AGRICULTURAL CHANGES IN THE SOUTHEAST

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If there is one word which characterizes this nation over the last two decades, it is "change." No facet of American life has been untouched, and the overall impact of change probably has been more far-reaching than that of any other peiod in the history of our country.

Foremost among changes have been the increased emphasis on education after the first Russian sputnik; and, more recently, attention given to problems of unskilled adults in our labor force; the shift in our population from rural to urban areas, with all the ensuing problems associated with mobility of people; the attention given to medical facilities and services for all age groups; the development of thousands of new products now on our markets, and the demand by consumers for more services. It is generally agreed that two regions of this country – the West and the Southeast – have experienced the highest percentage gain in economic growth during these two decades of change.

One of the major factors contributing to the affluence of our society has been the productivity of the sector of our economy – agriculture – in which we are associated. Let us look at a few statistics on farm production. If we apply an index of 100 to the year 1950, the following indices appear in 1970: man-hours of farm work used, 43; total farm inputs, 108; output per man-hour, 346; and output per unit of input, 138.

Stated in terms generally used, the total number of persons supplied farm products per farm worker increased from 15.5 in 1950 to 47.1 in 1970. Equally important has been the contribution made by agri-business firms during this period in supplying farmers' needs and in processing and distributing agricultural products through the channels of trade, with increased emphasis on services.

Historically, many people look upon agriculture in our region, the Southeast, as an economy built upon cotton, tobacco, or peanuts.[1] Although these enterprises are still important, this picture of agriculture is changing. The introduction of a backlog of scientific and technological knowledge, starting after World War II, is restructuring agriculture at a very rapid pace within this region. Let us look at the changes which have occurred and are occurring in our two sectors of agriculture, namely the farm and agri-business.

Farm Sector

Labor force: The substitution of land and capital for farm labor occurred at a rapid rate in the Southeast between 1950 and 1970. Farm employment declined from 5.1 million farm workers to 1.8 million, or a decrease of approximately 65 percent. Hired farm workers contributed 23 percent of this total labor force in 1950 compared with 29 percent in 1970. While this shift was occurring, the urban population of the region gained 16 million people and rural areas lost 2 million. The rural population exceeded the urban population in nine of the 13 states in 1950, but this situation existed in only four states by 1970. Actually, both the United States and the Southeast had the same proportion of their total population classified as rural in 1970.

Number and size of farms: Every state in the Southeast had a decline in number of farms, ranging from one-third to two-thirds between 1950 and 1970. The percentage decline was highest in South Carolina, Mississippi, and Georgia (about 60 percent); and lowest in Oklahoma (36 percent). Overall, the number of farms decreased from 2.5 million to 1.2 million.

States losing 25 percent or more of the land in farms over the two decades were Georgia, South Carolina, Alabama, and Virginia. Two states had a slight increase in land in farms – namely, Louisiana and Oklahoma. Nine percent of the total land in farms within the region in 1950 was removed from agriculture by 1970.

The average size of farms more than doubled between 1950 and 1970 in Louisiana, Arkansas, and Mississippi, while increasing 87 percent in the region. By 1970, the average farm consisted of 281 acres in the region, compared with 383 acres in the United States. The number and size of farms have been influenced by the degree of industrialization within specific states. For example, Tennessee had the third highest number of farms (127,000) in the region in 1970, and the average size of farm was the smallest (122 acres). Yet, a further examination of the composition of Tennessee farms indicates that 37 percent or 47,000 of the operators of these farms worked off the farm 200 or more days during the year. An additional 11,000 of the farm operators worked off the farm between 100 and 200 days per year.

Farm investment: The increase in farm size, plus the substitution of machines for labor and the increase in livestock numbers, has made farming big business. Even though precise figures are not available on total farm investment in the Southeast, the average investment in land and buildings alone increased from approximately $8,600 per farm in 1950 to $55,000 in 1970. By the latter date, the total value of land and buildings on farms in the Southeast was about $68 billion compared with $208 billion in the United States.

In Tennessee the estimated value of farm machinery and equipment on farms in 1969 averaged around 10 percent of the total value of land and buildings per farm. On farms having sales of $10,000 or above, the value of machinery and equipment per farm averaged $20,000. Our professional staff in Tennessee has estimated that farms having gross sales of $10,000 or more have average total investments of $100,000 per farm and this investment probably will increase to $250,000 by 1985.

Farm income: With fewer farmers, and larger farms and investments, how have our farmers fared? The average farmer in the Southeast in 1950 received 47¢ in net farm income for every $1 in gross income and this declined to 35¢ per $1 by 1970. Since gross income increased from about $3,700 to $13,300 over this period, net income was increased from around $1,800 to $4,800 per farm. The average net farm income was about $600 below the United States figure.

Source of farm income: A look at cash receipts from 8 crop and livestock enterprises indicates that they provided about $11 billion of the $17 billion in gross farm income in the Southeast in 1970. Increased income from 7 of these enterprises accounted for about $6 billion of the $7.4 billion increased gross farm income in 1970 over 1950, while income from cotton decreased $900 million. These enterprises and receipts are as follows:

Enterprises	Cash receipts 1970 (millions)	Increase in cash receipts over 1950 (millions)
Cattle and calves	$3,640	$2,450
Poultry and eggs	2,210	1,550
Tobacco	1,280	330
Dairy products	1,190	580
Cotton	980	-900
Soybeans	780	700
Hogs	690	250
Peanuts	330	100

Cash receipts from cattle and calves, and poultry and eggs, tripled over this period while similar receipts from dairy products almost doubled. Increases in receipts from soybeans were very pronounced. Even though cotton receipts declined, it is likely that this crop will remain a very important source of income in many of the states.

Summary of farm sector: Resource use in the farm sector of the Southeast over the past two decades may be characterized by a 65 percent decrease in the labor force, with a slight increase in use of hired labor, almost a doubling of farm size, total investments increasing several fold, and net farm income per farm increasing about 170 percent. A continuation in these directions of change is anticipated in the near future.

Agri-Business Sector

A brochure published by the Association of Southern Agricultural Workers in 1960 indicated that this sector was a $28 billion industry, accounting for over 40

[1] The Southeast is defined as the 13 states including Virginia, Kentucky, Arkansas, Oklahoma, and all states south of these states.

percent of the employment in the South. This excluded both employment and the value of production in the farming sector.

Farmers in the Southeast are big buyers of supplies and services. These include such items as petroleum products, fertilizer, machinery and repair parts, as well as services such as credit. It is estimated that expenditures for these inputs increased from around $3.2 billion in 1950 to $8.1 billion in 1970 – an increase of over 150 percent. Farm expenditures for hired labor increased approximately 17 percent over this period and amounted to $1.1 billion in 1970.

The $14 billion in farm products assembled, processed, and distributed in the Southeast generated investments, employment, and income through the various channels of trade. A recent study in Tennessee indicated that farm products which moved through several stages of assembly, processing, and distribution had the greatest multiplier effect on the economy of the state. Examples of such products produced in the Southeast are cattle and calves, dairy products, poultry and eggs, tobacco, fruits and vegetables, peanuts, and pulpwood and lumber. Located within each state are processing industries such as textile mills, pulp and paper mills, tobacco manufacturing companies, fruit and vegetable assembly and processing companies; and meat packing companies have thousands of people dependent upon a steady flow of raw farm products for their livelihood.

It is estimated that over $37 billion in annual business was generated in the Southeast through the assembling, processing, and distributing of farm products in 1970. This represented a doubling of such annual business activities between 1950 and 1970.

In summarizing the agri-business sector, it seems that the supply side generated a total of around $9 billion in business throughout our economy in the Southeast in 1970 while the demand side generated about $37 billion for a total of $46 billion.

Total Contribution of Agriculture

The interdependence of the farm and agri-business sectors of total agriculture is well known to those of us assembled here. Any industry which increases its contribution to the Southeast by approximately $30 billion over two decades must be viewed as important in the country. It is anticipated that the changes which will occur in agriculture in the decades ahead will rival those of the past. As teachers, researchers, or public servants, each of us has a major responsibility in providing the scientific knowledge necessary to keep agriculture a viable industry. I feel that we will accept and fulfill this challenge.

COMMITTEE REPORTS

REPORT OF THE NACTA TEACHER EVALUATION AND RECOGNITION COMMITTEE
MURFREESBORO, TENNESSEE, JUNE 14-17, 1972

E. Grant Moody, Chairman; James L. Ahlrichs, Eugene Coleman, H. Brad Craig, Franklin Eldridge, David Mayo, Don A. Post, N. Omri Rawlins, Neil Sandstedt, Robert Seif, Sam Stenzel, and Robert S. Wheeler.

I. The Committee continues to work toward improved teacher evaluation and recognition.

A. **Teacher evaluation through the IOTA program for peer and self evaluation of teaching competence for teacher improvement.** (IOTA, the acronym for Instrument for the Observation of Teaching Activities.)

The Committee has postulated that an evaluation of competency among college teachers requires: (1) A statement of professional standards which will constitute a definition of competent teaching. Such criteria must have social validity and be mutually understandable and agreeable to both teacher and evaluator. (2) An instrument to assess competence based on the accepted definition. (3) Trained observers to objectively use the instrument in making the assessment of individual teachers through classroom observations and structured interviews.

NACTA members Robert Wheeler, Dan Robinson, Don Post and Grant Moody joined a broadly based task force of teachers and administrators to modify the IOTA program for college teaching. For the definition they prepared THE ROLE OF THE TEACHER IN HIGHER EDUCATION and defined the seven roles of the teacher as: "Director of Learning, Counselor and Advisor, Mediator of the Culture, Link with the Public, Member of the Faculty, Member of the Teaching Profession and Member of an Academic Discipline." Each of the individual statements used in defining these roles was submitted across the continent to about 100 teachers and administrators, some of whom had had contact with the IOTA program. Social validity was provided by the moderate to strong approval given by the 60 respondents together with the fact that the definition was designed by educators originally.

Based on this definition an instrument was designed consisting of five items describing levels of competency in each of 28 scales; 13 scales applying to classroom observation and 15 scales to apply verifiable data to be obtained from a structured interview. The definition and instrument were then field tested in a NACTA-IOTA Workshop, at Arizona State University, February 17-21, 1972. This, as other like workshops, included not only a study of the definition and instrument, but also training in their objective use in actual classroom observations of teaching activities and in interviews.

Per instructions of the Executive Board, future workshops for college teachers and educators will be promoted as IOTA Workshops with NACTA's encouragement and support rather than NACTA-IOTA Workshops.

For continued Committee action in the development of an IOTA program for college agriculture teachers, a need is felt for NACTA to show a commitment by some overt act such as sponsoring a 30-hour IOTA workshop either to constitute the program or to be scheduled immediately prior to its 1973 Annual Meeting and perhaps every other year thereafter. Unless other funding can be found, this would entail a registration fee of $50-75 per participant with a minimum of 30 registrants.

B. **Teacher recognition through the TEACHER FELLOW program.**

The prestigious TEACHER FELLOW Award is to be based upon results of evaluations made by current and past students, peers and the teacher himself. Instruments and procedures for student and alumni evaluations and requirement for a statement of teaching philosophy from the teacher have already been established (NACTA Journal 13:40-41, June 1969 and 14:62-63, Sept. 1970).

Although operational details are yet to be formalized, the following will supplement information already published.

A selection panel of judges from NACTA membership (which might be the Teacher Evaluation and Recognition Committee) shall be established to evaluate material presented in the nomination which can be generated by the department, a student organization and/or the teacher himself.

Nomination material will include:

1. The teacher's own statement of teaching philosophy.
2. Student evaluation including
   a. an explanation of how the data were obtained
   b. the statistical results
   c. a copy of the instrument used (If different from that published in NACTA Journal 14:62-63, Sept. 1970).
3. Alumni input.
4. Peer evaluation can be accomplished in either of two ways depending upon expense considerations, location, choice, etc.
   a. The IOTA approach
      The peer evaluation for teacher competency will be on the basis of the IOTA Instrument that has been prepared to measure the definition of the Role of a Teacher in Higher Education.
      Upon application a teacher will be observed in his classroom (using observation scales) and be interviewed (using interview scales) by a person trained in the use of the definition and instrument. Minimum training for an observer will consist of participation in two IOTA Workshops.
      The observer will receive travel and per diem expenses plus a modest consultant fee to be provided either by his institution, the teacher or a granting agency. It would be desirable, but not necessary, that the teacher have experienced at least one IOTA Workshop prior to his evaluation. In any case, however, he will have familiarized himself with the definition.
      Noting that the IOTA program is designed to improve teaching competence, better teaching should be a spinoff from this experience.
   b. Non-IOTA approach
      (1) Peer evaluation is to be based on actual observation of performance in the classroom by colleagues. The dossier will include:
         (a) an explanation of how the data were obtained
         (b) the statistical results
         (c) a copy of the instrument used.
      (2) Administrator (immediate supervisor) evaluation including
         (a) an explanation of how the data were obtained
         (b) the statistical results
         (c) a copy of the instrument used.

C. **Other considerations regarding the TEACHER FELLOW program.**

1. Financing the TEACHER FELLOW program.

Since it will require the equivalent of at least two day's time to process TEACHER FELLOW applications and conduct interviews and/or classroom observations, each application for TEACHER FELLOW rank will be accompanied by a fee of $100 or the equivalent of two day's pay for the applicant, whichever is the least. Hopefully, this will be paid by the institution that stands to gain from the increased stature of its teacher. This amount will be paid to NACTA which in turn will provide a stipend of a like amount to the person(s) designated by the Board to perform this function. Approximately ½ of the fee might go to the person authorized to conduct the interview/observation.

2. Applications for the TEACHER FELLOW Award must be made at least six months prior to the NACTA Annual Meeting.

3. Not more than 5% of the NACTA membership at one time may be designated TEACHER FELLOW, and not more than 1% of the total membership shall be awarded each year. The applicant must score 75 or above on each category considered, with an overall score of 85 or more.

4. Unsuccessful applicants might re-apply after three years with payment of the application fee.

5. An appropriate certificate and recognition will be awarded the recipient at the Annual NACTA Meeting. Such awards will be publicized in the NACTA Journal. Officers are requested to find means of funding a modest cash award to recipients.

6. Whether or not the application was successful, results of the application will be returned to the applicant for his benefit in continuing his improvement of teaching competence. It will include the scores and