER

Farmers may adopt new production strategy to meet future food needs. At least this is the opinion of Astor Perry, agronomist at North Carolina State University. He believes farmers of the future may be forced to produce the raw material from which food can be made. In other words, he would grow crops that are most efficient in converting the sun's energy into basic raw materials for food. Taste, texture, and storage quality now play the important role in plant selection.

WINTER TAPPING OF SUGAR MAPLES MAY BE OVER

A feature of the recent maple syrup industry conference was a panel discussion in which seven producers shared their experiences in tapping trees in the fall instead of late winter. The development of bactericidal pellets that can be inserted in the taphole to prevent microbial growth has made the early tapping feasible.

RED LIGHTING MAY END CHICK DEBEAKING

Poultymen may be able to abandon the time-consuming and expensive practice of debeaking their birds, thanks to a new program which uses red lighting. An extra advantage was greater bird weight and more uniformity within the flock. Cargill scientists explain that crowded birds peck when they see red. Under red lights, the birds see their surroundings much in the same shades the human sees on a black and white TV.

WORTH WATCHING

CROPS—A report before the American Society of Agronomy shows that loss of seed vigor may cut corn yields by 13 percent. The study revealed that a test for determining seed longevity has been used successfully in corn and is now being applied to other crops. Clemson researchers have used a new technique of planting, which maintains better than previously the clover in fescue-Ladino pasture. By seeding fescue in 18- to 20-inch rows and sowing the Ladino clover in between, researchers have maintained a good crop.

WORLD NEWS—A small aircraft capable of lifting a ton has been built in Australia especially to meet the needs of aerial agriculture.

A promising fertilizer has been developed from coal at the Research Council of Alberta, Canada. Notable feature is its ability to release nitrogen at rates usable by plants.

Trials of a new "spray-on-rubber technique" have been successful in binding sand particles while seeds germinate along the wind-swept coast of Southport, England.

DAIRY—Future Farmers attending the Dairy Cattle Congress previewed a movie which showed that a dairy promotion program of 15 cents per person per year returned $1.68 to farmers for each dollar invested. The movie was based on a study by the U.S. Department of Agriculture and the American Dairy Association.

HOGS—In an Ohio trial to compare limited feeding of dry and paste feed, paste feeding resulted in as rapid and efficient gains as the same quantity of dry feed. No serious engineering problems were encountered.

Two weeds, pigweed and lamb's-quarters, are believed to be the cause of an often fatal swine disease, perirenal edema. Until now, poisonous plants were considered the culprits.

BEEF—Anaplasmosis vaccine is now commercially available in the U.S., according to the current issue of the Journal of the American Veterinary Medical Association. The article says the vaccine must be given in two doses with a recommended interval of six weeks between shots.

Results of an Iowa study show that bulls gain .2 to .3 pounds per day faster in the feedlot than steers and bulls required 95 pounds less feed per 100 pounds gain.
Handsome truck on a down-to-earth job.
Ready for another long, hard day.
Over the fields and through the gears.
Lots of bumps, dirt, dust, heavy loads.
Lots of toughness, too.
It's a Dodge.

Dodge trucks are Job-Rated to give you the best truck for your kind of work. Try one.

Dodge toughness doesn't cost any more.
Why settle for less?
Two hours ago these jeans climbed out of a muddy irrigation ditch

and they still haven't been pressed.

A quick dip in the washer. A whirl in the dryer.
That's all these slim-cut jeans need because the press and crease are baked in.
No wonder so many modern young farmers wear Lee-Prest Leens, the casual jeans that go anywhere...and never need pressing!

Lee-Prest Leens
Made by the H. D. Lee Co., Inc., of Kansas City, Mo.

New National Advisor

MR. H. N. HUNSICKER assumed the duties of national FFA advisor at the final session of the National FFA Convention. He had previously been appointed chief of the Agricultural Education Service in the U. S. Office of Education. He replaces Dr. A. W. Tenney, national advisor since November, 1961, who has been named director of organizational relations for the entire Division of Vocational and Technical Education.

Mr. Hunsicker is the first national FFA advisor to claim the distinction of being a former Future Farmer. As a high school student at Boyce, Virginia, in 1926, he was a charter member of the local Future Farmers of Virginia Chapter. The FFV organization served as a pattern for the development of the National FFA Organization.

A 1931 graduate of Virginia Polytechnic Institute, Mr. Hunsicker completed his M.A. Degree at Ohio State University. He taught vocational agriculture in West Virginia before becoming state supervisor of vocational agriculture and state FFA advisor in 1946. He came to the U. S. Office of Education in 1952 as program specialist in agricultural education for the North Atlantic Region. He has been a member of the Board of Directors of the National FFA Organization since 1950.

Commenting on the appointment, Dr. Tenney stated: "One of the basic principles of FFA is that the organizational program should be closely associated with instruction in vocational agriculture. The FFA constitution provides that the national advisor shall be the head of the agricultural program in the U. S. Office of Education. Mr. Hunsicker is admirably suited for this task."

In his new capacity, Dr. Tenney will maintain liaison for the division with many organizations. "I expect to continue a close relationship with the FFA," he explained.
Mr. William H. Tilley uses his Honda Trail 90 to herd cattle on his 9000 acre Indian Valley Ranch in Lake County, California. "I really have to cover ground to get things done," Tilley told us. "My Trail 90 saves me time and money. In fact, I own a pair of 'em." Praise from the field carries weight. No wonder Honda is fast becoming the nation's most versatile farm vehicle. For further information write American Honda Motor Co., Inc., Department FV, 100 West Alondra, Gardena, California.
"Couldn't have worked out better if I'd planned it."

"What are you going to be?" they kept asking me all through my senior year in high school. "I didn't know. But I did know I wasn't going to take any old job or try for college until I had plans. And I didn't want to just hang around until I made up my mind.

"I talked to the other guys, my family...everyone. Then I talked to the Army Recruiting Sergeant. And that was the smartest thing I ever did. He didn't try to pressure me. He just answered my questions. With his help, I enlisted for training as a data processing equipment operator.

"It turned out I was a natural for it. Picked it up with the help of some of the best teachers I ever came across. And now I'm an expert in something that will mean good jobs the rest of my life."

An Army enlistment has been the turning point for many men. It can be for you. It can give you the chance to learn any one of over 300 skills, skills you can build your life on. You can travel to countries and places you might never see otherwise. And you'll be proud of what you're doing.

Look into what the Army has to offer. You'll find there's more for you in today's action Army."
Mailbag Winners—Continued.

FIRST PRIZE $15
Funny Experience

While in Kansas City, we stayed 13 miles from the auditorium. A taxi was the only transportation back and forth. One night six of us got a cab and headed for the hotel. The cab driver said it was out of his district and let us out at the city limits. We had walked 20 blocks when a policeman came along and informed us we were going in the wrong direction! He was kind enough to take us to the hotel. There are six pairs of feet which still ache from that walk.

Ridgeway FFA Chapter
Ridgeway, Missouri

SECOND PRIZE $10
Inspirational Category

The National FFA Convention was more than a national gathering of FFA boys to me. It was more than the grand finale of the FFA year. To me it was a personal challenge.

Ever since I was about four years old, I have had a speech defect. I started to stammer almost overnight. I had to have a speech therapist help me pronounce sounds that I was unable to say. I have tried not to let this problem bother me, as I was determined to overcome it. Through the help of the FFA and my local advisor, I was able to compete in the Regional Public Speaking Contest. The ability to express myself had been given to me by the FFA, and the stage and setting were the National Convention of the Future Farmers of America.

Rick Chase
Yerington, Nevada

SECOND PRIZE $10
Funny Experience

The funniest thing happened when another FFA member who came along tried to smoke a cigarette. It blew up in his face. The rest of the fellows in the group told him the altitude caused the explosion since we were in a second story motel room when it happened. This fellow believed us. The reason it blew up was because I had loaded it. All through the convention this fellow still believed it was the altitude.

J. Edwin Rohrer
Paradise, Pennsylvania

THIRD PRIZE $5
Inspirational Category

The National FFA Convention was truly an inspiration to me. I never realized that the national officers were such an outstanding group of individuals. When a person observes these fine officers in action, he feels that some day he would want to be as important, skilled, and developed as they. The convention seems to be the lifeblood of the organization. Now I am more enthused in my organization and work. Some say that vitamin pills are a great help in carrying out a day’s activities. I am sure that the FFA convention was my long-lasting vitamin pill.

Allen Sedivy
Verdigre, Nebraska

THIRD PRIZE $5
Funny Experience

On the way to the convention, our train stopped at Ogden, Utah, for half an hour after leaving Salt Lake City. My pal and I went into the station and looked around for a while. When we came out, we walked the full length of a train that was on the same track as the Kansas City train we had left a few minutes before, looking for the number of the car we had been riding in. We couldn’t find the right number, and the train was about to leave, so we decided to get on anyway. Then we heard a man say that that train was going to Los Angeles, and the Kansas City train was on a different track. We ran to the other track and found the Kansas City train leaving. We ran along side it, hoping to jump in an open door, but no doors were open. We were about to give up hope when a brakeman saw us and stopped the train to let us on. After that we stuck close to the train.

Alden Robinson
Fillmore, Utah

HONORABLE MENTION

I have paid my own way to the convention the past three years, and the most outstanding thing about the convention is the fine boys from all across the United States who attended and also the wonderful advisors and honorable guests. The boys who attend the convention are the best young men in our country. For example, a lady who works in a store in downtown Kansas City said that Future Farmers were the nicest boys in the world. She said she could remember the first convention, and the boys had always acted like perfect gentlemen. She said we Future Farmers are a credit to our country.

Thomas Roan
Collinsville, Alabama

HONORABLE MENTION

What the National FFA Convention meant to me I can only express as follows: The behavior of 11,000 FFA members was amazing. Not just in the auditorium were they perfect gentlemen but in restaurants and stores, on the sidewalks, and wherever you saw blue FFA jackets, a truly beautiful sight!

Evening vespers was an enlightening way to start a convention. I’m sure God will see the FFA continue to progress.

The Public Speaking Contest was interesting and educational. The national officers and others connected with the convention do a superb job. The FFA Organization’s being accepted into the FFA was an impressive ceremony. The four Star Farmers are to be congratulated over and over again. This also goes for the 392 American Farmers.

In all, what FFA boys can do and will do is wonderful. I am an FFA boy’s mother who hopes to return to this marvelous convention in a few short years.

Mrs. Jerald Zieber
Bellevue, Ohio

Here’s how to find out what the Army can do for you

The quickest way is to go see your local Army Recruiter. He’ll answer any questions you have about your opportunities in the Army. If he doesn’t have an answer right there, he’ll get it for you.

And it’ll be a straight answer. After all, it’s his job to be sure the Army’s the right place for you. He knows where the opportunities are—and can tell you where you’ll fit in.

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December-January. 1965-1966
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The National FUTURE FARMER
1965 NATIONAL FFA CONVENTION HEADLINES

New National Officers Elected

TOP HEADLINE makers in the eyes of Future Farmers attending the convention were the six young men elected to serve as national officers. During the year they will spend two-thirds of their time traveling in the interests of FFA.

Howard Williams, a 19-year-old dairy farmer from Olin, North Carolina, was elected to serve as president. Williams has served as state president of the North Carolina FFA Association in addition to conducting a statewide leadership school. The main enterprise on the Williams home farm is a 50-cow Holstein dairy herd. In addition to growing needed silage, grains, and hay, they have a supplementary cotton enterprise. The cotton and dairy program is operated in partnership with his father.

Joseph B. Detrixhe was elected to the office of national student secretary. The 20-year-old FFA member from Ames, Kansas, has received awards in public speaking for three years and served as president of the Kansas Association. The new student secretary has 30 percent interest in his home farm's crop operation, which spans just over 1,000 acres. In addition, he receives a 25 percent share of the income from a 370-acre tract owned by a neighbor. Recently Joseph purchased 320 acres in partnership with his younger brother.

James Stitzlein, a 20-year-old member from Ashland, Ohio, will serve as vice president of FFA's Central Region. The new officer recently completed a term as president of the Ohio FFA Association as well as president of the board of trustees for Ohio FFA camps. Jim is engaged in partnership with his father and older brother. Included in the operation are 360 acres that are owned by the partners and an additional 50 acres which they rent. He was named the 1963 National Youthpower Congress "Top Teen."

William M. Kelly, Jr., of Winchester, New Hampshire, is the new vice president for the North Atlantic Region. During high school Kelly was state FFA secretary and state first vice president. He also served on the National Program of Work Committee. William and his brother have just purchased a 230-acre dairy farm two miles north of Winchester. The farm's dairy herd consists mostly of registered Brown Swiss cattle. They have exhibited their stock (Continued on Next Page)
National Officers—Continued
annually at local fairs in New Hampshire and the Eastern States Exposition.

Larry E. Craig, a member of the Weiser FFA Chapter at Midvale, Idaho, is the new vice president for the Pacific Region. The 20-year-old Future Farmer has one-third interest in a 6,000-acre commercial Hereford ranch. The home ranch includes 250 head of brood cows, 618 acres of hay, 68 acres of mixed grains, and the balance in pasture. In addition to the partnership, Craig owns nine grade cows and calves and four registered animals. Larry was president of his state FFA association and a state public speaking winner.

Norman Gay, a 20-year-old Future Farmer from Sumner, Georgia, takes over as national vice president of the Southern Region. Rising to chapter president, then to president of the Georgia Association, Gay is well prepared for his new duties. He farms in partnership with his father on a 1,160-acre farm. All of the land except 200 acres which the partners own is leased. Major enterprises include 80 acres of peanuts, 65 acres of cotton, and 90 acres of corn. He is Farm Bureau vice president and does church work with prisoners.

Gold Emblem Chapters

SIXTY-ONE LOCAL chapters were honored with Gold Emblem awards. They were Arizona—Tempe; Arkansas—Mansfield; Colorado—Eaton, Lamar; Connecticut—Falls Village; Florida—Bartow, Fort Pierce, Santa Fe, Alachua; Georgia—Bainbridge, Winder; Illinois—Sycamore, Williamsfield; Indiana—Hagerstown; Iowa—Audubon, Waverly; Kansas—Garden City; Kentucky—Frenchburg, Edmonton; Maine—Mars Hill; Maryland—Damascus; Massachusetts—Holden; Minnesota—Canby; Faribault, Forest Lake, Stillwater; Missouri—Cassville; Montana—Lewis- town; Nebraska—Amley; Nevada—Elko; Nevada—Belvidere, Newton; New Mexico—Clovis, Hatch; New York—Hamilton; North Dakota—Maddock; Ohio—Sunbury, Paulding, Spencerville; Oklahoma—Albert; Oregon—Canby; Pennsylvania—Kutztown; Tennessee—Cleveland, Dayton, Dickson; Texas—Grandview, Livingston, Tatum, Whitesboro; Utah—Brigham City, Heber City; Virginia—Ashland, Appomattox, Penn Laird; Washington—Pomeroy, Reardan; West Virginia—Ripley; Wisconsin—Granite, Wittenberg; Wyoming—Newcastle, Cheyenne.

U.S. Senators Head
Distinguished List of
Main Speakers

TWO U. S. Senators—the Honorable Fred R. Harris, Oklahoma, and Frank Carlson, Kansas—gave key addresses during the 38th convention. Both have close ties with the FFA.

The senators told the delegates they were confronted with many challenges but their opportunities for service are much greater than the challenges. Other speakers included Wayne O. Reed, associate commissioner of education, and J. K. Stern, president of the American Institute of Cooperation.

Reed told the future food producers, "You are young enough to be in on the ultimate victory over such enemies as war, poverty, and disease."

CONVENTION HOT LINE
TO WASHINGTON, D.C.

VICE PRESIDENT Hubert H. Humphrey received a standing ovation even though he was unable to attend. The reason was a unique telephone "hookup" whereby the Vice President delivered his speech from Washington. Humphrey cancelled the trip because of the President's recent surgery.

The Vice President said: "I talked with the President this morning, and he asked me to relay to you that he is feeling fine and his heart and mind are with you Future Farmers . . . Texas style—and that means very big. I also want you to know that hope and freedom are on the march."

President Ken Kennedy talks with Vice President Humphrey by special phone.

The National FUTURE FARMER
**Headlines**

(continued)

**CONVENTION PHOTOS BY ARCH HARDY**

The official "mail-order" national FFA band of 125 members represented 38 different state associations at FFA convention.

**FFA Band and Chorus Add Much to Program**

THE NATIONAL FFA “mail-order” band and a new choral group were key attractions at this year's convention. The new choral group was made up of about 50 young farmers who formerly sang in the NFA chorus. The FFA band was composed of 125 FFA members from 38 different states.

Band and chorus members pay their own expenses to Kansas City except where expenses are provided by state associations, local chapters, or other groups. They arrived in Kansas City on Sunday, October 10, ahead of other members to begin practice sessions. Members of the FFA chorus also took part in the Tuesday evening, October 12, vespers program, while band members stayed over an extra day to march in the American Royal Parade.

Dr. Henry S. Brunner organized the first FFA band for the 1947 convention.

**Other Youth Leaders Bring Greetings**

CONVENTION GOERS had the opportunity to learn about organizations similar to their own FFA from the national presidents of three such groups.

Represented were the Future Homemakers of America, Distributive Education Clubs of America, and the Vocational Industrial Clubs of America. Like the FFA, they are national organizations for students in vocational education.

New among the organizations is VICA, which was formed last May in Nashville, Tennessee. VICA National President Tommy Snider, Griffin, Georgia, explained that the organization is striving to develop leadership in 21 existing state associations now affiliated with the national organization. "We'll also be helping those states and territories without vocational industrial clubs to organize and affiliate with VICA," he explained.

Left to right, Presidents Ken Kennedy, FFA; Mary Driscoll, FHA; Randy Burnley, DECA; and Tommy Snider, VICA; told of their club opportunities.

December-January, 1965-1966
For close. truly acknowledgment. national J. Jarnagin. Nichols. separate

"In 1965 Star Farmer of America Named In Exciting Convention Drama"

Adolphus Pinson, NFA president, gives up jacket in merger of NFA with FFA.

Formal Ceremony Finalizes Merger Of FFA and NFA

MORE THAN 52,000 officers and members of the New Farmers of America (NFA) were merged into the FFA July 1. For 38 years the NFA organization, which includes Negro student farmers of 12 Southern states, has traveled a separate road. But at the opening of the 38th convention, their roads converged when the NFA officers presented their organizational symbols in acknowledgment of the merger.

"We are now members on a truly national level, and what we do will be judged on a national standard of young farmers across America, not on that of 52,000 from 12 states," commented Adolphus Pinson.

Representatives of four adult service clubs are honored for their support.

SERVICE CLUBS THANKED FOR FFA SUPPORT

A FIRST at this year's National Convention was the presentation of special citations to adult organizations which have supported the FFA.

Pictured above, from left, Merle H. Tucker, Kiwanis; Robert Amick, Russell Tenney, John Vogt, Lions; and Wilbur Lewis, Rotary. Other organizations recognized include the National Safety Council, Kansas City Chamber of Commerce, Farm Club of New York, National Association of School Principals, American Vocational Association, and the National Foundation.

Typical of the support given agriculture and FFA was the development of Farm-City Week by Kiwanis. Tucker was the program's first chairman.

IT'S STAR FARMER night at the National Convention. The four Regional Stars have been introduced; the movie on their farming programs has come to a close. As the excitement mounts, the president introduces the judges (pictured above). Front row, from left: Senator Harry Darby, Darby Corporation; Byron J. Nichols, Chrysler; A. W. Tenney, FFA advisor; L. W. Moore, American Oil; Kur Freeland, secretary of agriculture, Kansas; J. J. Jarnagin, Jr., former Star Farmer. Back row, from left: Mark Kedler, International Harvester; Sam Stenzel, NYATA; Russell DeYoung, Goodyear; Homer Young, Consumers Cooperative; Dr. Walter Arnold, U. S. Office of Education; E. W. Ukkelberg, Deere and Company; Rod Turnbull, Kansas City Star; and Blair Williams, New Idea. Then the announcement, "Star Farmer of America..."

Dr. A. W. Tenney is presented plaque in recognition of his service to FFA.

Tenney Steps Down As National Advisor

DR. A. W. TENNEY, national advisor since November, 1961, has announced his resignation from that position. In a recent reorganization, Dr. Tenney was named director of organizational relations for the entire Division of Vocational and Technical Education.

The National FUTURE FARMER
DONORS TO FFA FOUNDATION RECEIVE SPECIAL RECOGNITION

The spotlight illuminated the stage when 145 representatives of more than 475 FFA Foundation donors came to be recognized. FFA'ers gave them two standing ovations.

O'Neil to Serve as Vice-Chairman of Donor Committee

WORKING WITH Byron J. Nichols, new chairman of the Sponsoring Committee, will be M. G. O'Neil, Akron, Ohio, president of General Tire and Rubber Company. O'Neill will serve as vice-chairman.

O'Neil has been president of General Tire and Rubber Company since April 5, 1960. An articulate spokesman for the company his father founded in 1915, Mr. O'Neil has long been actively interested in community affairs.

FFA Foundation Sets Fund-Raising Record

FOUNDATION contributions from more than 475 business and industrial concerns, organizations, and individuals have set a new record in what has become a long line of new records.

A goal of more than $200,000 is budgeted each year. At press time H. H. (Judge) Hardy told The National FUTURE FARMER that L. W. Moore, Sponsoring Committee chairman, could report contributions of $217,540.68. This is more than $6,000 above last year's record, and the committee would be accepting contributions for two more months.

Nichols Elected Chairman of '65-'66 Committee

BYRON J. NICHOLS. Detroit, Michigan, general manager of the Dodge Car and Truck Division of Chrysler Corporation, has been elected to serve during 1966 as chairman of the Sponsoring Committee for the Future Farmers of America Foundation, Inc.

Mr. Nichols, who served as vice-chairman this year, succeeds L. W. Moore, Chicago, Illinois, president of American Oil Company, in the chairmanship. His principal responsibility as chairman of the Sponsoring Committee will be to contact potential fund donors during the coming year.

The election of Mr. Nichols took place during a dinner meeting of the donors held in conjunction with the National Convention.

Nichols grew up in the automobile business. His father was an automobile dealer, and as a youth, he spent his after-school hours and weekends learning all phases of the dealership. He sold his first car when he was 15 years old and built his own competition car when he was 16. Now a Chrysler vice president, he was named general manager of the Dodge Car and Truck Division in October, 1960.

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First place in the livestock judging contest went to Burlington, Oklahoma. The team was coached by L. E. Castle.

The contest, through nationwide winning, won by Samuelson, Fort Defiance, Virginia. Samuelson won the meats judging contest at Kansas City. He was coached by instructor Harley K. Reed.

Poultry and egg judging champions are from Mansfield, Texas. They were coached by instructor Harley K. Reed.

Top Teams Compete in Judging Contests

TEXAS, Minnesota, and Oklahoma carried off top honors in major judging contests held during the convention.

The Texas team won first place in judging poultry and eggs. Minnesota was first in judging meats, and Oklahoma was first in judging livestock. Members of the winning team from Mansfield, Texas, were Mike Foster, Billy Shanklin, and Karl Killgore; from Blooming Prairie, Minnesota, Wayne Williamson, Dean Wood, Chris Olsen; and from Burlington, Oklahoma, Robert Armbruster, Mike Cook, and Keith Kisling.

Awards were presented at a breakfast in the ballroom of the President Hotel attended by more than 500 Future Farmers.

Virginia FFA'er Is Top Speaker

SAM MIZER, Fort Defiance, Virginia, won the National FFA Public Speaking Contest with his speech, "An Elixir for Our Nation's Agriculture." He won in the final eliminations of a nationwide contest that started in local chapters with winners progressing through area or federation competition, state contests, and then regional contests. He received a cash award of $250.

Speaking contest judges (from left) Orion Samuelson, Samuel Graves, and William F. Foss decided on champion.

National winners of FFA farm proficiency awards line up to receive their cash awards. The Future Farmers of America Foundation provides the $250 prize.

National Winners Receive $$$ in Foundation Awards

EIGHT outstanding students of vocational agriculture were selected as 1965 winners of the Future Farmers of America national award for outstanding achievement in farm proficiency.

They are (pictured above, left to right) Joe Spencer, Albert, Oklahoma, Crop Farming; Duane Meranda, Georgetown, Ohio, Farm Electrification; and Craig Lewis, Alachua, Florida, Farm Safety (chapter award). Standing are (left to right) Charles Davis, Alachua, Florida, Soil and Water Management; Ted Zieber, Bellevue, Ohio, Poultry Farming; Roger Pfeifer, Blooming Prairie, Minnesota, Livestock Farming; Bernard Meyer, Uniontown, Missouri, Farm Forestry; and Michael Reynolds, Fitzpatrick, Alabama, Farm Mechanics. The Dairy Farming Award was presented at the National Dairy Cattle Congress rather than at the FFA Convention (see Waterloo this issue).

Each winner received a $250 cash award during the Thursday session.

The National FUTURE FARMER
Press Members Recognized

DISTINGUISHED Service awards were presented to representatives of the broadcast industry who have made outstanding contributions to the development of the organization by telling the FFA story to their large audiences.

In addition, the award was presented to 49 other outstanding Americans who have contributed to the development of the FFA. The plaques are presented only to persons who work outside the field of vocational agriculture.

394 FUTURE FARMERS RECEIVE AMERICAN FARMER DEGREE

THE AMERICAN Farmer Degree is the highest degree of achievement in the Future Farmers of America organization. Delegates at the 38th National Convention elected 394 members to this “cream of the crop” honor.

Each American Farmer Degree winner received a gold key and certificate from the FFA and a check from the Future Farmers of America Foundation to help pay his travel expenses.

TWENTY-FIVE VO-AG TEACHERS GET HONORARY DEGREES

THE HONORED teachers were Robert B. O’Berry, Bartow, Florida; Gustavus Blackwell, Oconee High School, Watkinsville, Georgia; James Braziel, Jr., Toombs Central High School, Lyons, Georgia; Carl Hylton, Hagerstown-Jefferson Consolidated High School, Hagerstown, Indiana; Everett L. McCauley, Connersville, Indiana; E. H. Haynes, Natchitoches, Louisiana; Clarence Whitaker, Aroostook Central Institute, Mars Hill, Maine; Norwin Braun, Chesa-ning, Michigan; Odell Barduson, St. James, Minnesota; Glenn Edin, Owatonna, Minnesota; Oliver Manning, Mid-way High School, Dunn, North Carolina; John Leyden, Scituate, Rhode Island; Kenneth Couch, Fairforest and Dorman High, Spartanburg, South Carolina; Ernest Christiansen, Webster, South Dakota; N. H. Baulch, Gallatin, Tennessee; Roy Crabtree, Polk County High School, Benton, Tennessee; Billy Conner, Sulphur Springs, Texas; F. Wayne Volkman, Belville, Texas; R. W. Simmans, Jr., Azle, Texas; Elmer Graff, Hurricane, Utah; Henry Davis, James Wood High School, Winchester, Virginia; F. H. Jackson, Elkton, Virginia; B. F. McConnell, Terra Alta, West Virginia; Floyd Doering, Wittenberg, Wisconsin; James Ness, Tomah, Wisconsin.

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Outstanding FFA Talent And Professional Acts Highlight Entertainment

TALENTED Future Farmers and entertainers from big name TV shows made the 38th National Convention of the Future Farmers of America a "fun" as well as an educational event.

The convention’s three big FFA talent shows brought down the house with cries of “More, more, more.”

A “pro” touch was added, to conclude the convention, when Raymond Firestone introduced his annual Firestone Show of top entertainers—an exciting end to the National Convention.

President Ken Kennedy thanks Raymond Firestone. Below is one of the acts known as the Browning family.
SO LITTLE interest was shown in the first National FFA Convention that a photographer wasn't even present to record the event. Times have changed as Floyd S. Dubben, Jr., new Star Farmer of America, can testify. His every minute at the 38th convention was planned so reporters could have interviews, radio broadcasts could be taped, or television appearances could be made.

But living on a tight schedule is nothing new to Floyd, better known to his friends as Sam. In fact, no one could have been better prepared than Sam for the rigors of fame that came his way in Kansas City. For you see, Sam crams two worlds into one. He explains, "I'm a full-time farmer with a side line that helps me farm better." Behind this simple statement is stark reality spelled in capital letters . . . WORK.

By Len Richardson

Floyd, his wife Marjorie, and children, Terry and Eddy, in front of their new seven-room home.

Floyd and his dad go over the latest D.H.I.A. records. While in high school he joined the county record club.

Sam's days begin at 4:30 with the early morning chores. By 6:30 he has completed "cleaning up" and drives 20 miles to a job as assistant farm credit manager. He puts in a full day, supervising the credit needs of some 400 farmers, before returning in time to finish the milking and other farm chores. At 21 he is personally responsible for loans totaling more than $48,000. This in itself is a man-sized responsibility, but Sam is no ordinary 21-year-old. He has also amassed a personal net worth of more than $50,000 from farming, and this was accomplished during a period when other farmers in his area were giving up and moving to the city.

"How did all this start?" we asked Sam.

"Well, when I was six years old, my Uncle George, who owned a farm not far from ours, gave me a heifer calf. It was a purebred Holstein. Little did I realize that my development in farming was starting. By the time I entered the sixth grade, I went to Mr. Rose, the vo-ag teacher, and asked how I could join the milk plant and get my own check. He directed me to the plant manager, and in a very short time I was the proud receiver of a monthly milk check," he explained.

When Sam entered the ninth grade and enrolled in vocational agriculture at Cherry Valley Central High School, Middlefield, New York, he owned six cows and three heifers. The years that followed have been marked by constant growth and change. At the time of the award, he owned a 50 percent partnership with his father in 695 acres of land, and they rent an additional 235 acres. Their partnership enterprises include 86 producing cows, 48 heifers and calves, 60 acres of corn, 40 acres.

The Dual World

Star Farmer of America

Here's how a New York farm boy amassed a net worth of $50,000 from a beginning with one calf. Today Floyd fills two jobs in order to make his farming goals come true.

This six-year-old cow produced just under 16,000 pounds last year and at present is milking 85 pounds per day.
of oats, and 262 acres of hay. Sam has assets of more than $80,000 with notes and mortgages of $30,000 for a net worth of $50,625. During this period he earned a labor income of $41,795.

Though this change, marked by growth, is significant, others are just as noticeable. Sam's dad summed it up pretty well at the end of his second year of vo-ag with the remark "What are we going to do next?"

"What were some of the changes that brought you to this point?" we asked.

"I started the first change, the one I think was most important, by testing the cows in our herd. We found that our herd average was only 7,500 pounds of milk per cow, but we've now increased that to 13,700 pounds of milk and nearly 500 pounds of fat."

Our next question was obvious, "How?"

"The first step was to improve our production per cow. My father went to one of the top herds and bought 17 purebred Holstein heifers. This proved to be a wise move, as they have become the nucleus of our herd. We also started using artificial breeding. We are sure that production pays the bills, and through careful selection and continual culling, we are fast gaining the kind of herd we want."

"I realized the need for crop land changes when we used some of our land for an FFA crop demonstration. Although we were using correct cultural practices in raising oats, we weren't getting a good crop. I found out that our fields were wet, needed more lime and fertilizer, and should have been sprayed sooner. I joined the Soil Conservation Service, installed nearly two miles of diversion ditches, and built two farm ponds. The ditches added 35 acres of crop land. In the field where the oat crop had been poor, we obtained yields from corn silage equal to 20 tons per acre. We also improved 45 acres of pasture including some sidehill land. We had been growing clover and timothy for hay but switched to alfalfa and bird's-foot trefoil with good results since has yields have doubled."

Sam's biggest decision came when it was time to graduate from high school and he had to decide on his next move. After discussing the alternatives with his agriculture teacher, Mr. Rose, he decided to attend a nearby two-year college. He explains, "I feel college helped me understand farm management and finances. I was now ready to draw up a contract with Dad and go into full partnership. At the time we owned three farms, I took over the mortgages on two of them, and I built a new house to replace one that had burned. I also built a new house for myself. Father figured that the mortgages on these were equal to what he owed on the farm where he lived, so we called it 50-50."

Mistakes have also influenced Sam, though few have been his. "With the credit service I see the mistakes of others, and I try to learn from them. I see the way others farm, study their financial statements, and use the ideas that work. We probably made a mistake when we added the 104 feet to the main stanchion barn. We should have gone to a free stall system because we are going to need another barn anyway," he explained.

"However you explain your side line with the credit service, it boils down to a 16-hour day," we prodded.

"The one thing that has been the greatest help to me has been the cooperation of my parents. We have an abiding faith in each other. My wife Marjorie likes farming and does many errands. The help Mr. Rose has given me, especially in FFA, has contributed to my becoming a farmer. I'm convinced there is a future in farming, and I want to share in that future," Sam concluded.

In Kansas City's huge Municipal Auditorium, before an audience of nearly 11,000 Future Farmers and guests, Sam stepped forward as the new Star Farmer of America. The award, carrying with it a $1,000 check, is sure to help his dual world spin faster toward his dairy farming goals.

Star Farmers (from left) Keith James, Oklahoma, Southern Region; Floyd Dubben; Emmett S. Jobe, Arizona, Pacific Region; and Marvin Hobbs, Illinois, Central Region; with plaques.

December-January, 1965-1966
Terraces For Tomorrow's Farms

WITH THE coming of 1966, all eyes will be on new tractors and equipment. But what about new terrace practices to match these new and bigger farming tools? Or what about the shift away from pasture rotation to increased planting of row crops?

Conservation experts held their preview showings of ideas to meet these changes at the recent meeting of the Soil Conservation Society of America. Richard L. Phillips, assistant state conservation engineer, Soil Conservation Service, Des Moines, Iowa, told some of the new concepts in controlling soil and water and in farming terrace land.

His work, reported in the Journal of Soil and Water Conservation, lists these terrace characteristics which allow for easy farming:

- Parallel wherever possible to eliminate point rows.
- Spaced to fit equipment used in the area.
- Spaced as far apart as possible yet still effective in controlling erosion.
- Planned and built with a cross section that does not make farming operations difficult.
- Planned to provide good access.

Phillips says of developments designed to fulfill these objectives: "They are an absolute must in today's agriculture, considering the trend to larger farms and larger farm machinery. I feel it is a must that we not only catch up on terrace developments but actually try to get ahead of the times."

Parallel Terraces

As already indicated, parallel terraces offer one of the best opportunities to make farming easier by eliminating point rows common to older terraces. In studies conducted by Craig E. Beer, assistant professor of agricultural engineering, Iowa State University, and Kent Mitchell, production time was measured on conventional and parallel terrace systems for two- and four-row corn production. Their results, as reported to the American Society of Agricultural Engineers, show that farming a parallel terrace system will usually mean an increase in operation time as compared with farming a system of conventional terraces. The time saved ranges from 5 to 30 percent. The comparisons were made from fields with a range in land slope. Therefore, any variation caused by land slope is not evident from their results.

"It also results in better quality crops since plants are not damaged by turning equipment." Phillips points out.

Storage Terraces with Tile Outlets

Though the use of tile is not new, the idea of designing storage terraces to be used with tile outlets is. Phillips explains, "To date, terraces have been built with a capacity to store two inches of runoff, which is in excess of a ten-year frequency storm. Tile size is selected on the basis of capacity needed to remove water stored by the terrace at a minimum rate of one acre-inch per day. On most terraces built thus far, the removal rate has been considerably above this. This is because the minimum size tile installed is usually five inches, grades are usually over 3 percent, and the area draining to an inlet is relatively small." Here are some of the advantages:

1. Shallow waterways make parallel alignment easier.
2. Steeper grades on the terraces are possible.
3. It provides a certain amount of land improvement, which contributes to topography improvement.
4. Any soil that moves along the terrace will be deposited near the intake, thus building up low areas.
5. Water tables are kept down, and low areas dry faster following storms.
6. Hard-to-establish large surface waterways are eliminated.

Grassed Backslopes

Another new development which is especially valuable on steep sloping land is the grassed backslope terrace. "This type of cross section is quite different from the common broad base terrace. With the broad base terrace, soil is usually taken from the uphill side, and the entire cross section is made with slopes wide enough and flat enough to farm. The grassed backslope terrace takes soil from the downhill side and none from the upper side. The effect is a flattening of the farmed area between terraces. Because the grassed backslope terrace flattens the land that is farmed, it decreases soil losses, increases farming efficiency, and allows wider terrace spacing." Phillips explains.

Terraces to Match New Equipment

What's being done to match terrace spacings to equipment, both today's and tomorrow's? "The trend in the Midwest, as elsewhere, is definitely to 30-inch rows," Phillips explains. "Equipment companies have revised their production schedules of 30-inch equipment three and four times this year in order to keep up with the demand. Both six- and eight-row planters and cultivators are available. Therefore, the design of parallel terrace systems should provide spacing that fits equipment. Terrace spacings are being adjusted in line with this concept. In a number of cases, spacings are being adjusted to a 120-foot farming width. This width fits four-row 40-inch, six-row 30-inch, and eight-row 30-inch equipment."

The National FUTURE FARMER

A new grassed backslope parallel terrace is built with a steep cross section which is seeded and left in sod. Terrace with a tile outlet and grassed backslope. Note: terraces are designed to store water during peak flows.
Santa Fe’s
Winning
Safety
Strategy

A NY FOOTBALL coach will tell you team members must know every play. With this knowledge a properly executed run or pass is precision to behold. The same is true of the half-time show. It’s the group’s working together that counts.

This past season, fans at the Santa Fe High, Alachua, Florida, and High Springs football game watched such a demonstration of precision planning. The half-time show was a team effort between the band and members of the Santa Fe FFA Chapter. The Future Farmers had constructed a huge safety wheel in their farm shop, written a script, and obtained the cooperation of Alachua and High Springs police departments. The net result was a half-time show on highway safety that few citizens of the two towns will forget.

But this FFA feat wasn’t an isolated example. It was only a small part in a giant, well-engineered program to better the area’s safety record. So successful, in fact, was their campaign that they received FFA’s national award for outstanding achievement in the practice and promotion of farm safety.

A $250 check was presented to Johnny Emerson, chapter president, during the Thursday morning, October 14, session of the 38th annual National FFA Convention in Kansas City’s Municipal Auditorium.

Three other FFA chapters were presented regional Farm Safety awards of $200 each. They are the Otis Chapter, Otis, Colorado; Belle Plaine Chapter, Belle Plaine, Iowa; and the Sebastian Creek Stream Chapter, Newport, Maine. Each of the four winning chapters previously had received a $100 award for winning its state’s top Farm Safety award. An additional $250 was divided among the four to help pay travel expenses of a chapter representative to Kansas City.

Craig Lewis, chairman of the Santa Fe Safety Committee, believes that safety is a continuous job in which many groups should be involved. Chapter Advisor F. D. McCormick explains, “One of our chapter’s first major safety campaigns was fire prevention. We live in a tobacco growing area, and several barns had burned. The year of our campaign not a single barn was lost within a 50-mile radius. The following year, three barns burned. That taught us how important it is to have a yearly program.”

Learning from this experience, the 66 Santa Fe members devoted themselves to a year-round safety campaign. Their program won the state award twice before capturing the national title. To cover all bases, they obtained the cooperation of more than 20 groups.

This year the chapter Safety Committee concluded that agricultural chemicals needed the major emphasis in the community. Their program emphasized the benefits of following recommended practices for using farm chemicals, and it aimed to teach the potential hazards of improper or uninformed use and storage of these materials.

The heart of the program was to have the “four keys to farm chemical safety” become second nature to every chemical user. These four keys are: 1. Read the label. 2. Use only as directed. 3. Store in original containers in a suitable place inaccessible to children or animals. 4. Safely dispose of empty containers and left-over quantities not used.

The Safety Committee had 100 per cent cooperation from chapter members in forming teams to find hazards in the community. Chapter members visited 337 farms and 465 other homes. On farms the total hazards found were 1,660, and in homes, 1,991. When the members followed up their inspection, 1,230 farm hazards and 1,352 home hazards had been corrected. Other activities included:

Chapter members gave a demonstration, “Chemical Safety,” before the school student body.

During Farm Safety Week the committee published a slogan daily in the newspaper with the major emphasis on chemical safety.

Chapter members cooperated with local fertilizer dealers in promoting chemical safety and obtained a speaker from this source.

Safety instruction was given to all members who came in contact with fertilizer, sprays, and other chemicals. Shelves were constructed by 25 members in their farm feed rooms for safe storage of chemicals. They used a green seal to designate the storage area.

Members burned chemical residue from barrels, making them safe for distribution to local farmers.

As a result, many farmers have requested information on constructing chemical storage shelves, and no chemical poisoning has occurred in the community. More important, fewer accidents have occurred on members’ home farms, and there were no school farm or shop accidents. This is a credit to their year-round program, which also encourages safe hunting, safe use of Christmas lights, traffic safety, home safety, and all phases of farm safety.

A chapter member explains the importance of using proper equipment when working with farm chemicals. The chapter gave more than 30 demonstrations.
Flying Field Trips

The jet age has given new meaning to the old idea of vo-ag field trips. Montana, whose economy is primarily based on agriculture, has for the past four years been experimenting with projects designed to strengthen vocational agriculture, emphasize usage of aircraft in agriculture, and promote the use of airplanes as a study tool.

What's a flying trip like? A student, nose pressed to the window, explains from his bird’s-eye view 1,000 feet above the earth, “I can learn more from here in an hour and a half than I would learn from the ground in a year and a half.”

His plane, a Cessna 180 high-wing aircraft, had just taken off, climbed to about 1,000 feet, and joined several other planes in a diamond pattern. The interplane radio crackled as an instructor, flying in the lead plane, gave a running commentary: “Ahead and to the right on the old Jones farm, they have had a problem with wind erosion. Note how this is being controlled through the wise use of stubble mulch and strip cropping. Now off to the left on the Ed Smith farm, see the white alkali spots scattered over the area, these are primarily caused by poor drainage. The local SCS technician would tell Mr. Smith the area should be investigated, which means a topographical survey should be made with soil borings throughout the affected areas. Consequently, a drainage pattern could be determined that would take care of this alkali problem.”

The first field trip like this was pioneered by Malta High School in 1962 because they believed scientific farm management could be implemented by use of aircraft. For one thing, farms and ranches in this area may cover ten to 12 square miles, and flying provides an excellent opportunity to study soil and range management. This initial project was planned by two supervisory personnel in the Department of Public Instruction: Mary Jo Janey, aviation education supervisor, and Max Amberson, vocational agriculture supervisor. Financial sponsorship came from the Montana Aeronautics Commission, which also approved planes and pilots.

This past spring, “flying classrooms” were conducted by Absarokee, Warden, and Miles City. At least two more are planned in the spring of 1966. The Fort Benton department, which took part in the program two years ago, liked the program so much they repeated this year. This time they financed the entire operation on a local basis with their school picking up the tab for the flight operator’s time.

Using the airplane as a means of studying is not new. Because of the acceptance of this educational device, the activity has been adopted by other groups. Ohio, for example, has had air field trips in almost every county of the state with more than 28,000 persons taking part. Leaders of the program in Montana give these tips on planning a tour.

- Vocational agriculture teachers adjust their lesson plans to include study of the relation of aviation to agriculture.
- The countrywide area was studied for points of interest, and a flight was made by supervisory personnel to determine exact route.
- Area was mapped and route charted, with each point of interest numbered.
- A description of points on the tour was studied beforehand.

(Continued on Page 52)

The National FUTURE FARMER
Dingle Dwarf Jumps To State Championship

IF A MAN bites a dog, that is news. When the FFA introduced a contest for frogs, The National FUTURE FARMER thought you should know. That's right! The Minnesota FFA Association introduced an invitational frog jumping contest at the Minnesota State Fair September 2.

Here's a "jumping end" view of Dingle Dwarf, who leapfrogged his way to a slim victory.

More than 1,000 persons witnessed the new event just 100 years after publication of Mark Twain's renowned short story, The Celebrated Jumping Frog of Calaveras County. Thirty-seven amphibians were taken to the line-up, but several failed to respond to their owners' frantic shouts and coaxing tackle before the 30-second time limit was completed.

A peppy, spotted leopard frog named Dingle Dwarf, owned by 17-year-old Dennis Sonnenberg of Perham, Minnesota, leaped to the championship. Dingle Dwarf covered eight feet ten inches in three hops from a starting line chalked out in front of the FFA Children's Barnyard. Governor Karl Rolvaag, starter and official judge, used a State Fair kazoo whistle to provide the "go" signal.

Four frogs, fed a special high-protein ration for the preceding two weeks by two Waseca FFA members, could muster no better than a five-foot one-inch effort in three hops.

The only "professional" entrant, Joe Koons of Parkers Prairie, whose family raises frogs for fish bait, was chagrined when his carefully trained Unbeatable Urb jumped only two feet nine inches.

A photo finish was provided when Mountain Dew, owned by Lynn Smith, Parkers Prairie, jumped eight feet eight inches, two inches short of the record set by the great Dingle Dwarf.

Raising frogs and worms and selling bait provide many FFA members with educational opportunities in this land of 10,000 lakes.

Minnesota Governor Karl F. Rolvaag, far right, watches the champion in flight. Next to the Governor is Sonnenberg, who coaxes his champion on. Dingle Dwarf can be seen near the foot of another contestant, Joe Koons, Parkers Prairie. A crowd of 1,000 saw the new event.
Feeding studies determine the value of medications in improving feed efficiency.

Are you curious about life’s secrets? As a scientist-to-be or as a farmer looking for a better way, you should meet

Your Partners

Possibly you have never seen this partner of yours. He wears a long, white coat and works in a bright, shiny laboratory. All around him are the microscopes, the test tubes, and the complex equipment which makes up the tools of his trade.

He is a research scientist in the field of animal health and nutrition.

The great progress that has been made in animal agriculture during the past 15 years has shown how important he is to your farming future. Medicated feeds and animal health products are helping produce healthier, more productive poultry and livestock. Much of the credit for this advancement belongs to scientific research.

Extensive research by college, state, and federal experiment stations and commercial laboratories of drug and feed manufacturers has produced near miracles . . . not only in animal but in human health as well.

But what do these partners of yours actually do?

During the dedication ceremony of a new wing to their chemistry laboratory, a scientist at the Hess and Clark Research Center in Ashland, Ohio, described their efforts this way: “Research activity in this field is the development of new compounds and the improvement of existing compounds to combat disease and improve health.”

Another Hess and Clark scientist used the example of “taking a journey down a long, twisting path with dead-end sidetracks (which incidentally also provide useful information) to discover and develop a useful product.”

One starting point for this journey might be with the organic chemist. He conducts an unending search for new chemical compounds which might aid in the treatment, control, or prevention of animal disease. For an idea of the tremendous task involved, simply consider that an estimated half a million organic chemical compounds have been isolated and identified. In developing ideas for new chemicals, the organic chemist calls on his experience and knowledge of known compounds and what they do. Once an idea evolves, planned research is started.

First, an intensive literature search is made to see whether the new compound has been previously developed. If it hasn’t, the next step is to produce the new chemical in the laboratory.

Scientific apparatus is brought into play. The components of the new compound are carefully combined. Then with equipment such as an infra-red spectrophotometer, the compound is “fingerprinted” and analyzed to confirm its chemical structure.

A unique instrument known as a gas chromatograph that separates mixtures of compounds into individual components and is capable of finding concentrations of one part per million is also used.

From the organic chemist, the new compound goes to the biochemist in the biology lab and perhaps to the nutrition lab at the same time. The biochemist will determine whether the drug has the power to produce the desired result of improving animal health. Much of his testing will be done chemically, but he will also conduct experiments on live animals.

Finding out what happens to the medicant or drug inside the animal is one of the tasks of the biochemist. Is the chemical changed? If so, where is it changed and into what is it changed? Is there residue remaining in the tissue? To find answers to such questions, the biochemist often uses radioactive tracer experiments and other highly technical studies.

Assuming a new basic drug is found biologically effective in improving animal health, another group of scientists will begin work to transform the drug into a product. They will test and experiment to find the best way to administer the drug. Experiments will determine whether it shall be an ointment, a capsule, a tablet, or a liquid. They will expose it to extremes of heat and cold and other conditions which

The National FUTURE FARMER
in Animal Agriculture

may affect the drug and prevent it from doing the job for which it is intended.

The two guiding principles for this group of scientists is finding the best method of presenting a drug to an animal and finding the method that is most efficient for the farmer.

At the same time this activity is going on, the nutrition scientists have been finding out what effect the drug might have on feed conversion and weight gain.

These nutrition specialists conduct long-term feeding studies under controlled laboratory conditions. Precise measurements and constant observations are carefully recorded. Laboratory conditions permit the control of many variables so the effect of the test drug can be determined.

Testing procedures vary according to the animals and drug being tested. Usually, however, before testing on the animal for which the drug is intended, many previous tests and experiments are conducted on smaller laboratory animals such as rats, mice, rabbits, and Japanese quail.

The last or, perhaps more accurately, simply another step in the research circle will be field testing. These tests are conducted under actual farm conditions, supervised by yet another group of field research scientists.

In field research, the product undergoes its crucial testing to find out if the laboratory-proved effects will be the same under field conditions. Before a new animal health product is marketed, thousands of animals or birds will have been involved under laboratory and field tests. Also, biological and pathological studies will have tested the drug to make sure it is safe when used as directed.

All the research information is checked and rechecked. The data is submitted to the Federal Food and Drug Administration for further evaluation. After clearance by the Food and Drug Administration, the new product is ready for marketing and takes its place among the growing number of animal health aids available to the farmer and rancher.

Anywhere along this path, after many months—often years of searching—the journey can end in costly, frustrating disappointment. Yet even failure adds to the scientist’s ever-increasing store of knowledge.

When the search ends successfully with the development of a new drug or product that effectively combats disease and improves animal health, your partner in scientific research has helped the farmer benefit mankind through more efficient food production.

(Editor’s Note: If you are thinking about an off-farm agricultural occupation, you may wish to consider this field of scientific research. In addition to the careers mentioned in this article, there are hundreds of supporting careers as laboratory technicians and research specialists.)
When calling predators

You Are The Hunted!

Predators can be hypnotized with these crafty methods. Sure to outfox even a fox.

By Russell Tinsley

WEBSTER defines hunting as "the pursuit or chase of game or wild animals." But how about hunting with a reverse twist? Instead of pursuing the animal, let the critter seek you. With a little device that, when blown, imitates the squeal of an injured rabbit, the man no longer is the hunter, but instead he is the hunted.

The sport is called predator calling. If you think stalking a wild animal has suspense and excitement, then wait until you see a sinister-looking predator come rushing toward you, almost as if it is hypnotized, its quick eyes searching for the weird noise, the promise of an easy meal overpowering its sense of survival.

This is a different brand of hunting. And the best part of it all, perhaps, is that it can be practiced anywhere at any time of year. Predators are widespread, their numbers are increasing, and in most states they are unprotected. In winter or summer, when regular seasons are closed, there is still hunting to be had. Predator calling is year-around sport.

Whoever coined that time-worn phrase "smarter than a fox" never tried calling one. Of all predators that will answer the dying rabbit call, the fox is easiest to fool, particularly the abundant gray fox. The red fox is more cunning, but it enjoys a dinner of tender young rabbit, too. If one is in range of your calls and you've minded your ABC's of calling technique, it will come toward you, often in a fast run. When foxes answer a call, they respond swiftly.

There is nothing difficult about outfoxing a fox. The call itself—the tone and pitch—is quickly mastered just by following the instructions which come with a predator call. It is available at any sporting goods store for less than $5.00. Far too many beginners

(Continued on Page 53)

An eager fox comes charging toward the motionless caller. Anyone can learn to use the mouth-blown call to dupe foxes.
“Every hunter must shoot his share of tin cans before he takes a crack at a lion.”

“I couldn’t even begin to count the number of tin cans my Winchester 22 put daylight into,” says David Ommanney, the Winchester man from Africa.

You’d expect a professional hunter from Africa who hunts lions for a living to turn up his nose at shooting tin cans.

Not David Ommanney.

Look what happened when we invited him to hunt deer with us in Maine last fall.

This boy, Jimmy Sprague, who lived near our camp, came over to show us his new Winchester 22. (He really just wanted to talk to David about hunting lions.)

Well, as it turned out, Jimmy’s gun was just like one David had in his safari battery back in Africa. (Not for hunting lion, of course, but to use on birds and varmints.)

“This is a real rifle,” said David when he saw it. “Mine will group five shots at 100 yards that you can cover with a half crown. And that’s darn accurate shooting.”

It was David who suggested plinking at tin cans. "If you want to hunt lion, you’ve got to practice," he said. “You can spend a couple of weeks finding a lion to shoot at. You know, one with a good mane. And then you may get only one shot at it. So you’ve got to learn to make every shot count.”

In between shots, David mentioned some other things besides good marksmanship that Jimmy could learn from his 22. Like knowing where to aim to hit a vital spot. And knowing how far the rifle will shoot. And what its effective range is. And knowing what size game it should be used for.

“Don’t let anyone try to tell you plinking with a 22 is kid stuff,” he told Jimmy. “You can just tell them that you’re practicing to hunt lions.”
MILKING PARLOR
OF THE FUTURE

THE DAIRY farmer of the future will milk his cows in an automated milking parlor. His only manual function will be attachment of the milker units.

Such an installation will require only one operator to handle a complete milking for as many as 500 cows. In the most efficient installations of today, one man can milk a maximum of about 100 cows.

The De Laval Separator Company is already in the early stages of developing such an automated system. The company describes its automated parlor as "about 30 percent hardware and 70 percent imagination right now."

As each cow enters the parlor, she passes between a pair of sprays for udder washing with warm water, then over a drain and blower where warm air dries the udder. She continues down the alleyway to the nearest open stall. As she enters it, the gate closes automatically and an electronic scanner identifies her to the control console.

The console meters the proper amount of feed for that cow—a quantity predetermined according to her productivity—into the stall and prints the cow's identification on a milking performance chart. The operator then attaches the milking unit and moves on to the next cow.

An automatic sensing device replaces the strip cup. It will detect the slightest abnormality and record it on the milking performance chart, where it alerts the dairyman to take corrective action.

One operator could handle 500 cows in this automated milking system being developed for tomorrow's farmer.

When unmarketable milk is detected, it is automatically diverted.

As each cow is milked, the control console creates a milking performance chart. These charts give the farmer a daily record of production and milking time. The dairyman can review the charts on a regular basis to update feeding procedures and for guidance in culling and breeding.

The system automatically removes the machine when milking is completed and directs the cow out of the parlor.

It is too early at this stage of development to estimate the cost of an installation. However, De Laval estimates that 100 cows will be the minimum-size herd for which automated milking will be economically feasible at first.

Current trends towards fewer and larger dairy herds, plus the difficulty in hiring and keeping qualified farm help, are factors that create the need for automation.

Future Farmers' BOOKSHELF

These new books and educational materials are reviewed as a reader service. If your local bookstore doesn't have them, write directly to the publisher and mention The National FUTURE FARMER.

Hunting the Whitetail Deer (Harper and Row, 49 East 33rd Street, New York, New York 10016, $1.50 in soft cover, $3.95 in hard back)—This authoritative book is a comprehensive guide to all facets of hunting the most popular big-game animal in North America. It contains brand-new material written by Russell Tinsley, contributing outdoor writer for The National FUTURE FARMER and outdoor editor of the Austin American-Statesman newspapers in Texas. The 144-page illustrated book tells readers all about the whitetail, firearms, equipment, scouting the hunting area, technique, weather signs, dressing, carving, and cooking venison, hauling deer out of woods, and preserving the trophy.

Farmstead Modernization (Educational Service Behlen Manufacturing Company, Columbus, Nebraska, $1.00 per kit)—Why are so many farmers struggling to realize a respectable profit in today's market? One reason is that the nucleus of most farm systems has been sadly neglected. . . . the farmstead. To help correct and improve the efficiency/profit of your farmstead, Behlen has collected ideas and know-how of some of the best farmstead "brains" in the country and put them together in eight booklets. Kit includes complete materials and instructions for drawing your own farm in scale model.

Ducks at a Distance (Superintendent of Documents, Government Printing Office, Washington, D. C. 20402, 25 cents, Catalog No. 149.6/2; D85/2)—A full-color handbook for students and hunters. Tells why identification is important and what to look for. Shows how to tell one species from another by flight pattern, action, color, shape, and voice. A valuable guide for all who want to identify species of waterfowl.

The Quality of Courage (Bantam Books, 271 Madison Avenue, New York, New York 10016, 50 cents in paperback)—A collection of true stories of heroism and bravery by Mickey Mantle. The one thing Mickey Mantle probably knows more about than baseball is courage. Hobbled by injuries during most of his career, he has gone on to become one of baseball's all-time greats. These are the stories that have inspired Mickey himself on his way to the top.

"Which do you want installed . . . the overhead fixture or a floor outlet?"
EXPAND UP INSTEAD OF OUT

TAKE A FRESH LOOK at fence, your newest income producing tool. Strong stock tight fence can turn neglected acres and idle acres into pastures of profit—with very little labor.

Rolling land or thin soil returns more net income in good grass and legumes than in concentrated cropping. A leading farm publication tells us high yielding grasslands may produce as much as 12,000 to 15,000 pounds of milk or 600 to 700 pounds of beef or lamb per acre. Treat your pasture as carefully as you treat your corn...to turn it into acres of profit opportunity.

Long-life RED BRAND fence is the first step in this new management idea. It makes the right use of pasture, including rotational grazing, as easy as opening a gate. Exclusive Galvannealing® fuses zinc deep into every copper-bearing wire. Result? Added years of trouble free pasture profit. See your RED BRAND dealer today.

KEYSTONE STEEL & WIRE COMPANY
Peoria, Illinois 61627
A New Beginning

Mark knew what he wanted, but somehow it was slipping from his grasp!

Fiction by B. H. Hamilton

The October sun was hot on Mark’s back as he broke corn and threw it into the trailer. Everything seemed in harmony—George’s laughter as he drove the roaring tractor through the field, the rustle of fodder, the thud of corn falling into the trailer, and crows cawing hungrily from a distance.

It was a day to remember. It might be a long time before he again worked in the fields with his father and younger brother, but Mark was glad this was the last load. Now he could begin college, and George could go back to high school.

When the last of the corn was unloaded, his father turned to Mark and said, “A fair crop, but not what I expected. I guess that schooling will have to wait, eh, Son?”

Mark could scarcely believe the words. “Why, I thought it was all settled,” he said, trying to control his voice.

Old Tom took a plug of tobacco from his faded jeans pocket, cut a chew, then looked again at his son. “We will barely have enough to get by on till spring. I asked Jed to let you work in his store this winter. We can save a little for fertilizer next spring. Come fall, you can go if your mind is still set on it.”

Mark bit his lips in disappointment and frustration. He had planned to go to college since grammar school. He had wanted to work in town this past summer and save money for college, but his father had said, “You stay here and help George and me with the crop. You can go to school this fall after the crop is in.”

Mark had not minded the hot days and hard work. His weekly visits with Nancy Landry had brightened the summer. He remembered their talk Sunday and her warm hand in his. How could he tell Nancy?

Mark noticed at supper how tired and worried his mother looked as she put more bread on the table. He glanced across the table at his father and knew that he was happy because the season’s work was over.

Leah, 17, finished her peas and began to eat her apple cobbler deliberately. “I’m not going back to school after Friday,” she announced defiantly. Her father set his coffee cup down with a thud. “And just why aren’t you going to school after Friday?”

“First,” she said, “because I have nothing to wear except my old summer dresses and my old white flats. I can’t wear them to school any longer.”

Mark looked at his sister with symp-

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The National FUTURE FARMER
SPECIAL INVITATION TO
ALL FFA MEMBERS

"Power Train '66" is heading your way. This year, John Deere Day
offers you ninety minutes of action movies based on a 3/4-mile
train loaded with new John Deere Equipment.

On board "Power Train '66" you'll see what's new in The Long Green Line
a unique hay cuber . . . narrow-row farming equipment . . . plus movies that
introduce new equipment especially designed and tested for
crops and conditions in your area.

As a long-time donor to the FFA Foundation, John Deere realizes the interest
FFA members have in modern farming methods and machinery. You'll
particularly enjoy the information and entertainment in this year's
John Deere Day program. Get a group together from your FFA chapter.
Plan to see "Power Train '66" when it comes to your town.
Contact your John Deere dealer for exact information.
pathy and understanding. He knew that she was about to cry as she flung her dark hair from her eyes and took her dishes to the sink.

"I must say you have it as good as the other farm children," said old Tom.

Mark knew there was no use in trying to explain or to argue with his father. He would never understand. Doubtless, he really believed the girls' clothes were as good as anyone's. Mark noticed his mother's fingers tremble on her cup.

Fifteen-year-old George grinned. "Oh, Dad, don't mind Leah. She just wants to look pretty for Charles Jones."

Mary arose and picked up her dishes. "Well, my old white flats have holes in them, and Leah's old dresses that I wear are falling apart."

"Children, that will be enough," re-buked their mother.

"Well, it's true," Mary said. "There's not another 12-year-old girl in school who doesn't have at least one new dress."

Mark noticed how cracked and old the dishes were. He took his plate to the sink. "Don't be too worried," he said softly to the girls. "We will manage something."

"But what?" Leah's voice was doubtful.

"I don't know yet, but I'll do something."

He had to find work and not at Jed's store either. The girls must have shoes and at least one new dress. Mother needed new shoes too and dishes.

Mark went outside. Wild geese were flying across the thinly veiled sky. The moon showed perfect "V" formations as a gentle breeze brought their honking clearly. He watched for a moment, then started walking along the trail that led through the woods to the Landry place. In addition to being Nancy's father, Mr. Landry was also their landlord.

Suddenly the wind was chilly, and he walked briskly, thinking of Nancy and his talk with her Sunday night. They had sat in the swing on the broad Landry porch. She had put her hand on his and told him, "A year from now I'll be in college, and you will be in your second year. If we both go to State, we can be together, until you finish." He had said nothing. She had removed her hand and sat pensive a moment. "Then, I guess you'll go away and I'll never see you any more."

"That's a long time off," he had said.

"Not if we are near each other. We must begin now to plan for our future aims."

He had held her warm hand tightly. "I know, Nancy. My plans are made. First, to college, then a farm somewhere, somewhere, and ... it may be a long time."

"I know," she had said softly.

"I don't mean to ever be very far from you," he had said, "until you have a chance to grow up and know exactly what you want."

"I know what I want now. I want ..."

"No, Nancy, don't say it. Wait, please."

He had wanted to tell her how solidly his plans were woven around her, but the time was not yet right.

Now, walking through the dark woods, he wondered if she were too young. Now he must tell her he could never go to college—or maybe not for a long time—until Leah, Mary, and George had had their chance. He knew that Leah had dreams for college too. Leah must have her chance, and only through his efforts could she have it. She must have a better life than washing cracked dishes.

(Continued from Page 36)
A FREE MOVIE

"men who feed the world"

the story of Jimmy Carter and his Brown Swiss calf Heida...

This is a story that really happened... of a calf that really did exist... really did win a prize ribbon... and really was fed Florida Citrus Pulp in her feeding program. This full color 16mm film, with a running time of 14 minutes, is available for showing to all clubs and organizations. Just fill in the coupon and we will ship you the film with enough Citrus Pulp Brochures for each member of your group.

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FLORIDA CITRUS PROCESSORS

December-January, 1965-1966
A New Beginning

(Continued from Page 38)

Nancy could go on to a better life without him, but his heart was heavy at the thought of it.

Mr. Landry was sitting on the front porch when Mark entered the yard. "Come and join me, Mark," he called. "Nancy's gone to visit Sue Parker." Mark sat down on the steps. "I just wanted to talk to her."

They sat in silence awhile. Mr. Landry smoking his pipe and Mark thinking. Mr. Landry began to talk about the crops and plans for next year. Mark felt bitter. What could he hope for or expect from next year? He arose to go. "I'll come back some other time. Tell Nancy I was here."

"Mark, something is bothering you. Can you tell me?"

Mark had had no notion of bringing his troubles to Mr. Landry, but before he realized what he was saying, he was explaining the whole situation under Mr. Landry's sympathetic questioning. Finally, he felt silent, ashamed.

"School has been going on for a couple of weeks now," Mr. Landry reminded him.

"I know."

"Could you catch up if you began now?"

"Yes, but there's not a chance."

Mark began to walk back and forth in front of the steps.

Mr. Landry relit his pipe before continuing. "You know, Mark, some young people go to college on loans."

"Who would loan me money? Besides, I've got to help Mother and the kids."

He sat back down, remembering the despair in Leah's voice, the bitterness that had showed briefly in Mark's face. He knew how his mother must feel at her inability to help them.

He could see her fingers trembling on the cracked cup.

"No," he said. "I can't go."

"Mark," Mr. Landry said firmly. "We all have just so many working years. We spend our lives either doing the kind of work we want to do, making fairly good money, or just doing what we must do, making a bare living, being discontented, with no chance of helping others. Being prepared gives us a chance to help those we love much more than working at cheap labor, helping only a little now and then."

"You don't understand," Mark told him. "If I borrow money and go to school now, by the time I pay it back, it will be too late for the others. They—or at least Leah—need it now."

Mark couldn't bring himself to mention the old white shoes and the faded dresses.

"I happen to know the seed and fertilizer store in town needs someone to help on weekends, and the owner mentioned a student, I told him about you. It would be hard, studying and working too," Mr. Landry went on. "If only he dared try! But Mary's shoes had holes in them, and no telling when his father would buy her new ones."

Mr. Landry put a big rough hand on Mark's shoulder. "You could get a long-term loan to pay your tuition and get some of the things you mentioned earlier."

"A loan from who?" Mark felt a spark of hope.

"I could help you get it through the bank as you need it." Mr. Landry got to his feet. "You think about it till morning; then, if you are interested, meet me at the bank."

The dark forest was a happy place as Mark walked back along the winding path. Every rustle of the leaves held a special significance. When he reached home, he went quietly to bed. When morning came, Mark asked permission to use the old pickup.

"I'll go with you as far as Jed's store," his father said. "Don't forget to ask Jed about that job."

"I have another plan right now, Dad," Mark said. "Why don't you ask Jed about the job for yourself? I'm sure you could do it as well as I."

Old Tom carefully cut himself a chew of tobacco. "I guess he might let me work a little at that."

Mark smiled. "Let's go, Dad. Want me to drive?"

Old Tom spat. "I reckon I better get my own hat."

"I'll get it for you," Mark said.

He went into the house and got the hat. It was old and crooked but the best that his father had. He felt a great compassion as he gave the hat to his father.

When Mark stopped the truck in front of Jed's store, his father got out. He took his ragged billfold from his jeans pocket. Mark watched as the gnarled old hands removed two bills.

"Here, Son. I reckon this will get the girls some shoes, and when Jed pays me, I'll get some cloth for your mother to make them some dresses."

Mark swallowed hard. "No, Dad. Why don't you take the girls to town tomorrow and let them get their shoes?"

"Well, I reckon they might want to get their own shoes," he said and went toward the store.

Mark met Mr. Landry at the bank in town. He felt humbled by the words of respect and concern with which Mr. Landry spoke of him to the bank president.

When Mark left for home, he drove carefully so that the well-packed dishes in the back of the truck would not break. He knew his mother would like the pink roses in the center of the plates. A new hat for Dad was in a box beside the box of dishes. Dad needed something to bolster his pride. He had had a hard time making a living for them all.

The drive home was a dream, a challenge. Mark could see himself walking through those college doors he had dreamed about for so long. He saw Nancy's happy face as she stood on the steps of the home they would have some day. Nothing could stop him now, though he knew there would be hard work and sacrifice.

He parked the truck near the back door. His mother was putting dinner on the table as he set the box of dishes on the floor. "It's all yours, Mother."

He kissed her and went back for the hat as she exclaimed, "Why, Son, what in the world is it?"

He smiled, "It's a beginning, Mother."
IN OUR modern society, when someone is suffering from an illness, he seeks the professional help of a physician. The physician examines the patient and by a deductive process relates the patient's symptoms to a particular disease. The physician then prescribes a medication to ease or remedy the disease and thus cure the patient. But what happens when the ailing victim is our country's gigantic agricultural enterprise?

First of all, we must examine the subject. Upon examination we find that there has been so much public wailing about the petty problems of agriculture in recent years that a major problem has been created, resulting in a general lack of interest concerning the agribusiness industry.

Before we can prescribe an elixir or a cure for this problem, which has been one of the most persistent and least understood problems of the American people, we must have a better understanding of its causes.

A primary cause of the problem of lack of interest is the fact that the public in general still has a 50-year-old concept of agriculture. They fail to see that American agriculture has advanced more in the past 50 years than in all prior years of our history, and is no longer confined to the fence lines of the farm.

Today agriculture is the nation's largest single industry and is vital to our continued economic and social stability. The production, processing, and distribution of agricultural products employ approximately one-third of America's labor force.

Agribusiness is a field of unlimited opportunity for young men and women who seek a rewarding career and have the ability and desire to work. Hundreds of new jobs have been brought about as the result of scientific and technical advances. The agribusiness industry is actively seeking college-trained persons to fill these jobs, but because of the antiquated conception of agriculture on the part of the general public, less than one-half the number of needed college graduates enters the agribusiness industry.

A second cause of today's lack of interest is basically political. A politician is defined as a person who gets things done for the good of the people and the nation. Indeed, our politicians in Washington have studied the problem of farm income stabilization, discussed the situation, formulated opinions, and introduced and passed legislation which they felt would help insure the stability of farm income.

Unfortunately, these programs have failed to solve the problem. But what is even more depressing is the fact that many American farmers lack the initiative to take constructive action to solve their own problems and are content to sit back and let the government do their bargaining for them. Thus our agricultural abundance, which should be our greatest blessing, has become our greatest problem.

This situation has caused the public to "sour" on the agricultural industry, which in turn has discouraged many qualified and interested young people from pursuing careers in agribusiness.

Perhaps the greatest reason for the shortage of qualified young people in the agribusiness industry has been the failure of agriculture to present itself as an attractive and rewarding vocation.

In a survey of "Why certain college-bound rural high school boys in Virginia did not enroll in an agricultural curriculum," conducted by Dr. B. C. Bass and Professor C. E. Richard, of Virginia Polytechnic Institute, it was found that nearly half of the rural high school seniors interviewed reported that they were not acquainted with the opportunities for employment in the industry of agriculture. It was also noted that about 44 percent of the boys had been advised that there were more and better opportunities in occupations other than in agribusiness.

The shortage of qualified people entering the agricultural industry is more dangerous than we might realize. A United Nations study concerning the world's population explosion pointed out, "Man's ultimate fate could well hang on the outcome of the race between production and reproduction."

While population is not a problem at present in our land of abundance, three-fourths of the world's population goes to bed hungry. It should also be remembered that the population of our country and of the world is growing rapidly. Indeed, if we are to see to it that future generations enjoy our abundance and that we give assistance to the starving peoples of the world, we must continue to develop and improve our agricultural program. The only way that this can be done is through the efforts of a new generation of highly skilled and well-trained agricultural workers.

Now that the problem has been realized and its causes discovered, a remedy must be prescribed.

It is my belief that those engaged in the dynamic field of modern agriculture face the obligation and possess the ability to remedy this serious problem of lack of interest.

The first and most obvious way of meeting this problem is through a well-planned and intensified program of public relations. We should endeavor to promote the true image of agriculture with its vast vocational opportunities to the general public. There are opportunities not only in farming and farm management but in business, industry, education, research, specialized services, communications, conservation, and recreation.

The non-farming segments of agriculture are advancing spectacularly. Agricultural occupations are becoming highly specialized and diversified, offering the qualified youth enormous job opportunities in practically any field in which he is interested.

We should also try to counteract the popular idea that agricultural occupations are inferior to nonagricultural occupations by publicizing the scientific and technical aspects of modern agriculture.

Secondly, we should prepare ourselves to provide the necessary leadership to resolve the problems of agriculture rather than continue the senseless complaining which intensifies, instead of solves, our problem.

In the United States, we have the God-given ability to produce an abundance of food. As a third step, we should realize that if we fail to do all that is within our power to feed the starving peoples of the earth, we are committing a great sin against the Christian principles on which our country was founded and by which it has grown into the greatest nation on the face of the earth.

Herein we see the challenge which awaits us. The entire fate of mankind depends on what we will do with it.

Let us answer this challenge and proceed to remedy the grave problem of lack of interest in agribusiness and all its related headaches. If we apply ourselves to the task and work diligently, indeed, we can act not only as an elixir for our nation's agriculture but as a stimulant for our country and the entire world to reach new heights of prosperity and brotherhood.
INTERNATIONAL—The United Nations General Assembly designated 1965 as International Cooperation Year to focus public attention on the cooperation among nations rather than on the conflicts. According to the National Citizens’ Commission on International Cooperation, there is no better example than worldwide Future Farmer projects.

Future Farmers are now active in Japan, the Philippines, Denmark, Brazil, Thailand, Panama, Colombia, Peru, Ethiopia, Great Britain, New Zealand, and Australia.

During the past four years, thousands of Future Farmers from all over the world traveled to distant countries. About 100 have come to the United States; nearly 2,000 FFA members have traveled to 20 countries abroad.

Wherever they went, these young people were welcome. They made friends for themselves and their countries. American youths visiting in Japan were greeted with welcome banners and flowers, singing students, and school bands. When they left one village, the mayor arranged a special service at a Shinto shrine to safeguard the visitors on their journey home.

KANSAS CITY, MISSOURI—A new concept in breed promotion was set in motion October 22 by the formation of the American Junior Hereford Association. Delegates and adult advisors representing 31 state junior Hereford groups assembled at the headquarters of the American Hereford Association during the American Royal Livestock Show, Kansas City, Missouri. The 125 breed supporters elected FFA’er Lawrence Kuhlmann, North Platte, Nebraska, to guide the new organization on its maiden voyage.

Kuhlmann won the 1965 Nebraska FFA Livestock Farming Award and is state president of the Nebraska FFA Association. Lawrence was the subject of a feature article in the August-September issue of The National FUTURE FARMER.

Left to right, seated: Martha Williams, reporter; Margeann Laurence, secretary; Lawrence Kuhlmann, president; Mary Sellman, 2nd vice president; and Pat Reed, director. Left to right, standing: Larry Benedict, 1st vice president; Larry Sterling, director; Mark Anderson, director; and Jack Dunford, AJHA treasurer.

WYOMING—The first place National Grand Farm Shop Award and $700 were granted to Buster High of Morton, Wyoming. He was among 288 mechanically minded high school shop students from 39 states who were selected to receive the 1965 School Shop Awards for Arc Welded Projects. Over half of the winning students built their projects while taking vocational agriculture shop courses.

Buster’s project, a portable squeeze chute for holding cattle, was built under the supervision of his instructor, Terry Slack.

NEBRASKA—Arlynn Aldinger of Wilcox, Nebraska, won $600 and the second National Grand Award. His project, a mounted sprayer, was constructed at Holdrege Senior High School, Holdrege, Nebraska. His vo-ag instructor is James L. Pollan.

CALIFORNIA—A self-propelled spray rig won Bill Benson of Tulare, California, third place in the competition and $400. Bill built the project under the supervision of Norman H. Walker, vocational agriculture instructor at Tulare Union High School.

MISSOURI—The fourth National Grand Award and $300 were granted to Michael Biellier of Mount Vernon, Missouri, for his holding chute.

The national school shop competition is sponsored by the James F. Lincoln Arc Welding Foundation.

Michael Biellier, right, and Advisor Dale Pontius with shop-built chute.
VIRGINIA—Pittsylvania County, Virginia, is proud of its contribution to the birth of the Future Farmers of America organization. Minutes are on file in the school board office in Chatham, Virginia, of a meeting held by the middle Virginia area vocational agriculture teachers at Dan River High School in 1928. At this meeting on Thursday evening, November 1, Henry G. Groseclose read what appears to be the original copy of the constitution, bylaws, and ritual for the proposed FFA organization.

The 36-year-old minutes read: “On Friday, November 2, 1928, the Dan River Chapter of the F.F.A.’s initiated 21 freshmen by demonstrating a new opening and initiation ceremony for the visiting teachers to observe.”

Dr. Harry M. Love, former vo-ag teacher at Dan River, states that Mr. Groseclose completed the writing of the ceremony while staying at the Hotel Danville and his boys had only one day to learn their parts.

The following day, November 3, 1928, a committee composed of vo-ag teachers submitted this report:

“1. To have this Dan River team visit other chapters and give the initiation.

“2. That the ritual be made nationally uniform in all the degrees, after more thought and study so as to make the occasion solemn and dignified.

“3. That we believe the initiation to be the best we have yet heard, heartily recommended that such be adopted and wish to congratulate Mr. Groseclose and Mr. Love on this most excellent piece of work.”

Members were Pop Wilkins, E. Y. Noblin, and T. M. Dean. Wilkins acted as chairman. (Chapter Chats)

NORTH DAKOTA—FFA chapters like the idea of an emblem that is standardized so any driver immediately recognizes it as marking a slow-moving vehicle. The National FUTURE FARMER’s cover story in the August-September issue created response from FFA chapters all over the country. Typical are these members of the Williston FFA Chapter.

Chapter Advisor V. D. Rice says, “These are our FFA members who were first to get the ball rolling on the use of the new SMV signs.” They are front row, left to right, John Miller, Ronald Lewis, Mickey Brunelle, Steven Helstad, Rodney Helstad, and Ardean Harstad. In the back row are Gary Toft, Daniel Kjorstad, Nicholas Andre, Lynn Kjorstad, Curtis Anderson, Glenn Jorgenson, Harvey Lee, and Dennis Barkie. (V. D. Rice, Advisor)
These new hog farming concepts signify a trend to specialization and mechanization.

When Granddad said, "They may fly to the moon, but they will never take the smell out of raising hogs," he couldn't have imagined the systems available today. Space-age science has triumphed to that ultimate and more.

On June 29 The National Future Farmer previewed a hog confinement system called the "Bacon Bin" when it was introduced to the press. The system promises to bring a smile of contentment to the faces of hog raisers due mainly to reduction in stress. William J. Conover, of Rhodes, Iowa, has had the system in operation on his farm for a year and a half. Here are some of the major breakthroughs cited:

- Virtual elimination of obnoxious appetite-reducing gases from animal wastes through an advanced manure disposal system that carries waste outside rather than accumulating under the building.
- A complete circulation and ventilating system. The circular design of the building eliminates dead spots, completely changes air every 60 seconds.
- A full 360-degree view of all 46 pens from the center of the structure permits close inspection and control of up to 450 pigs and sows.

This new system points toward a definite trend in the United States of specialization and mechanization in hog raising. Even so, it is well to keep in mind that a highly favorable corn-pork price relationship is desirable when producing hogs on a confinement basis since a heavy investment and related costs are required. With existing corn-pork prices, producers must get extremely high levels of efficiencies, particularly in the area of feeding, if a reasonable net return is expected above all costs.

Solar Heating

In western Illinois a solar drying system is harnessing the sun's rays to help heat and maintain healthy environments in swine raising buildings on the farms of William Gray of Hamilton and Tom Kirley of Kewanee.

By heating air in two buildings with special galvanized steel roofs and circulating it with automatic fans, the farmers provide dry air, cut heating costs, reduce disease losses, and lengthen the life of the buildings by eliminating corrosive atmospheres.

Marvin Hall, area extension engineer of the University of Illinois, who designed the two swine buildings, says: "The two main goals of the solar-energy system are to cut heating expenses in the winter and to ventilate and keep humidity low year-round. The heat gathered from the sun by the roofs in these two buildings is expected to reduce fuel costs the first year by more than enough to repay the extra construction expense."

The solar-heating ventilation system in both buildings includes these four main components:

1. A sandwich-type steel roof that collects heat from the sun to warm incoming air.
2. A collection chamber built into the middle of the roof to receive the warmed air.

(Continued on Page 49)
For the FFA Home

Your personal copies of the 1966 Official FFA Calendars!

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FFA painting on the cover, 12 color photographs of Future Farmers inside.

35¢ EACH

These Plan C Calendars are imprinted as shown on the Folding Poster Calendar illustrated on the right, and no additional printing can be added at these prices.

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Date pad has same pictures that appear in the booklet calendar plus the FFA painting on the back.

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The Education of a Horseshoer

One of Shakespeare's kings commented in despair that he would have given up his kingdom for a horse; these days most horsemen would part with similar treasures for a good horseshoer.

The horse population is on the increase throughout the nation, but the number of professional horseshoers has dwindled away mainly due to lack of adequate training facilities. The result is that horse owners, stable operators, rodeos, county fairs, and ranchers are finding it increasingly difficult to find capable "hot" shoers.

Oregon State University is attempting to remedy the situation in a state where the present 125,000 horse population has been growing over the past five years at a rate of 7,000 horses annually.

OSU is one of only two major colleges in the nation to offer a course in horseshoeing. The other is California State Polytechnic College. Several smaller, private colleges throughout the U.S. offer similar programs—a small number considering the urgent needs of horsemen everywhere for well-shod animals.

The OSU school consists of three classes a year. Each class is 15 weeks long and consists of 12 students. The school is under the capable direction of Charles A. Dickinson, a well-known Oregon horse trainer, who has been shoeing for 45 years.

(Continued on Page 48)
FREE for YOU

THESE booklets are free! You can get a single copy of any or all of them by mailing the coupon below. Just circle the booklets you want and send us your complete address.

91—Threads of Life—This 16-page booklet is the story of career fields in agricultural science. Tells how you can make it possible, through research in biological science, to feed, clothe, and house increasing millions. Explores such questions as why do plants flower and what is the role of microorganisms in a ruminant animal (National Academy of Science).

92—Instinct Shooting—George Carson, outdoor editor of the St. Louis Globe-Democrat, gives 11 pointers on how to point your gun with both eyes open and be right on target. If your friends call you a "hitless wonder," it's time to turn to this new method. (Daisy Manufacturing Company)

93—Where There's Smoke—A 16-page four-color "comic book," which emphasizes that more than one million young people of school age will die of lung cancer if present rates of cigarette smoking continue. Should help FFA chapters who are conducting anti-smoking campaigns. (American Cancer Society)

94—Careers in Wildlife Conservation—Since many of the careers in wildlife conservation are relatively new and highly specialized, guidance in such fields is often difficult to obtain. If you are interested in a career in outdoor America, this 16-page booklet is for you. (Olin Mathieson)

95—Lactation—A 20-page, illustrated booklet that takes an unusual approach to cow preparation for letdown and emphasizes key steps in more profitable milking. The booklet, based on scientific findings, treats and illustrates the subject of milking in a manner that will interest vo-ag students. (Crown Dairy Supply Company)

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What did you like best in this issue?

December-January, 1965-1966
The Education of a Horseshoer  (Continued)

The OSU classes have been amended several times to bring them up to date to fit modern-day shoeing requirements. Students receive instruction eight hours a day, five days a week, with most of their time devoted to actual lab work in the college's open-air blacksmith shop.

The course includes not only hot plating, corrective shoeing, heats, and welding but also the physiology and anatomy of the horse.

Veterinary instruction includes lectures and demonstrations on the horse's foot, pastern, and legs and a study of the elastic, sensitive hoof structures of the foot as well as the blood supply and nerves of the foot.

There are sessions devoted exclusively to welding because Dickinson believes that modern techniques call for farriers to have a solid foundation in electric and gas welding. Dickinson's graduates are "hot shoe" men, as opposed to cold shoeing where factory-made shoes of malleable steel are pounded into desired hoof shape.

After first learning the art of making a proper forge fire and how to care for and manage a farrier's tools, the student is taught the fundamentals of trimming and shaping. He will practice first on the feet of dead horses—a length of leg obtained from a killing plant and kept under refrigeration when not in use. Such legs can actually bleed and thus show the student his mistakes which, with a live animal, would cause serious injuries.

Then comes the task of working on live animals provided by local horsemen or from the college breeding herd. Each week Dickinson gives his students a new type of shoe to fit—and fit they must, for their course grade will reflect their skill. Graduating students receive certificates that are recognized throughout the nation.

Most OSU students are high school graduates and express much the same reason for wanting to become horseshoers: "I love horses and I'll be my own boss." As such, they'll earn between $10,000 to $15,000 a year, depending again on how hard they work, and some who go into corrective shoeing will earn upwards of $20,000 annually.

The average shoe can shoe an animal per hour, with the fee varying between $9.00 to $12.00 per horse. The number of horses a man can shoe each day depends on where he's working and how hard he wants to work. Most hot shoers carry their forges and equipment in pickup trucks and drive to where the horses are. Some average 50 to 100 miles daily in a given area.

For the student horseshoer, his expenses will vary depending on the quality of his equipment. Tuition at Oregon State is $350 for the 15-week course. Tools required as a minimum can be categorized as follows:

Fire tools—these include a forge, anvil, vice, hammers, tongs, and various small punches and heel cutters. An outfit of medium quality can be put together for about $100 to several hundred dollars.

Horseshoeing tools—these include shoe pullers, clinch cutters, hoof nippers, hammers, rasps, hoof knives, and various additional small items for trimming the hoof, nailing the shoe, and finishing. This set can be assembled from $75.00 to $175.

Horseshoers' supplies—these items comprise the shoes and nails, which are manufactured by a number of business concerns. There are various types of shoes built to correct certain deficiencies in gait or to cause a horse to perform in a given manner. These are more expensive, but the average set of four shoes of the common type costs about $2.00. Horseshoe nails cost about a penny each.

A graduate will need a pickup truck, and then he's in business.

A student at OSU must be at least 18, physically strong, and love horses. "If you're afraid of a horse, it will sense this immediately, and you can't do a thing with it," explained Dickinson.

"Youngsters who love horses and have a good shoeing background can find a most satisfying and lucrative career," said Dickinson.
SPACE AGE HOG FARMING

(Continued from Page 44)

3. A long warm-air duct, hung just below the ceiling, equipped with electric fans that force warm air down into the building.

4. A system of openings along the side walls of the building where air escapes after it has circulated.

At the Gray building, the highest heat gain was received one cold day in March when the outside air temperature was 10 degrees F. Hall says, "For best heat rise, we would rather have a clear sunny day even though the outside air is very cold than a cloudy day when the air temperature is not particularly low."

For summer, electric fans can be reversed to cool the buildings. Hot air will be pushed out through the distribution ducts and on through outside roof edges that serve as winter air intakes.

Feeding

The latest in self-service feeding of hogs has been developed by Carl Van Gilst, research agricultural engineer of Fort Atkinson, Wisconsin, and Robert M. Peart, associate professor of agricultural engineering at Purdue University.

The two engineers have developed a system which will automatically mix a slurry (liquid mixture of feed and water) and inject it directly into the hog's mouth. "It was found that a hog could consume 0.15 pounds of dry feed per minute from this nozzle when it was mixed with water at a 3:1 water-to-dry-feed ratio," the engineers say. "This is 1 1/2 times as fast as he could consume feed from a conventional self-feeder. Since general recommendations are to allow three to four hogs per self-feeder space, one nozzle should easily handle five or six hogs."

They estimate that electricity cost, including a motor used in the metering system, would be approximately $60.00 per year.

Ultrasonics

A new tool for use by breeders in the improvement of swine is ultrasonics. The machine operates on the same principle as echo sounding equipment in ships. A beam of high frequency sound is directed into the body tissue. As the sound beam passes through the tissue with different densities, sound waves are reflected or echoed on the screen. Smaller echoes are reflected from fat within a muscle (marbling). By measuring distances between echoes, a technician can predict the depth of fat and the area of the loin eye with a series of readings.

Under the direction of Leo E. Lucas, University of Nebraska, the Nebraska Swine Council has been using such a machine to screen possible herd boars and replacement females which have met desired performance standards. Although the accuracy has been somewhat less than perfect, it has been a practical aid in determining loin eye size in live animals.

Breeding

In the near future, farmers may plan their hogs... a crop at a time. How? By causing sows to come into heat all at one time, thus permitting synchronized breeding and farrowing.

In tests at Beltsville, Maryland, 132 gilt sows were given a synthetic drug called MATCH in their ration, brought into heat simultaneously, and bred artificially. Of those continuing in the tests through farrowing, all gave birth to their young within a three-day period.

The compound, developed and patented in England, is being examined by the Food and Drug Administration—a necessary step before it can be cleared for use by farmers.

Viewed in total, these new concepts indicate many changes are ahead in hog raising.
Waterloo means dairy cattle and judging contests to hundreds of Future Farmers who gather annually in this well-known Iowa city for the big Cattle Congress.

The 53RD National Dairy Cattle Congress opened with a big blue lake in its back yard as well as a big attendance in blue FFA jackets. More than 400 Future Farmers participated in events, which included the National FFA Dairy Judging Contests and the naming of a new FFA Star Dairy Farmer of America.

Machinery exhibits were moved to the parking area across the road when the Cedar River backed up to the doors of the Milking Shorthorn barns. The FFA Kiddies' Barnyard stood in more than four feet of water.

High water, however, failed to dampen the spirits of Future Farmers who participated in this king of dairy cattle shows. It is the site of national FFA, 4-H, and intercollegiate dairy cattle judging contests. Annually, more than 250,000 people visit its exhibits and attend its programs.

The purpose of the Congress is to present a nationwide showing of quality dairy cattle in each breed rather than to encourage large numbers of exhibits. This policy helps to demonstrate the value of purebred dairy cattle to thousands of breeders. Future Farmers, and farmers who are interested in improving their herds.

During the past 17 consecutive years, over 40 states and Canada have been represented at the Congress. Various firms place over 400 commercial exhibits relating principally to the dairy industry.

The FFA Contests

FFA teams from 41 states were represented in the Dairy Cattle Contest, and 29 states competed in the Dairy Products Contest.

National Dairy Judging Contests for Four Star Dairy Farmers. From left, are Julius Beaty, Tennessee; Thomas Bradbury, Kansas; Frank Albert, Washington; and D. J. Mosher, New York.
David J. Mosher, Star Dairy Farmer of America, was a dual winner. He is shown here with Maine’s Governor Reed (right) after being named North Atlantic Star.

To-ag students were started before FFA was organized and have continued annually except during the war years of 1942-46. The first contest was held in connection with the National Dairy Show at Indianapolis, Indiana, in October, 1925. Beginning in 1926 and continuing until 1941, the contests were held at the American Royal Livestock Show in Kansas City, Missouri. Since 1947, the events have been included as a part of the National Dairy Cattle Congress in Waterloo, Iowa. The plan of presenting the Star Dairy Farming awards at the Congress was begun in 1954.

The Winners

David J. Mosher, 17, from Greenwich, New York, was named national winner of the Future Farmers of America’s Star Dairy Farmer award. He was presented a $250 check by the FFA Foundation during a colorful pageant, “The Parade of Stars,” on opening day of the National Dairy Cattle Congress. Members representing 41 states participated in the ceremony, carrying state flags and leading animals representing every major dairy breed.

Three other FFA members were presented regional Star Dairy Farming awards of $200 each. They are Thomas Ray Bradbury, 18, Uniontown, Kansas; Julius Beatty, 18, McDonald, Tennessee, a member of the Bradley FFA Chapter; and Frank Louis Albert, Jr., 20, Stanwood, Washington.

A committee of judges, which included leaders in the dairy industry, met in Waterloo to select the national winner. (The complete story of young Mosher’s achievements will appear in a later issue.)

The Dairy Cattle Judging Contest was completed Saturday, October 2, and awards were presented Monday evening at a dinner sponsored by the Sears-Roebuck Foundation in the Electric Park Banquet Hall. The FFA team from Illinois took first place and the special team trophy.

Dairy products judging was completed on Monday at the Waterloo Carnation plant, and awards were presented at the Sears banquet. The California team won first place.

Other High Lights

FFA’s participation in the Congress featured two new events. Both occurred on Sunday. First was a “Morning Watch” worship service and breakfast at the Electric Park Hall. Breakfast was provided, courtesy of the American Dairy Association. Later that afternoon National FFA Vice Presidents Joe Perrigo and Larry Prewitt helped conduct the first leadership training program held in connection with the Congress. The program included discussions on effective chapter meetings, the FFA code of ethics, and a report on “Agriculture in Great Britain” by Michael Danieli of the National Federation of Young Farmers, who was visiting the U. S. on an FFA exchange program. Skits prepared by the Bear River, Utah, and Grady, New Mexico, FFA Chapters on “Look Like a Leader” and “I Would Like You to Meet...” were real crowd pleasers.

By Monday evening the Cedar River had retreated to its banks, the contests were over, awards had been presented, and as one speaker at the final banquet summed it up, “This experience will live with you regardless of where you go or what career you follow.”

A tag that will stay In A Pig’s Ear

Yes, an ear tag that will actually stay in the ear of a hog! It won’t hang up and tear out and has no sharp corners or sharp edges to keep the ear sore, irritated and infected.

They are made of tough weather resistant lifetime plastic, by the Temple Tag Co. of Temple, Texas, and come in 15 different colors.

The color scheme can be used in a dozen different ways. By using a different color each year a rancher can tell, at a glance, how old an animal is. By using color, you can separate families, strains, high or low producers, culls, etc.—Turn them all out together, and when you want to separate them—there they are. They will not discolor or fade, and will last the life of the animal.

Names and numbers will not rub off... years later, stock wearing Temple Tags are easily identified. They are large enough to be seen at a great distance, but small enough to stay in the ear, and the big numbers can be read from horse-back.

Use them on everything, cows, hogs, sheep and goats. Ideal for custom feeders or where performance records are kept.

TEMPLE TAG CO., TEMPLE, TEXAS

Please send price list and a free sample of Temple Tags.
Flying Field Trips
(Continued from Page 28)

- Pilots are commercially rated and approved by Aeronautics Commission, and only high-wing aircraft are used.
- Exact time is determined by weather. Usually late April or May provides better weather and bare ground. Crop growth is evident, stock dams are full, and irrigation systems are beginning to operate.
- Instructor gives running commentary during flight.
- Early morning flights are preferable to avoid turbulence.
- Assistance of the local soil conservationist is helpful.
- Post-flight de-briefing is usually quite lively, since most boys have seen their own farms from the air. Students often come up with ideas for improving their farm or developing a booth at the county or state fair.

What about the danger of flying? It doesn’t seem to worry jet-age students or parents. A permission slip signed by the student’s parents is good public relations, but James M. Schultz, voag instructor at Fergus County High School, says that parents of the students were in complete agreement with the program. “I did not receive any phone calls or questions in relation to the danger or requirements. I am sure the comments of students to their parents gave the program its needed public relations.”

Apparently, Schultz was correct because planners of future field trips are making room for fathers of students who want to come along for the “learning.” This all goes to prove that a “worm’s-eye view just doesn’t compare to a bird’s-eye view.”

History of the Breed

On June 12, 1964, the American Galloway Breeders Association established its first national office at Billings, Montana, and took a major step in a drive for Galloway acceptance in the United States. It will probably go down as a milestone in the history of this unique beef breed.

All business of the association is now handled through the office of H. E. Gerke, newly appointed secretary-treasurer, at the Livestock Commission Company Building, 1202 First Avenue, North, Billings, Montana.

Writers on Galloway cattle generally agree on three points: that the breed is a very ancient one, that its origins are obscure, and that it takes its name from the province of Galloway in southwest Scotland. The most attractive theory is that the present breed is descended from the cattle which the Norsemen brought with them when they overran the coastal districts of Scotland.

According to history the cattle of Scandinavia were a polled breed, and it is assumed that these cattle are the lineal ancestors of the Galloway breed as we know it today.

A survey of agricultural conditions in the counties of Scotland made at the end of the eighteenth century gave the first written reference to the breed. A more detailed reference was made by Marshall in his Agriculture of Norfolk, published in 1794. He described the breed as being large, thick, short-legged, hornless, and black or brindle in color. Calling the Galloway beautiful, he pointed out that their backs were broad and level and their quarters long and full. Most animals, he said, were refined about the head and neck and possessed barrel-like girths and fine bone.

From 1840 onward, dairying increased steadily in Galloway, and this resulted in the gradual displacement of Galloways from the lower lying and better quality farms with Ayrshires and other dairy breeds. Generally the change was a steady one, and the Galloway was slowly but surely pushed into the hills and marginal areas.

Pedigree breeders, however, had one asset working in their favor. It was a steady demand for heifers to cross with white Shorthorn bulls. In spite of some disagreement, trial and error had proven the Shorthorn-Galloway cross produced an excellent animal. The resulting polled calf became known as the “Blue-grey” and earned a wide popularity.

The popularity of the Blue-grey and the enthusiasm of the remaining Galloway breeders kept the breed going until the outbreak of World War II, which brought about a change in the position of the breed.

With the pressing necessity to increase food production from hills and marginal land during the war, attention was again focused on the Galloway. The Galloway thus became established as an ideal breed for hill and marginal lands.

The National FUTURE FARMER
worry about getting the proper call down pat and ignore other fundamentals that are more important to success. The call itself is just a small but integral part of the over-all scheme.

The foremost mistake beginning callers make is to hunt in territory where there are no foxes. Usually, the gray fox is a creature of the woodlands while the red fox is more plentiful around agricultural areas, although this is no hard-and-fast rule. Often the range of the two overlaps. The wise caller learns to "read" signs like tracks and droppings, foxes habitually trot along well-defined country roads and trails. If you see one, you can return to the immediate area in a few days and be assured the animal won't be far off. Foxes don't roam a lot of countries.

Another error is to call an area several times within a short time span. A fox once fooled by a call is difficult to outwit again. Always, if possible, seek fresh new territory, resting a place several weeks between calls. A call under best conditions—calm and cool—will travel at least a half mile, so this means moving more than a half mile between calls.

It pays to scout your country prior to calling to pick out strategic spots for calling. Another common mistake is to move around in circles in strange terrain, calling the same area over and over.

Otherwise, there are just a few simple rules to keep in mind:

1. The best times for calling are early and late in the day, although in wintertime calling is productive all day long.

2. Call in fairly open country that is near brush or rocky ridges where foxes are apt to den.

3. Wear camouflage-colored or drab clothing (in snow, white garb blends best), and push against low-slung trees or bushes to hide your telltale silhouette.

4. Have any prevailing breeze blowing into your face (and the sun to your back if possible), since a whiff of human scent is one danger signal no wary predator ignores (calling is best when there is negligible wind).

5. Call about 15 minutes continuously, looking all about you with as little undue motion as possible. If you must move, do so deliberately. Herky-jerky movement is quickly detected.

6. When moving to a new calling location, leave the vehicle quietly and keep unnatural sounds at a minimum. The cautious caller is a successful caller.

If you wish to eradicate the foxes, any rifle larger than the .22 rimfire or a shotgun will suffice. The .22 Winchester Rimfire Magnum and the .22 Remington are two of my pet fox weapons. A full-choke shotgun loaded with No. 2 Magnum loads also is deadly, since most of the shots will be at close range. When you glimpse a fox approaching, allow it to come on in. If it isn't spooked, it is not unusual for one to approach within ten yards or less. (For unusual sport, try hunting these small critters with bow and arrow.)

Calling is fast sport. When you get set and commence calling, be alert. Things can start popping in a hurry.

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December-January, 1965-1966
Write a Better Letter

Writing letters can be fun or it can be a disliked, neglected chore. It depends on you and the letter writing habits you develop. You have to write letters if you expect to receive any, so if you enjoy getting letters, you'll have to learn how to enjoy writing them.

Here are some things which might help you, if not enjoy, at least not mind writing letters.

Most of the letters you will be writing fall into two groups—personal letters and business letters. This is somewhat misleading because all of your letters should be personal with a little bit of YOU in the envelope. But for now, think of personal letters as being thank you letters and informal letters to friends and relatives, maybe to your girl. (Letters to your girl possibly should be in a separate group, and you probably do not need help with them, anyway.)

The most frequent excuse offered for not writing a personal letter is the excuse that you cannot think of anything to say, that you cannot write long enough letters. The main thing to remember here is your letters will grow as you write more frequently. A short paragraph or two is all that is needed to show you were thinking about the person and to start the writing habit. Just be natural and try to write as if you were talking in person. Make it sound as if you are enjoying writing and visiting with him or her by mail. Asking questions, talking about future plans, remembering past experiences—all make friendly, chatty letters that are a pleasure to receive and easy to answer. Things that you are interested in at the moment such as school events, hobbies, sports, or what have you, while perhaps sounding unimportant to you, will be of interest to the friend to whom you are writing.

Turning to business letters, you find that just as with personal letters, it isn't so much what you say as how you say it that counts. Whether you are asking for information, making a complaint, expressing an opinion, applying for a job, selling hay, or any reason you have for writing, think of each letter as being an opportunity to make a good impression of yourself on someone.

One of the most basic rules to remember is to write a business letter "not so you can be understood but so you cannot possibly be misunderstood." Keep in mind that your letter is made up of words that will be read, and your reader will not know if you were smiling or kidding. Watch out for words or phrases that may seem harsh and offensive. Some people, unfortunately, do not hesitate to say in a letter things they wouldn't dream of saying in person. Keep the tone of your letter polite and well mannered. With most business letters, strive for the shortest, clearest possible way to state your business, providing all the information the reader will need to understand why you are writing.

Now for a few simple rules that are often overlooked. If you keep in mind that with business letters or personal letters, you are sending an impression of yourself, you'll want to:

- Use proper stationery. Good bond typewriter paper is fine if you do not have regular stationery. School notepaper, wrapping paper, or half sheets with torn edges do not make a very good impression. Try to use envelopes that match your paper so your letter will not be folded and creased several different ways.
- Take the trouble to spell correctly. Start now to develop a "look-it-up-attitude" about the words you use. It's a good idea to read your letter over once for just this purpose. Even simple, everyday words have a way of getting misspelled if you are not careful.
- Write legibly! Most of us can improve our handwriting remarkably by writing more slowly. This is doubly important when you sign your name. Don't embarrass your reader by making him guess who wrote the letter or how to spell it when he answers. Sign your name any way you like—with a hen-scratching scrawl if you so desire—but be considerate enough to print it legibly underneath your signature or up in the right-hand corner with your correct address.

With a little thoughtfulness and attention to the job at hand, you'll start enjoying every minute between the "Dear Joe," "Dear Sir," or "Dear Uncle John" that starts your letter and the "Sincerely yours." "Yours truly," or "Cordially yours" you end with.

The National FUTURE FARMER
A. New "Slip-Lok" drawbar pin provides greater tractor safety plus ease of unhooking wagons and other towed equipment. Said to be first pin which is removable without leaving driver's seat. (Overland Products Co.)

C. New nine-foot mowers mean fewer trips around fields. The new models feature a nine-foot cutterbar for a cut that's 28.6 percent wider than the conventional seven-foot swath machines. (New Holland Machine Co.)

D. New half-ton and three-quarter-ton pickup trucks feature 128-inch wheelbase for improved weight distribution. This swepthline model has full-width tailgate. (Dodge Truck)

F. New trap for muskrats stops rats from draining farm ponds. Can be set unbaited in runways under water. Collapsible for easy carrying, it is made to last. (Holdsem Trap)

B. New tractor model features hydraulic-powered front-wheel drive. Has 50 percent more work output with only 16 percent more fuel. Front-wheel drive can be engaged by lever mounted on the tractor dashboard. (Oliver Corp.)

E. New Eutalloy welding method features simultaneous flame-application of Microlo alloys. (Eutectic)

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PASS RECEIVERS in the National Football League are usually tall fellows, but one of the best receivers is the smallest man in pro football. Tommy McDonald of the Los Angeles Rams is only 5 feet 9 inches tall and weighs around 170 pounds.

Thirty years old now, Tommy is in his ninth pro season, but he still has good speed and the fine sensitive hands that caught passes in his early games in Roy, New Mexico. Tommy also played basketball in junior high and American Legion baseball. He soon learned to use good natural speed to offset his small stature in competing with bigger boys. Since he was raised on a farm, his chores helped keep him in good shape.

The McDonalds moved to Albuquerque in 1951 where Tommy lettered in football, basketball, and track for Highland High School. He won All-City and All-State gridiron honors, set basketball scoring records with an average of 24.8 points a game, and ran the 100 in 11.2 seconds on the track team. This fine high school performance earned him two scholarship offers, and he decided to enter the University of Oklahoma in 1953.

Tommy concentrated on football at Oklahoma and ran from the halfback slot. He was an important member of the 1954-56 Oklahoma teams with Coach Bud Wilkinson's famous "Go-Go" offense that won 40 games in a row. They won two national championships and a 1956 Orange Bowl victory over Maryland. Tommy received All-American honors in 1955 and 1956 and won the 1956 Maxwell Club award as the nation's outstanding collegiate player. He played in the North-South game, the Hula Bowl in Hawaii, and the College All-Star game. His fine collegiate record earned him a third-round pick in the '56 N.F.L. player draft by the Philadelphia Eagles.

Tommy wasn't too sure of his chances as a pro but accepted the challenge when people began to say he was too small. His work was cut out for him, as most of the pros were at least a head taller and outweighed him by 50 pounds. His quickness earned him a spot on the 1957 Eagles' kickoff and punt-return teams, and he gained 448 yards in returning 26 punts and 12 kicks. He had a chance to run from the flanker slot at the end of the season and caught nine passes for 228 yards and three touchdowns. An average of 25.3 yards per catch earned him a spot in the Pro Bowl game and a permanent job as the Eagles' flanker back.

This position was natural for Tommy, although he had to spend a lot of hard hours on the practice field to develop the moves he has today. A flanker gets a lot of exercise in running out his patterns on pass plays. On an end sweep he has to block the corner linebacker or wingback, who is usually a big man. Tommy has proved to be a good blocker with amazing strength, which he displayed during a game when he picked up a 270-pound end and carried him back to the bench. In his first year as a flanker in 1958, he caught 29 passes for 603 yards and nine T.D.'s.

Tommy finished second to Ray Berry of the Baltimore Colts in 1959 with 47 catches for 846 yards and ten T.D.'s. His 39 catches in 1960 again took second place league honors and played a big part in the Eagles' Eastern Division title. He gained 801 yards, and 13 of the catches, an amazing one-third, went all the way for touchdowns. He also caught two scoring passes in the Eagles' N.F.L. Championship win over Green Bay.

He caught 64 passes for 1,144 yards and 13 T.D.'s in 1961 to lead the league in pass receiving. A consistent performer, he caught 58 passes in 1962 for 1,146 yards and ten touchdowns. The Eagles' receivers had injury problems in 1963, and the defensive teams were able to double team Tommy. This lowered his production to 41 catches, although he gained 731 yards and eight T.D.'s. This drop, combined with his age, earned him a trip to Dallas, Texas, last year in a trade with the Cowboys. He proved he was still a pro receiver, catching 46 passes for 612 yards. Traded to the Rams at the end of the season, Tommy is currently third on the list of N.F.L. receivers with 30 catches, gaining 406 yards and four touchdowns.

Tommy has caught 333 passes in his eight years as a pro receiver for a gain of 6,111 yards—more than three miles of football field. His 68 touchdown catches (at the end of the 1964 season) rank second only to the great Don Hutson in N.F.L. history. He was named All-Pro five consecutive seasons, 1958-1962, and played in the Pro Bowl game in those years. Tommy McDonald has certainly proved that a little man can be BIG in pro football.

The National FUTURE FARMER
Joe: "Did you hear that Charlie the Tuna got picked up?"

Nick: "What Joe?"

Joe: "Star kissing."

Jimmy Brake
Paragould, Arkansas

Sam: "What was that loud explosion I just heard?"

Farmer: "Well, I bought some chicken feed the other day called Lay or Bust, and that darn rooster just got into it."

Jackie Fisher
Dupont, Indiana

First drunk: "We're getting closer to town."

Second drunk: "How do you know?"

First drunk: "We're hitting more people."

Wayne Dillon
Oakland, West Virginia

A small boy debunked the talk about a painless dentist in his neighborhood. "He's not painless at all," said the youngster. "When he put his finger in my mouth, I bit it and he yelled just like anybody else."

Susan Shepard
Woodbury, Connecticut

The guy who really lives off the fat of the land is the girdle manufacturer.

Marlene Nelson
Barneville, Minnesota

I shot a pass into the air; it fell to earth. I know not where. Now that is why I sit and dream on the bench with the second team.

Diana Weitzel
Fort Recovery, Ohio

There are two reasons for people not minding their own business: (1) no mind and (2) no business.

Richard Kleindl
Barry, Minnesota

Roger: "Have I done him any dam-

Disgusted manager: "No, but keep swinging— the draft might give him a cold!"

David Dalko
Fayetteville, North Carolina

Paul to Tom: "I would rather brush with regular toothpaste and have 21 percent fewer commercials."

Diane Nelson
Fremont, Utah

There's a new gas that puts a rabbit in your tank. It's for short hops.

Forrest Post
Stouts Mill, West Virginia

Little boy at county fair: "Why does that man go around pinching the animals?"

Mother: "He wants to buy one, and he's just seeing that they are in good condition."

Little boy: "Mommy, I think Daddy wants to buy our maid."

Robert Benavidez
Bosque, New Mexico

Two visitors in a home were waiting for a hostess when the little four-year-old walked in. They looked her over very carefully, then one spelled to the other, "She's not very P-R-E-T-Y, is she?"

Before the other woman could answer, the four-year-old said, "No, but I'm awful I-N-T-E-L-L-E-C-T."-- Judy Graves
Speedwell, Tennessee

A salesman, held up in Montana by a winter blizzard, wired his boss: "Stranded here because of storm. Wire instructions."

Back came the reply: "Start summer vacation immediately."

Larry Castle
Fort Gay, West Virginia

". . . just got back, Eileen, I had to leave the FFA convention a day late in order to see a great movie the airline was showing at that time."

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THE BEATLES - I CAN'T HELP MYSELF

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