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PICTURES on pages 4, 5, and 17 are through the courtesy of the South Carolina Agricultural Extension Service.

COVER — Snow scene of Calhoun Mansion located on the Clemson campus just across from Third Barracks. It was in this mansion that John C. Calhoun, United States Senator from South Carolina and later Vice-President of the United States lived for many years. Restoration of the mansion was completed in recent years by the United Daughters of the Confederacy.

It was Calhoun's son-in-law, Thomas Green Clemson, whose bequest made possible the founding of The Clemson Agricultural College. The land upon which Clemson College now stands was once Fort Hill, farm estate of John C. Calhoun and later Thomas G. Clemson who inherited it from his father-in-law.

Photograph taken by Lewis D. Moorhead, a graduate of Clemson.
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Opportunities In Agricultural Research

Improvements of Agricultural Methods in South During Last Two Decades Creates Opportunities

By H. P. COOPER
Dean, School of Agriculture and Director, S. C. Experiment Station

The agricultural research program in this country is unique. Our research activities consist of a central federal system administered from Washington, D. C., and individual state systems financed jointly by the federal government and the separate states. Our comprehensive agricultural research system has contributed to the development of the most efficient and effective agricultural systems in the world. The increased efficiency in our agriculture has resulted in a progressive decrease in the percentage of the population necessary to produce the food and fiber crops needed. At the present, time less than twenty percent of our population is engaged in agricultural production.

The increased efficiency in agricultural enterprises is closely related to the power available for agricultural work. In certain primitive agricultural countries manpower is largely utilized in production activities. Other systems utilize oxen and horsepower.

The introduction of the modern automotive equipment has markedly increased the efficiency of farm labor and is resulting in the need of more research information necessary in the establishment of still greater efficiency in farm operations. The southeastern area is one of the last agricultural regions to depend largely on hand or simple agricultural equipment.

During the past fifteen or twenty years, or since farm equipment was put on rubber tires, there has been more progress in the mechanical operations on southern farms than in the past century. The passing of the old agricultural methods, the introduction of more farm equipment and the relatively heavy financial investments involved make it necessary to increase the efficiency of all agricultural enterprises.

Along with the introduction of the farm mechanization program and with relatively large capital investments, there is the desire for an agricultural research program that will provide research information for agricultural equivalent to that being made available to many of the large manufacturing industries.

Since the prevailing production unit in agriculture is the family farm, it is necessary for the agricultural research activities to be supported by government as it is not possible for the small units to develop adequate research information comparable to some of the larger industrial enterprises. In order to more adequately serve the farm interests, the federal government has made provisions for substantial appropriations to develop a comprehensive agricultural research program.

One of the limiting factors at the present time is securing well-trained research personnel to develop an adequate research program. The present high prices and the employment by the larger industries of a large proportion of qualified persons have created a serious deficiency of agricultural research scientists. There is a deficiency of adequately trained scientists in practically every field of biology and agriculture, and there will be many good opportunities for well-trained scientists for a long time as it will require many years to train all the research scientists needed in our agricultural program.

In the field of agricultural economics there are numerous problems needing special consideration with emphasis upon the financial problems of agriculture. Where the family labor or operating with simple equipment is one of the major factors in farm production, it is customary to give relatively more consideration to the returns per acre than to labor income. The entire field of marketing of agricultural products will need the services of many trained agricultural economists.

The field of agricultural engineering will need the services of more agricultural engineers than are being trained at this time. Soil conservation activities and land utilization practices will need many men trained in such subjects as botany, entomology, agronomy and horticulture. The increasing importance of livestock enterprises in our agriculture will require the services of a large number of men trained in dairy, poultry and animal husbandry.

Since there is a shortage of trained scientists in practically every field of agriculture such as teaching, research, and the various commercial enterprises including marketing, fertilizer, insecticide, fungicide, and numerous other agricultural industries, there will be excellent opportunities available in this state and in the region for men trained in agricultural science.
PERMANENT PASTURES IN SOUTH CAROLINA

By Following These Directions Livestock Farmers In This State Can Increase Their Margin of Profit by Reducing Expensive Concentrates

By LEWIS B. SMITH
Agronomy 1949

Due to the rising cost of grains, protein supplements, and hay, the cattleman and the dairyman must seek to find a more economical source of feed to combat high-priced feeds which are now on the market. Although the farmer may have enough high-priced feed to take care of the cattle until the next harvest, it would be more profitable to sell the feed than to sell it in the form of cattle.

The more practical outlet for the farmer in this crisis would be the establishing of good permanent pastures. Many South Carolina farmers have no conception of what a permanent pasture is. In any county in the state, one may ask a typical farmer about his pasture and he will point out a rough plot of land half-covered with underbrush. After close observation, it becomes apparent that little or no fertilizers have been used; nor any special attention given to the variety of seed that was planted on the ill-prepared seedbed.

It's time the farmers of South Carolina "woke-up" to the fact that the pastures are going to be no better than the land they are grown on and the care that is taken before and after they are planted.

In establishing a permanent pasture, the following procedure should be considered. After carefully choosing the site for a pasture so that water and shade are accessible to the cattle, the farmer should have the pH taken. With this knowledge, he may apply the amount of lime necessary to bring the pH within an optimum range of between 6.0 and 6.5. The land should then be broken and a basic application of nitrate of soda, basic slag, and muriate of potash applied.

The amounts vary with the soil type, but recommendations may be secured from the county agents.

After the land has been disked and fertilized, the land should be packed with a cultipacker if available; otherwise a log will serve the purpose. This tends to improve the stand and helps young seedlings to stand the drought.

Securing the quality of seed and obtaining recommendations for the best possible mixture are two of the most important steps in producing good pastures. A pasture should include a grass that will establish a good sod, such as carpet grass, Bermuda grass, or bluegrass. White dutch clover should be included in every pasture mixture in South Carolina because of its excellent nutritive value and its long grazing season. Dallis grass is another important pasture grass and should be given consideration when determining the mixture. There are other grasses and legumes which should be considered before determining a mixture. The farmer may receive advice and recommendations through his county agent and farm bulletins.

By following this outline the cattleman may establish a permanent pasture with a reasonably low initial cost, and with practically no overhead after the pasture has been established. With the increasing amount of beef and dairy cattle in South Carolina, permanent pastures will maintain a prominent place in the farm management program.
CONSERVE THAT SOIL

We Must Stop Soil Erosion And Start Now With Soil Conserving Practices to Insure Our Future

By CLYDE R. ALLEN
Agricultural Engineering 1949

The people of South Carolina are just beginning to realize the seriousness and extent of this state's erosion problem. While our population is increasing our farm land is steadily decreasing due to improper care and lack of attention. Our future, as has been our past, will depend chiefly upon agriculture. For an insured high standard of living for our posterity we must today strive towards erosion control. With the gradual increase in population more and more of our farm land will have to be converted into food producing land. With these things in mind let us undertake to explore the causes, types, and control methods of erosion in South Carolina.

The most common cause of erosion in South Carolina is rainfall. This factor presents our greatest problem as the annual rainfall in the south is greater and more intense than that in most other parts of the United States. Failure on the part of the farmer to carefully plan an effective crop rotation system and keeping the land covered as much of the time as possible, also leads to extensive erosion. In sections where row cropping is practiced on sloping land this should be given careful consideration. Another important factor of erosion is the high percentage of farms that are operated by tenants. It is only natural that they will not be as considerate of the soil as the owner. This assumption should encourage each land owner to give specific instructions to tenants in regard to land preparation and planting. It is also evident that soil with a low organic content is less permeable than soil with a high organic content; therefore, a special effort should be made to increase the organic content of the soil thus making it less susceptible to erosion.

In the piedmont section of South Carolina is found, sheet, rill, and gully erosion, all which are caused by an excess of water. Sheet erosion is the removal of topsoil fairly uniformly over an entire area. On unprotected areas of sloping fields the runoff water picks up soil particles that are agitated by the raindrops and carries them along down the hill. If the condition of the (continued on the following page)
land is relatively uniform, the removal of soil is approximately the same from all parts of an area having the same degree of slope. The damage will not be noticed until the subsoil begins to show. This is sometimes called "insidious" erosion.

Sheet erosion leads to other forms of erosion unless areas of sheet washed soils are given complete protection, such as may be afforded by a change in methods of cropping. Small gullies a few inches in depth and width often develop on unprotected slopes of recently cultivated soils. These gullies are known as shoestring gullies or rill washing and, if neglected, grow into larger gullies. As a rule, however, these tiny gullies are erased by cultivation. Rill washing is a transition stage between sheet erosion and gullying.

Gully erosion is different from sheet erosion in that gullying is the removal of soil from a tiny strip or belt down a slope. Any depression, however slight, down a slope may lead to the beginning of a gully. Loose, sloping soils gully rather easily when water is concentrated on them. A heavy subsoil intensifies sheet erosion under most conditions, but such a layer often checks the rate at which gullying takes place. Some clay soils crack into large cubical granules, which on being loosened by the water fall from the sides into the gully and are carried away by the current. Under this condition, gullies grow in width very rapidly.

There are three types of erosion found in the coastal section of South Carolina: (1) selective water erosion, (2) selective wind erosion, and (3) sheet erosion in some areas just below the sand hills. In the coastal section, sheet erosion caused by water is analogous to that in the piedmont region. As to selective water erosion; on sandy soils subjected to rains of severe intensity, the finer lighter particles of soil are carried away by a process of washing and straining, leaving behind the larger heavier particles. Thus, heavy sandy loam is sometimes changed to light sandy loam, or, perhaps even to sand. It is by this same process that strong winds strip sandy loam of its finer particles.

Vegetative practices are the simplest and most economical means of erosion control. They serve the purpose of conserving the soil and providing an income at the same time. Research and farm experience show little or no soil washing takes place on land that is completely covered by close growing crops and that on such land the soil is more permeable and the water as well as the soil, is saved. It is a good practice to grow close growing crops on the more sloping land on the farm and to grow row crops on the more level land. Lespedeza sericea and Kudzu are two of the most efficient erosion checking crops. If used extensively they could be a big factor in the answer to South Carolina's erosion problem. If vegetation proves unsuccessful in checking erosion then mechanical methods such as terraces, outlet channels, and structures must be resorted to. Mechanical practices are generally expensive compared with vegetation methods and they provide no income which is a disadvantage; but they are a necessity in some cases. In mechanical control of erosion training, skill, and experience are essential elements.

There are several sources of assistance available to farmers who are interested in practicing erosion control on their farms. A few of these are: The local Soil Conservation District, Extension Service, A. A. A., and the local high school agricultural teachers. Of these agencies and individuals, the Soil Conservation District will probably be able to offer more actual technical assistance, because each district has a "work-unit", consisting of specialists assigned by the Federal Soil Conservation Service to do this specific work. With better knowledge of erosion and its control, the farmer can increase his yields and the same time do an all important job of conserving the soil.
THEORY IN PRACTICE

AGRICULTURAL ECONOMICS CLASS TAKES TRIP

Farm Management Classes Visit Agricultural Industries in Georgia and Florida; Students Observe Modern Farming Methods Used There

By LEONARD D. REYNOLDS
Voc. Ag. Ed. 1949

One of the highlights of the semester for agricultural students enrolled in Agricultural Economics 302 is the field trip which enables the instructor to point out visibly to his class the things that have been covered during the actual theory periods spent in the class room.

Recently Dr. W. E. A. Husmann, Associate Professor of Agricultural Economics, conducted his Farm Management class on a three day tour of central and south Georgia and Northern Florida, where they observed, first hand, practices followed in certain types of agriculture.

The party departed from Clemson College early Friday morning, November 14, and traveled by way of Athens to Greensboro, Georgia. Many of the group saw for the first time on the road between Royston, Ga., and Athens, a cotton picker. There the group had the working mechanism of the machine explained to them. Greensboro, which is located in Greene county in one of the key sections of the dairy industry in the Peach state. Dairy products have become one of the leading sources of income for the farmers of our southern neighbor across the Savannah River. The Soil Conservation Service cooperating with the experiment stations of Georgia, has a pasture development project consisting of about twenty thousand acres of permanent grazing land. Extensive experiments are being run, to determine the best grass combinations for pasturage. These government owned pastures are used by the cattle owners to feed their stock for a small rental fee per acre.

A Co-op creamery was visited at Eatonton. The group saw where whole milk was delivered to the plant and the various processes that took place before the milk was used by the consumer. A large portion of the Eatonton Co-ops output is marketed in Atlanta which is the largest city in the southeast.

In Macon the party had an interview with one of the officials of the First National Bank of Macon. This firm is widely known for their Agricultural Credit department, one of the few that renders such a service to farmers. A firm representative explained the steps that a borrower had to take in order to obtain a loan from the bank and the steps the firm would take to insure their investment. The bank official also told the group the procedures that were followed in granting veterans’ loans to former service men and women.

Saturday morning an employee of the Armour Packing Company conducted the men on a very complete tour of their plant at Tifton. There the future farm managers saw the continuous process where the live animal enters the chute to the slaughter room and emerges at the end of the line in the form of smoked hams and T-bone steaks. Every part of the animal is utilized and nothing is wasted. Perhaps the most interesting part of the plant was the cutting room. There the animal is brought in on an overhead track and keeps moving all the while. At different stations along the line workers have a definite job to perform. There government inspectors grade the carcass with certain stamps and the beef and pork are placed in cold storage rooms.

The Tifton plant packs mostly local stock, the majority coming from the ranges of northern Florida and the counties of Georgia around Tifton.

The Clemson students visited the Georgia Coastal Plains Station at Tifton, Ga. Dr. George H. King, station director, greeted the party and explained to the group the things that his station was endeavoring to accomplish. Director King gave the class the scope of activities with the physical make-up of the station. S. A. Parham, head agronomist at Tifton, explained his work with peanuts and small grains. The agronomist gave the visitors from Clemson first hand information connected with the value of peanuts and peanut hay. An extensive discussion was held concerning hay making. Animal Husbandman Southwell carried the visitors on a hasty tour of the livestock pastures and animal lots. He explained his experiments briefly with pasture and cattle. Mr. Southwell stated that the herd of registered Hereford cattle at Clemson was superior to those at his station.

Considerable work has been done in Valdosta with reforestation. Large numbers of slash and loblolly pines have been planted and are yielding (continued on the following page)
returns to the owners through turpentine and naval stores. In Valdosta the South Carolinians were shown through a complete turpentine distillery. There the huge barrels of crude gum were brought in and weighed before they were dumped into the melting vats. The foreign materials were carefully removed and the turpentine emerged in different grades. There the finished product was placed in tanks and stored. Turpentine is graded by color. A different name is given to each color such as Nancy, Mary, Jack, etc. The gum emerges in solid form and is sold to powder companies for use in explosives. The director of the forestry co-op in Valdosta gave a very interesting and timely talk to the group on the necessity for preserving the forests of our country. According to the speaker large dividends can be reaped from relatively waste land by utilizing this soil to establish permanent forests which will increase the farm income and preserve the soil for future generations.

While traveling through northern Florida the group saw the different kinds of cattle raised in the leading beef producing state east of the Mississippi. The stock producers of Florida have begun to cross their native stock with imported Brahman bulls. These natives of the country of India have the ability to withstand intense heat and pay little attention to flies. A much more palatable table product is the result. The grades produced by these crosses have much better carcasses and the packing houses report much higher dressing percentages over the scrub stock formerly used exclusively. Florida is one of the largest cattle producing states in the union.

During the war America’s supply of tungoil from the East Indies was cut off. This brought about the necessity of seeking to establish a domestic supply after no other supply could be secured. One of these tungoil plantations was seen while in northern Florida and Dr. Husmann explained the procedures involved in starting such an enterprise. Tungoil is an essential ingredient for lacquers and varnishes because of its quick drying abilities. Even though there is much money to be made in this industry, the high cost encountered in initiating such a business makes it rather risky for the average capitalist.

Late Saturday afternoon the students arrived deep in the citrus belt and visited a citrus canning plant. There the oranges and grapefruit is brought to the plant in huge trucks and emptied after being weighed into a huge conveyor. This conveyor takes the produce into the plant where it travels on a production line basis. After going through a series of machines it emerges in cans as orange and grapefruit juice and other products. Approximately one half of Florida’s citrus is canned while the other half is marketed in other forms.

After a short delay the party was conducted through a packing shed where the citrus is washed, colored, graded, packed and shipped to all parts of the country. It was very interesting for the Clemson party to follow the oranges as they came in the shed from the groves and see them after a series of processes, placed in box cars to be transported to the different parts of the United States and the world.

The party head showed the group of students his groves and explained in detail the problems involved in establishing a paying grove.

Leaving Dr. Husmann’s place the convoy returned to Clemson College by the way of Jacksonville, Fla.
Robert E. Ware
And His Hobbies

Does it seem strange that a person who studies birds and is interested in their welfare and conservation should also have a hobby of collecting guns and cartridges with which birds are killed? Such may seem to be the case with Prof. Ware, Assistant Professor of Zoology and Entomology at Clemson. except that the guns he collects are definitely not used to destroy wild game.

Prof. Ware, who hails from a little town in southern Iowa, received his undergraduate degree from Iowa Wesleyan College and attended graduate school at Iowa State College. Before coming to Clemson in 1930 Prof. Ware was engaged in a number of occupations, one of them being in the Stock Exchange in San Francisco.

Prof. Ware started his gun collecting hobby as a young boy and at the present time his collection amounts to around sixty firearms as well as an immense assortment of cartridges of various descriptions and sizes. Even though they probably have a great monetary value he collects them only for his enjoyment and recreation. He has been offered various sums of money for several of his guns but as he said, "They mean more to me than money."

Some of these old firearms are history books within themselves. One such piece is a Remington cap and ball .44 caliber revolver which was given to him by an old prospector. He received this revolver in gratitude for food and clothes which he carried out to this old prospector while working in Death Valley, Arizona as a student. As related to Prof. Ware by the prospector, the revolver had been carried through three gold rushes and there is a worn place on one side of the barrel where it rubbed against the owner's leg.

The only heirloom in the collection is an old musket that his grandfather owned as a kid and which was passed down to Prof. Ware through his father.

One of the most interesting and perfect specimens is a rifle which was made specifically for him by an old mountain gunsmith from the hills of Tennessee. This rifle was made from the same materials, in the same way, and with the same tools as this gunsmith's father and grandfather gunsmith ancestors before him. It is an exact replica of the rifle used by his grandfather in the Revolutionary War.

These are just a few of the many interesting specimens owned by Prof. Ware, some of which are on display in his office. A very interesting afternoon can be spent around these same specimens by anyone who has the time.

Another hobby which Prof. Ware devotes his time to may seem to be connected with his work at the college but is also for his own amusement and is done in his spare time. This hobby consists in catching birds, banding them, and releasing them to be caught by other bird fanciers throughout the hemisphere.

Prof. Ware began his hobby of banding birds at Clemson in 1936. Recently the Boy Scout troop at Clemson became interested and is now helping him. At the present time he has banded over thirty-five different kinds of birds totaling around fifteen thousand individuals. The birds with which he does the most banding are Chimney Swifts and White Throated Sparrows.

(continued on the following page)
A Hasty Glimpse of An Amazing Industry

By T. C. CARTWRIGHT
Animal Husbandry 1948

To a half-scarred country boy holding on to the seat of an elevated train and trying to peer out at the vast spreading city, it is easy for him to believe that the geography book he studied back in grammar school was right when it said that Chicago is one of the largest cities in the world. It becomes apparent to him that anything to be outstanding in this place must really be something. The only thing he knew about Chicago was that it was the meat packing center of the United States and he was a little surprised that it was about the only thing every Chicagoan knew existed in the windy city. The prominence of Packerlington, the name given to the location of the stock yards and packing companies, is more easily understood when it is learned that about three times more people are employed there than can crowd into Tigertown for a Clemson-Furman football clash.

Chicago is only the center of the industry. Taken as a whole, the meat packing industry is the third largest industry in the most industrialized country in the world. It nets billions of dollars annually. It is composed of over eight hundred different companies, and to thousands of American families it supplies fresh meat, butter, cheese, dressed poultry, and eggs daily. Realistic solutions to the many problems involved in distributing such highly perishable products have created an amazing industry, a vast, sprawling, topsyturvy industry that produces buttons as well as T-bone steaks, that gathers its raw materials from small producers almost as numerous as the customers, that disassembles rather than assembles in its manufacturing process, and that functions of necessity with the precision and sensitivity of a Bulova watch in order to survive the whims of nature, housewife, and bacteria alike.

Of course, only a small percent of the industry is in Chicago, but it is the core of activity and the best place to get a birds-eye view of the methods employed in the meat packing industry. Before starting a journey through a packing plant, it may be interesting to go through the stock yards and see how the packing company buyers secure livestock. Practically all of the livestock shipped in by the farmers is consigned to a commission firm at the stock yards. The commissioner completely takes over the care of the animals shipped to him, and because of his contacts, his familiarity with sales procedures, and his knowledge of current livestock prices, the agent tends to secure higher prices for the farmer. The packers have closely coordinated purchasing organizations with specialized buyers for each type of livestock. These buyers move from one commission man to another making offers for certain pens of animals. If the offer is satisfactory, a sale is made by verbal agreement.

From the stock yards the animals are driven in chutes to the slaughtering pens of the purchasing company. For each type of livestock there is a different method of butchering. Every possible step is mechanized and when this is impossible butchers specialize in one particular operation and become highly skilled, working so deftly and rapidly that they seem to be mechanical devices themselves.

In hog slaughtering, for example, the live animal is started on an overhead chain assembly line hanging by a hind leg. First, he is stuck and allowed to bleed while on his way to the scalding vat. The chain takes the carcass through the vat and scaring machine in a continuous movement and then straight on through a room filled with several scores of workmen. These men stand at a certain point along the path of the chain and perform one operation deftly and expeditiously, because it is only a matter of seconds before another carcass is before him. At the end of the line clean, white carcasses file into the cooler at the rate of hundreds per hour.

To be shipped from one state to another, all meat must be inspected and passed by federal inspectors. In order to detect any animal unfit for human consumption, these inspectors work in the packing plant and examine the livestock at all stages of the disassembling process.

A tour through a packing plant gives only a glimpse of the many details and complications involved in the meat packing industry. But even a country boy, after such a tour, becomes aware of the fact that this is a most amazing industry.
OUTSTANDING GRADS OF SCHOOL OF AGRICULTURE

In each class of graduates there are always a few who stand out among their classmates as outstanding either because of scholastic ability, leadership ability, moral excellence, personality, or other traits. We have selected four students whom we have observed as being outstanding in the Ag school. There are many more but we could not possibly characterize them all in the space we are allotted. We hope that these boys as they go forth from Clemson will maintain as fine a record as they have at Clemson.

T. C. CARTWRIGHT
Tom Cartwright came to us as a transfer student from Amarillo Junior College in September, 1942. While serving as pilot of a B-24 bomber in the Pacific Theatre he was captured by the Japanese and held prisoner for a month before he was released.

Tom is president of the Animal Husbandry Club and Chancellor of Alpha Zeta. He is also a member of Phi Kappa Phi. Recently he returned from a trip to Chicago where he won the prize winning essay in the Swift Essay Contest.

A. B. CARWILE
"A. B.", who is the only cadet portrayed, entered Clemson in September, 1942, only to be called to service in February, 1944. After serving for 19 months in the Air Corps, he was discharged as an air cadet, and returned to school in February, 1946.

He is musically inclined and is company commander of Band Company. A. B. is a member of Mu Beta Psi, honorary music fraternity, as well as president of Tiger Brotherhood, recording secretary of Blue Key, chairman of YMCA membership drive, and a member of the Senior Council, Alpha Phi Omega, B.S.C. council, YMCA Cabinet, and A.S.A.E.

W. C. KENNERTY
Bill Kennerty, who came to Clemson from that state in the low country, commonly known as Charleston, is one of the few journalists in the Ag school. He has been Feature Editor of the Tiger, Editor of the AGRARIAN, and is Sec.-Treas., of Alpha Gamma Mu, honor writers fraternity. Bill is also President of Beta Sigma Chi, and a member of the Horticulture Club, Newman Club, Sigma Phi, and the Ag Fair committee.

He entered Clemson in September, 1941 but was called to the Army in June, 1943. He served with the Engineers and spent a year in the Philippine Islands before returning to Clemson in March, 1946. Bill is majoring in Horticulture.

D. C. SHARP
Don Sharp came to Clemson as a transfer student from the University of South Carolina after receiving his discharge from the Army. When he received his discharge he was company commander of a tank training company with the rank of captain.

While at Clemson Don has distinguished himself in several ways, one of them being his high scholastic record. He has made High Honors every semester and at time of publication his grade point ratio is 8.6. Not bad, eh? In addition to his scholastic record he is treasurer of Alpha Zeta, president of Kappa Sigma Epsilon, and a member of Phi Kappa Phi. He was selected for "Who's Who Among Students In American Universities and Colleges" and was on the staff of the AGRARIAN.

Don is a native of Allendale and is married to the former Camille Cunningham. They have two children. Upon graduation Don expects to farm in Allendale.
CHEMISTS HONOR DR. COOPER

Dr. H. P. Cooper, Dean of the School of Agriculture and Director of the South Carolina Experiment Station was recently designated as "one of the ten ablest chemists and chemical engineers" in the United States working in the field of fertilizer research by the American Chemical Society bulletin.

Dr. Cooper was the only scientist from a Southern college or university to be selected in this line of research.

Dr. J. B. Hester, a Clemson graduate of 1926 in Chemistry was also honored. Dr. Hester is in the agricultural research department of the Campbell Soup Company in New Jersey.

NEW ENTOMOLOGISTS AT CLEMSON

Two positions in the Zoology and Entomology Department have recently been filled by two graduates of Clemson, both who received their degrees in Entomology.

Dr. James A. Cothran comes to us as Associate Entomologist in the South Carolina Experiment Station. He received his B.S. degree from Clemson in 1935 and his M.S. and Ph.D. degrees from Iowa State College. Dr. Cothran came here from the E. I. DuPont De Nemours Co., of Wilmington Del. He has considerable entomological experience and while at Clemson his work will be principally investigational research with insects affecting fruits and nuts.

Mr. E. H. Warnhoff, a native of Alexandria, Va., finished Clemson in 1946 and completed his graduate work and received his M.S. degree from Texas A. & M. College in August, 1947. Prior to coming to Clemson as Associate Professor of Entomology and Zoology, Mr Warnhoff was director of work with the White-fringed Beetle in the Bureau of Entomology and Plant Quarantine of the USDA in South Carolina.

FFA OUTLINES WORK

The Clemson chapter of the Future Farmers of America reorganized last semester and has already grown to be one of the largest ag organizations on the campus. It now has a membership of sixty active members and under its officers, Carl Lowder, President; Leonard Reynolds, Vice-President; J. G. Harris, Secretary; J. T. Black, Treasurer; C. C. Carter, Watchdog; John Green, Reporter. A program of work has already been outlined which is as follows: (1) sponsor parliamentary procedure team, (2) sponsor initiation team for awarding different degrees, (3) sponsor VAE exhibit at Ag Fair, (4) initiate a music program at meetings, (5) put on radio programs, (6) have regularly planned meetings, (7) plan for recreation at meetings, and (8) co-operate with the state FFA program.

LATEST DEVELOPMENTS ON AG. FAIR

Most of the students have been in the dark about the Ag Fair and many rumors have been traveling over the campus as to the date and which schools are going to participate.

Here is the latest developments as quoted to us by R. M. Hanckl, Chairman.

At a meeting held recently with representatives from all the schools on the campus it was decided that we would have a fair with all schools represented.

SIMONS APPOINTED ASST. AG. EDITOR

Henry Simons, Horticulture, 1946, has been appointed assistant agricultural editor at Clemson.

He will handle administrative details for the state experiment stations, and for the School of Agriculture at Clemson. He is now located in the office with Mr. R. A. McGinty, Vice-Director of the Experiment Station.
FURROWS

ALPHA ZETA HONORS GRADUATES

Alpha Zeta honored its members at a banquet held on January 9 in the YMCA Cafeteria. Mr. A. B. Bryan made the after dinner address. Those members honored were T. C. Cartwright, Chancellor, D. C. Sharp, Treasurer, J. F. Chaplin, S. J. Hadden, J. E. Herlong, and B. R. Nicholson.

The local chapter has accomplished much this year. At the beginning of this semester the following new members were elected: A. S. Gramling, Orangeburg; J. M. Gullede, Callison; Steve Lund, Exeland, Wis., William McKay, Hendersonville, N. C.; L. H. Moore, York; J. H. Rodgers, Charleston; H. V. Rogers, Cowpens; and A. W. Snell, Ellerree. After a week of informal initiation the new members were formally initiated on October 16.

The next step taken was to elect Mr. B. D. Cleoaniger, Secretary of the Board of Fertilizer Control, and a former student member of the South Carolina Chapter, to fill the position on the Advisory Committee left vacant by Dr. S. P. Marshall who resigned at Clemson to return to Florida.

Projects undertaken during the year include erection of a banner at Homecoming and beginning of a movement to reduce dishonesty among students in the Ag School.

CLEMSON GETS BUILDING FUNDS

Recently Governor Thurmond signed the bill authorizing the appropriation of a sum of money to be divided between the various state institutions for building funds. Clemson's share of this amount to $1,300,000 which will go for a new chemistry building, a new hospital, and a new heating plant. All of these buildings are greatly needed on the campus and it was a wise choice indeed that the administration made when they designated the funds for these buildings.

ALPHA TAU ALPHA REORGANIZES

The Kappa chapter of the Fraternity of Alpha reorganized at Clemson this semester. The only pre-war member in school at this time was E. M. Rallings, so through him and members of the faculty the chapter was reorganized and at the formal initiation held before Christmas holidays the following members were initiated: C. C. Beam, J. T. Black, C. W. Derrick, E. B. Earle, C. E. Gambrell, R. A. Hall, G. J. Harris, S. P. Hunt, J. C. Jackson, D. L. Johnson, J. P. Pickens, L. D. Reynolds, D. K. Stokes, B. Todd, S. O. Tomlinson, and M. P. Zuver.

The fraternity which was last active at Clemson in 1942, is a national honorary fraternity for students majoring in Vocational Agricultural Education. To be eligible for membership a student must have a high scholastic average, show qualities of leadership, and profess interest in carrying on vocational agricultural work upon graduation from college.

The officers for this year are: President, C. C. Beam; First Vice-President, S. O. Tomlinson; Second Vice-President, J. T. Black; Secretary, J. C. Jackson; Treasurer, E. M. Rallings; and Reporter, L. D. Reynolds. The faculty members are Dr. T. A. White, Mr. W. H. Washington, Mr. J. B. Monroe, and Mr. B. H. Stribling.

SOIL CONSERVATION SUPERVISORS MEET

On January 15-16 the annual meeting of the South Carolina Association of Soil Conservation Supervisors was held in Columbia. There were several out of state speakers at the convention. Among them were Dr. Willis A. Sutton, guest lecturer of the Education Department of Readers' Digest, and Kent Levatt, from Millbrook, N. Y., who is president of the National Association Soil Conservation District Governing Bodies.
L. C. Martin Drug Company
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THE OFFICIAL COLLEGE BOOK AND SUPPLY STORE

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Clemson South Carolina
WHO'S CHEATING WHO

Cheating at Clemson College is nothing new. Former students tell us that in years past when they were in school here, practically the same situation existed then as does now.

If this is the case, then why the sudden uproar about dishonesty in the classroom? This is the situation as it now stands.

Under the overcrowded conditions and shortages of faculty, cheating has reached an all time high. It has advanced to the stage with some members of the faculty as a “necessary evil” and a large percentage of the students have rationalized cheating to being “the only way to make a satisfactory grade”. Some professors make it so easy to cheat and so many students take advantage of this opportunity that it actually works a hardship on the honest student. A student who knows all the “methods” is considered a “clever” student by the majority of the others in his class.

In this way the professors are cheating the students, the students are cheating the professors and themselves, and they are both cheating future employers of Clemson graduates. Who, then, is getting any benefits from this? The answer is absolutely no one!!!

This must be stopped if Clemson College is to maintain her high standing of which we are all proud. That means that we must all cooperate, students and faculty alike, to put an end to this degrading influence.

Here is a challenge to the organizations on the campus to make the first decisive move in this direction. Alpha Zeta is planning to initiate a move to reduce cheating in the ag school. Here is a golden opportunity for some of the clubs who have accomplished very little this year to co-operate with Alpha Zeta and bring “skinning” to a new low at Clemson rather than an all time high.

Let’s us as future leaders in agriculture set a worthy example for the other schools at Clemson to follow. LET’S GET STARTED!!!

CLEMSON GRADUATE AWARDED MEDAL

Dr. E. H. Smith Ent. ’38, was recently awarded a gold medal and cash award for a scientific paper delivered at the meeting of the Eastern Branch of the American Association of Economic Entomologists at Philadelphia. He was given the award as was Dr. G. W. Pearce for their paper, “On the Mode of Action of Petroleum Oils as Ovicides”. This paper is largely a report on the effect of petroleum oil on the respiratory activity of oriental fruit moth eggs.

Dr. Smith, who recently became Extension Entomologist at Cornell University, is a native of Abbeville, S. C. While at Clemson he was very active in campus affairs, being a member of Alpha Zeta and numerous other campus organizations.

A FOND FAREWELL

When I was appointed editor of The AGRARIAN last spring I had no idea of the duties, responsibilities, trials and tribulations that confront the student editor, but after the remainder of the staff was appointed and work began on the fall issue each of us learned a little and by the time that we published the magazine, no one could convince us that we weren’t The AGRARIAN staff to date.

However, without the help of “Big Ben” Goodale, Tom Millford, and other faculty members we could never have even gotten started. I would like to stop here and thank them and also each and every student who helped to make this publication a success.

In closing I wish to say that I hope my successor will meet with the same enjoyment that I had, and that The AGRARIAN will surge on to greater heights than ever before in the coming year.

—The Editor
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TENNESSEE BASIC SLAG
Imagine packing a pipe with sweet mellow aromatic tobacco and enjoying a pleasant smoke in the cool of the evening. You can imagine this now, and you can imagine still further that this aromatic tobacco is being grown right here in the Piedmont section of South Carolina. It’s being done!

During normal times 50 to 75 million pounds of Turkish tobacco is imported mainly from Turkey, Bulgaria, and Greece for the manufacture of the various blends of cigarettes. During the war these imports decreased greatly. This aroused the interest of several experimental stations with respect to growing Turkish tobacco in this country. For a number of years the Department of Chemistry at Duke University has been conducting experiments at Oxford, North Carolina and Chatham, Virginia, involving cultivation, fertilization, harvesting, curing, storage, and fermentation with several varieties of aromatic tobaccos. Duke University has also conducted cooperative demonstrations with farmers in Oconee, Pickens, Greenville, and Anderson counties. After five years of experimental work and cooperative farm demonstrations, results indicated that certain varieties of Turkish tobacco could be grown with success in the Piedmont area of South Carolina. Because of its high labor and acreage requirement it is best adapted to small farms where sufficient labor is available. Since the results of trials mentioned above prove that it can be grown profitably in this area, a project was initiated at Clemson to determine the economic aspects, and proper cultural and curing procedure.

Turkish tobacco is distinguished from the other types of tobacco by small glandular hairs that protrude from the leaf. It is from these small hairs that an oil secretion is produced which gives the aroma to the tobacco. The density of these hairs per leaf area is influenced by heredity and environmental conditions. Any environmental factor which causes the plant to grow very vegetatively also causes the density of the hairs to be less, which results in a poor quality tobacco. In grow-

(continued on the following page)
(continued from the preceding page)

In cleaning Turkish tobacco the growth of the plant should be controlled in order to obtain small leaves which possess as many glandular hairs as possible per leaf. In this way quality can be raised to a higher level.

In loothing a seedbed, a soil should be chosen which is relatively high in organic matter, contains few weed seeds and disease organisms, is well drained, and near a source of water. The beds should be located on a south or southwestern slope in order to get the benefits of natural heat.

After clearing the plant bed area, the top soil should be pulverized, smoothed, and levelled.

The seed bed should be sterilized in September or October so as to eliminate weeds, diseases, and insects. This may be done by steam, by burning, or by chemical treatment.

After sterilization of the seed bed, the fertilizer should be applied at least two weeks before seeding at the rate of two pounds of a complete tobacco plant bed fertilizer per yard.

The beds should be seeded between February 1 and March 1, using 1 to 1½ tablespoons of seed per 100 square yards. The seed should be mixed with cottonseed meal, fine sand, or sifted wood ashes, using one quart of such material to each teaspoonful of seed, in order to get uniform distribution of the seed.

In experiments at Clemson, tobacco cloth covers were used on the seedbeds to increase the temperature and protect plants from unfavorable weather conditions. After a stand of plants was established in the field, the remaining plants in the beds were destroyed, and the bed was planted with nematode resistant varieties of cowpeas or soybeans.

A heavy and relatively poor soil containing mixtures of sand, gravel, or small rocks is desired for the best growth of Turkish tobacco. The field should have some slope which will afford protection against wind damage.

To fertilize Turkish tobacco, 4 to 8 tons per acre of well-rotted stable manure was used as a source of nitrogen. Superphosphate and potassium sulfate was used at the rate of 200 and 160 pounds per acre respectively. Large supplies of fertilizer will cause the plant to grow very vegetatively which will result in a decline of quality. To understand the underlying causes of this decline in quality with an increase in growth, we have to be reminded that in the Near East tobacco has been cultivated in soil of low fertility and very little rainfall.

Rows are laid off 20 inches apart and the plants spaced 4½ to 5½ inches apart in the row. According to these specifications, it will require approximately 60,000 to 70,000 plants per acre. The close spacing has a damping effect upon the leaves of the plants which is favorable for quality.

In order to withstand transplanting, the seedlings should be hardened five to seven days before transplanting by removing the tobacco cloth covers. Transplanting is done with a hand transplanter which releases plant and water simultaneously. Plants are placed midway on side of the ridges approximately half the distance from the bottom of the ridge to the top.

The first cultivation is usually 10 to 15 days before transplanting. During this cultivation, the tops of the ridges are raked down away from the rows of plants. The second cultivation is carried on mainly to control weeds and to loosen the soil in order to get better aeration. In general, very little cultivation is required during most seasons.

The first priming begins 40 to 45 days after transplanting. If maximum yield and quality are obtained, the leaves are harvested when they are quite green. Leaves showing yellow or any burning will be of light weight and poor quality. Priming should be done early in the morning before the dew has dried from the leaves. Never prime when the leaves are in a wilted condition as Turkish tobacco has to be strung and wilting slows down this operation.

Leaves are then strung onto a string with the use of a 14 inch needle and then tied to a bamboo stick. As soon as the leaves are properly arranged on the string, they are placed in a cool and shady place on racks so that the tobacco can yellow and wilt which will take from 36 to 72 hours. After wilting, the tobacco is placed on portable racks on castors and placed in direct sunlight for curing during the day time. These racks are moved inside a building at night and during inclement weather. It requires from 10 to 14 days to cure tobacco in the sunlight. At no time should the tobacco be exposed to dew or rain.

A shed with 200 or more square feet of floor space will be required to house one-fourth acre of tobacco. Approximately 700 square feet of white sand or concrete should be close to the opening of the shed upon which the tobacco is placed for curing. This place should be dry and free of grass and weeds, as vegetation causes a higher humidity and consequently delays curing of tobacco.

After curing, the tobacco is sorted in the barn on racks for baling during October and November. Great care should be taken during this stage to prevent molding.

Turkish tobacco is susceptible to diseases and insects such as blue mold, flea beetle, budworm, hornworm and nematodes. These diseases are controlled in the same manner as the diseases of flue-cured tobacco.

The following men have contributed much to the immense amount of work necessary in the establishment of Turkish tobacco as a new cash crop for Piedmont farms:

Mr. G. H. Griffen, County Agent of Oconee County, South Carolina.
Mr. J. A. Martin, Assistant Horticulturist, Clemson College
Mr. Donal Matheson, Assistant Tobacco Specialist, Clemson College
Mr. H. A. Mcgee, Extension Tobacco Specialist, Clemson College

AMONG OUR ALUMNI

1900

J. H. Kinser has one of the largest cotton farms in Texas located at Austwell.

1905

H. W. Barre is in charge of Cotton and Other Fibers and Plant Diseases with the Bureau of Plant Industries in the USDA.

1908

M. J. Funchess has established his career with the Alabama Agricultural Experiment Station and is now Director. He is located at Auburn, Alabama.

THE AGRARIAN
LOANS FOR FARMERS

Farmers Home Administration

This Federal Agency Has Provided Financial Aid  
For Farmers; Now Adds Veterans to Benefactors

By JAMES N. YOUNG  
Agricultural Economics 1948

The Farmers Home Administration is an agency authorized by Congress for the purpose of giving aid to worthy and deserving farm families. It is an outgrowth of the Emergency Relief Administration established in 1933. However, there were many changes between the original ERA and more recent FHA. The ERA was superseded by the Resettlement Administration in 1935 and Rural Rehabilitation Loans were made through that agency. The Farm Security Administration was the result of further reorganization in 1937 at which time the Tenant Purchase phase was added. On November 1, 1946 the functions, assets and liabilities of the Farm Security Administration and Emergency Crop and Feed Loan Division of the Farm Credit Administration were merged by an amendment to the Bankhead-Jones Farm Tenant Act of 1937. Out of this merger the Farmers Home Administration was formed as an agency within the U. S. Department of Agriculture. Farmers having loans outstanding from either of the two predecessors agencies, as well as other eligible farmers are now served by the FHA.

The chief aim of the FHA is to give aid and assistance to agricultural families. It accomplishes this in part by helping deserving farmers climb the agricultural "ladder" to farm ownership. The successive rungs of the agricultural "ladder" are usually thought of as farm laborer, sharecropper, share tenant, cash renter, and finally farm owner. It must be kept in mind, however, that some farmers are not qualified or desirous of becoming land owners. Also the "ladder" may be descended as well as ascended.

In addition, the FHA assists farmers by lending operating capital to both landowners and tenant farmers. This has been a great asset to the farmers in the past. For instance, records show that farmers on relief ten years ago now own their own farms. Because of inflated farm prices and the large increase in the cost of land a considerably smaller amount is now being invested in this phase of the FHA program.

Two types of loans are made through the FHA, namely: (1) production and subsistence, and (2) farm ownership. All loans of either type have to be approved by a county FHA committee composed of three persons including two farmers, but no FHA borrowers.

Production and Subsistence Loans

Any farmer or stockman is eligible for a production and subsistence loan if he (1) is an American citizen, (2) operates a farm not larger than a family farm, and (3) is unable to obtain credit from other sources on reasonable terms and conditions to finance farm and home needs. Applicants must certify in writing that they cannot obtain needed credit elsewhere.

Individual loans may be made to enable two or more farmers to acquire jointly, equipment or facilities such as purebred sires, machinery, storage facilities, and food preservation equipment, which they could not otherwise obtain or use individually on an economically sound basis. Individual loans also may be made for the purchase of membership in established purchasing and marketing and farm service type co-operative associations.

Production and subsistence loans bear 5 percent interest and are repayable in from one to five years. If loans are to be repaid within one year, a farm and home plan is not required. The period for repayment may be extended to 15 months for loans to purchase or feed livestock. If repayment is not anticipated within 12 or 15 months, as the case may be, a farm and home plan outlining detailed farm and home operating plans including financial activities is prepared. The borrower family makes the plan with the technical assistance of the County FHA supervisor. Loans must be paid within 5 years in order for borrowers to receive further credit. No more than $3,500 can be loaned to an individual during any one fiscal year, and this total outstanding indebtedness for all such loans may not exceed $5,000 for any borrower.

Such loans as these are made to enable eligible farmers to make adjustments in their farm and home operation, for the production of cash crops, the purchase of growing of feed for livestock, etc. "Adjustment" loans for purposes other than routine annual operating expenses are based on sound farm and home plans developed with the families. Borrowers are provided with on-the-farm supervision or guidance as is necessary to assist them in carrying on successfully their planned operations. The determination as to the type and extent of assistance to be provided an applicant is made after consideration
(continued from the preceding page)

ation of his individual needs, proposed operations, and other related circumstances, including recommendations by the county FHA committee.

Whenever a borrower becomes eligible for private or cooperative refinancing of his loan, at prevailing terms and at interest not exceeding 5 percent, he will be required to apply for such credit and, if granted, use these funds to repay his FHA indebtedness.

Farm Ownership Loans

The second type loan is the farm ownership loan. Tenants, sharecroppers, farm laborers and other persons, including owners of inadequate or under-improved farm units, who obtain or recently obtained the major portion of their income from farming operations are eligible if (1) they are American citizens, (2) they cannot get credit at reasonable terms anywhere else, and (3) they are known as good farmers, capable of managing farms of their own. Farm ownership specialists are sent out to see about the potentialities of the farm. At present there is one farm ownership specialist in South Carolina. U. S. war veterans who have received discharges other than dishonorable are eligible if they intend farming as a principal occupation and if they meet the requirements as to experience, training, character and other assurances of success.

The loans are made (1) to buy family-type farms, (2) to enlarge undersized farms, and (3) to improve or repair undersized or under-improved farms when such refinancing is incidental to the main purpose of the loan.

The loans—except those to disabled war veterans—are made only for efficient family-type farms. A family-type farm is one which furnishes full, productive, year-round employment for an average farm family and one which an average farm family can operate successfully without employing outside labor except during brief peak-load periods at planting or harvest time. War veterans receiving disability pensions, however, may qualify for loans on farms which are less than economic family-type units; farms of this type must afford the disabled veterans opportunity to make full use of their farming capabilities.

The farm ownership loans are limited to farms which have a value, as acquired, enlarged or improved, not in excess of the average value of efficient family-type farm management units in the county or locality as determined by the Secretary of Agriculture. The top limit on any such loan is $12,000.

The loan bears three and one-half percent interest and is repayable over periods of not more than forty years. Borrowers may repay on a variable payment plan, paying more in years of high income and less in years of low income.

Whenever a borrower becomes eligible for private or cooperative refinancing of his loan, at prevailing terms and at interest not exceeding 5 percent, he will be required to apply for such credit and, if granted, use these funds to repay his FHA indebtedness.

Certain special assistance is given to veterans. Veterans' applications for Farm Ownership loans are given preference over applications of non-veterans, as required by the FHA Act. While there is no similar provision in the law with respect to production and subsistence loans to veterans, they are eligible for such assistance, and their applications are given careful and prompt consideration. Special provision also is made for assisting disabled veterans who are able to do some farm work but cannot carry on a normal family-type farm operation. Disabled veterans may qualify for either production and subsistence loans or farm ownership loans.

The FHA program seems to be one that has been and can be very beneficial to the underprivileged low income farmers. For those farmers that are deserving and desirous of owning and improving their farms this act has, no doubt, done a great deal toward helping them to achieve a greater degree of success in their farming operations. It must be observed, however, that the program has been "tested" largely during a period of rising prices. Had it, for example, begun operating in 1919 or 1929 the results might have been different. Certainly the present is time for caution in making farm loans.

The writer is indebted to Mr. Lewis D. Malphus, former FHA employee and now of the Agricultural Economics Department at Clemson College, for many of the facts presented in connection with this article.

Noted Indian Economist Visits Clemson

Jaswant Singh, of Punjab, India, spent two days on the Clemson College campus recently in connection with a projected tour throughout most of the southern states.

Mr. Singh, who was a guest of Dr. G. H. Aull, head of the Department of Agricultural Economics has a Master's degree in psychology and economics from Punjab University in Lahore, and is now working on a Ph.D. at Michigan State College.

He plans to return to India in September to assume a vital role in the government of his country as an advisor on matters pertaining to economics, agriculture, and education. He has spent two months in Washington, D. C., and has visited several projects of the Tennessee Valley Authority.

Mr. Singh describes conditions in India as very bad in some respects. In a country which, because of its diverse climatic conditions ranging from temperate to tropical, and its almost total lack of soil erosion, can grow practically any vegetable or fruit crop, farming is retarded by primitive methods, virtual absence of machinery, and a traditional law whereby the real estate holdings in a deceased land owner is divided equally among his sons. Mr. Singh plans to help to relieve these and other ills when he arrives home.

The Indian economist liked Clemson's campus very well, but deplored the scarcity of eligible females. He is an avid football fan, and especially likes Chappius of Michigan.

Mr. Singh is married, but his wife has remained in India during his trip.
HELPFUL STUDENT TRAINING

FUTURE FARMERS OF AMERICA

This Organization of Farm Youth Has Risen to Outstanding Heights;
S. C. Students Receive Training That Will Be Helpful in Later Years

The Future Farmers of America is a national organization composed of boys enrolled in courses in vocational agriculture throughout the United States and its territories.

These farm boys began to feel a sense of comradeship shortly after the National Vocational Education Act was passed in 1917. Within a short while after Congress passed the act, "agricultural clubs" began to be formed in Virginia, South Carolina, Tennessee, North Carolina, Oklahoma, and California. As these clubs began to be organized in the early '20's a number of names were used by these agricultural groups. Virginia is recognized as the first state to use the title Future Farmers for their organization.

As soon as a majority of the states had a state organization, the far-sighted leaders in vocational education visualized the idea of having a national body and worked diligently toward that end. The individual states were in a very receptive mood because the state groups saw the need of a closely knit society which had the same aims and common interest in mind. When the first national convention was called in November of '28, the states cooperated whole heartedly and the Constitution for the Future Farmers of America was written. From this gathering, a national organization was born. From a rather modest birth, this brain child has grown and is continuing to grow into a world wide group.

The Future Farmers of America hold their annual convention in Kansas City, Missouri, unless the board of advisors deem it unwise to have their national get-together. For many years, the gathering was held to coincide with the American Royal Livestock Show. However, in the future this will not be so. At the last national convention, the group voted to separate themselves from the American Royal because of the acute housing shortage that existed in Kansas City. In the past, the national Future Farmers judging contest was held at the Kansas City Royal and many of the visitors were unable to secure lodging because of the crowded conditions.

At the American Royal, the Future Farmers entered their livestock in the shows and many valuable prizes were won. Usually, the top steer was bought, at premium prices, by one of the major packing houses for advertising purposes. At this national show, the outstanding chapter members from all parts of the country gain the recognition they so justly deserve.

When a boy enters high school and begins his study of vocational agriculture, he is given a chance to join the local chapter of the Future Farmers of America. This automatically qualifies him for initiation as a qualified Green Hand. After this initiation, the club member is encouraged to work diligently and carry out the requirements for his State Farmer Degree. This can only be obtained for outstanding achievement and is awarded at the Annual State Convention. However, there is one more step to the top of the recognition ladder. Should a student be ambitious and capable, a hard worker and carry out the proper program of work, and accumulate various types of capital, he may be put in the national spotlight by being awarded the coveted American Farmer Degree. This is the highest honor that can be attained by a member of an F. F. A. chapter. Many strive to attain national recognition; however, few succeed.

Future Farmer camps play a large part in the social and recreational activities of America's farm youth. Each summer, many thousands of young men attend these resorts, usually located near some scenic attraction. Many of the chapters have athletic competition on a highly organized scale. Regular teams for competitive play are had in some major sports.

South Carolina was one of the first states to take a forward step in the organizing of her youth. The Palmetto State was one of the first states to organize agricultural students into vocational agricultural clubs. From these clubs grew the Future Farmers of South Carolina. Since that initial attempt, a large and closely knit body was developed. According to a recent report, we have nearly 6,000 students enrolled in vocational agriculture in South Carolina. Of this number, 5,043 are members of the F. F. A. in good standing and many more are expected to join before the present school year is terminated. These members are affiliated with chapters who have paid their annual dues.

At the present time, the chapters of the state are being organized into Federations. A Federation consists of a number of chapters that work (continued on page twenty-three)
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COLUMBIA, SOUTH CAROLINA
FUTURE FARMERS OF AMERICA
(continued from page twenty)

Future Farmer entries are judged and attractive prizes are given to the winners.
Here, in South Carolina, the F. F. A. Cooperative Association has been formed to handle farm and garden seed, feed, and other farm supplies for its members. Here many dollars are saved for the group each year. Plans have been formulated to handle other commodities that will be of even greater saving to the members of the cooperative.

According to information from the South Carolina Department of Education, three of four Future Farmer camps will be operated during the summer months. Here each chapter has an opportunity to enjoy a short vacation in a cultural and healthful environment. Usually, camps are provided with all sorts of recreational facilities for the visitors. During the emergency created by the war, the government took over the Future Farmer camp at Murrell's Inlet. As yet, the camp is still under government lease, but the agriculture teachers hope that the camp will soon be returned to the Future Farmer organization. This recreational spot is nestled in a grove of pines that provide excellent shade for the front of the main building. The back overlooks the inlet, which furnishes a most beautiful background. Brookgreen Gardens, Myrtle Beach, State Park and many other places of interest are within relatively short distances of the camp. Another Future Farmer Camp is located at Bluffton, only a short distance from Savannah, Georgia, on the Muy River. This splendid resort furnishes excellent fishing, swimming and other camp activities. Near the Sandhill Experiment Station is located a third camp used by the vocational agriculture students. The fourth camp owned by the F. F. A. is located above Walthall on Oconee County at Tamassee. This scenic spot gives the campers a chance to enjoy healthful activity in the foothills of the Blue Ridge Mountains. Nearby, is Oconee State Park where superior swimming facilities are found and enjoyed by many.

South Carolina Future Farmers held their annual convention last summer at Clemson College. The delegates enjoyed their stay at the institution to the extent that they voted in favor of selecting Clemson as their permanent convention site.

A collegiate chapter of the Future Farmers of America has been organized at Clemson for a number of years for the men enrolled in Vocational Agricultural Education. It is the primary purpose of this group to give to its members experience in conducting Future Farmer meetings in the prescribed manner and to train them to be good chapter advisors. This is of supreme importance to the future of the Future Farmer program. Without good leaders, any program will falter hopelessly and fall; therefore, well trained teachers are needed to assume responsibility of carrying on the work that has made the Future Farmers of America prominent in the eyes of the leaders of agriculture in America.

Upon the shoulders of these prospective teachers rests the responsibility of developing the youth of the south into progressive farmers who will follow the farm practices and will preserve the agricultural resources that we have today and give to future generations the heritage of better agriculture in South Carolina and the South.
AMONG OUR ALUMNI

1912
J. T. Lazar is working with the South Carolina Extension Service at Florence as District Agent.

1913
F. H. Lathrop is Entomologist with the Maine Experiment Station.

1917
E.D. Kyser is Superintendent of the Coastal Experiment Station at Summerville, S. C.

M. J. Lemmon has varied slightly from his major, Agricultural Chemistry, and is now Chief Surgeon at Jefferson Medical College and Hospital in Philadelphia, Pa.

J. H. Moore, who came to Clemson on a scholarship for making the world’s record in corn production, is now Cotton Technician with the North Carolina Experiment Station at Raleigh, N. C.

T. S. Buie is now Southeastern Regional Director of the Soil Conservation Service, at Spartanburg, S. C.

1920
R. F. Kolb is Director of Farm Security Administration in Columbia, S. C.

1921
Rev. E. F. Getteys is Superintendent of John de la Howe School, McCormick, S. C.

1922
R. E. Carter is the owner of Carter Lumber Co. in Ridgeland, S. C.

James L. Harvin owns the Harvin Ice Cream Co. in Lansing, Mich.

1923
Ralph W. Coursey is manager of Reigeldale Dairies in Trion, Ga.

John M. Dunlap is the owner of Cleveland Ice Cream and Milk Products Company.

1924
J. P. Gaston is running a dairy farm at Richburg, S. C.

1925
G. E. Hawkins, Sr. runs a dairy farm at Greenwood, S. C.

W. C. Huffman, who roomed with G. E. Hawkins, is a turkey breeder at Newberry, S. C.

1926
Dr. John M. Fleming established his profession in the medical field and is now a baby specialist at Spartanburg.

J. R. Paulling, Jr. decided he liked agronomy better than dairying and is now Extension Specialist in Charge of Field Crops at the University of Missouri.

1927
C. T. Smith and A. C. Haskell are dairy farmers. Smith is at Kinards and Haskell is located at North Augusta.

1928
L. W. Shelley taught at Clemson for several years and is now located at Columbia where he is part owner in Jefferson Mortgage Co.

T. F. Cooley was Assistant Dairy Specialist in South Carolina for several years and is now manager of Klondike Farms, Elkin, N. C.

1929
Coy R. Cook is Assistant County Agent in Wilmington, N. C.

R. W. Dickson manages the feed division of Lindsey-Robinson Milling Company, Roanoke, Va.

1931
M. C. Rochester obtained his Ph.D. from the University of Wisconsin and is now connected with the Agricultural Extension Service at Clemson as Agriculturist Economist.

1932

1935
G. H. Stewart is Extension Agricultural Engineer at Clemson.

1936
E. K. Rambo, on leave from Arkansas Extension Service, is Agricultural Engineer with Office of Foreign Agricultural Relations in the Panama Canal Zone.

G. H. Rankin, one of Clemson's few graduates in Forestry, is a major in the Army and is now doing graduate work at Syracuse University.

Maxey Chapman is stationed at Camp Lejeune, N. C. as a lieutenant colonel in the Marine Corps.

1937
J. J. Moorman holds the rank of a major in the Army and is stationed at Alexandria, Va.

Ben T. Lanham, Jr. is now Associate Professor of Agricultural Economics at Alabama Polytechnic Institute, Auburn, Ala.

1938
H. H. Kinney manages the Pee Dee Electrical Corp. at Wadesboro, N. C.

J. L. Fulmer obtained his Ph.D. from the University of Virginia and is teaching Economics there.

D. D. Lee is Sheriff in Dillon County where he is also farming, in the farm implement business and owner of the airport there.

1939

BARNETT
TIRE & BATTERY CO
COLUMBIA, SOUTH CAROLINA

Compliments of
HOKE SLOAN

"A Clemson Man Serving Clemson Men"
We can't figure out whether we're soft-hearted or soft-headed. Anyway, Pepsi-Cola Company pays up to $15 for jokes, gags and stuff like that for this page. Below we list some of the characters who hit the jack-pot in September. What have they got that you haven't got? Right—Easy Money!

So climb on board the gravy train now.

Send your gags, with your name, address, school and class, to Easy Money Department, Pepsi-Cola Co., Box A, Long Island City, N. Y. All contributions become the property of Pepsi-Cola Co. We pay only for those we print. (Getting "Pepsi-Cola" into your joke may not keep that rejection slip from your door, but it might help. Who knows? Certainly not us!)

He-She Gags

This is really a soft detail. Three bucks for just kicking it back and forth between a Him and a Her. Duck soup! Three-dollar bills were sent to Barbara Fram, U. of Texas; Ira Gurney, New York Univ.; and Forest M. Cruse, U. of Texas, for these gags which limped in during the September contest:

She: When I get in a drug store, I feel like an anarchist.
He: Me too. Down with Pepsi.

She: When you go to a restaurant, why do you always flirt with the waitress?
He: I'm playing for big steaks.

She: So long...I'm going on a Pepsi party with my two beaux.
He: Beaux?
She: Elbows!

That's it...$3 each for any of these we print.

Daffy Definitions

We'll probably have to cut out this department soon. These things are beginning to sound logical to us. Until that day, however, any Daffy Definition we buy rates a fast buck. Like these:

Oboe—a cockney tramp.
Plenty—what Pepsi-Cola's your best buy by.
Barber-shop—clip joint.
You—what Pepsi's the drink for.
Oyster—a fish that's built like a nut.

At $1 apiece for you, your conscience should keep you up nights. But that's what we pay for those we print.

Little Moron Corner

Dubious Dave "Michaelangelo" Moron, the would-be artist who never believed what people told him, was discovered one day painting Pepsi-Cola on his paint board. "They told me it would tickle my palette," he exclaimed, scowling fiercely, "but so far I haven't heard a single laugh!"

The two bucks for this classic went to William D. Blair, Jr., of Princeton. What could be simpler, if anything? Send in your Moron gags...$2 each for those we buy.

Jackpot

At the end of the year, we're going to review all the stuff we've bought, and the item we think was best of all is going to get an extra

$100.00

Hash on the House

Here are a couple of miscellaneous gags we dredged up in the September contest. We couldn't classify 'em, but we thought they ought to be worth something. So we kicked in $2 each. Are we a soft touch?

Little Susie, at her first basketball game, observed one day that the home team was "red hot," so she immediately ran out on the floor with 5 bottles of Pepsi-Cola!

Sent in by Mrs. J. B. Kennedy, of Urbana, Ill.

Robert's uncle had just returned from Africa and paid a visit to the college lad. "Rob, my boy," said the uncle, "I've brought you a trinket." With that, he took out a Pepsi-Cola and handed it to his nephew. "But this is a bottle of Pepsi-Cola," exclaimed the boy, "Why, sure it is," said his uncle, "so . . . trinket!"

Sent in by Leonard Blostein, of Washington Square College, New York University.
"There's one thing I can always count on with Chesterfields...they satisfy."

Gary Cooper

Starring in Paramount's great Technicolor Picture "Unconquered"

Always Buy Chesterfield

Always milder
Better tasting
Cooler smoking
The right combination - World's best tobaccos