The Agrarian

OFFICIAL STUDENT PUBLICATION

The Clemson Agricultural College

MAY, 1949

School of Agriculture

CLEMSON, S. C.
Voted the "Rookie of the Year" in the American League with an earned run average of 2.43, Gene was the pitching hero of the '48 World Series... stepping out on the mound to wrap up two big climax games for the Cleveland Indians.

After many seasons with the Cincinnati Reds, he has more strikeouts to his record than any pitcher on the Club. Vander Meer is the only big leaguer to pitch two "no-hit" games in a row.

Voted the "Rookie of the Year" in the American League with an earned run average of 2.43, Gene was the pitching hero of the '48 World Series... stepping out on the mound to wrap up two big climax games for the Cleveland Indians.

Gene Bearden

Johnny Vander Meer

Right, Van! It's CAMELS FOR ME, TOO—Ever since I made THE 30-DAY MILDNESS TEST!

In a recent test of hundreds of people who smoked only Camels for 30 days, noted throat specialists, making weekly examinations, reported

NOT ONE SINGLE CASE OF THROAT IRRITATION due to smoking CAMELS

• Have YOU made the popular Camel 30-Day Test? The doctors' findings in the recent coast-to-coast test of Camel mildness speak for themselves. But why not make your own personal 30-day test of Camel Mildness?

Yes, smoke Camels and test them in your "T-Zone" (T for taste, T for throat). Let your own taste tell you about the rich, full flavor of Camel's choice tobaccos. Let your own throat report on Camel's cool, cool mildness.

Money-Back Guarantee!

Try Camels and test them as you smoke them. If, at any time, you are not convinced that Camels are the mildest cigarette you ever smoked, return the package with the unused Camels and we will refund its full purchase price, plus postage. (Signed) R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina.
EXECUTIVE STAFF
Editor _________ L. B. DeYoung
Co-Editor _________ D. D. Blocker
Managing Editor ___ W. R. Alexander
Business Manager ___ C. B. Doyle
Advertising Manager ___ W. J. Bryan
Circulation Manager ___ W. H. Craven
Asst. Adv. Manager ___ E. L. Knight

DEPARTMENT EDITORS
Agric. Economics ______ K. P. Howell
Agric Engineering ______ S. P. Young
Agronomy _________ R. C. Herring
Animal Husbandry ___ T. A. Warren
Dairy _________ J. E. Cushman
Horticulture _________ W. J. Jenkins
Voc. Agric. Ed. _______ F. M. Hart

ASSISTANT STAFF

ADVISORY BOARD
Prof. B. E. Goodale ______ Chairman
Dr. G. H. Aull.

THE AGRARIAN — published in November, January, March and May by the under-graduate students in the School of Agriculture. Opinions expressed in this magazine do not necessarily reflect the policy of the School of Agriculture or the College.

All correspondence should be addressed to the AGRARIAN, Clemson College, Clemson, S. C.
No article may be reprinted without permission.
SUBSCRIPTION FREE.

CONTENTS
Her Majesty—Queen Azalea __________ 3
State Finances—Where the Money Goes _______ 4
Milk Factories—The Fern Guernsey Family _______ 7
Outstanding Graduates of Ag. School _______ 8
Rusts of Small Grains ___________________ 11
Decay at Bay—Fence Post Treatment _______ 15
Between The Furrows __________ 16
Dedication—Memory of William Barre Aull 18
Agrarian Philosophy __________ 19
Following Through—
Choice Steer to Juicy Steak _______ 21
Convention Banquet Features “All S.C.” Menu _______ 22
Summer Camps—
Recreation and Education for FFA Boys _______ 23
Cold Weather Deals Blow to 1949 Peach Crop _______ 26
Lighter Shades of College Life _______ 28
Flowering Dogwood __________ 32

Flowering Dogwood article courtesy of The Master Gardener, Swift & Co.

COVER—Azalea blossoms in all their glory. Which side of the picture is “right-side-up”? Don’t get dizzy trying to figure it out, for as Francis Bacon said — “There is no excellent beauty that hath not some strange-ness in the proportion.”
Some tractor tires get by best on this job... or that job... some pull best in soft ground, some show up better on hard ground. But, there's one tractor tire that gives you top performance on every job the year around. That's the Firestone Champion Low Pressure Ground Grip.

When your tractor is on Firestone Champions you can hitch it to any implement... hook it up to any load... and it will take you through — on hard ground, on soft ground... on sod... on stubble... in Spring, Summer, Fall... through the snow of Winter.

The Firestone Champion Low Pressure Ground Grip is the top traction tire under all conditions because its high curved bars take a clean, full-traction power bite clear across the tread from shoulder to shoulder and in the center.

Before you buy any tractor tire try a set of Firestone Champion Low Pressure Ground Grips on your tractor on your toughest jobs, in any kind of soil. Let them prove that they pull better.

Listen to the Voice of Firestone every Monday evening over NBC and Americana over NBC Network Television Stations.

Copyright, 1949, The Firestone Tire & Rubber Co.
HER MAJESTY
QUEEN AZALEA

Just Naturally Beautiful
and Financially Secure
— to Boot!

The azalea is near the top in popularity among the flowering shrubs in the South today. Some people place the Camellia first, but others insist that it is surpassed by the Azalea. The South Carolina lowcountry has in recent years become famous as a showplace for this queen of flowers. There one finds nestled in among the graceful moss covered oaks, thousands of beautiful azaleas in all shades and colors. Every year people come from all over the country to see and enjoy the beautiful spectacle.

By W. J. JENKINS
Horticulture, 1951

For a number of years the city of Charleston has put on an annual Azalea Festival. For a week during the heart of the blooming season, this city rises out of its historic past, puts on its holiday clothes and begins to rock with merriment. The festival opens with a parade of the states most beautiful girls riding on highly decorated floats accompanied by every band and high official in the state. Event follows event in rapid succession until at the end of a breath taking week, the festival reaches its climax with the crowning of the queen and the Coronation Ball. Here every year is shown proof that the beauty of South Carolina flowers is surpassed only by the beauty of its girls. At the recent festival held in April, excitement ran so high that even the fact that there were no azaleas in bloom during the festival failed to put a damper on the fun. Due to an early spring every flower except a few very late varieties had finished blooming long before festival time, but just the same the entire state and thousands of tourists poured into the city to share in the fun.

The Azalea is important not only as a decoration and tourist attraction, but also as a commercial crop supplying many nurserymen in the South with their principal source of income. Nurserymen specialize in propagating and growing out Azaleas for the retail florists who force out the blossoms and resell the plants. South Carolina is especially well adapted for this business because the state has a long growing season which enables the growers to get a salable plant in a relative short period of time.

There are a number of species of Azaleas but most popular are the Azalea indica, Azalea obtusum or Kurume Azalea, and Azalea Kaempferi. The Indica is a fast growing evergreen with rather large leaves. Its habitat is limited to the lower part of the state because it is rather easily killed by cold weather. The Kurume is the well known dwarf Azalea. It is also evergreen but it has a slower more compact type growth. It is much more cold resistant than is the Indica. The Azalea Kaempferi is very well suited to growing in the colder regions of the South because it comes into bloom late in the Spring after danger from frost is gone. All of these species come in a wide range of colors.

The Azalea is a rather simple plant to grow. It is easily propagated by vegetative means. Usually they are propagated by cuttings, but if only a few new plants are desired it is quite easy to propagate by layering. Azalea cuttings are taken from half ripe wood preferably in July or August. If placed in clean sand about an inch apart, they should root in about four weeks. The cuttings require moisture, but care must be taken to prevent over watering. As soon as roots get about one inch long the cuttings should be put in pots with a soil mixture of one-third soil, one-third sand, and (continued on page thirteen)
STATE FINANCES — WHERE THE MONEY GOES

The ever-increasing demands of the people for state government to accept financial responsibility for special functions has placed public expenditures in a role of vital importance. Evidence of this is shown by the marked increase in state expenditures in South Carolina during the past three decades. For example, the total expenditures of state government in 1919 amounted to less than four million dollars. Twenty years later the total had jumped to more than thirty-seven million dollars, and this year (1948-49) the appropriations for state purposes amounted to over one hundred and four million dollars.

There are several major causes responsible for the phenomenal increase in total expenses of state government during the past thirty years. The first of these is the establishment of new departments, commissions, bureaus, and institutions for the purpose of performing new functions. State government has changed from the simple affair it was in 1919 to the complex form of government that we have today, in which there is an agency for each activity which society has demanded that the state undertake. State expenditures were limited to forty-seven departments and institutions in 1919, but by 1938 the number had grown to sixty-one. Since 1933, no less than eleven new agencies of government have been established. During the fiscal year 1938-39, the expenditure of these agencies amounted to nearly four and one-half million dollars or twelve percent of all state expenditures.

A second major cause has been the natural growth and expansion of functions and activities recognized as obligations of the state. There has been a large increase in the enrollment of state-supported colleges and universities. The needs of the State Hospital and Penitentiary have greatly expanded. Also, the work of the General Assembly has been increased and tremendously complicated by changing economic conditions.

A third major factor in state expenditures has been the assumption of financial responsibility by the state for activities which were formerly financed by counties and districts. State financing of a nine months' school term, construction of highways, and relief for the old, the blind, and the dependent children have all added to the burden of state expenditures.

By Kelly P. Howell
Agricultural Economics '51

Still another cause for an increase in state expenditures has been the decrease in value of the dollar. Even though 1919 was not a normal year, the dollar was worth more than it is today.

In 1919, the state spent funds on public schools only for the purpose of encouraging school improvement. Later, the idea that the state should support the schools for a definite term gained general acceptance. This term changed many times before it arrived at the present length of nine months. This year, 1948-49, funds for education for both schools and colleges accounted for 33.6 percent of the total amount, or above thirty million dollars, as compared with 34.8 percent of the total and less than 1.5 million dollars in 1919. This figure however was supplemented by tuition and other fees. State colleges received approximately 5.5 million of the 35 million dollars for education in 1948-49 including tuition fees, leaving about 29.5 million dollars for elementary and high schools.

State highways have expanded at a very rapid rate, and many miles of county and rural roads have been incorporated into the state system. This has led to an increase in the amount of money to be spent by the state. In 1919 the State Highway Department spent less than one hundred thousand dollars, but this year the expenditures amounted to almost thirty - six million dollars or 34.4 percent of the total expenditures.

Another marked increase in expenditures has occurred in welfare work. Prior to the beginning of this program, the work of poor relief was left entirely up to local governmental units or to private charity. However, welfare accounted for over nine million dollars of the appropriations for the year 1948-49 or 8.6 percent of the total. This is more than twice the total of all state expenditures thirty years ago.

Still another major item of expense has been the aid given to subdivisions by the state. This factor accounted for 11.59 percent of the total expenditures for this year.

These four main items (Education, Welfare, Highways, and Aid to Subdivisions) accounted for 88.25 percent of total expenditures for 1948-49, leaving only 11.75 for all other items combined. The chart on expenditures for 1948-49 shows the main items of expense with the percent of the total that they account for.

The prospect for reducing the expenditures of state government are not encouraging, for South Carolina at the present time is providing only a minimum of services now considered necessary and desirable. As a matter of fact, South Carolina suffers in a comparison with other states as to the amount and proportion of money spent on certain essential functions. This being the case, it would seem that emphasis should be placed upon getting the most value out of each dollar spent.

The placing of personnel on state more efficient personnel on state jobs, the elimination of duplicating and overlapping functions, and the reappraisal of all the many activities carried on in the name of the state, constitutes important steps in state government not only in South Carolina but everywhere.

FOUR
A Groundhog's Shadow
... One Hundred Years Ago

See "Pageant of Progress," as thousands saw it daily for a week during the Wisconsin Centennial Exposition at Milwaukee last summer. Filmed then, this Case pageant of quaint costumes, strange skills, ancient tools and modern machines has been made into a full-color sound movie. Besides being shown by Case dealers, this 16 mm. film is available for meetings sponsored by educational agencies and farmer groups. Write now for reservation of future date. Address our nearest branch.
J. I. Case Co., Racine, Wis.

At the start of the century spanned by Wisconsin's statehood, this was a fairly modern threshing rig. Six years earlier, Jerome I. Case had started in business with the groundhog—the taller unit next to the tread-power. The low part, extending like a shadow from the groundhog, was an added attachment. Aided by hand raking, it shook threshed grain from straw.

Within a dozen years Case was building complete machines that released the rake-hands, rolled on its own wheels, did the whole job better and far faster. Along the lengthening shadow of the groundhog appeared a host of advances—the Eclipse and Agitator threshers; horsepowers, steam engines and gas tractors; and in 1923 the prairie-type combine, pioneer of today's most modern harvest method. In one short century the equipment of farming advanced more than in all the earlier centuries.

American freedoms had broken the stagnation of centuries. Chief among them was freedom of any man to engage in any enterprise, and to keep what he earned by his work and his wisdom. As you defend that freedom you keep open the door of opportunity for yourself and for all Americans. As you look toward your farming career, look to Case for ever-better machines to make your hours more productive, your years more prosperous.

Case Model "A"
6-foot Combine
PUREBRED GUERNSEYS and ABERDEEN-ANGUS
The "PALMETTO" Home of Foundation Breeding Animals
The kind you want and need in your own herd

HERD SIRES IN SERVICE

Guernsey
* Woodacres Royal Corinthian
* Quail Roost No Max Majesty
* Imp. Stype Richmond Antonio

Angus
* Blackbird Grenadier GR 2nd
* Bandolier 223rd of Wilton
* Benefactor of Glencarnock

You are invited to inspect our herds at any time
They Must Pay — Or — They Don't Stay

Write us your needs
F. B. DAVIS, JR.
President

Visitors always welcome
BRAYS ISLAND
PLANTATION, Inc.
P. O. YEMASSEE, S. C.
Tel. BEAUFORT 9 F 12

Green Pastures Farm

* Angus Cattle
&
O. I. C. Swine

DAVID DOWS
Owner
BRADLEY
SOUTH CAROLINA

CENTRAL ROLLER MILLS

Manufacturers of
Isaqueena Flour & Feeds

Central, South Carolina
MILK FACTORIES!!

THE FERN GUERNSEY FAMILY COMES TO CLEMSON

South Carolina has made great strides toward improving its dairy industry during the last half century. One of the most outstanding pioneer leaders in this development has been Mr. C. S. McCall of Bennettsville. His Appin farm is one of the oldest and best dairy enterprises in the South. He was born in Bennettsville and grew up there, being educated in the Bennettsville schools. Upon his high school graduation, he entered Bingham School in Asheville, North Carolina, where he spent two years. From here he went to The Citadel where he was graduated with the Class of 1901.

Mr. McCall's inherent love for agriculture brought him back to the farm where he has been located ever since, growing principally cotton and kindred farm crops. Aside from his farming operations, he is connected with several business enterprises in Bennettsville. He has been president of the McCall-Weatherly Mercantile Company for thirty years. He is president of the Marlboro Warehouse Company and vice-president of the Marlboro Trust Company.

In 1930 his friends prevailed on him to enter politics and he successfully obtained election to the South Carolina State Senate, in which capacity he served four terms, a period of 16 years. At the conclusion of four terms he voluntarily retired to devote his time to private business.

By J. E. CUSHMAN
Dairying, 1951

The State Dairy Extension Forces persuaded him to purchase his first purebred Guernsey female in May 1917 and thus the development of a great herd of Guernsey cattle was started.

The foundation females of this herd included two full sisters, Fern of Glenville, born March 16, 1916, purchased in November 1917 and Glen Gable Lady Williams born March 2, 1917 purchased in June 1931. Mr. Paul G. Williams, Cochranville, Pennsylvania bred both of these sisters. Fern of Glenville proved to be a great brood cow through her five sons and her two daughters, all of which were used extensively in the herd. Glen Gable Lady Williams is important to this family especially because she became the mother of Appin's Lady Williams as a result of a mating with Fern's Raider of Appin, the most important son of Fern of Glenville. The inheritance of Fern of Glenville and of Appin's Lady Williams were blended with that of five foundation herd sires, Beauty's Raider of Wadding-

Left to right: Appin's Hattie, Appin's Lass, Appin's Levonia, Little Fern of Appin and Appin Ofern

ton, a son of Imported Border Raider; Winston Farms Glory Boy, a son of the great brood cow Gold Dust Valentine; Upland's General, a son of Langwater Cavalier; Foremost Golden Boy, a son of Langwater Foremost; and Argilla Forecaster, a son of Dolly's Foremost of High Rock, to produce the Fern Family of Guernseys which has made the Appin Farm herd famous and provided foundation breeding stock for many famous herds of Guernseys in the South such as Appin's Golden Fern at Quail Roost, Appin's Kitty at Klondike, Appin's Happy Girl at Clear Springs, Appin's Flirt at Edisto, Appin's Kesta at Caughman Bros., Appin's Gaiety at Fletcher Bros., and Appin's Bopeep at Dinsmore to mention only a few.

A production testing program in Advanced Registry on 3 milking per day for 365 days was started in 1920 and has continued through good and bad years to the present time. Fern of Glenville made a national class leader record in 1922 with 15,157.6 pounds of milk, 815.6 pounds butterfat in class AA. In 1927 Appin's Lady Williams produced 13,155.5 pounds of milk with 816.3 pounds butterfat in class B. Although the records made in the Appin Farm herd have always been creditable, it is a tradition that cattle sold from this herd have invariably made better records in their new homes to reflect the very modest arrangements available for the testing work at Appin Farm.

(continued on page twenty-four)
OUTSTANDING GRADUATES OF AG. SCHOOL

Several weeks ago our Editor assigned this writer the pleasant task of writing an article about this year's outstanding agricultural graduates. The selections were made by students, professors, various agricultural clubs and by members of The Agrarian staff. We have tried earnestly to give you a true representation of each department. These men do not necessarily have the highest grade point ratio in their respective major courses. They were picked because of their leadership, personality, scholastic ability and above all, because each one is truly a "good Joe". If their past gives us any idea of their future, they will be the leaders in the agricultural fields of tomorrow.

He seems to have done well at this profession and certainly with the knowledge he has gained at Clemson, should gain even greater farming wealth.

Sonny takes great pride in having an evening with the boys over a pinochle game. His room greatly resembles the juice shop on a warm morning—people everywhere. Sonny Montgomery is looking ahead and will be an alumnus of which our college can and will be proud.

This is exactly the type future "Fuzzy" has picked out for himself as a cattle buyer. If this falls through, he plans to give the air corps another try. This time as a peacetime flying cadet.

Ag. Engineering

A. B. Snell's friends like to call him "Ab". He takes a special pleasure in helping fellow students who don't seem to learn very quickly, and is known for his helping hand which seems to be extended at all times. We might describe him as a hard working friendly and very conscientious fellow.

Animal Husbandry

Harry "Fuzzy" Falls entered Clemson in May 1943 as a student of mechanical engineering. Then there was a war, and he finally got back to Clemson in September of 1946. Animal Husbandry seemed a little more like what "Fuzzy" wanted. The change was a good one because Harry has made a record of which the A. H. department can be proud. He made honors his sophomore year, High Honors his junior year, and this year he has made the highest honors given at Clemson College.

"Ab" is interested in farm machinery and plans to make it a life vocation. He has done well in Agricultural engineering, not to mention such courses as Hydraulics, Mechanics, Food Preservation, History and Government. He is writing his thesis on farm spillways and has done a great deal of research on this project. By this, we can see that "Ab" Snell is doing his best to insure himself of a future on which he can depend. At present, he is looking over a wide field and is turning down no offers for a good job.

Agronomy

Sonny Montgomery started at Clemson back in September of 1942. Shortly after this he went into the service and then re-entered in September of 1946. Agronomy has always been a high light in Sonny's life. An outdoor man, he likes to hunt, fish and play all sorts of sports. He got a good educational foundation at Sumter High School and has used it to every advantage at Clemson.

Asked about a future, Sonny stated, "I've always farmed—can't see and reason for changing now".

Harry Falls

Aside from studying, "Fuzzy" likes to get out on the green for a good evening of golf. His high school days, back in Asheville, N. C., were largely spent riding horses and getting out of the city for outdoor life.

Sonny Montgomery

Ab. Snell

EIGHT

THE AGRARIAN
Dairy

S. E. McGregor, known to everyone as Sam, is one of this year’s most promising Dairy students. Sam came to Clemson from Lykesland, S. C., at the beginning of the 1945-46 school year. Among other activities, Sam has been Editor of The Agrarian, Chancellor of Alpha Zeta, a member of Blue Key, Tiger Brotherhood, and the Dairy Club. He was also chosen this year for Who’s who in American Colleges and Universities.

When asked what meant most to him at Clemson, Sam replied, "people and being Chancellor of Alpha Zeta." As a hobby, Sam has chosen purebred Guernseys. As a future plan, Sam plans to help his father with their dairy in Lykesland.

J. C. Bishop

Raymond West came to Clemson in February of 1946 fresh from The United States Navy. While in the Navy, Raymond decided on agriculture as a field. The thing that seemed to trouble Raymond, was the fact that he couldn’t decide which phase of agriculture he liked best. When Raymond began his education, Poultry was not offered as a major course. Just as soon as our agricultural department was able to offer this, Raymond jumped at the chance to enroll and he has become the very first Clemson man to graduate in this field.

Raymond likes sports as a hobby. He particularly likes to watch a football game and has become somewhat of a player himself on the intramural squads. Every month or so, he likes to trout fish in some mountain stream.

When asked what he thought most beneficial to him during his college career, he replied, "My friends and the contacts I’ve made at Clemson". Raymond plans to go back to his home in Spartanburg, S. C., and run a poultry farm for a profession.

Poultry

J. C. Bishop

Sam McGregor

Raymond West

Len Reynolds

V. A. E.

Len Reynolds was chosen by his classmates as the most outstanding student in V.A.E. for this school year. Len’s smile wins you the very first time you meet him. He seems to be a person who likes to mix a little pleasure with his work. Graduating last February, Len’s time is now taken up with graduate work. However, he likes to take time off to see every football, basketball and baseball game that Clemson plays. He covered most of these games as sports Editor of the Tiger.

Len likes to do a little writing and is using for his thesis work a theme based on a publicity program for South Carolina Agricultural Teachers. His biggest honor came when he was chosen for Who’s Who in American Colleges and Universities at Clemson College.
For Your COMPLETE Building Needs and Service
Come In or Call
ROSS Builders Supplies INCORPORATED
TEL. 401 SENeca. S. C.
BRANCHES AT:
Greenville — Anderson — Rock Hill

Marett's Pedigreed Seed

COTTON
White Gold Strain 5 White Gold Wilt

SMALL GRAIN
Marett's Chancellor Wheat
Calhoun Barley Strain 3
Anderson Oats

Use Pedigreed Seed for Higher Production

MARETT'S FARM & SEED COMPANY
WESTMINSTER, SOUTH CAROLINA

The Students and Faculty of Clemson College are invited to subscribe to the

South Carolina Magazine
Founded 1937
"For the Advancement of South Carolina"

Feature Articles and Pictures about South Carolina and South Carolinians

PUBLISHED MONTHLY

Use This Coupon

SOUTH CAROLINA MAGAZINE
Box 835 Columbia, South Carolina

Date __________________, 194_

Enclosed please find my check for the

SOUTH CAROLINA MAGAZINE
1 Year $3.00 ( ) 2 Years $5.00 ( )

Name of subscriber ____________________________ (Please Print)
Street address ________________________________
City ________________________________
By______________________________ (Signed)
RUSTS OF SMALL GRAINS

LARGE PERCENTAGE OF
1949 CROP AFFECTED

From the reports over the state this year, the wheat crop seems to be highly infected with rusts, both stem and leaf rusts, but chiefly leaf rust. Many samples of grain have been sent to Clemson to have the disease attacking them identified and in many instances the disease has been found to be leaf rust.

These rust diseases, which occur wherever wheat is grown, are among the best known and most important of all plant diseases. They have been a major factor in the production of wheat for 2000 years or more. Long ago, before the relation between barberry and cereal stem rust was known, shrewd farmers noticed that grain suffered most severely from the rust when barberries were nearby and because of this, laws were enacted requiring the destruction of barberry near grain fields.

The injury from the rusts is very dependent on weather conditions. Some years the diseases cause practically no damage, while at other times they are very destructive. In 1935 the stem rust disease reduced the nation's wheat crop by 160 million bushels.

By R. CARLTON HERRING
Agronomy, 1950

The stem rust fungus is subdivided into seven varieties and each variety in turn is subdivided into various numbered physiologic races, each being able to attack certain varieties of grain crops. From the type of reaction produced on each variety the race can be identified by the use of a key.

The symptoms of stem rust on grain crops are very definite and the rust can usually be readily detected. Stem rust first appears as long, narrow streaks, largely on the stems but also on the leaf sheaths, leaf bases, or distal part of the leaf blade. In some cases the rust even occurs on the glumes and awns and in rare cases on the grain. The streaks are covered with a dark red powdery mass of one-celled urediospores, produced from the feeding mycelium inside the stem or leaf. The epidermis is torn to form a white collar around the pustule or sorus. As two-celled teliospores replace the urediospores in the sorus, the sorus become black an dit is at this stage that the stems become dried and cracked or broken, and the grains lacking or few in number, shriveled and light in weight.

The leaf rust appears on the leaves and leaf sheaths as small, round to oval, bright orange pustules in the early stages. This disease begins in the lower leaves and works toward the top of the plant. In the latter stages of the disease the pustules become black as with the stem rust.

The life cycle of the wheat stem rust organism is a rather long and complicated one because the rust (continued on page thirty)

WOOD PRESERVATION PAYS DIVIDENDS

ANTIROT*

Will stop rot and insect attack in existing construction—prevent damage to new construction.
ANTIROT TREATED Fence Posts, Bridges, Barns. Other Buildings COST LESS because they LAST LONGER.
ASK YOUR DEALER TODAY ABOUT ANTIROT*
*Trade name WOOLFOLK CHEMICAL WORKS, LTD.

MAY 1949
Compliments of

A FRIEND

McNair's Yield-Tested Seed Company, Inc.

WHOLESALE SEED GROWERS OF

Watermelon  Crotolaria
Tobacco  Soybeans
Cotton  Wheat
Corn  Oats
Lespedeza
Hybrid
Seed
Corn

ALL OF OUR SEED ARE GROWN
ON McNAIR'S OWN FARMS BY

McNair's Yield-Tested Seed Company, Inc.

Phone 388 and 87  LAURINBURG, N. C.
AZALEAS
(continued from page three)

one-third humus. It is necessary that the young plants be protected from the cold over the winter and bedded out in the spring. The same soil mixture may be used for bedding out but four pounds of Azalea and Camellia fertilizer should be added for every 100 square feet of space in the bed. After setting out, the plants should be mulched about two inches thick with straw, leaves, well rotted sawdust or any similar material. Fresh shavings or sawdust should not be used because they bring about a nitrogen deficiency in the plants. Pine needles make an excellent mulch when available. Mulching is necessary because the Azalea throws its roots near the surface and a mulch keeps the soil temperature and water content of the soil fairly even, thus preventing drying out. For vigorous, healthy plants a pH of from 4.5 to 5.5 should be maintained. There are a number of fungus diseases which attack Azaleas. The more important of these are Die Back, Blight, and Flower-Spot. Die Back shows up with a drying up of the leaves. The stems turn brown and die. To control the disease cut out the diseased tips well below the infected parts. Blight affects the terminal flower buds and later the leaf and stem buds. Diseased sections do not bloom and are covered with thousands of spores. Treat with Bordeaux mixture or copper-lime dust. Flower-Spot is a disease peculiar to the southern states along the coast. The Indica and Kurume Azaleas are especially susceptible to it. In the first stage, circular spots about the size of a pinhead appear on the underside of the petals. In favorable climatic conditions, the spots enlarge rapidly and run together appearing white on colored flowers and brown on white flowers. The affected flowers become limp and are covered with a frost like mat formed of spores of the fungus. These are easily carried away by wind and rain, also by bees and other insects which spread the infection. The most effective way to control the disease is by removing all the flowers and destroying them. If this is not possible, treat the flowers with a colorless fungicide.

The principal insect pests of Azaleas are Lacebug, and Red Spider. The Lacebug feeds on sap and chlorophyll from the leaves. This causes the leaf to become gray splotched or almost entirely blanched. Only a few bugs are necessary to cause considerable damage. The best control has been obtained with Florida Volck using one gallon to 100 gallons of water, plus 1½ pounds of derris root. The Red Spider feeds on both leaf surfaces, withdrawing plant juices and causing the leaves to become reddish brown. To control, spray the plants with Florida Volck about the first of October.

Despite disease, insects, and particular cultural requirements, even the inexperienced can get good results growing Azaleas. Every year thousands of people in the South get a great deal of pleasure out of raising the plants and watching them bloom. Surely, so many people can't be wrong.

NEW APHID KILLER
MULSIFOS*
DOES THE JOB THOROUGHLY—KILLS QUICKLY
Kills APHIDS—RED SPIDERS—MEALYBUGS—WHITEFLY
Attacking
FLOWERS — SHRUBS — GARDENS

Try MULSIFOS next time—You'll appreciate its effectiveness and economy.

*Trade name WOOLFOLK CHEMICAL WORKS, LTD.
YOUR INSECTICIDE DEALER HAS IT!
Suni-Citrus Pulp is popular with progressive Dairymen because...

1. It is an excellent cattle conditioner.
2. It will take the place of BEET PULP.
3. It has a tonic effect upon the animal.
4. It will produce good milk flavor.
5. It is a bulky and succulent feed.
6. It contains 1520 pounds of digestible feed per ton — therefore a cheap source of digestible nutrients.

Cows Love Suni-Citrus Pulp

Suni-Citrus is rich in milk-making units, brimming with bovine health and happiness. That's why —
"They Moo For More"

Suni-Citrus Products Co
HAINES CITY, FLORIDA
Sales Agent: ASHCRAFT-WILKINSON COMPANY, ATLANTA, GEORGIA

PENDLETON MOTOR COMPANY

Sales Service

Telephones: Office 2361  Night 2091
PENDLETON, SOUTH CAROLINA

More Milk From ALFALFA
"FEED THE BEST"

We invite your inquiries on FANCY WESTERN ALFALFA HAY
New Crop Now Available
Personal Inspection Given Each Shipment
Carloads Only

Serving the Southeast Since 1920

CECIL BROKERAGE CO.
Room 201  ::  Brokers Building
BIRMINGHAM, ALABAMA
DECAY AT BAY!!

Fence Post Treatment Proves Practical and Effective

CHEMICALS USED AS PRESERVATIVE

Fence posts treated by the trough method give over five times the life of untreated posts. Recent experiments on the non-pressure preservative method of fence post treatment by the South Carolina Experiment Station show that the average length of life of posts can be increased from one and one-half years to over eight years by this type of treatment. The placing of each end of a green post in a water-soluble salt solution and allowing it to soak up the solution is known as the "trough method." Because of the simplicity of this method of treatment, no special knowledge or equipment is necessary; all operations may be carried out with very little extra effort on the part of the farmer. Life expectancy of trough-treated posts is not as long as those treated by creosote or pentachlorophenol, but the low comparative cost and increased length of service are such that this method has a definite place in the farm treatment field.

At the present time, chromated zinc chloride is recommended for use with many varieties of wood. Two pounds of salt to a gallon of water results in a 20 percent solution, which is satisfactory for use when treating posts cut from common woods. Since zinc chloride salts absorb water from the air and tend to harden if exposed, the container in which the salt is placed should be kept tightly closed until ready for use. Possible corrosion of a metal container when mixing can be avoided by using a wooden barrel. Constant stirring of the solution with a paddle will expedite the mixing operation if the salt is lumpy.

Factors Determining Time to Treat

Some factors to be considered when planning the time to treat posts are insect control, season of most rapid treatment, and proper curing period.

There is no danger of insect infestation to standing trees in the

Comparison—Treated and Untreated—2 years

case of hardwoods, but unless all tops and limbs from pines are cleaned up, cutting should be done between September and June. There is little danger of damage from pine tree beetles and other harmful insects between these months.

Results from the Connecticut Station indicate that hardwoods give best results when treated in the Spring. Pines treated in the Spring when the sap is rising absorb the solution at a more rapid rate than when treated at other seasons.

By S. P. YOUNG
Agricultural Engineering, '50

After treating, posts should be allowed to season for a period of at least 60 days. Experiments show that posts seasoned for this length of time give longer life than those set into the ground immediately after treating. Posts should be treated within two weeks after cutting. No special care in stacking is necessary unless insects are active at the time, in which case the posts should be stacked in such a manner as to insure adequate ventilation of all posts.

Common pine, yellow poplar, sweetgum, and American sycamore will treat well. Black oak, black-jack oak, and black willows give satisfactory results after treating by the trough method, but white hickory is not adapted to this method and should not be used.

Smaller posts are lighter, easier to handle, and require less preservative; therefore, posts to be used as line posts should be from three to five inches in diameter. In order to withstand the greater stresses on the end, gate, and corner positions, posts to be placed at these points should be from six to ten inches in diameter. Line posts should be seven feet long; all other posts should be eight feet or longer.

How to Treat

Two quarts of solution to each cubic foot of wood should be used. Since a post seven feet long and five inches in diameter contains approximately a cubic foot of wood, each post requires roughly two quarts of solution.

Before placing posts in the solution, saw an inch from the basal end to remove any tar or mud which may have accumulated there during handling. The first end treated is the basal end, and it should remain upright in the solution for four days. Exposure to the weather is not harmful to treated posts; drying is more rapid in the open.

When zinc chloride is used as a preservative, longer periods of air-drying are definitely advantageous. Of the Shortleaf Pine posts air-dried 90 days, only 6.7 percent have failed and 66.6 percent can be classed as good after eight years. Those set immediately after treating show 53.3 percent failed and 26.6 percent in good condition. Longleaf pine responds even better, and all of this variety treated with zinc chloride are still in good condition after eight years.

The cost of the preservative used in this method varies from ten to thirty cents per post, depending on the size. Peeling of the posts is unnecessary, which materially reduces the handling costs.
Seniors Complete Inspection Trip

Eleven dairy seniors recently completed an inspection trip which included visits to the USDA’s Bureau of Dairy Industry laboratory at Beltsville, Md.; the University of Maryland’s dairy department and farm at College Park, Md.; and some of the largest commercial milk processing plants at Richmond, Va.

The eleven touring seniors were accompanied by Prof. J. P. LaMaster, head of the Clemson Dairy Department on the trip, which is sponsored annually for seniors majoring in dairying. The group left Clemson on April 23rd and returned four days later, on April 27th.


Alpha Zeta Elects S. P. Young

At a recent meeting of the Alpha Zeta, honorary agriculture fraternity, S. P. Young of Dalzel was elected Chancellor, replacing S. E. McGregor. Others elected were: W. B. Boykin, Censor; A. F. Busby, Scribe; R. S. McCants, Treasurer; E. Chamness, Chronicler; and W. P. Law, Faculty Advisor. Retiring officers were: W. McKay, Censor; A. W. Snell, Scribe; F. L. Fitz Simmons, Treasurer; E. L. Corley, Chronicler; and Dr. G. H. Armstrong, Faculty Advisor.

Alpha Tau Alpha Award

M. M. Harrison, VAE senior of Pelzer, was awarded the ATA Scholarship Award that is given each year to the senior graduating during the year that has the highest grade point accumulated during his stay at Clemson. This is the second year the award has been given.

The first medal was won by J. T. Black, present teacher of agriculture in the Greenville city schools. By donating the honor award Alpha Tau Alpha hopes to encourage scholarship among the members of the student body that are enrolled in the School of Agricultural Education.

International Conference Be Held At Clemson

The first annual meeting of the International Sesame Conference will be held at Clemson on August 15-16, 1949. The object of this conference is to bring together sesame workers from all parts of the world to discuss fundamental problems related to this crop, which is an important economic crop in many countries. Dr. Pinto Salvatierra, Secretary of Agriculture for Venezuela, and numerous other distinguished visitors from foreign countries as well as USDA officials and delegates from the various state experiment stations interested in sesame research are expected to attend. Dr. R. F. Poole, President of Clemson College, and Dr. H. P. Cooper, Director of the South Carolina Experiment Station, will welcome the visitors.

Sesame, or Benne as it is often called, has been found highly adaptable to South Carolina conditions and extensive research and breeding work is being carried on at Clemson by J. A. Martin, Associate Horticulturist with the Experiment Station, who is regarded as one of the foremost authorities on sesame. The location of this worldwide meeting at Clemson is another step forward in establishing sesame as a stable cash crop for South Carolina farmers and in supplying the oilseed industry with a new domestic crop of high oil content.

Prof. Law To Research—Prof. Rogers Replaces

W. P. Law, Associate Professor of Agricultural Engineering, will transfer to full-time research work with the South Carolina Experiment Station on July 1. He will work on irrigation projects and other experiments in the agricultural engineering field in his new capacity.

E. B. Rogers, Assistant Professor of Agricultural Engineering, will replace Prof. Law on the teaching staff.

Dr. Ferrier Attending Marketing Congress

Dr. W. T. Ferrier, Professor of Agricultural Economics, is attending the Cotton Marketing Congress being held at Lake Petit Jan in Arkansas. The Congress is composed of a group of Southern marketing specialists.
Dr. Barre to Return

Dr. H. W. Barre, former Dean of the Clemson School of Agriculture and Director of the South Carolina Experiment Station, plans to return to Clemson to live when he retires July 1. A Clemson alumnus of '04, Dr. Barre has worked with the USDA as Head of the Division of Cotton and other Fiber Crops and Diseases since he left Clemson in July, 1934.

Sibley Wins Trip

Winston H. Sibley, animal husbandry sophomore of Greenville, has been granted the sophomore scholarship award of the Sears Roebuck Foundation. He will be given an all-expense trip to Chicago on May 22 where he will compete with students from 47 other land grant colleges for three national award given by the Sears Roebuck Foundation.

Sibley has accumulated a grade point ratio of 8.51 which is truly an outstanding accomplishment. The young Greenvillian will be accompanied on this trip by Dr. H. P. Cooper, Dean of the School of Agriculture.

Judging Team Selected

Five regular members and two alternates were selected for the Clemson Livestock Judging team in an elimination held the afternoon of April 19. Those selected were R. S. McCants, T. A. Warren, F. L. Cox, C. K. McCrae, and R. E. Warner. Alternates are J. C. Bloxham and I. J. Adams.

Alpha Tau Alpha Banquets

Thirty-six members of the Kappa Chapter of Alpha Tau Alpha and their guests feasted at Seiuler's Steak House in Walhalla Tuesday night May 2, at their semi-annual steak supper. Dr. G. H. Aull delivered the main address of the evening.

President Bud Railings introduced the new officers of the chapter which are headed by J. C. Hammond, president. Railings gave a brief word of welcome to the guests and gave the incoming officers their charge of office.
The Agrarian

RESPECTFULLY

DEDICATES THIS ISSUE TO

The Memory of

WILLIAM BARRE AULL

MARCH 24, 1887        APRIL 16, 1949

Vice-Dean School of Agriculture
Professor of Bacteriology

TEACHER :- COUNSELOR :- FRIEND

A Clemsonian — First — Last — Always
Agrarian Philosophy

Crystal Grazing by a Bathtub Optimist

Look! Look! — for the love of the good earth and the health of your spirits, look dead ahead of the good ship "SCA (South Carolina Agriculture) FUTURE" and glass the horizon with a vivid imagination for fair weather and smooth sailing.

The scuttlebut is flying from all sides about the rough channel into the Bay of Security — about Depression Point, Surplus Sandbar, Unemployment Reef, Marketless Rock and other points likely to shipwreck the "SCA FUTURE." I'm just a boot cabin boy aboard, so pardon me while I go below to my bilge suite — hoist the Jolly Roger over my hammock — and proceed to mutiny against the fear mongers.

It looks to me like a heap less talk and a scad more work 'a battening down the hatches of faith and hope and securing the lines of opportunity around the stanchions of stickability would come a darn sight nearer to preparing us for whatever rough sailing there is ahead. Since I'm still a boot, guess I'd better do this mutiny up in a landlubberish sorta' way. Fetch me my soap box and crystal ball and I'll proceed to orate.

People who spend their time worrying about gloomy things that can happen instead of doing their all to see that the best possible things will come about are pretty far gone down the road to fear and insecurity. Sure, there can be rough times ahead for South Carolina agriculturists — just as a roof can leak if it isn't kept in proper repair.

In many respects, our farmers have decided advantages over those of many other regions of the nation. We have a mild climate which gives us a relatively long frost-free growing season and by way of comparison we have abundant rainfall. New cash crops are constantly being introduced and new rotation schedules worked out which can easily serve along with the long growing season as a profitable means of putting our eggs in more than one basket.

All phases of this business of farming are continually under the objective scrutiny of analysis and experimentation. Quicker, cheaper and easier ways to perform the multiplicity of farm operations are important points that well occupy the time of numerous trained investigators and are being used by progressive farmers to good advantage.

New processing and storage techniques can help immensely in solving difficult phases of the marketing problem and at the same time provide the farm family with a better balanced home grown diet the year round. The ever increasing mechanization of our farms is taking much of the drudgery out of farm work and greatly expanding the production possibilities of the farm family.

The varied types of farming enterprises within the state give each agriculturist advantage par none to put his own special abilities and interests to best use. Relatively new fields opening up—irrigation, oil crops, aromatic tobacco, new industrial uses for agricultural residues, and others—offer enterprising South Carolinians a chance to secure their own future while helping to do the same for their state.

The remarkable postwar industrial expansion within our state offers new markets for farm products and possibly part time employment for farm family members — and is not, as some people seem to think, an omen of declining importance of agricultural enterprises. South Carolina has always been a great agricultural state — and can and will remain so alongside a welcomed and much needed industrial expansion. Agriculture and industry can well serve the state to mutual advantage; the days of one-sided economy have long since past for progressive communities.

If there is any one great limiting factor to agriculture in South Carolina it is the marketing of our farm products. It isn't all of the answer, but the quicker our agriculturally minded citizens accept the importance and spirit of co-operative effort the sooner our marketing problem will assume smaller proportions.

That's enough of a spiel for awhile; 'cept I almost forgot to tell you who's skipper of the "SCA FUTURE." Well sir, he's a fine 'un — men and a lot of other bilge rats have got a lotta' faith in him. He's YOU!! Yep, YOU!

Why? Well, it's this way — you're pretty interested in the "SCA FUTURE," else you wouldn't have read this far through this messa' words. Right? And isn't the interested crewman the one most likely to become skipper? Anchors aweigh Skipper — we're with you — set sail for that Bay of Security and never fear the rough channel, we'll navigate her fine.
THE EPTING DISTRIBUTING CO.
Leesville, South Carolina

Fertilizers
Fine Farm Seeds
Agricultural Chemicals

TENNESSEE BASIC SLAG
"Restores Nature's Balance to Worn-out Soils"

Carolina Produce Haulers
INCORPORATED

LONG DISTANCE HAULERS OF
FRESH FRUITS & VEGETABLES
INSULATED-REFRIGERATED VANS

SEABROOK, S. C.

PHONE: 33F11 Beaufort, S. C.
TELEGRAPH: Beaufort, S. C.

TWO FAMOUS QUALITY PRODUCTS

BORDEN'S DAIRY STARLAC
For Buttermilk, Chocolate Drink and All Creamery Uses.

BORDEN'S SPECIAL ICE CREAM STARLAC—
ESPECIALLY FOR ICE CREAM
Gives Added Body and Smoothness

Ask us for literature and quotations
Distributed in North and South Carolina by

R. R. BEATTY
CHARLOTTE, NORTH CAROLINA
1233 W. Morehead St. Phone 3-2302
**Following Through — Choice Steer to Juicy Steak**

**COMPLETE STEP-BY-STEP BUTCHERING PROCEDURE GIVES A.H. STUDENTS PRACTICAL EXPERIENCE**

On March 16 the Animal Husbandry Department of Clemson College purchased five steers at the Anderson Fat Stock Show. Fed by 4-H Club members of Anderson and Oconee counties these steers ranged in weight from 825 to 1130 pounds on foot, were well finished and graded *choice* by the official judge. The purchase price ranged from 24.75 to 26.25 cents per pound, and the dressing percentage averaged about 60 percent.

The main idea behind this purchase was to give the students majoring in Animal Husbandry an opportunity to judge and observe a class of fat steers. This purpose was carried out very well by the members of the faculty and the students benefitted in many ways from the program — as they had a chance to follow the steers on foot through to the carcasses and on to the market cuts of meat. Approximately 125 students from various classes had the opportunity to judge the steers prior to slaughter. Afterwards students of the Animal Husbandry Department slaughtered the steers and cut them into retail cuts for observation and discussion. The steer shown in these pictures was purchased by the Clemson Infirmary.

(continued on page twenty-three)
CONVENTION BANQUET FEATURES "ALL-S.C." MENU

Independent eaters of good food—that's what South Carolinians are!!

The entire menu of the banquet held during the annual meeting of the South Carolina Frozen Food Association at Columbia on May 12-13 was made up of South Carolina grown foods—with the exception of the coffee, which naturally came from our good neighbor to the south, Brazil.

Shrimp, lettuce, ham, lima beans, asparagus, biscuits, and the ever-tasty combination of strawberries and shortcake were among the gallant soldiers of good nutrition from over the state who fought a losing battle against the hearty appetites of the hundred-odd delegates to the convention. Clemson College's contribution to the cause—cottage cheese, spiced peaches, and butter—met the same defeat of delightful consumption.

Clemson was also represented at the convention by L. O. Van Blairicom, Associate Prof. of Horticultural Manufactures, and R. F. Wheeler, Prof. of Animal Husbandry.

Columbia's Mayor Frank C. Owens welcomed the convention and Gov. J. Strom Thurmond addressed the delegates on the importance of their industry to South Carolina. The main address was given by John L. Hoppe, Editor of Locker Management.

"Meat Curing and Storage Experiments at Clemson" was the subject of an address by Prof. Wheeler. Prof. Van Blairicom was elected Horticulture Consultant to the association for the third consecutive year and Prof. Wheeler was elected Animal Husbandry Consultant.

SNAPPY COMEBACK

A minister, rather noted for his close calculations, also operated a small farm in Vermont.

One day he observed his hired man sitting idly by the plow, as his horses took a needed rest. This rather shocked the good man's sense of economy. After all, he was paying him 75 cents an hour. So he said, gently but reproachfully, "John, wouldn't it be a good plan for you to have a pair of shears and be trimming these bushes while the horses rest?"

"That it would," replied John agreeably. "And might I suggest, your reverence, that you take a peck of potatoes into the pulpit and peel 'em during the anthem."

SMALL FAVOR

They're reviving the one about the midwest football coach who was collared by an angry rooter after losing a game by a big score. "How many students are enrolled in this University?" asked the old grad, with deceptive politeness. "Seventeen thousand," replied the coach. "Is it too much to ask to have two of them in front of the ball carrier?" snarled the alumnus.

"A STRONG UTILITY is a COMMUNITY ASSET"

South Carolina Power Co.
Summer Camps -- Recreation and Education for FFA Boys

FARMERS OF TOMORROW LEARN THEIR STATE TODAY—WHILE VACATIONING

Realizing the need for some form of recreation and pleasure for the F.F.A. boys of South Carolina during the summer months, several camps have been established throughout the state, which are namely: Tamassee, Bluffton, Columbia, and Murrells Inlet. Noting the location of these camps, one can see that they are so distributed over the state that the boys from the coastal plains can camp in the mountains and the boys in the piedmont can camp at the beach. This way of camping serves as a good means by which the boys may see and learn more about their state.

Bluffton FFA Camp

The camping program consists of various activities such as: visits to experiment stations, wood pulp mills, meat packing plants; historical places; boating, fishing, games of various kinds, mountain climbing, swimming, and others. These activities shape into a well organized camp program for a week of real pleasure for the boys.

By FRANK M. HART
Agricultural Education 1949

Over two-hundred F.F.A. chapters attend camp each year. Each chapter starts planning its camping trip well in advance. This makes it possible for the different chapters to make reservations early and then the finer details can be worked out more easily.

Each chapter usually has a plan in which to finance the trip. A finance committee may outline plans for securing the necessary funds or some other way may be used.

The camps are open from June first until September first, and each chapter spends a week at camp. There are from two to four chapters at each camp every week. Inner-squad games and other activities brings about a general understanding and friendship between the different chapters.

Most of the boys take an educational tour to and from camp. This is done by planning such trips. Visiting outstanding farms, industrial plants, and other points of interest adds another highlight to a very pleasant week.

Clemson Seniors Visiting Murrells Inlet FFA Camp

FOLLOWING THROUGH (continued from page twenty-one)

most beneficial and practical project. The students who participated have the same opinion, and we are looking forward to more work of this nature in the Animal Husbandry Department.

The pictures with this article tell a story that need not be put into words — the story of a new and expanding industry in South Carolina and the south as a whole. The degree of finish and marbling of fat with lean shown on the carcass and in the steaks in these pictures respectively, is second to none. This is the type of beef that South Carolina is capable of producing. During the past ten years the south has made great steps forward and beef cattle production has certainly been one of the stepping stones. We in the South have been blessed with a climate that permits almost a year-round grazing period; this indeed is a large advantage over many beef producing areas of the United States.

Why not turn the brown, barren fields of winter into a green blanket of forage dotted with beef cattle for South Carolina?

Beef cattle have an important part to play in the growing industry of the south, and nothing will prevent them from taking their place. Those foresighted people who take the advantages offered them and use good management will be leaders in this progressing industry. Think it over. How far can you see?

TOO MANY STOPS

Last night when all the stars were lit,
Pa went out to stroll a bit.
When Pa came home, Ma had a fit,
The stars were out but Pa was lit.

BIG DIFFERENCE

Oliver Wendell Holmes once mistook an insane asylum for a college. Realizing his mistake, he explained to the gatekeeper, and commented humorously, "I suppose, after all, there is not a great deal of difference."

"Oh, yes, there is," replied the guard; "in this place you must show some improvement before you can get out."

MAY 1949

TWENTY-THREE
FERN GUERNSEY FAMILY
(continued from page seven)

Daughter - dam comparisons have been made on the 2 times a day milking 305 day mature equivalent basis for 3 of the 5 foundation sires and all of them have shown plus values.

In addition to the 5 foundation herd sires, 12 bulls bred in the Appin herd from the Fern Family have been used with marked success since 1920. Five of these were sons of Fern of Glenville; 4 sons of Appin's Lady Williams; 2 sons of Little Fern of Appin, a daughter of Fern of Glenville; and 1 was a son of Appin's Fern another daughter of Fern of Glenville. Each of these 12 Fern bulls were sired by one of the original 5 foundation herd sires.

Fern's Raider of Appin, the most famous of the Fern bulls, was used throughout his life in the Appin herd. He has 30 tested daughters, 25 of these from tested dams show plus production. Dr. R. B. Becker of the University of Florida has made an extensive study of the length of time dairy bulls are fertile. His data indicate that Fern's Raider of Appin was fertile to 19.09 years of age. This is the most advanced age on record in the United States for a fertile bull of the dairy breeds.

The Appin herd of 31 females, all home bred in the Fern family, was type classified January 5, 1949 with overall ratings of 2 Excellent, 11 Very Good, 8 Desirable, 9 Acceptable, an 1 Fair. In the detailed breakdown there were 50 Excellent, 126 Very Good, 93 Desirable, 52 Acceptable, 18 Fair, and 2 Poor ratings. Seventy nine percent of these detailed ratings were in the most useful classes of Excellent, Very Good, and Desirable.

The Clemson Dairy Department has been trying since 1938 to get a foundation of the Fern Family of Guernseys. A suspicious Bangs test stopped one opportunity, efforts to breed bulls for Clemson turned out to be heifers, the money was not available at one time and later Mr. McCall refused to part with a bull he had especially bred for his own herd.

In February 1949 Mr. McCall decided to reduce the Appin Farm herd of over one hundred Guernseys to twenty-five head because of local labor conditions. The Dairy Department was advised of this situation and an offer made to sell members of the Fern Family to Clemson. On March 26, 1949, Professor J. P. LaMaster, Mr. Graydon W. Brandt, and Mr. Carroll C. Brannon visited Appin Farm. Five cows and two bulls were selected. Mr. McCall made possible the purchase of these cattle by setting very reasonable prices because of his interest in the Clemson Regional Dairy Cattle Breeding Research Project.

The five females purchased were:
(1) Appin's Hattie now in her fifteenth year, classified Excellent 1949, record 10,517 pounds of milk, 507 pounds of butterfat in GG. She was sired by Winston Farms Glory Boy and her dam is a daughter of Appin's Lady Williams sired by a son of Fern of Glenville.
(2) Appin's Lass, eleven years of age, classified Excellent 1949, record 12,052 pounds milk, 579 pounds butterfat in class A. She was sired by Fern's Raider of Appin and her dam traces two times to Appin's Lady Williams and three to Fern of Glenville.
(3) Appin's Levonia, eleven years old, classified Very Good 1949, record 11,756 pounds milk, 630 pounds butterfat in class DD. Her sire is a son of Appin's Lady Williams and her dam is a granddaughter of Little Fern of Appin.
(4) Appin's Little Fern, eleven years of age, classified Desirable 1949, record 12,439 pounds milk, 577 pounds butterfat in class AA. She was sired by Argilla Forecaster and her dam is Little Fern of Appin. (5) Appin's Of Fern, eight years old, classified Desirable 1949, record 10,105 milk, 51 butterfat in class A, sired by Argilla Forecaster out of Appin's Fern.

The three bulls of the Fern Family now at Clemson are Appin's Main Stay, a ten year old proved plus double grandson of Fern of Glenville having been sired by her son Fern's Raider of Appin out of her daughter Appin's Fern; Appin's Token, a three year old, by a son of Appin's Lady Williams out of Appin's Fern; and Appin's Trumpeter, a two year old, sired by Appin's Holden (a son of Little Fern of Appin) and his dam is Appin's Lass one of the excellent cows in this purchase.

Longevity is an outstanding characteristic of the Fern family. Appin's Main Stay's sire, Fern's Raider of Appin, was fertile to past 19 years of age and his dam Appin's Fern had her last calf, Appin's Token, when she was 18 years 4 months and 16 days of age. Main Stay was 10 years old March 23, 1949 and is in excellent physical condition and breeding well. Appin's Little Fern dropped a bull calf by him at Clemson May 3, 1949, Appin's Lass has been pronounced in calf to him since October 3, 1948, Appin's Levonia since October 28, 1948 and Appin's Hattie is apparently in calf to his February 14, 1949 service.

The Bureau of Dairy Industry, United States Department of Agriculture, is cooperating with the Clemson Dairy Department in the Regional Dairy Cattle Breeding Research Project and is paying for Appin's Main Stay and Appin's Trumpeter for use in this work.

Thanks to the cooperation of Mr. McCall, top representatives of the Fern Guernsey Family are now at Clemson to provide a thirty year start in the research program designed to develop better dairy cattle for the South.

OLDER AND WISER
Our tastes change as we mature. Little girls like painted dolls; little boys like soldiers. When they grow up, girls like the soldiers and the boys go for the painted dolls.

THE AGRARIAN

Fern's Raider of Appin on his 15th birthday.

Illustration showing a Guernsey cow and calf.
INSIDE STORY OF THE
ROLLED BALE

You simply unroll it and there it is... a thick, soft, leafy carpet of hay. The leaves are still on the stems. The natural protein and color are still there. Livestock show a preference immediately.

Roto-Baling is the new art of packaging hay or straw. The farmer pictured at left is showing how it is properly done. Wide double windrows cure fast and make the best rolled bales. (And you travel only 1/2 as far per bale.)

The ONE MAN ROTO-BALER, for the first time, makes possible home ownership of your own machine. You can save your crop the hour it is ready. Once hay is in the rolled bale, you can breathe easy, for it sheds rain like a thatched roof.

ROTO-BALING is setting new standards for preserving hay quality.

Double windrows are easily made by reversing direction of raking. Ideal for the job is the new POWER DRIVEN air-tired Allis-Chalmers Side Delivery Rake and Tedder, with selective reel speeds. It steers true, makes straight, airy windrows.

ALLIS-CHALMERS TRACTOR DIVISION MILWAUKEE 1, U.S.A.
COLD WEATHER DEALS BLOW TO 1949 PEACH CROP

April 17 Struck

The Last Blow

Current prospects are for less than 25 percent of a normal South Carolina peach crop this summer, according to latest estimates. Cold damage has been so severe that the entire southeastern peach producing region has one of the smallest crops in prospect during recent years.

Last February it was predicted that South Carolina would produce over six and a half million bushels of peaches. However, since then five different periods of freezing temperatures have steadily reduced the prospects for a peach crop. The first injury occurred on January 30, but only a few buds were damaged. However, on March 10 about 10 percent of the buds were killed. Further cold spells on March 16, 18 and 19, and estimates of the total crop dropped to only 40 percent of normal.

By HENRY SIMONS
Experiment Station Editor

The heavy frost and sub-freezing temperatures on April 17 struck the last blow. Practically every section of South Carolina where peaches are grown was damaged to some extent. At Clemson practically the entire remaining crop was wiped out, and temperatures as low as 26 degrees F. were recorded, according to Mr. A. M. Musser, head of the Clemson Horticulture Department.

Even present estimates of the peach crop are only tentative, because some small peaches are dropping from trees due to poor pollination and other factors. Those areas of the Sandhill peach growing section where cold damage was relatively light are now faced with another problem. Delayed dormancy has occurred because of an insufficient number of hours of chilling temperatures to break the rest period of the trees. Some peach trees in the Sandhill area simultaneously had unopened flower buds, blossoms and small peaches up to one-half inch in diameter, all on the same limb.

The peach crop situation in North Carolina and Georgia is not very encouraging either, reports Roy Fereon, Clemson extension horticulturist. Delayed dormancy in the Fort Valley, Georgia, area threatens practically the entire crop and about the only variety which is expected to produce a fairly good crop is the Hiley. Central Georgia peach prospects have been reduced to some extent by the cold damage and the latest information from the North Georgia area indicates very heavy damage to the remaining crop from frost on Easter morning.

CLARK LINDSAY McCASLAN
AWARD ESTABLISHED

An award to be given annually on Honor’s Day to the student in the Department of Agricultural Engineering deemed the most deserving in the opinion of the Agricultural Engineering faculty was recently established at Clemson. The award will consist of the income from a $1,000 fund donated by Mrs. Clark Lindsay McCaslan in memory of her late husband who was a Clemson graduate of ’08 and a pioneer in Agricultural Engineering. Mrs. McCaslan also made an additional $25.00 available so that the first presentation of the award could be made on Honor’s Day of this year.

Mr. McCaslan was Extension Specialist in Agricultural Engineering at North Carolina State College at the time of his death last June 24.
All these and many more engineered for the Ford Tractor

Dearborn Implements offer rugged construction, plus the uncompromising quality that means long life and low lifetime cost. All but a very few can be attached or detached in three swift operations, saving precious working time in the field. Dearborn Implements are easy to transport, easy to use, easy to service, easy to store — and they do stand up.

And every Dearborn Implement is specially engineered to work at its best with the Ford Tractor.

A few of the implements in this great line are illustrated here. Many more are available, making it possible to keep a Ford Tractor profitably busy — making it a real "Year 'Round Tractor."

DEARBORN MOTORS CORPORATION, DETROIT 3, MICHIGAN

Look For This Sign...

It marks the headquarters of your nearby Ford Tractor and Dearborn Implement dealer. He has a genuine interest in cooperating with you in every way. It will pay you to know him better.

The only time that Counts is Working Time

Ford Farming

MEANS LESS WORK . . .
MORE INCOME PER ACRE
LIGHTER SHADES OF COLLEGE LIFE

Yea, we know, you thought this column was a thing of the past. Someone lowered the boom on us last month and we had a heck of a time ever getting back into print. It seems that we stepped on some very important toes in our last “Shades” and were banned. “It doesn’t contribute a thing to agriculture,” they screamed in our ears. Our argument was, neither did Tennyson, but a lot of Ag boys have become familiar with that noble gentleman of verse.

Someone spiked the tea on our table at the Junior-Senior banquet and it all seems sorta’ hazy. Remember seeing “Boo” Lachicotte under one of the tables. It seems that “The Drake” had given him a “hot foot” and he was ah’ huntin’ the scoundrel. What excuses some people won’t think of to avoid embarrassment. All kiddin’ aside, it was a wonderful affair. Doc Roberts and company are certainly to be congratulated. Taps Ball was also a fine affair. The C.D.A. really went all out for this one. Next year maybe a new system of getting good bands will be devised and we can have more than one name band a semester.

Prof. Jim Cook looked very much like the boy with the green hair several weeks ago when he left his Monday afternoon lab. An afternoon among the cattle certainly proved disastrous for him. He looks so neat each morning at eight o’clock. It was really very hard to believe, but we saw it with our own peepers.

“Nose” Gilliam has had steak for supper every Friday night since this semester began. Could this possibly have anything to do with the meats lab he has on Friday? Won’t Professor Wheeler be glad to read this!!!

Some bright person thinks this years “Taps” should be called “Careless Hands”. We think an appropriate name for the “Bobbin and Beaker” would be “The Mill Hand’s Leaf”. This was meant directly as a slur. We understand some of the Textile boys were instrumental in this magazine being called “The Plough-Boy Journal” in the “49 Taps”.

Last time “The Agrarian” ran this column, we had conducted a poll to determine which girls’ school was the favorite with Clemson men. Since then, we have read where Winthrop, Anderson, Coker, Limestone and Carolina girls have picked Clemson men as their favorite male spruces. Ain’t we got any friends at Converse?

With that choice little tidbit, we’d like to conclude our socalled writings for this year. These seniors that are graduating certainly will be missed. How can anyone stay here four years and then want to leave—Haw!!! Imagine if you’re at the beach very much this summer you’ll certainly kick one or two while walking in the sands. Clemson men have a way of doing that—taking life easy. Good luck to all of you.

Father (speaking to prospective): “The man who gets my daughter will get a prize.”
Prospect: “May I see it, please?”

QUESTIONS

A
Diverse in prominence, yet alike in taste,
On each apostle his name has placed.

B
Enclosed by two comparatives of “mellow”
Uncrinnable “chum”, here underlinded in yellow.

C
Where the Amazon and rubber meet you locate me,
Hood, McKinley or Rainier completes my picture, see?

Answers and names of winners will be available at magazine office. Winners will be notified by mail.

RULES FOR CHESTERFIELD HUMOR MAGAZINE CONTEST

1. Identify the 3 subjects in back cover ad. All ads are in al.
2. Submit answers on Chesterfield wrapper or reasonable facsimile to this publication office.
3. First ten correct answers win one carton of Chesterfield Cigarettes each.
4. Enter as many as you like, but one Chesterfield wrapper or facsimile must accompany each entry.
5. Contest closes midnight, one week after this issue’s publication date.
6. All answers become the property of Chesterfield.
7. Decision of judges will be final.

LAST MONTH’S ANSWERS & WINNERS

A
The word “milder” appears twice in the ad in red letters, and the word “mild” (two-thirds of “milder”) appears white letters. They all explain why Chesterfield is right.

B
Four eyes (Darnell’s and Griffin’s) are the same in color and shape, but not in fame, since Linda Darnell’s are much more famous.

C
The pearl earrings worn by Linda Darnell.

WINNERS...


Up and at ’em boys—read the questions; figure them out; call in your secretary to write down your answers; put on your track shoes and head for the second barricades. Watch out for the traffic jam at Room 2-202, because that’s where the winning entries are to be turned in.
Dirty engines can cause costly breakdowns this spring...put a tractor out of use just when you need it most. Don't risk this threat to bigger cash crops. Protect your heavy-duty diesel and gasoline tractor and truck engines now and regularly with ESSOLUBE HD Motor Oil!

ESSOLUBE HD provides this protection in two ways:

1. Contains special detergent that helps keep valves, rings, pistons and upper engine surfaces free from harmful sludge and varnish.

2. Stays full-bodied at high temperatures, flows freely when motor is cold...for all-around engine protection in any weather.

See Your Esso Farm Distributor For These Other Important Esso Aids to Better Farming for Bigger Profits

ESSO GASOLINES—strong and smooth power flow for farm engines, high anti-knock under load.

ESSO MOTOR OIL — a proved, low consumption, high performance premium oil.

ESSOLUBE MOTOR OIL—dependable engine protection at a popular price.

ESSO CHASSIS GREASE—long-lasting, adhesive grease that stays on the job under rough going.

ESSO GEAR OIL—a high-quality oil that gives maximum protection to farm machinery gears.

ATLAS TIRES, BATTERIES, AND ACCESSORIES

AGRICULTURAL STUDENTS are offered free subscriptions to the regularly published ESSO FARM NEWS. Every issue packed with valuable articles and helpful hints on modern farming methods. Write today to: Esso Farm News, Room 777A, 15 West 51st St., New York 19, N. Y.
RUSS OF SMALL GRAINS
(continued from page eleven)

fusus produces five types of spores, each with a distinct function to perform. I will not attempt to give the complete details concerning the life of the rust organism here, although I shall mention a few conditions which favor the destructive outbreak of the disease. They are as follows: (1) large uniform acreages of susceptible wheat varieties; (2) presence of physiologic races of rust that will attack those varieties; (3) mild winters in the South; (4) a constant succession of humid, or rainy days and dewy nights as the crop matures in the spring; (5) cool temperatures; (6) rank succulent growth of the crop; (7) late maturing crops which have longer exposure to the rust; (8) continuous south winds; (9) presence of barberry in northern areas. When these factors are combined with hot, dry conditions just before harvest, the greatest losses result.

The conditions favoring leaf rust are much the same as for stem rust except the leaf rust is adapted to cooler temperatures and has no relation to the barberry.

There are about four control measures which are very effective in controlling stem rust: (1) Resistant Varieties — Breeding for stem rust resistant varieties of wheat and other grains has largely centered in the northern states where stem rust is most destructive. This measure of control remains our most important means of fighting stem and leaf rusts but history shows us that breeding work is never finished. New resistant varieties will constantly be needed as new races of the rust become prevalent and the breeding of new varieties must be continued if this control measure is to remain successful. (2) Eradication of Barberry — This control is most important in the northern states where the new physiologic races of rust are the result of hybridization of older races during sexual reproduction of the rust which takes place on the barberry. (3) Agronomic Practices — Agronomic practices favoring stem rust control consist of avoiding low, undrained sites for grain crops, the use of early maturing varieties and the avoidance of excessive nitrogen fertilization. (4) Sulfur Dusting — It has been proved for a number of years that application of sulfur dust will control rusts, although early views were that this measure was impractical. Today these views are being reconsidered in view of the recent development of airplane dusting. Experiments have shown that under conditions of heavy rust infestations the sulfur treatment has more than paid for itself in increased yields. At present the experimental evidence is not sufficient enough to justify recommending dusting as a general practice, but it is a desirable control measure in growing small plots of valuable grain for seed production or for show purposes.

All of the above statements also apply for the control of leaf rust except the eradication of barberry. This does not apply for the leaf rust because the barberry is not a host for the leaf fungus.

Grandfather admits chewing tobacco is a filthy habit, but defies anybody to prove that it ever started a fire.

Manufacturers of

HIGH GRADE FEEDS

MONARCH is our top quality brand. We manufacture all types of poultry mashes and scratch feeds, dairy feeds, hog feeds, corn meal, and table grits. We sell our products to the retail merchant, to the commercial poultryman, dairyman, and hog raiser—all at one wholesale list price.

We strive to give the feeder the very best quality for his money.

Mountain View Milling Co.

Phone 532 Seneca, South Carolina
Strengthening the Basis of Our Economy...

The American standard of living is a tangible monument to the progress of free men. In no other country, in any age, have people enjoyed all the rights, privileges and benefits which we in this country now take for granted. We can point with pride to the accomplishments of this great nation, but we must also accept these rights and benefits as a responsibility that none of us can shirk without inviting trouble.

The industry and ingenuity, the cooperation and teamwork of American labor and management, the American system of free enterprise—these things made possible our present standard of living, which is the envy of the world.

These qualities, or attributes, of the American way of life are secure to us and our posterity only as long as we continue to exercise vigilantly and diligently our responsibilities in a democracy. Elsewhere in the world, these responsibilities would not be considered a disagreeable obligation but a welcomed privilege. The exercise of our franchise to vote . . . the willingness to do more than is expected . . . the cooperativeness to give ground at personal sacrifice for the common good of all mankind . . . the ingenuity to overcome apparently insurmountable obstacles—these are but practical applications of the golden rule which will secure the continuation of the blessings of our free enterprise system and democracy.

We have many obligations to discharge if we are to maintain the pace of progress and strengthen the basis of our economy. We must conserve our natural resources so that our children and our children's children will not face want, social unrest, and an uncertain future.

Food, clothing and shelter are derived from the soil. Without these products of the soil, the wheels of industry would cease to turn; business would suffer; the economic welfare of the nation would deteriorate; and unemployment with its bitter consequences would again haunt many American homes.

MM Builds Quality Modern Machines

Minneapolis-Moline takes pride in providing quality machines for agricultural America . . . machines planned and designed by Minneapolis-Moline engineers to equip progressive farmers to cut costs and to eliminate drudgery so that they may utilize the potential possibilities of modern methods of agriculture . . . more faithfully discharge their stewardship over one of our most important basic natural resources—our soil. To this end we rededicate our skill, our experience, our knowledge, our deep-rooted regard for quality. This we do with some pride, of course; but more so with the humble feeling that we are but fulfilling our responsibility to those we serve.

MINNEAPOLIS-MOLINE  MINNEAPOLIS 1, MINNESOTA
THE FLOWERING DOGWOOD

Tiny Yellow Flowers In Large White Bracts

The Flowering Dogwood is without equal among the showy early spring flowering trees. The tiny, yellow-clustered flowers are borne in May and are surrounded by four large white, blunt-ended bracts. (It is these bracts that many gardeners refer to as the flowers of the tree.) Then, in fall, the fruits ripen and become clusters of brilliant scarlet. Gorgeous leaf coloring adds to the fall beauty of the Dogwood.

Native from Massachusetts to Florida and west to Texas, the Flowering Dogwood is usually around 15 feet in height, though it does grow taller. It thrives in low, moist, fertile soils and prefers a soil with a pH of 6.0 to 6.5. It is a good move to incorporate peat moss or some other form of humus in the soil where it is growing. Good drainage is also essential for best growth.

Established trees may be fed in early spring—from the time frost is out of the ground until early May. Make holes two inches in diameter and 12 to 18 inches deep, in a zigzag fashion slightly inside and outside the branch spread. The holes can be made with a crowbar or earth auger. Fill the holes with a mixture of half complete plant food and half soil. Then water. Allow 3 pounds of plant food to each inch of trunk diameter, measuring the trunk 4 feet above the ground.

The Flowering Dogwood is best transplanted in spring. The width of the hole for balled-and-burlapped trees should be 2 feet wider than the soil ball, and as deep as it was where the tree was formerly located. Make allowance for proper drainage and settling. If you collect Dogwoods from the woods, pick out small seedlings, because large plants are difficult to transplant.

When planting, be sure and include complete plant food. The following table based on the size of the hole will serve as a guide:

<table>
<thead>
<tr>
<th>Diameter (inches)</th>
<th>Food (ounces)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>one-half ounce or one heaping teaspoonful.</td>
</tr>
<tr>
<td>2</td>
<td>two ounces, or four heaping teaspoonfuls.</td>
</tr>
<tr>
<td>3</td>
<td>four ounces, or one-half cup.</td>
</tr>
<tr>
<td>4</td>
<td>eight ounces, or one-half pint.</td>
</tr>
</tbody>
</table>

Provide about 3 inches of loose soil in the bottom of the hole and mix one-half of the complete plant food with this soil. Mix the other half with the soil to be used in refilling the hole. Set in the tree and fill the hole. Leave the top layers of soil slightly concave and water thoroughly.

Another dogwood, the Pacific Dogwood, is excellent for Western areas. It is similar to the Flowering Dogwood, but there are certain marked differences. First it grows to a height of 75 feet. Also, the flowers are twice the size of those of the Flowering Dogwood and the bracts are not notched. There are usually six bracts although there are occasionally four or five.

By THE MASTER GARDNER

SPARTICLES
Increase Poultry Profits

.....REDUCE FEED WASTE!

Sparticles are the new, bite-shaped granular form of Spartan Chick Starter and Spartan Broiler Ration. Young birds see and eat Sparticles more eagerly...get ALL the nutritious elements in every bite. Feed Sparticles for greater vigor, quicker growth, and added profits. A complete feed...you need no supplements.

Spartan Grain & Mill Co.
Spartanburg -: Landrum -: Newberry
South Carolina

THIRTY-TWO

THE AGRARIAN
WHEREVER YOU FARM

WHATEVER YOU GROW

INTERNATIONAL HARVESTER serves you all the way

There are 3 basic reasons why so many growers of so many crops rely exclusively on McCormick Farm Equipment built by International Harvester.

1. This company builds fully proved farm machines that fit the specific practical needs of American Agriculture.

2. The long-continued and increasing preference for McCormick equipment is the result of research and manufacturing facilities that give you farm machines designed for long life and efficient performance—that are precision mass-produced with quality as the standard. For example, farmers have shown their confidence in International Harvester by purchasing more than a million all-purpose Farmall tractors!

3. Long-time Harvester policy requires that customer investment be protected. This has built a dealer network closely serving all communities—providing the farmers of America what they need and expect to keep their equipment earning.

Wherever you farm, whatever you grow, IH and the International Harvester dealers serve you all the way!
Always Buy CHESTERFIELD

“When you smoke Chesterfield you get a Milder cooler smoke - that’s why it’s my cigarette”
John Lund
STARRING IN “BRIDE OF VENGEANCE” A PARAMOUNT PICTURE

Prominent Tobacco Farmers smoke Chesterfield

JAMES H. DARDEN, Farmville, N. C. says
“I've smoked Chesterfields steadily for 12 years. They’re really MINDER. They buy mild, ripe, sweet-smoking tobacco . . . the kind that ends up in real smoking satisfaction.”