The front and back covers depict scenes at the Annual Farm and Home Week attended each year by an estimated 20,000 farmers and farm people representing every county in South Carolina and including many visitors from other states.
SIXTY-SIXTH ANNUAL REPORT

of the

BOARD OF TRUSTEES

of

THE CLEMSON AGRICULTURAL COLLEGE

to the

GENERAL ASSEMBLY OF SOUTH CAROLINA

1955
LETTER OF TRANSMITTAL

Members of the General Assembly
Columbia, South Carolina

Gentlemen:

In behalf of the trustees of The Clemson Agricultural College, we are pleased to transmit herewith for your consideration the report of President R. F. Poole for the fiscal year July 1, 1954 to June 30, 1955.

The Board advises with pleasure fine progress at Clemson College.

Respectfully submitted,

R. M. Cooper
President, Board of Trustees

December 1, 1955
WHERE THE CLEMSON STUDENTS COME FROM

FIRST SEMESTER 1955 - 1956

SOUTH CAROLINA 2450
NORTH CAR. & GA. 293
OTHER SOU. STATES 103
OTHER STATES 189

TOTAL ENROLLMENT 3035

SOUTH CAROLINA 80.7%
OTHER SOU. STATES 13.1%
OTHER SECTIONS 6.2%
REPORT OF THE PRESIDENT OF THE COLLEGE

From R. F. Poole
President, The Clemson Agricultural College

To The Honorable Robert M. Cooper
President, The Board of Trustees

I have the honor of presenting to you the sixty-sixth report of the President of Clemson College. This annual report of the President is supplemented by other annual reports and publications issued by the institution each year on various phases of its activities. For the year 1954-1955 special attention is called to the College Catalog and the Annual Reports of the South Carolina Agricultural Experiment Station and the Extension Service. These publications give extensive information relating to instruction, research and public service—the three general areas in which the institution is privileged to serve.

Review of Basic Aims and Purposes

In serving South Carolina, Clemson has an obligation to be continually cognizant of its basic aims and purposes. These aims and purposes are based upon the historic mandates for the establishment of the institution interpreted in the light of current and potential needs. It is therefore appropriate from time to time to review these basic aims and purposes for the record.

In 1889 the General Assembly of South Carolina accepted the bequest of Thomas G. Clemson which set aside the bulk of the Clemson estate for the founding of a scientific and technical college. The institution was also established under the Morrill Land-Grant Act passed by the National Congress in 1862. The following excerpts are quoted from the historic mandates establishing Clemson as an Agricultural and Mechanical College and a member of the national system of Land-Grant Colleges and Universities:
From the Clemson Will

"My purpose is to establish an Agricultural College which will afford useful information to the farmers and mechanics; therefore, it should afford thorough instruction in agriculture and the natural sciences connected therewith; it should combine, if practicable, physical with intellectual education; and should be a high seminary of learning in which the graduate of the common schools can commence, pursue, and finish a course of studies terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly upon agriculture . . . but to always bear in mind that the benefits herein sought to be bestowed are intended to benefit agriculture and mechanical industries . . . I trust I do not exaggerate the importance of such an institution for developing the material resources of the State, by affording its youth the advantages of scientific culture."

From the Act of Acceptance

"The State of South Carolina hereby expressly declares that it accepts the devise and bequest of Thomas G. Clemson subject to the terms and conditions set forth in his last will and testament."

From the Morrill Land-Grant Act of 1862

". . . the leading object shall be, . . . to teach such branches of learning as are related to agriculture and mechanic arts . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Mr. Clemson's vision was that of a "high seminary of learning." This emphasis was not always found in the establishment of the earlier "people's colleges", as the Land-Grant Colleges were known at the beginning. However, it was soon recognized that these institutions were destined to train men and women for services on a professional level as distinguished from the level of the technical or skilled worker. As pointed up in the Land-Grant College Survey a quarter of a century ago (1930), "social, economic, and educational advances require that this fact be recognized frankly by the institutions and their constituencies."

The term "mechanical industries" as used by Mr. Clemson had its counterpart of "mechanic arts" in the Morrill Land-Grant Act. The engineering profession was not so highly developed in 1862 but, as emphasized in the Land-Grant College
Survey, "the definition of 'mechanic arts' during the time of the passage of the Morrill Land-Grant Act and the custom of interpreting it place engineering as a required part of the program of land-grant institutions and coordinate with agriculture."

The Hatch Act (1887) and the Adams Act (1906) passed by the National Congress gave impetus to research and the establishment of experiment stations. The Smith-Lever Act (1914) provided for extension work in agriculture and home economics in the land-grant institutions, and the Smith-Hughes Act (1917) provided for the training of teachers in agriculture, trades, home economics and industrial subjects. These early acts of the National Congress established the research and extension functions of the land-grant colleges and provided for teacher training in specific fields. Companion acts of acceptance and acts to provide matching funds as passed by the General Assembly of South Carolina provided for this work in South Carolina.

While the land-grant colleges became high seminaries of learning, with research for searching new truths and both undergraduate and graduate instruction on a high level, they still remained the "people's colleges" through the extension program to carry information to the farm and home. These institutions are truly public institutions on the state and national level.

Legislative Acts of the General Assembly of South Carolina and the National Congress subsequent to the early acts have enhanced rather than modified the basic purposes of Clemson College. The concept of teaching, research, and public service is basic to the public trust of the Land-Grant Colleges and basic to Clemson in particular. Acts of the General Assembly of South Carolina have also assigned to Clemson certain agricultural programs involving regulatory procedures as programs associated with and companion to research and public service in agriculture.

Historical Sketch of Undergraduate Curricula

The agricultural and industrial economy of South Carolina in 1955 presents a picture vastly different from the economy of 1893 when Clemson opened its doors. In the same period
of time it is rather generally admitted that scientific culture advanced more than it advanced in the previous history of the world. Clemson claims its fair share of the credit for promoting the economy of South Carolina and advancing scientific culture in the State but at the same time admits the struggle of keeping up with these advances with the limited resources available. The General Assembly of South Carolina has been generous in the portion of the public funds devoted to higher education in the State, but the lag in the total public funds available in comparison with those of other states has placed a handicap on the development of a full program of educational offerings.

With the limited finances available the approach to the establishment of new curricula at Clemson has necessarily been conservative in comparison with other land-grant colleges. Nevertheless, it has been possible in a measure to keep up with the demand for new curricula and to establish those needed to serve agriculture and industry in the State through the training of youth for leadership. A brief sketch of the growth of curricula reveals the changes which have taken place during sixty years of economic and scientific development.

The first students were enrolled at Clemson in 1893, and the first graduates in 1896 and 1898 completed the agricultural and mechanical-electrical courses. Next came Civil Engineering with three graduates in 1899, Textile Industry with four graduates in 1900, and Chemistry with one graduate in 1905.

By the 1913-1914 session, Architectural Engineering had been added, and provision had been made for seven majors in agriculture, including agronomy, botany, chemistry, animal husbandry, entomology, horticulture, and veterinary science. The animal husbandry major included dairying.

Twenty years later, the 1933-1934 catalog listed 20 four-year courses leading to the bachelor's degree. The mechanical-electrical course had become Mechanical Engineering and Electrical Engineering with the first degrees in these separate courses awarded in 1921. Architectural Engineering had changed to Architecture, and Textile Industry had become Textile Engineering. The agricultural majors in botany, chemistry, and veterinary science had been abolished and new majors established in Dairy and Agricultural Economics. The new four-year courses included Agricultural Engineering, General

The undergraduate curricula in 1954-1955 are listed below. They total twenty-nine including the two-year programs in Pre-Forestry and Pre-Veterinary and the new curriculum in Industrial Management organized in 1954-1955 to be offered first in 1955-1956. These twenty-nine curricula represent a minimum educational program and should be expanded as warranted. The College is constantly facing needs and requests for new programs to enable the institution to offer a fuller service to South Carolina.

**Industrial Management**

The establishment of a curriculum in Industrial Management was well-justified by the demand for such a program and its potential service to the State. The continuous industrial growth of the South and South Carolina in particular is now well known, and this growth has resulted in a need for personnel trained to follow careers in industry and exercise leadership in developing industrial resources. While this new program emphasizes preparation for management in industry and business, the curriculum is so designed to give the student an understanding of the basic principles of science and engineering underlying industrial operations, an appreciation of the nature of human beings, and the comprehension of the economic, political, and social environment.

When the apparent need for a curriculum in Industrial Management was sensed by the College, a committee was appointed to examine this need, gather facts, and make recommendations. In addition to reviewing the requests of students and prospective students for such a program and the interests of industry in its establishment, the Committee gathered facts on the industrial development of South Carolina and the availability of curricula in Industrial Management in neighboring institutions.

The Committee found, for example, that the number of workers employed by industry in South Carolina increased from 126,408 in 1939 to 185,021 in 1952. While the textile indus-
try accounted for the greatest percentage of these workers, the number of people employed by the wood and paper industry, the chemical industry and other less important industries amounted to more than 50,000. The Committee also found that while curricula in Industrial Management were available in Alabama and Georgia, no such curriculum was available in North Carolina or South Carolina.

The new curriculum was recommended, authorized, and established. An initial enrollment of 232 students in Industrial Management in September 1955 was greater than anticipated and is in all likelihood the largest initial enrollment in any new curriculum ever established at Clemson.

Undergraduate Curricula in 1954-1955

The 1954-1955 Catalog gives detailed information concerning the curricula, their purposes and content, as listed below:

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<thead>
<tr>
<th>Agricultural Chemistry</th>
<th>Entomology</th>
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<tr>
<td>Agricultural Economics</td>
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<td>Agronomy</td>
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<td>Animal Husbandry</td>
<td>(Effective September 1955)</td>
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<td>Architecture</td>
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<td>Arts and Sciences</td>
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<td>Civil Engineering</td>
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<td>Dairy</td>
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<tr>
<td>Education</td>
<td>Textile Management</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>Vocational Agricultural Education</td>
</tr>
</tbody>
</table>

Graduate Program

In scientific and technological areas today it is impossible for the student to be trained adequately with any program short of the master's degree, and in most fields, the Ph.D. Mr. Clemson envisioned "a high seminary of learning in which the
graduates of the common schools can commence, pursue, and finish a course of studies”; and it has been well recognized that the land-grant institutions such as Clemson have a definite responsibility in building strong graduate programs in the areas in which they have developed undergraduate work. As connoted in the words of Mr. Clemson, and as graduate programs are effectively operated today, graduate study is an extension beyond the undergraduate program built on a firm foundation of undergraduate work in the respective areas of knowledge.

The first master's degree at Alabama Polytechnic Institute was awarded in 1872, at Mississippi State in 1885, and at North Carolina State in 1894. Clemson was founded later than these comparable institutions in other southern states, and for this and other reasons the graduate program was later in its development. Graduate work is recognizably expensive but also recognizably important and a necessary essential if any institution is to hold its place in scientific education today.

The first master's degree at Clemson was awarded in 1924, and in 1945 the Board of Trustees approved the establishment of a graduate school offering work leading to degrees of Master of Science, Applied Masters, and the Doctor of Philosophy. In 1951, a Dean of the Graduate School was appointed, and in 1954-1955 the first Ph.D. offerings were initiated.

In 1954-1955 graduate programs were offered leading to advanced degrees in the following fields:

**Master's Level**

- Agricultural Economics
- Agricultural Education
- Agricultural Engineering
- Agronomy
- Animal Husbandry
- Botany and Bacteriology
- Ceramic Engineering
- Chemistry
- Civil Engineering
- Dairy
- Electrical Engineering
- Horticulture
- Industrial Education
- Mathematics
- Mechanical Engineering
- Mechanics and Hydraulics
- Physics
- Textile Chemistry
- Zoology and Entomology

**Doctor's Level**

- Entomology
- Plant Pathology
Enrollment and Degrees

Since the opening of the College, a total of 33,866 students have attended Clemson. A total of 11,868 bachelors' degrees and 138 masters' degrees have been awarded (1896-1955).

The recent growth of the College is indicated by the fact that forty-three percent of all bachelors' degrees awarded have been awarded during the past ten years. The recent growth of the graduate program is indicated by the fact that ninety-five percent of the masters' degrees have been awarded in this same period.

The enrollment of 3035 students in the fall of 1955 represents a thirteen percent gain over the enrollment of 2690 in September 1954. There is every indication that this gain is the beginning of a series of increases year after year as the upward trend in college enrollments is felt at Clemson.

The most pronounced trend in the enrollment by major courses is the trend toward engineering. From the fall of 1950 to the fall of 1955, the proportion of undergraduates enrolled under the School of Engineering increased from 31.2 to 46.5 percent. This trend will continue since in the same period the enrollment of freshmen under the School of Engineering increased from 28.8 to 52.9 percent.

The enrollment in the fall of 1955 included 56 women students with 35 enrolled on a full-time basis and 21 on a part-time basis.

Agricultural Experiment Station

The South Carolina Experiment Station of Clemson College includes the central unit at Clemson and the five substations located in the different agricultural regions of the state. The central station works on problems of statewide interest and those of particular interest to the Piedmont region. The five substations devote most of their research activities to the problems of their respective regions: the Pee Dee Station at Florence, the Edisto Station at Blackville, the Sandhill Station near Columbia, the Coast Station at Summerville, and the Truck Station near Charleston.

In addition to the five substations receiving state support, the College has established a sixth substation at Johnsonville.
under the sponsorship of Mr. Arthur O. Wellman and the Wellman Foundation. This new station is organized as a modern sheep-growing demonstration farm for the primary purpose of determining the best methods of raising sheep for profit for South Carolina farmers. Companion investigations are being conducted with hormones and light variations, and experiments are underway to determine the effect of low temperatures on fertility.

More than 250 research projects in agriculture were underway during 1954-1955. The results of these studies are published in the Annual Reports of the Experiment Station and in the new publication, South Carolina Agricultural Research, which is issued quarterly. Plans were also underway in 1954-1955 to publish an annotated list of all projects under the Station as a comprehensive means of giving additional information concerning studies underway and results to date.

Farmers have reacted quickly and favorably to the new Palmetto non-shattering variety of sesame.
The percentage of the farm income from livestock has increased consistently in recent years in South Carolina.
4-H Club enrollment has made a steady gain in recent years. A new high enrollment of 58,472 rural boys and girls, white and Negro, was attained in 1954.
The results of research have been most gratifying. Since these results are reported in other publications, only a very few comments are made here by way of illustration:

The results of one project alone if applied generally in the State would increase the annual income of South Carolina farmers by $10,000,000. On 37 demonstration plots the yield of lint cotton was increased by 39 pounds per acre by the application of five pounds of Colemite plus five pounds of magnesium sulphate per acre. The increase yield represented a gain of $11.50 per acre which would amount to $10,000,000 annually if every farmer in South Carolina adopted this plan of fertilization.

Through early irrigation, phenomenal increases in yield can be obtained with tomatoes, potatoes, and snap beans, according to the findings of irrigation research. The Experiment Station took the lead in irrigation research in 1946 and now has a project which is cooperative with the states of Tennessee and Texas on developing sources of water for irrigation.

Hogs fed penicillin-bacitracin or penicillin plus B₁₂ make faster and more economical gains than those fed a similar ration without these antibiotics, according to the results of research with animals. In beef cattle breeding, the recrossing of British-

County Agents helped many farmers check the efficiency of insect control measures.
Brahman cross-bred brood cows with a third British breed cross (Shorthorn) is being checked with the single cross of Angus and Shorthorn. Significant findings are that all cross breeds, both that of British breeds and British and Brahman breeds, are much heavier than purebred Angus, not only at weaning but at breeding age as well.

In an important area of development, farmers have reacted quickly and favorably to the announcement of a new non-shattering sesame variety from Clemson, bearing the name Palmetto. Palmetto originated from a multiple cross of selected seed. The nonshattering variety represents the co-operative work of the Tobacco and Special Crops Section, USDA, the Texas Agricultural Experiment Station (Rio Farms, Inc.), National Cottonseed Products Association, the Division of Plant Exploration and Introduction, and S. C. Agricultural Experiment Station. Two varieties were released: Palmetto from Clemson, and Rio from Texas. Introduction of the two new varieties represents the most important development that has occurred in the sesame program, and one which holds promise that sesame will soon be an important crop for the cotton belt.

Research appears well on the way toward winning the weed and grass control battle. Experiments show that some of the more expensive practices of producing a cotton crop, such as

Aromatic tobacco appears to be a coming crop in the Piedmont area of South Carolina where it was introduced several years ago. This new crop was also introduced in Saluda County in 1954-1955 and growers were well pleased with the results.
hoeing, can now be eliminated by the use of pre-emergence and post emergence herbicides. No costly equipment is normally needed for applying these chemicals. Tractor outfits currently in use can be readily adapted for the chemical weed control program.

Very encouraging results have been obtained on the control of soil insect damage to sweet potatoes with the insecticide-fertilizer mixtures. Excellent control was obtained when insecticides were applied in the setting water or placed high in the bed on which the plants were set.

Aromatic tobacco, previously introduced in the upper Piedmont, was planted for the first time in Saluda County in 1954-1955, and growers were well pleased with the new crop. Considerable progress was made during the year toward mechanizing the production and harvesting of aromatic tobacco.

Previously it was thought that damage to watermelons occurred primarily during shipment, especially in rail shipments. It now appears that much damage is caused during the picking, hauling from fields, weighing, and loading of melons into cars and trucks.

The above brief sketches have been given only to illustrate the research program. The 250 to 300 projects of the Experiment Station are constantly yielding important results which benefit the farmers of South Carolina and economy of the State.
Regulatory Service

By acts of the South Carolina General Assembly certain agricultural programs involving regulatory procedures have been assigned to the Clemson Agricultural College.

The policy of the College as authorized and directed under these acts is that of operating an efficient and impartial compliance program, which, in addition to the present acts, includes the promulgation of rules and regulations by the Board of Trustees of the Clemson Agricultural College in the furtherance of these services but not inconsistent with said acts, for the protection of South Carolina farmers and agriculture.

These regulatory services include the Fertilizer Inspection and Analysis Department, the Livestock Sanitary Department and the Crop Pest Commission. All coordinate and cooperate with other agricultural agencies in striving for a better and more efficient agricultural program.

Closely associated with this regulatory program and coordinated with the College is the work of the Seed Certification Department. The rules and regulations of this department are promulgated and approved by the Board of Directors of the South Carolina Crop Improvement Association.

The following paragraphs give brief comments concerning the regulatory services in 1954-1955.

Experiments have shown that sweet potato yields can be profitably increased by irrigation.
The number of beef cattle on South Carolina farms has increased rapidly in recent years.
Turkey production has increased rapidly in the State.

Fertilizer Inspection and Analysis

Perhaps the most progressive step ever made by the Fertilizer Inspection and Analysis Department is evidenced by the New S. C. Fertilizer Law which became effective July 1, 1954. It streamlines guarantees, makes for uniformity of labeling, makes optional the out-dated open formula, and eliminates the tax tag. The farmer is being saved approximately $1.00 per ton through the printing of the required guarantee on the bag rather than attaching unnecessary tags. Spot checks are made daily by fertilizer inspectors to see that all shipments are reported. Within 48 hours after the close of the month, IBM cards prepared as a result of inspections are assorted and a report made to the fertilizer industry. For the first time in South Carolina accurate information revealing analyses and tonnage of fertilizer sold by counties is made available to agricultural workers and fertilizer manufacturers.
Livestock Sanitary Service

The Livestock Sanitary Department is now housed in the new laboratory headquarters at Pontiac. Great progress has been made in these programs following the adjustments necessary after moving and combining the State Federal programs.

The Livestock Laboratory is now in full operation and has lived up to all expectations. The scope of services to be offered to the livestock industry is being increased daily so that with the exception of toxicology and chemistry, the assistance rendered is rather complete. The poultry and turkey industry continues to use the laboratory in an ever increasing volume.

The accelerated Brucellosis Program has progressed very rapidly. The number of samples being tested for Brucellosis on a current basis in 1954-1955 was approximately three times that of the previous peak, with an anticipated further increase expected. The goal of testing all herds in South Carolina is definitely a possibility and with an extended effort can become a probability.

All patrons of every dairy plant in South Carolina have been tested by the ABR Milk Ring Test indicating that three such tests a year is possible and practical.

Substantial progress has been made in the Tuberculosis Program, the Hog Cholera Eradication Program, and the program for the control of Vesicular Exanthema. The tuberculosis service is not unusual for South Carolina but does stand out in
comparison with the programs of other states. The workable garbage control law has been effective in the control of Vesicular Exanthema and has helped also in the control of Hog Cholera, though it was necessary during the year to prosecute a number of violators to make this program effective.

The Technical Livestock Committee has continued to be of great service to the Livestock Sanitary Department and to the livestock industry.

**Crop Pest Commission**

A rigorous program of inspections by the S. C. Crop Pest Commission attempts to protect South Carolina farmers from all types of insects. It now appears that the Japanese Beetle has established a foothold in the state, and is a serious threat to the economic welfare of the state. The Commission was able to delay the establishment of this pest by more than twenty years since it was first discovered here in 1931. When pesticide samples were found to be low in effectiveness, the Commission required manufacturers to withdraw low samples from the market. Almost all changed their methods to obtain a better product. The same situation was found with insecticides-fertilizer samples, with a marked improvement after manufacturers were informed.

**Seed Certification**

The Foundation Seed Organization is providing the missing link between plant breeders and farmers who desire to obtain new improved varieties quickly. Eighteen different varieties were being increased under contract during 1954-1955. A new variety of Soybeans, “Lee”, was grown for release in 1955. This bean promises to be one of the most outstanding soybeans ever grown in South Carolina. Latest information on crop varieties, fertilization, insecticides, and fungicides was made available to seedsmen and agricultural workers through five district seed short courses and the Eighth Annual Seed Short Course. Stock seed of Ashley and Stono cucumbers were increased and released to the seed trade.
Introduction of the new varieties of watermelon, Charleston Gray and Sugar Baby, was of interest to farmers of the state. Rio Gold muskmelon offers possibilities of establishing a Fall production of the crop, when very few melons are on the market.

**Agricultural Extension Service**

The Agricultural Extension Service has the responsibility of an educational program designed and organized to communicate to the farm and home the results of research and successful farm and home experience in agriculture and home economics. The purpose of this program is to assist the farm and home in applying this information to improve farming as a means of earning a livelihood, to raise the standard of living of the farm family, and to build a safe, sound, and progressive agricultural and rural life.

![Graph showing number of tractors on South Carolina farms increasing rapidly in recent years to reach a peak of 55,564 in 1954.](image-url)

The number of tractors on South Carolina farms has increased rapidly in recent years to reach a peak of 55,564 in 1954.
In carrying the 1954 program of extension work in agriculture and home economics to the farm people of South Carolina, county extension workers made 121,463 farm and home visits, and held or took part in 36,357 educational meetings which were attended by 982,399 farm people including men, women and boys and girls enrolled in 4-H clubs.

A total of 139,449 farm people called at county extension offices and 156,440 called by telephone for information and assistance. County extension workers prepared and made 4,843 radio and 348 television broadcasts, distributed 378,682 farm and home bulletins, and prepared 15,695 news articles for publications on timely farm and home information.

A new high record of 54,872 farm boys and girls, including both white and Negro, were enrolled in 4-H club work.

The effectiveness of this vast communicative net-work in reaching the farm and home is very gratifying. There is a definite evidence that research discoveries of experiment stations and industrial concerns are effecting improved farming and farm family life. To give just a few statistics by way of illustration:
The pul-wood industry has grown rapidly in recent years and scenes like the above are to be found in many sections of the State.

Cash farm income in South Carolina increased from less than $100,000,000 in 1934 to more than $300,000,000 in 1954. While the cost of production has also increased and farmers are still caught in the cost-price squeeze, the long-time trend is beyond doubt in the direction of a higher standard of living.

Mechanization for economical production is shown by the increase in tractors in the State from 12,500 in 1945 to 57,000 in 1954. In the same period, the number of mules decreased from 192,000 to 140,000.

New high total production records were achieved in South Carolina in 1954 with:

- Oats—23,846,000 bushels
- Milk—626,480,000 pounds
- Beef Cattle—229,000 on farms
- Eggs—548,244,000 produced
- Turkeys—1,384,000 raised

New high average production records were achieved in 1954 with:

- Oats—32.5 bushels per acre
- Barley—29 bushels per acre
- Milk—3,820 pounds per cow
- Eggs—157 per hen

New high records have also been achieved during the past five years either in total production, average production, or both.
with corn, tobacco, soybeans, wheat, peanuts, Irish potatoes, commercial broilers, and total cattle on farms.

A new low was reached in 1954 in the percentage of South Carolina cotton classed as rough-ginned. Through improved harvesting and improved ginning cotton classed as rough-ginned has been reduced from 13 per cent in 1946 to one-half of one per cent in 1954.

Production isn't the whole story but the figures given above are cited because such reported records coincide well with the agricultural extension program underway in South Carolina. More detailed information concerning agricultural progress in the State is presented in the Annual Reports of the Extension Service and the hundreds of bulletins published by the Service. Progress can also be seen among the 124,000 farm operators and their families who live and work on 11,000,000 acres of land in farms in South Carolina.

Report of the Treasurer

Incorporated as an integral part of this report for 1954-1955 is a report of the Treasurer of the College. This report which appears on the following pages presents a summary of the income and expenditures of the institution for the fiscal year from July 1, 1954 to June 30, 1955.

Report of the Board of Visitors

In accord with the By-Laws of the College, the Board of Trustees invites each year a Board of Visitors to spend several days on the campus and appraise the work of the institution. This Board consists of two citizens from each Congressional District selected each year by the Trustees.

The Board of Visitors has access to every feature of the College work and organizations and reports its findings in a special report. A copy of the Board of Visitors Report for 1955 is incorporated as a part of this report and is presented on the following pages.

R. F. Poole
President
REPORT OF THE TREASURER
A. J. Brown, Secretary-Treasurer

THE CLEMSON AGRICULTURAL COLLEGE OF SOUTH CAROLINA

COLLEGIATE ACTIVITIES
Fiscal Year July 1, 1954, to June 30, 1955

INCOME

Legislative Appropriations:
S. C. Legislative Appropriation ........................................ $1,961,947.00
Federal Funds .................................................................... 45,558.86
Endowment Funds ................................................................ 9,266.36
Miscellaneous—Rents, Sales & Service ................................ 126,263.75

Student Fees:
Tuition and Matriculation ............................................... 321,971.69
Laboratory Fees .............................................................. 121,914.75
Class Maintenance Fees ................................................. 42,918.20
Summer School 1954 ...................................................... 12,804.87
Summer School 1955 ...................................................... 71,754.80

Sales & Service Collegiate Departments ......................... 672,153.37

Total Income Collegiate Activities ................................. $4,627,275.49

EXPENDITURES
July 1, 1954 — June 30, 1955

A-1 Salaries and Wages .................................................. $2,267,311.51
B-2 Travel ....................................................................... 31,829.62
B-3 Telephone & Telegraph ........................................... 27,901.90
B-4 Repairs ...................................................................... 132,907.28
B- Contractual Services ................................................. 162,277.22
C- Supplies ..................................................................... 943,773.93
D- Other Charges ............................................................ 365,074.91
G- Equipment ................................................................... 118,585.34
Transfers .......................................................................... 34,757.33
Sinking Fund—Bond & Interest—
Institution Bonds ......................................................... 321,971.69
Sinking Fund—Bond & Interest—
Barracks ...................................................................... 230,168.51

Total Expenditures ................................................................ $4,636,559.24
Receipts:

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<td>Tiger</td>
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<td>Student Organizations</td>
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<td>Slipstick</td>
<td>$3,018.65</td>
</tr>
<tr>
<td>Athletic Radio and T.V.</td>
<td>$6,116.00</td>
</tr>
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</table>

$468,872.79

Expenditures:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A- Salaries, Wages &amp;</td>
<td>$148,237.69</td>
</tr>
<tr>
<td>Professional Services</td>
<td></td>
</tr>
<tr>
<td>B-2 Travel</td>
<td>$58,680.46</td>
</tr>
<tr>
<td>B-3 Telephone and Telegraph</td>
<td>$4,722.79</td>
</tr>
<tr>
<td>B-4 Repairs</td>
<td>$21,102.31</td>
</tr>
<tr>
<td>B- Other Services</td>
<td>$65,722.46</td>
</tr>
<tr>
<td>C- Supplies</td>
<td>$57,078.41</td>
</tr>
<tr>
<td>D- Fixed Charges</td>
<td>$65,747.03</td>
</tr>
<tr>
<td>G- Equipment</td>
<td>$35,181.09</td>
</tr>
<tr>
<td>H- Transfers</td>
<td>$8,474.90</td>
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<tr>
<td>H- Investment</td>
<td>$10,000.00</td>
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</table>

$474,947.14

SPECIAL STATE APPROPRIATIONS

Appropriations:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brought Forward: Purchase and Install Boiler</td>
<td>$73,494.96</td>
</tr>
<tr>
<td>Equipment for New Barracks</td>
<td>$146,600.37</td>
</tr>
</tbody>
</table>

$220,095.33

Expenditures:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>$220,095.33</td>
</tr>
</tbody>
</table>

SMITH-LEVER AGRICULTURAL EXTENSION WORK

Receipts:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brought Forward</td>
<td>$650.00</td>
</tr>
<tr>
<td>Appropriations: Federal</td>
<td>$1,031,177.53</td>
</tr>
<tr>
<td>State</td>
<td>$915,000.00</td>
</tr>
</tbody>
</table>

$1,946,827.53

Expenditures:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A- Salaries and Wages</td>
<td>$1,566,061.31</td>
</tr>
<tr>
<td>B-2 Travel</td>
<td>$251,446.94</td>
</tr>
<tr>
<td>B-3 Telephone and Telegraph</td>
<td>$18,658.04</td>
</tr>
<tr>
<td>B- Other Services</td>
<td>$16,170.32</td>
</tr>
<tr>
<td>C- Supplies</td>
<td>$47,482.80</td>
</tr>
</tbody>
</table>
**D-** Fixed Charges ____________________ 5,054.30

**G-** Equipment ________________________ 41,691.32

---

**Carried Forward** ____________________ 262.50 $1,946,827.53

---

**MISCELLANEOUS STATE APPROPRIATIONS**

**EXTENSION SERVICE**

**Receipts:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brought Forward</td>
<td>33,667.30</td>
</tr>
<tr>
<td>Camp Long Appropriation</td>
<td>2,400.00</td>
</tr>
<tr>
<td>Camp Cooper Appropriation</td>
<td>2,400.00</td>
</tr>
<tr>
<td>State Marketing Commission</td>
<td>4,075.00</td>
</tr>
</tbody>
</table>

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**Expenditures:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A- Salaries and Wages</td>
<td>7,579.07</td>
</tr>
<tr>
<td>B-2 Travel</td>
<td>554.76</td>
</tr>
<tr>
<td>B-4 Repairs</td>
<td>225.00</td>
</tr>
<tr>
<td>B- Other Services</td>
<td>544.39</td>
</tr>
<tr>
<td>C- Supplies</td>
<td>2,028.05</td>
</tr>
<tr>
<td>D- Fixed Charges</td>
<td>1,203.83</td>
</tr>
<tr>
<td>G- Equipment</td>
<td>55.14</td>
</tr>
<tr>
<td>H- Building</td>
<td>10,479.80</td>
</tr>
</tbody>
</table>

---

**Carried Forward** ____________________ 19,872.26 $ 42,542.30

---

**SOUTH CAROLINA EXPERIMENT STATION**

**Federal Funds**

**Receipts:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams</td>
<td>$ 15,000.00</td>
</tr>
<tr>
<td>Hatch</td>
<td>15,000.00</td>
</tr>
<tr>
<td>Purnell</td>
<td>60,000.00</td>
</tr>
<tr>
<td>Bankhead-Jones Section 5</td>
<td>68,111.24</td>
</tr>
<tr>
<td>Bankhead-Jones Non-Regional, Sect. 9</td>
<td>202,696.17</td>
</tr>
<tr>
<td>Bankhead-Jones Regional, Sect. 9</td>
<td>44,367.00</td>
</tr>
<tr>
<td>P. M. A. Fund Title II</td>
<td>4,640.00</td>
</tr>
</tbody>
</table>

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**Expenditures:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1 Salaries</td>
<td>302,176.72</td>
</tr>
<tr>
<td>B-2 Travel</td>
<td>6,491.11</td>
</tr>
<tr>
<td>B-3 Telegraph and Telephone</td>
<td>1,113.05</td>
</tr>
<tr>
<td>B-4 Repairs</td>
<td>5,053.27</td>
</tr>
<tr>
<td>B- Other Services</td>
<td>4,671.78</td>
</tr>
<tr>
<td>C- Supplies</td>
<td>39,906.97</td>
</tr>
<tr>
<td>G- Equipment</td>
<td>42,878.83</td>
</tr>
<tr>
<td>H- Improvements</td>
<td>202.22</td>
</tr>
<tr>
<td>H- Buildings</td>
<td>7,320.46</td>
</tr>
</tbody>
</table>

---

$ 409,814.41

---

32
# SOUTH CAROLINA EXPERIMENT STATION

## State Funds

**Receipts:**
- State Appropriation $560,820.00

**Expenditures:**
- **A-1** Salaries and Wages $450,246.91
- **B-2** Travel 11,082.41
- **B-3** Telephone and Telegraph 2,849.07
- **B-4** Repairs 9,326.32
- **B-** Other Services 9,394.98
- **C-** Supplies 48,557.58
- **D-** Fixed Charges 7,828.73
- **G-** Equipment 15,754.63
- **H-** Improvements 1,751.37
- **H-** Buildings 4,028.00

## Farm Products Funds

**Receipts:**
- Balance Brought Forward $41,936.97
- Farm Products 435,619.08 $477,556.05

**Expenditures:**
- **A-1** Salaries and Wages
- **B-2** Travel
- **B-3** Telephone and Telegraph
- **B-4** Repairs
- **B-** Other Services
- **C-** Supplies
- **D-** Fixed Charges
- **G-** Equipment 155,356.58
- **H-** Improvements

<table>
<thead>
<tr>
<th></th>
<th>155,356.58</th>
<th>33,956.38</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>G-</strong> Equipment</td>
<td>5,465.86</td>
<td>7,428.61</td>
</tr>
<tr>
<td><strong>H-</strong> Buildings</td>
<td>4,028.00</td>
<td>13,532.54</td>
</tr>
<tr>
<td><strong>H-</strong> Improvements</td>
<td>1,751.37</td>
<td>33,956.38</td>
</tr>
<tr>
<td><strong>D-</strong> Fixed Charges</td>
<td>31,569.30</td>
<td>13,532.54</td>
</tr>
<tr>
<td><strong>C-</strong> Supplies</td>
<td>186,058.54</td>
<td>30,376.83</td>
</tr>
<tr>
<td><strong>B-</strong> Other Services</td>
<td>3,076.83</td>
<td>30,376.83</td>
</tr>
<tr>
<td><strong>B-4</strong> Repairs</td>
<td>31,569.30</td>
<td>30,376.83</td>
</tr>
<tr>
<td><strong>B-3</strong> Telephone and Telegraph</td>
<td>2,900.26</td>
<td>30,376.83</td>
</tr>
<tr>
<td><strong>B-2</strong> Travel</td>
<td>5,495.92</td>
<td>30,376.83</td>
</tr>
<tr>
<td><strong>A-1</strong> Salaries and Wages</td>
<td>155,356.58</td>
<td>30,376.83</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>466,674.96</th>
<th>$10,881.09</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B-1</strong> Salaries and Wages</td>
<td>$466,674.96</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>B-2</strong> Travel</td>
<td>7,367.63</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>B-3</strong> Telephone and Telegraph</td>
<td>442.27</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>B-4</strong> Repairs</td>
<td>355.35</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>B-</strong> Other Services</td>
<td>1,231.46</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>C-</strong> Supplies</td>
<td>6,616.36</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>G-</strong> Equipment</td>
<td>5,465.86</td>
<td>74,517.00</td>
</tr>
</tbody>
</table>

## FERTILIZER INSPECTION AND ANALYSIS

**Receipts:**
- State Appropriation $74,517.00

**Expenditures:**
- **A-1** Salaries and Wages $53,038.07
- **B-2** Travel 7,367.63
- **B-3** Telephone and Telegraph 442.27
- **B-4** Repairs 355.35
- **B-** Other Services 1,231.46
- **C-** Supplies 6,616.36
- **G-** Equipment 5,465.86

<table>
<thead>
<tr>
<th></th>
<th>5,465.86</th>
<th>$74,517.00</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A-1</strong> Salaries and Wages</td>
<td>53,038.07</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>B-2</strong> Travel</td>
<td>7,367.63</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>B-3</strong> Telephone and Telegraph</td>
<td>442.27</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>B-4</strong> Repairs</td>
<td>355.35</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>B-</strong> Other Services</td>
<td>1,231.46</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>C-</strong> Supplies</td>
<td>6,616.36</td>
<td>74,517.00</td>
</tr>
<tr>
<td><strong>G-</strong> Equipment</td>
<td>5,465.86</td>
<td>74,517.00</td>
</tr>
</tbody>
</table>
# LIVESTOCK SANITARY WORK

## Receipts:
- State Appropriation: $252,096.69
- Sales and Service: $20,611.73

## Expenditures:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1 Salaries, Wages and</td>
<td>144,662.01</td>
</tr>
<tr>
<td>Professional Service</td>
<td></td>
</tr>
<tr>
<td>B-2 Travel</td>
<td>24,678.11</td>
</tr>
<tr>
<td>B-3 Telephone and Telegraph</td>
<td>2,620.33</td>
</tr>
<tr>
<td>B-4 Repairs</td>
<td>1,191.81</td>
</tr>
<tr>
<td>B- Other Services</td>
<td>1,462.58</td>
</tr>
<tr>
<td>C- Supplies</td>
<td>30,630.25</td>
</tr>
<tr>
<td>D- Fixed Charges</td>
<td>62,151.51</td>
</tr>
<tr>
<td>G- Equipment</td>
<td>5,311.82</td>
</tr>
</tbody>
</table>

## Special State Appropriation:
- Brought Forward—Construction Laboratory Building: $160,389.98

## Expenditures:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1 Salaries</td>
<td>$376.00</td>
</tr>
<tr>
<td>B-2 Travel</td>
<td>43.73</td>
</tr>
<tr>
<td>H- Building</td>
<td>159,970.25</td>
</tr>
</tbody>
</table>

Total Expenditures: $272,708.42
Gentlemen:

We, the Board of Visitors, visited Clemson College during the first week of May, and we were privileged to observe and inspect the functions and operations of our state's important and growing Land Grant College. We are grateful for the opportunity of having had an inside view of this great institution and for the privilege of having been chosen to serve as a Board of Visitors.

All of us were impressed with the magnitude of the college, its operations, and the splendid manner in which the institution is conducted. It is a college of which South Carolina may indeed be proud.

We wish to express our appreciation for the many courtesies extended to us and for the hospitality we found at Clemson. During our stay on the campus, we were conducted on a series of tours which took us to, or through, every department of the institution. While a detailed study of a particular school or department is not possible in the allotted time, the Board obtained a great deal of information regarding the activities of the various component parts of the college.

The influence of Clemson on South Carolina and its value to the state is reflected in a report of Dr. R. F. Poole, President, that more than one-half of the population of the state sought Clemson last year for education, research, or assistance through the Extension Service.

With the amazing industrial growth and agricultural advancement in this state in recent years, Clemson College becomes even more valuable and important to South Carolina. The college must be prepared to match the strides of the state if it is to serve the people properly.

Clemson's total enrollment for 1954-55 was nearly 3,000. The number is expected to continue to increase in the years
ahead. As far as dormitory facilities are concerned, Clemson appears to be prepared for some time to come, now that the handsome new barracks building has been completed and put into use. We inspected this building and were impressed with its design, convenience, spaciousness, and serviceability.

The college appeared to be adequate in most respects, well organized, and functioning in a splendid manner. There is evidence, however, of some needs, and the Board of Visitors wishes to call your attention to several matters in the hope that consideration will be given to them in future planning.

The salary scale for the faculty is considerably below the average of similar institutions in other states. We suggest that the Board of Trustees make a study of the number, qualifications, rank and salaries of the faculty members in the various departments, as compared with colleges in other states which might be competitive. We suggest that consideration be given to installation of a system of merit promotions for faculty members. This would obviate the necessity, for example, of promotion of a faculty member from assistant professor to associate professor merely to provide him with a higher salary.

There is an obvious need for more adequate facilities for the School of Arts and Sciences. Four buildings scattered over the campus are used by the school which does one-third of all the teaching at Clemson. The principal building is 60 year old Tillman Hall, a structure woefully lacking many conveniences found in other buildings on the campus. Restroom facilities are inadequate. There are no private offices or rooms for faculty members, a handicap to the professors, particularly in the counseling of students. Supporting columns in the four-story building reduce the usability of space in some of the classrooms.

The School of Engineering is well-equipped, but additional facilities are needed. The already overcrowded conditions existing there are becoming more acute with the ever-increasing number of engineering students. The Board advises the most efficient distribution and use of available facilities until more buildings are constructed. The Board suggests the possible use of Long Hall, which is to be vacated when the new Agricultural Center is put into use, to provide additional space for the School of Arts and Sciences and/or the School of Engineering.
In the School of Textiles we were intrigued with what we saw. Graduates of this school are well qualified to enter the field of textiles, which is an important part of South Carolina's vast industrial empire. We were interested to learn that Clemson this fall will add industrial management as a new major course.

One of the principal needs is a larger and more modern auditorium. The present auditorium has a seating capacity of 1,200, less than half the number of students at Clemson. Another pressing need is for a better building to serve as the college hospital. An old wooden building resembling a residence is and has been in use for decades. The hospital, which is a fire hazard, has sufficient beds for patients except during epidemics. Each Clemson student visits the hospital for treatment an average of three times a year.

Since Clemson can do a great service to the state by educating its women as well as men, and since Clemson is going to provide this service, serious consideration should be given to the problems of co-education, and some provision should be made for housing and supervision of the women students.

As a part of our tour of the new barracks building, we had a delightful meal with the student body in the huge dining room. During that time we talked with some of the students, and though our conversations were of necessity brief, we sensed that the majority of the Clemson students were happy and that their attitude was good. Talking with the boys was a pleasant feature of the visit to Clemson, so much so, in fact, that the members suggested that future boards meet informally with student leaders to obtain their viewpoints regarding the college.

We toured the School of Agriculture and learned of its teaching, research, extension, and livestock sanitation programs. Traveling by bus, we saw the small grain nursery, herds of cattle, and milking barn before inspecting the new agricultural center. We recognize the value of the new center and its facilities to make possible the aiding of farmers of the state in marketing of their products as well as producing them.

We noted with interest the plans for a strong graduate program at Clemson to provide training in research and to further the scientific and technological education of our people.
The Board learned, on its visit to the college library, of the work of reorganization that had been done there and the rearrangement of the volumes in more systematic fashion. There is a need for a higher rate of pay for library assistants in order to afford the proper library service to students and faculty members.

Dr. Poole and his assistants saw to it that we were made comfortable at all times and our visit to Clemson was a most enjoyable one. We were privileged to talk with many of the faculty members and others connected with the college. On the afternoon of our second day at Clemson, a full scale parade was given in our honor.

The Board wishes to comment on the achievements of the college's public relations department. The work it is doing in apprising the public of activities at Clemson, outside of sports, should prove of benefit to the college.

We suggest that some method be devised whereby future Boards of Visitors may be of more service to the college with consideration being given to (a) the possibility of its being allotted more time for discussing the findings and opinions of the members; (b) the feasibility of having half of the Board members held over each year so that over a period of years each member would have visited Clemson twice; (c) the practicability of having the Board of Visitors assigned some service to augment the work of the public relations department.

Out of our visit to the campus grew a deeper fondness for the institution. We wish to commend the Board of Trustees, the President and his administrative staff, and the General Assembly of South Carolina for the splendid manner in which they are working together to provide and maintain a creditable institution dedicated to education and promotion of the agricultural and industrial development of the state.

We recommend to you Lewis F. Brabham as the holdover member of the Board of Visitors for 1956.

Respectfully submitted,

E. H. Agnew, Hold Over Member
Mrs. J. I. Waring
W. J. McLeod
W. E. Myrick
Frampton W. Toole, Jr.
Lewis F. Brabham

Hiram W. Sandlin
Clifford Smith
W. W. McEachern
Ralph Wilson
Harold Jackson

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Printed in 1957
20,000 attend Clemson's Annual Farm and Home Week