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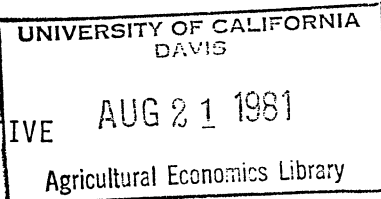
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COMMERCIAL AGRICULTURE IN HISTORICAL PERSPECTIVE



W. W. McPherson and Max R. Langham

"Achievement is a pleasant spectacle when it has been made in spite of obstacles" (Hullinger, p. 53).

Our session title suggests that agriculture in the "Old South" can be treated as an entity.¹ To do so requires such great generalization that one soon realizes that much of what is said about modern agriculture in the South can be said about other agricultural regions of the U.S. That is as it should be since forces from our political economy which induce adjustment in southern agriculture are also those which affect all agriculture.

Unique features of the "Old South" include the purpose and organization of the initial settlements by Europeans and the influence of these features on subsequent developments. Initial settlements employed systems of indentured servants and slaves to produce products for export to Europe. These features have made the adjustment problems in the South somewhat different and probably more difficult than those elsewhere.

We consider the "Old South" to include those areas in which the slavery system prevailed prior to the Civil War. It includes most of the states of Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, Arkansas, Tennessee, and Kentucky. Parts of Maryland, northern Florida, eastern Texas, and central Missouri were in the Old South, but are excluded here for we are working with data at the state level. For convenience, we have also used regional data as reported for three of the USDA Farm Production Regions--Appalachian (West Virginia, Virginia, North

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Carolina, Kentucky, and Tennessee), Southeast (Alabama, Georgia, South Carolina, Florida), and Delta States (Arkansas, Louisiana, and Mississippi).

We begin with an historical sketch of the Old South to provide a background of how southern agriculture has been transformed from early settlements until the 1940s. We then look at post-World War II changes and conclude with some speculation about the future.

Early Settlement

Attempts to colonize the South in the 17th century were for the purpose of producing products for export to Europe--rice, indigo, tobacco, forest products, and cotton. "The typical institutions--servitude, slavery, the plantation system, and the credit system--were not peculiar to the South nor established by the English race" (Gray, p. 301). Throughout the West Indies, Central America, and South America, the French, Spanish, Dutch, and Portuguese nations engaged in the establishment of similar economic enterprises under similar institutional systems. According to Gray (p. 341), these enterprises were in part the outgrowth of nationalistic ambitions but were promoted and made possible by investors from the nobility, gentry, and bourgeoisie who were essentially interested in deriving profits from investments. But, these colonial enterprises were unprofitable largely because of unfamiliarity with this new environment and difficulties of communication and administration from across the Atlantic.

Land settlement for profit was then attempted by subordinate associations of capitalists. This approach failed also and private plantations followed. These private enterprises "had the advantage of experience with the new environment and the opportunity in some cases to acquire at small cost the lands, improvements, and equipment of unsuccessful colonizing agencies. With the development of regular trade the planter was provided

not only with market outlets for his products, but also a means of procuring on credit the requisite servants, slaves, and equipment" (Gray, p. 341).

Farming Systems and Agricultural Growth to the 1860s

Traditional farm enterprises included cotton, a dominant crop throughout the Old South, tobacco in Virginia, the Carolinas, and parts of Kentucky and Tennessee, rice in South Carolina and Georgia, and sugarcane in Louisiana. Cotton and tobacco were the major exports. Corn was the major subsistence crop--it was the primary feed for work animals and subsistence livestock, and was widely consumed for food. These crops were highly labor intensive. Estimates of the annual man hours per acre for about 1800 and 1840, respectively, are as follows: cotton, 184 and 135, and corn, 86 and 69 (McElroy et al., p. 3). The use of slaves was a system in which landowners were able to acquire labor for working areas in excess of what the owner's family could cultivate. Hired labor was not a feasible alternative since moving to the frontier and working one's own land was an option for free persons.

In 1850, the 10 states that we include in the Old South contained 34 percent of the total population and 91 percent of the slaves in the United States (U.S. Census Office, p. 248). The U.S. population was 14 percent slaves compared to 37 percent in the Old South. Among the 10 states, slaves as a percentage of total state populations ranged from 22 percent in Kentucky to 58 percent in South Carolina.

Labor, obviously, was the limiting factor of production during this era. The acquisition of additional slaves was a means of rapidly expanding commercial output for export to Europe so long as additional lands were available. By 1860, westward expansion of cotton production had moved well into Texas and Missouri. While growth in output and wealth was taking place,

the degree of inequality of income distribution was also increasing because slaveholders were able to expropriate any surplus over bare subsistence produced by the slaves. Ransom and Sutch (p.4) estimated that the distribution of output on large slave plantations in 1859 was as follows: interest and depreciation on capital, 7.7 percent; salary of management, 3.4 percent; land rent, 35.7 percent; food, clothing, etc. for slaves, 21.7 percent; and expropriation by slave owner, 31.5 percent.

Two farm organizational systems were in operation: (a) the small one-family farm on which the operator and his family provided most of the labor, and (b) the plantation on which labor was provided by slaves. There was a wide range in the sizes of farms worked by slaves, from those with a few slaves to those with hundreds. One-family farms occupied the less productive lands and had poorer access to the infrastructure, such as transportation, communication, and education. They were largely self-sufficient with small quantities of output sold to meet low cash expenses.

The number of slaveholders (319,143) was equal to 60 percent of the total number of farms (534,800) in 1860. However, the distribution of slaves among slaveholders was highly skewed. About 50 percent of the slaveholders owned 5 or fewer slaves each and, as a group, 10 percent of the total number of slaves. At the other size extreme, 1 percent of the slaveholders also held 10 percent of the slaves.

There have been several attempts to measure the economies of scale in cotton production during the slavery period. (See, for example, Ransom and Sutch, pp. 73-78, and Gray, pp. 462-80.) There is no reason to believe that economies of scale existed beyond very small levels of production at the farm level, for only simple hand and animal implements were used. Economies in ginning would occur up to the capacity of a gin unit, and possibly in

marketing and financing up to rather large outputs. However, the main factor that contributed to the growth of the plantation system was the ability of the landowner-decision maker to expropriate the surplus produced by slave labor.

The main technological factor that influenced agriculture in the Old South prior to the Civil War was the invention of the cotton gin in 1793, which reduced processing cost dramatically and increased farm-level demand. This event occurred at a time when the prices of rice, tobacco, and indigo were declining and plantations were facing serious difficulties. In 1793, the South produced 10 thousand bales of cotton and exported 4 thousand; in 1810 production had increased to 178 thousand bales and 124 thousand were exported (Vance, p. 42). Production of cotton in 1860 was 3.8 million bales. These rather amazing increases in production were accomplished by employing more labor and traditional inputs on additional acreages of land. Of total U.S. production in 1860, the Old South produced about 90 percent of the cotton, 100 percent of the rice, 72 percent of the tobacco, and 100 percent of the sugarcane. Thus the Old South was export oriented throughout the slavery era. International forces were also operating on the input side as capital markets were based largely in England.

Sharecropping Era, 1860s to 1940s²

Immediately following the Civil War, plantation owners attempted to re-establish operations by hiring freedmen for wages. However, low cotton prices (due to a release of cotton stored during the War) and serious droughts in 1866 and 1867 resulted in a sharp drop in wages paid. These decreases in wages ranged from 7 percent in South Carolina, where wages were lowest, to nearly 40 percent in Mississippi (Ransom and Sutch, p. 65). Plantation

owners and hired workers were displeased with the wage labor system and it was very rapidly replaced by the sharecropping system--a system in which both landowner and sharecropper had a vested interest in seeing the crop through the harvest. By 1880 only 9 percent of the agricultural land in crops in the Cotton South was cultivated on units that could be considered plantations worked with hired labor (Ransom and Sutch, p. 87).

Ransom and Sutch (p. 7) estimated that, on the average, a slave who became a sharecropper had an increase in welfare³ of 80 to 105 percent between 1859 and 1879. Sharecropping also provided an opportunity for "poor whites" to work on the better lands of the plantations. Apparently this opportunity was a superior alternative for many white families. In 1935, there were 368,406 black sharecroppers and 347,846 white sharecroppers in the whole South. In the Old South, there were 338,000 black sharecroppers and 279,000 white sharecroppers. The black sharecroppers accounted for 48 percent of farms operated by blacks and 14 percent of all farms in these states. The white sharecroppers accounted for 16 percent of all farms operated by whites and 11 percent of all farms. All tenant classes included 45 percent of the whites and 79 percent of the non-whites.

Social status was identified with land tenure status, from lowest to highest: hired laborer, sharecropper, share tenant, cash tenant, and landowner, and among landowners social status varied directly with acreage owned.

The sharecropping system reached a peak in the early 1930s and began to decline rather rapidly in the late 1930s. From 1935 to 1940, the number of white sharecroppers declined 25 percent and non-whites 17 percent as migration from farm to non-farm employment accelerated. This labor adjustment was due to acreage allotments on cotton, tobacco, and peanuts--major crops in the sharecropping system--and to increasing off-farm opportunities.

In 1940 there were nearly 22 thousand plantations (defined as multiple-farm units on which 5 or more farm families, including at least 1 cropper or tenant family, are regularly employed), containing 242 thousand farm units--11 percent of all farms (U.S. Dept. of Commerce, 1940). These farms produced 28 percent of the cotton harvested. Also, 42 percent of all farms were classified as subsistence farms--defined as farms on which production for home use was the major source of income. In the remainder of the U.S. 27 percent of the farms were in the subsistence category.

Throughout the sharecropping period, the land per farm family changed very little. The production systems for traditional crops of cotton, tobacco, and peanuts for cash and corn for subsistence were essentially ones in which inputs were combined in fixed proportions of labor, land, mules, plows, hoes, and other traditional inputs. The number of mules in the Old South began to decline after 1935 and oxen, as a source of power, had already disappeared. The first reductions in numbers of mules probably resulted from reductions in numbers of farm families rather than from a substitution of tractor power. The introduction of tractor power in cotton and tobacco production lagged behind its use in grain production. Peak manpower loads in the production of cotton and tobacco occurred during harvesting and, in the early stages of mechanization, tractor equipment that would substitute for manpower in harvesting was not developed. Also real labor costs, related to the social constraints on the outmigration of blacks (especially discrimination in education and lack of acceptance in many occupations), lagged in the Old South. The Old South had only 7 percent of all farm tractors in 1930 and 6.3 percent in 1940. However, by the early 1940s farm wage rates were beginning to rise faster than other costs as the migration of workers from sharecropper and other tenant families accelerated.

With the deterioration in soil fertility under continuous row cropping, the use of chemical fertilizers was an important factor. From 1932 to 1937, 51 to 58 percent of the commercial fertilizer used in the U.S. was applied on farms in the Old South.

Cotton acreage and production reached a peak in the U.S. and in the Old South in the period 1926 to 1930. This region's share of acreage and production between 1911-15 to 1926-30 dropped from 57 percent to 48 percent and from 63 percent to 57 percent, respectively. The most rapid increases occurred in new areas of Texas, Oklahoma, and Missouri. The Old South's shares increased in 1935-40 as a result of the historical base used to calculate acreage allotments under the agricultural adjustment program. At the same time, the expansion of cotton acreage in California and Arizona was getting underway.

Five-year average yields of lint-cotton fluctuated from a high of 201 pounds per acre in 1911-15 to a low of 151 pounds in 1921-25. Soil erosion and the boll weevil and later the pink boll worm were major factors that affected yields. The boll weevil entered Texas in 1892, by 1903 it had spread over most of Texas to the Louisiana border; by 1912 it had crossed Oklahoma, Arkansas, Mississippi, and was halfway into Alabama, and by 1922 it covered the entire southern cotton belt (Ransom and Sutch, p. 173). In Louisiana, Mississippi, Alabama, Georgia, and South Carolina, the averages of the first four years after infestation compared to the four years before infestation showed reductions of 27.4 percent in acreage and 31.3 percent in yield (Ransom and Sutch, p. 175).

Cotton prices were highly influenced by the international market and there were wide fluctuations. Exports that reached a peak of 10.9 million bales in 1927 dropped to 3.3 million in 1939. The 1930-34 price of cotton

was 51 percent of 1925-29. The price of food grains which dropped by 50 percent was the only price that fell relatively more than the price of cotton. Thus it should not be surprising that the cotton and wheat areas were able to achieve a unification in political support--they had many problems in common, such as being heavily dependent on the export market, low prices and subsequent accumulation of large carry-over stocks. In 1939, the carry-over of cotton exceeded annual production for the first time in history.

Tobacco was second to cotton in terms of cash income produced in the South. Although the average U.S. acreage of tobacco was only 4 percent of that for cotton in 1926-30, the farm value of tobacco was 22 percent of that for cotton. In the Old South the income from tobacco relative to cotton increased from 17 percent in 1911-15 to 32 percent in 1926-30 and to 61 percent in 1935-40. Soil conditions for tobacco are more restrictive than for cotton; the Old South production was concentrated in the Atlantic Coastal Plain and the Appalachian areas. North Carolina and Kentucky continuously produced about 70 percent of the farm value of tobacco from the Old South, but their shares have changed because of the increased demand for cigarettes relative to other uses of tobacco. In 1911-15, Kentucky produced 43 percent and North Carolina 28 percent; in 1935-40, North Carolina produced 48 percent and Kentucky 23 percent. Acreage of tobacco harvested increased in all but one 5-year period from the Civil War until 1926-30. Subsequently, acreage was reduced by allotments. There is no indication of a trend in yield per acre until the reduction in acreage in the 1930s.

Sugarcane production was essentially limited to Louisiana until the late 1920s when production was started in Florida. Production increased consistently from the Civil War until 1898; thereafter there were wide fluctuations. The peak year between 1870 and 1935 was in 1904 with 803 million

pounds of raw sugar and the low year was 1926 with 96 million pounds.

Soil, water, and temperature requirements limited rice, another one of the early settlement crops, to a rather small geographic area. Early commercial production was mostly in South Carolina and Georgia. By 1890, Louisiana had surpassed South Carolina as the leading rice producing state. Subsequently, as cotton became more competitive, rice production moved out of South Carolina and Georgia and expanded in Arkansas and Texas (Holder and Grant, pp. 1-3).

Peanuts is a more recent cash crop of importance in the Old South. In 1933-42, there was an annual average of 3.0 million acres planted in the U.S., of which 1.1 million were picked and threshed. Eighty-three percent of the total acreage and 89 percent of the picked and threshed acreage were in the Old South; the remainder was in Texas and Oklahoma.

In summary, the early agriculture of the South was based on trade. Indeed, plantation agriculture would never have developed without a strong European demand for tobacco, indigo, and cotton. Between 1910-14 and 1936-40, the value of cotton and tobacco exports ranged from 48 percent of the U.S. total agricultural exports in 1921-24 to 66 percent in 1936-40. In 1905-09, 65 percent of the cotton production was exported. This quantity dropped to 40 percent in 1935-39.

Economic forces combined so that agriculture in the Old South expanded rather continuously from the Civil War until the late 1920s. In the 1930s, in the face of reduced exports and low prices, the Agricultural Adjustment Administration (AAA) played a major role in the reduction of acreages.

In the next section we look at the South's agriculture in the modern era. There are indications that the South's, and indeed the U.S.'s,

agriculture will again face greater dependence on international forces and greater risks.

Modern Era, 1940s to Present

During the last of the 1930s through the 1960s, the Old South and the producers of the "basic" commodities (cotton, tobacco, peanuts, and grains) elsewhere in the U.S. were somewhat insulated from the international markets via price supports and acreage allotments. There was an acceleration in changes, especially in the Old South. With the development of mechanical power and equipment for all operations from land preparation through harvesting, chemical weed control, and decreased supplies and increased costs of labor in agriculture, sharecropping as an institutional arrangement and source of labor and mules as a source of power disappeared in the late 1950s and early 1960s. Thus the Old South essentially disappeared.

Number and Size of Farms

The number of farms in the South has decreased more rapidly than in any other major region of the U.S. During the period 1950-60, the South lost 40 percent of its farms. From 1960 to 1970, it lost 48 percent of those remaining (U.S. Dept. of Commerce, 1980, p. 688). By 1980 there were 626,500 farms in the 10 states of the Old South with an average farm size of 203 acres. This size compares to 244 for the Corn Belt (Illinois, Indiana, Iowa, Missouri, and Ohio).

During the five years 1974-78, farms with sales of under \$2500 decreased in number in contrast with the rest of the U.S. The largest size group (sales above \$100,000) increased 48 percent and the \$2500-\$9999 group increased 19 percent. The data suggest a growing bimodal distribution of sizes in both

the U.S. and South. The lower peak of the bimodal distribution seems to be forming at somewhat higher sales levels in the South in contrast to the rest of the U.S. The categories are consistent with a pattern of small, part-time farms supplemented with off-farm income and large, full-time farms. This pattern is also consistent with the trend of more farm family income coming from nonfarm sources--52 percent during the 1974-79 period compared with 31 percent in 1950 for the U.S.

Inputs

The basic trends in input use in the South cannot be distinguished from the rest of the U.S. or, for example, the Corn Belt. Nonpurchased inputs (mainly land and labor) have declined sharply relative to purchased inputs. The purchased inputs increased as capital in the form of equipment has been substituted for labor, and improved seeds, fertilizer, and pesticides have been substituted for land. The index of interest payable per acre in U.S. agriculture has increased thirty-fold since 1945, six-fold since 1967. Some of the increase is due to increased interest rates but most is associated with increased capital use.

Fertilizer use per acre (especially nitrogen) in the three-region South has been heavier than in most other agricultural regions (USDA 1981a). This use is associated with high valued crops and older, more marginal soils. The agriculture of the South also uses about three times as much pesticide and 17 percent more total energy per crop acre as the non-South (USDA 1977, p. 22). It is a high cost agriculture and one of considerable risk. As a consequence, land used for crops in the South has been more variable than in the rest of the United States or, for example, the Corn Belt. Cropland moving out of production in the mid-'60s suggests that the southern region has relatively

more marginal soils than in the rest of the U.S.

Labor use data in agriculture suggests a large release of surplus labor to nonfarm employment during the 1950s and '60s. Labor use in the South remains higher per crop acre than in the rest of the U.S.: in 1945 versus 1979, the hours per acre were 68 and 13 in the three-region South and 16 and 5 in the non-South. The difference is in part due to the fact that some crops grown in the South--especially tobacco--remain labor intensive and in part to smaller average size farms which utilize smaller scaled equipment.

Output

Farm output in the Delta region, as defined by USDA, has shown more growth than on U.S. farms. Growth in farm output in the Southeast region has been similar to that for the U.S. and the Corn Belt; the Appalachian region has lagged other regions. Since 1945, acres of corn, cotton, peanuts, tobacco, and hay have decreased. The acres planted to corn and harvested for hay declined as animal power declined. Corn acreage in the Old South decreased from 25.3 million in 1934-43 to little more than 7 million in 1978. Cotton acreage declined largely because of a comparative advantage in the Southwest. The newly developed mechanized power and equipment and chemical weed control was much better adapted to the large irrigated farms in California and Arizona, the large farms in Texas and Oklahoma, and the Delta areas than to the rainfed, smaller, and, frequently, hilly farms in the Southeast. In the Old South, cotton has been essentially reduced to the Delta areas. Georgia, the "heart" of the Old South with 4.8 million acres of cotton in 1911-15, had only 111 thousand acres in 1978. Peanut and tobacco acreage declined in large part because of supply control programs.

Acres planted to soybeans have increased sharply and the South now produces about 30 percent of the U.S. supply--up from less than 10 percent in the late 1940s. Pasture acreage has increased and the acreage of timber on southern farms has declined. In terms of production, peanuts, soybeans, and wheat have increased while corn, cotton, and tobacco have declined (USDA 1980).

Indexes of farm output indicate that livestock output has grown more rapidly in the South than crop output. This result is in contrast to what has happened in the U.S. in general and in the Corn Belt. Cattle, poultry, and egg production have been the big gainers. Hog numbers are down over early post-World War II years and milk production has declined 40 percent over the past 30 years.

Productivity

The Old South has an image of a poor agricultural region of small farms. This image derives in large part from the sharecropper era and the plight of the "Cotton South" during the boll weevil infestation. The index of farm productivity indicates that the agriculture of the Mississippi Delta has outperformed U.S. agriculture and that of the Corn Belt in terms of relative change. The Southeast and Appalachian regions have performed about the same as the Corn Belt and the U.S. in general (USDA 1981b).

Yield increases of crops of primary importance to the South and the fertilizer use data suggest a progressive innovative agriculture. For example, peanut yields in Georgia have increased by a factor of 4.8 since 1945. Cotton yields in Mississippi have increased by a factor of 1.9, and tobacco yields in North Carolina have increased by 1.8. Although not directly comparable, soybean and corn yields in Illinois have increased by factors of about 1.8 and 2.8, respectively, during the same period, and cotton yields in California

have increased by a factor of 1.5.

The Old South has made considerable progress but it still contains many poor farmers. There are in all regions great interfarm variations and this is perhaps more true in the South than in other regions. Small farms in terms of acreage mean a relatively low equity base. On January 1, 1979, the equity per farm in the South was only 25 percent that of the average farm in the remainder of the U.S.--\$85,300 compared with \$354,000. This low resource base also means low net returns. For example, in 1979, average net returns per farm in the South were 70 percent of those for the average farm in the rest of the U.S. (USDA 1981b). Low net returns mean less funds for investment purposes and the cycle of relatively small units is perpetuated.

Institutional Factors

In terms of human capital investments, the South remains behind. In 1976, about 57 percent of the population above 18 years of age graduated from high school in the South compared to 67 percent in the U.S. Expenditures in public schools per pupil are relatively low and only Virginia ranks in the upper half of the states on the basis of expenditure per pupil in average daily attendance (U.S. Dept. of Commerce 1980).

Earlier we suggested that the agriculture of the South was a relatively high risk enterprise, and we agree with Schuh that risks in U.S. agriculture are increasing. Historically, the South has effectively used agricultural programs to maintain or increase income and to reduce risks. A greater proportion of cash receipts plus value of home consumption in the South came from government payments during the '50s and '60s than for agriculture outside the South. In 1945 and since 1975, this proportion in the South was lower than in the non-South.

We hasten to point out that government payments are a very imperfect measure of net effectiveness in the use of policy. The South has also been placed at a disadvantage by policy. Perhaps the best example was when the Southwest was able to obtain public investments in water project development which enabled that region to obtain a comparative advantage in cotton production. The distributional aspects of this policy are particularly disturbing since the advantage went to large farms at the expense of small farms.

The body politic of the South has recognized a payoff to policy and developed power by exploiting the tenure system in Congress. Tobacco politics stand out. The result is a contradiction in policy with the USDA encouraging production at a time when tobacco use is being discouraged by the Department of Health and Human Services.

There is evidence that the agricultural sector in the South is exercising power in state legislatures to obtain funds for research and extension activities. For example, in 1979, the state appropriations in Arkansas, Louisiana, and Mississippi for extension work and for state agricultural experiment stations reported research exceeded appropriations in the midwestern states of Illinois, Iowa, and Missouri. Collectively the three southern states out-appropriated the three midwestern states by 30 percent. On a per farm or per capita basis the South out-appropriated the midwestern states by a factor of 3.

Concluding Remarks

Agriculture today is characterized by a set of increasing international linkages. These strengthened linkages are most apparent in the commodity markets. Indeed, one only has to look at U.S. agricultural exports, which have grown to the \$40 billion range, to be amazed at this rapid development during the last decade. Schuh has effectively argued that changes in the

national and international financial markets are also increasing the number and strength of ties between the agriculture and non-agricultural sectors in an international arena.

Schuh has also argued that growing interdependencies between agriculture and non-agricultural sectors have increased risks in agriculture and that national and international economic policies will do more to condition what happens to agriculture in the future than will traditional commodity programs.

While the international arena is now looking more like the pre-1930s era, the position of the Old South has changed. In 1935-40, cotton and tobacco accounted for 66 percent of the total value of farm exports. These two crops accounted for little more than 10 percent of the total in 1978 and a much smaller share of the cotton was produced in the Old South.

Every agricultural region has its problems but in addition to problems that face agriculture in general, the South perhaps experiences more biological risks than many other parts of the nation because of its warm, moist climate which is attractive to pests, and, except in the Delta, because of its older, more leached soils.

There will probably be some further migration of farm labor to nonfarm employment. But as many persons seek less congestion, and in many instances a warmer climate in which to live, labor markets are created which provide nonfarm employment for resident farm labor. We expect this market for surplus farm labor to become an increasingly important mechanism for adjustment and labor migration that requires moving to an urban setting less important. This adjustment mechanism will further increase southern agriculture's interdependence with the nonfarm sector.

Population migration to the Sun Belt has placed greater demands on the indigenous resource base in parts of the South. In these places, water,

noise, space, and non-point pollution problems will increasingly occur at the interface of the farm and nonfarm sectors. These trends, too, will add to risks in southern agriculture as migration to the Sun Belt continues.

Agriculture of the South effectively used commodity policies from the 1930s to reduce price and income fluctuations. What happens to its agriculture in the 1980s will, by and large, depend on the technological and institutional mechanisms which are created to accommodate adjustment to its more risky environment. It may be that expected net income to farmers will increase sufficiently to make elements contributing to risk seem less important. This may be the case if the international demand for food shifts faster than new technology and resources can shift supply. In recent years such a scenario seems more realistic than it did in the mid-1960s. If relative food prices increase, the U.S. consumer interests may take a more explicit role in agricultural policy issues. U.S. consumers may find it to their advantage to encourage policies that increase agricultural output internationally as well as at home.

FOOTNOTES

W. W. McPherson is Graduate Research Professor and Max R. Langham is Professor in the Food and Resource Economics Department, University of Florida. Florida Agricultural Experiment Stations Journal Series No. ____.

¹Such works as Nicholls, and Strand and Heady, and USDA publications Farm Costs and Returns and Economic Indicators of the Farm Sector, reveal the inter- and intrastate complexity of the agriculture of a region that extends across states.

²Data cited in this section were taken from U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States, unless noted otherwise.

³Welfare was estimated as the sum of the increase in material income and the released labor time valued at the average productivity of farm labor.

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