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Optimum Farm Organization
and
Aggregate Area Production
Wiregrass Area, Alabama

AGRICULTURAL EXPERIMENT STATION
OF AUBURN UNIVERSITY
E. V. Smith, Director
Auburn, Alabama

In cooperation with

FARM PRODUCTION ECONOMICS DIVISION
ECONOMICS RESEARCH SERVICE
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This is the eighth in a series of publications which have been developed from the Southern Regional Farm Management Research Project S-42 and from Alabama Agricultural Experiment Station Project Ala-118. These reports, published by the Agricultural Experiment Station of Auburn University in cooperation with the Farm Production Economics Division, Economic Research Service, U. S. Department of Agriculture, are as follows:

Costs and Returns from Poultry Production in the Limestone Valley Areas of Alabama. January 1960.

Costs and Returns from Crop Production in the Limestone Valley Areas of Alabama. February 1960.

Costs and Returns from Livestock Production in the Limestone Valley Areas of Alabama. December 1960.

Costs and Returns from Crop Production in the Wiregrass Area (Lower Coastal Plains), Alabama. August 1961.

Costs and Returns from Livestock Production in the Wiregrass Area (Lower Coastal Plains), Alabama. December 1961.

Optimum Farm Organization and Aggregate Area Production, Limestone Valley Areas, Alabama. Agricultural Economics Series 1. June 1963.

Aggregate Area Production, Limestone Valley Areas, Georgia and Tennessee. (A Supplement to Agricultural Economics Series 1). July 1963.

Copies of these reports are available upon request from the Department of Agricultural Economics, Auburn University, Auburn, Alabama.

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The Southern Farm Management Research Committee, sponsored by the Farm Foundation and the Southern Agricultural Experiment Stations, was helpful in the development of this Regional Project.

The overall purposes of this project are (1) to provide guides to farmers when choosing among alternative production opportunities, especially as those opportunities are affected by changes in prices and technology, and (2) to provide guides to persons engaged in developing and administering public agricultural programs.

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Summary

Four representative farm sizes in the Wiregrass Area of Alabama were studied under assumed conditions of estimated free market prices, no production controls, and improved production technology. Budgets were prepared for each size of farm and linear programming procedures were used to select the optimum combination of enterprises. Three sets of programs were computed. The first set included selling Coastal bermudagrass hay and purchasing corn as alternatives; the second excluded selling hay; and the third excluded both selling hay and buying corn.

In all cases peanuts came into the optimum program at the maximum allowed by an agronomic restriction. Cotton was a strong competitor for resources, and the same was true of Coastal bermudagrass hay on the two larger size farms. However, Coastal was not competitive on the smaller farms that were too small to support ownership of hay-making equipment.

When Coastal was eliminated either arbitrarily or because of high custom harvesting costs, the plowable open land unsuitable for row crops was used for oats, and the nonplowable open land was either used for hay and pasture for cattle or left idle. Corn was usually purchased and more livestock entered the optimum program. When corn buying was eliminated, livestock numbers declined. However, this reduction in livestock numbers had only a small effect on net returns.

The effect of changing cotton prices was studied using the situation where both Coastal selling and corn buying were eliminated. Cotton prices were varied from 40 per cent below to 40 per cent above the 25-cent base price. With peanuts at base prices, all high-yield

cotton entered the optimum plans at cotton prices between 17.8 and 21.3 cents per pound. Medium-yield cotton entered the plans in two groups: (1) that which replaced feed crops for steers and hogs, and (2) that which replaced peanuts. Medium-yield cotton replaced feed crops at cotton prices between 21.4 to 23.3 cents, and it replaced peanuts at prices between 31.0 and 32.0 cents per pound. Low-yield cotton replaced additional peanuts at prices between 35.0 and 37.1 cents per pound. Reducing or raising peanut prices by 30 per cent, respectively, lowered or raised the cotton price at which cotton replaced peanuts.

Cotton price was then held constant at base price and peanut prices were varied from 40 per cent below to 40 per cent above the $160-per-ton base price. Peanuts replaced feed grains at peanut prices between $100.32 and $114.80 per ton. Part of the medium-yield cotton was replaced at peanut prices ranging from $115.43 to $125.46 per ton. Rotational restrictions on peanuts prevented further competition with cotton.

Weights were developed for each representative farm size reflecting the acreage in the respective size class. These were used to estimate aggregate area production for 20 different peanut and cotton price situations. Normative, partial-equilibrium supply curves for cotton and peanuts were constructed from the aggregates. These curves demonstrate very high supply elasticities for cotton up to the point where it begins to compete with peanuts for land. The peanut supply curves show that peanut production increases from none to the assumed agronomic maximum within a very small range of peanut prices. This range is far below the assumed base price for peanuts. Thus, peanuts seem to be a more profitable enterprise than cotton at base prices.

OPTIMUM FARM ORGANIZATION AND AGGREGATE AREA PRODUCTION, WIREGRASS AREA (Lower Coastal Plains), ALABAMA*

Earl J. Partenheimer and P. L. Strickland, Jr.**

Introduction

The comparative economic advantage of different areas in the production of various farm products changes as farm technology and economic conditions change. Questions repeatedly raised by farmers and agricultural workers indicate a need for economic information to guide them in adjusting to technological and economic changes. Some of these questions concern the relative returns from various enterprises and enterprise combinations for particular farm resource situations. Other questions concern the kinds and quantities of resources needed for various enterprises and enterprise combinations. Answers to these questions should help public agencies and farm organizations concerned with agricultural policy problems and assist State and Federal agencies in administering agricultural programs.

Adjustments that will pay any one farmer to make depend upon actions taken by competing farmers. This interpendence of profitable actions makes it essential to know the nature and extent to which various individual adjustments, when taken as a whole, would affect

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*The research reported herein was conducted under Alabama Agricultural Experiment Station Project Ala-118. The Alabama project is a contributing project to the Regional Research Project S-42, "An Economic Appraisal of Farming Adjustment Opportunities to Meet Changing Conditions in the Southern Region."

**Associate Professor, Alabama Agricultural Experiment Station, Auburn University, and Agricultural Economist, Farm Production Economics Division, Economic Research Service, United States Department of Agriculture, respectively.

production, price, and therefore the ultimate profitability of individual adjustments.

The specific objectives of this study are: (a) to determine the most profitable combinations of enterprises for several selected resource situations under a range of product prices, and (b) to determine aggregate production for the Wiregrass Areas of Alabama under these price and resource situations.

Area of Study

The area of study comprises the southeastern portion of the Lower Coastal Plain and includes 12 counties (Figure 1). The eastern two-thirds of the region, often referred to as the Wiregrass Area, is largely a nearly level to rolling plain with a rougher area along its northern rim. The western third of the region has slightly rougher topography and a larger proportion of the land is in forest. Soils vary from light to medium in texture.

Average annual precipitation varies from 52 to 58 inches, but late spring and fall months are often relatively dry. High evapotranspiration rates and the low water-holding capacity of the soil cause frequent damaging droughts.

The 1959 Census of Agriculture reported 20,095 farms within the study area (Table 1). Nearly two-thirds of these farms had less than 50 acres of cropland harvested. However, 80 per cent of the harvested cropland was on farms where 50 or more acres of crops were harvested.

The 1959 census also indicated that there were 988,716 acres of cropland harvested in the 12 county area. Alabama Crop and Livestock Reporting Service estimates indicate that 60 per cent of this acreage

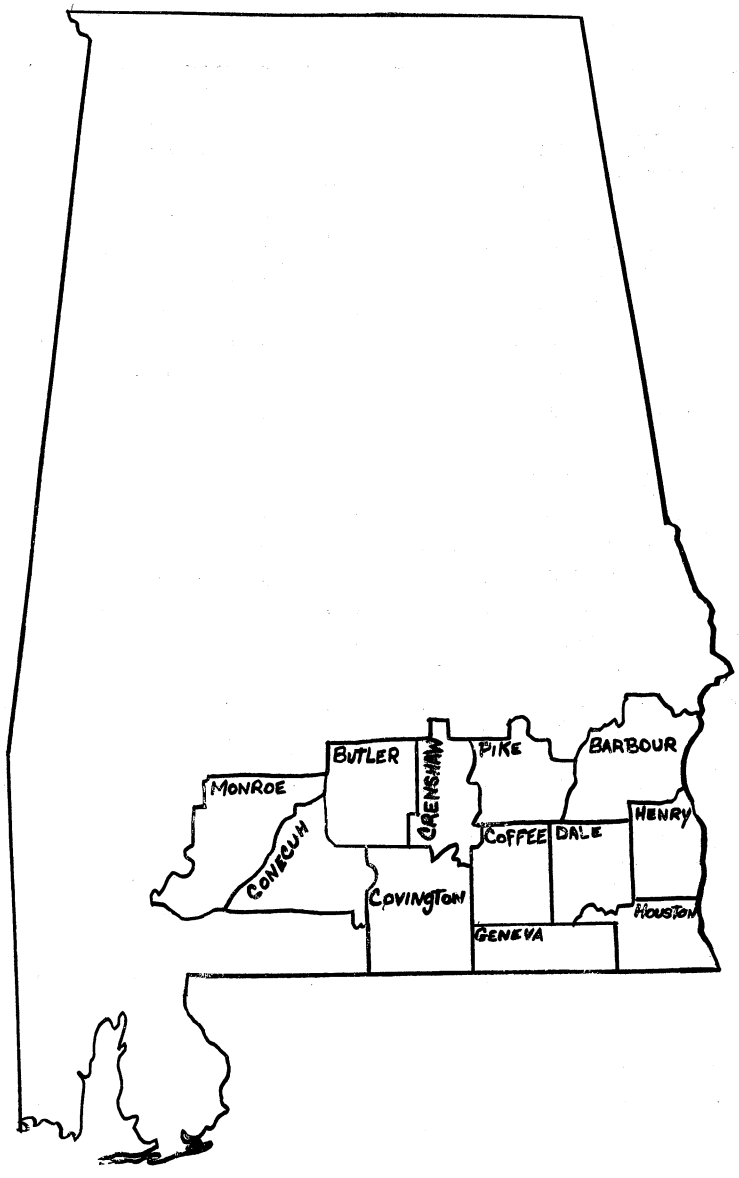

Figure 1. Location of the Area of Study

Table 1. Estimated Distribution of Farms by Total Land, Cropland Harvested, and Economic Class, Wiregrass Area, Alabama, 1959*

Item	Number
Total land class	
Less than 10 acres	1,071
10 to 49 acres	5,298
50 to 99 acres	4,628
100 to 179 acres	4,280
180 to 259 acres	1,924
260 to 499 acres	1,803
500 to 999 acres	718
1,000 acres and over	373
Total	20,095
Cropland harvested	
None	2,940
1 to 9 acres	2,351
10 to 49 acres	7,900
50 to 99 acres	4,176
100 to 199 acres	2,126
200 to 499 acres	559
500 to 999 acres	37
1,000 acres and over	6
Total	20,095
Economic class	
Class I	71
Class II	296
Class III	880
Class IV	2,091
Class V	3,712
Class VI	4,381
Part-time	5,553
Semi-retired	3,084
Total	20,068**

*Source: 1959 Census of Agriculture.

**Differences in total number of farms is due to sampling error.

was in corn, 15 per cent in cotton, and 19 per cent in peanuts (Table 2).

Five-year (1957-61) average yields per harvested acre were 29.5 bushels of corn, 347 pounds of lint cotton, and 966 pounds of peanuts.

The only major livestock enterprises in the area were beef cows and hogs. Hogs were more prevalent in the Wiregrass proper, and the western fringe area had relatively more cattle. Generally, quality of breeding stock was poor in both enterprises. Litters were small and hogs were often sold at lighter weights than in other areas. Calf weaning weights were also low.

Procedure

The wide diversity of resources on Wiregrass farms creates an opportunity for a variety of farm adjustment alternatives. It was impractical to investigate each of these situations. Instead, farms were divided into four size groups and a representative situation was selected for each group. Linear programming techniques were used to determine the optimum combinations of enterprises for each representative situation with selected alternatives, product prices, and resource situations. These investigations were made for individual farm adjustments without considering the aggregate effect of such adjustments.

Adjustment opportunities that are profitable for an individual may become less profitable when a large number of individuals take the same action. It is desirable to determine the aggregate effect of the adjustment alternatives. The optimum programs for each representative farm situation were expanded to the total acreage

Table 2. Estimated Production of Major Agricultural Commodities, Wiregrass Area, Alabama, 1959*

Item	Amount
Crops:	
Corn for grain:	
Acres harvested	441,100
Bushels harvested	11,804,000
Corn for silage and hogging off:	
Acres harvested	172,900
Cotton:	
Acres harvested	150,050
Bales (480 pounds of lint) harvested	102,030
Peanuts:	
Acres harvested	189,900
Tons harvested	77,834
Livestock on hand January 1, 1960:	
All cattle other than milk cows	239,600
Milk cows	33,600**
Hogs	453,600

*Source: "Alabama Agricultural Statistics" Alabama Crop and Livestock Reporting Service, July 1962.

**Includes cows kept to produce milk for home consumption.

crop and livestock production, and total resource use for the area. Aggregations were made assuming that all the included land base would be adjusted to the optimum farm organizations. Further aggregations were made assuming that specified portions of the included land base did not adjust to the optimum organizations.

General Assumptions

Land Capability

Classification of land capabilities were based on the Soil Conservation Service land use capability classes. All Classes I and II cropland and pasture were considered suitable for continuous use for row crops. It was further assumed that Classes IIIe and IIIw could be used for row crops one half of the time. Thus, in the programming model row crops must not exceed the total acreage of Class I, Class II, and $\frac{1}{2}$ of Classes IIIe and IIIw. The remaining Class III land was classified as plowable open land but it could be used only for close-growing crops. Class IV land was classified as nonplowable open land and its use was limited to permanent sod crops such as Coastal bermudagrass.

Estimates of the acreage in each of these classes which are currently being used for cropland or pasture were obtained from SCS data.[1/] Using these estimates and the above definition, 58 per cent of the total open land was classified as row cropland, 28 per cent as plowable land suitable only for close-growing crops, and 14 per cent as nonplowable open land.

1/Alabama Conservation Needs Committee, Alabama Soil and Water Conservation Needs Inventory, State Soil Conservation Committee, 1961.

Enterprises Considered

The enterprises considered for the programming model included cotton, peanuts, corn, oats, grain sorghum, oats and grain sorghum double-cropped, soybeans, wheat, Coastal bermudagrass hay, beef cows, feeder steers, and hogs. Poultry enterprises were not considered since they do not compete for land. They could be added to any organization if sufficient labor and capital were available.

Several enterprises were eliminated because of institutional, resource, or market restrictions. Entrance into Grade A milk production is severely restricted by the existing institutional framework. Fruit, nut, and vegetable production were eliminated because of the limited market for these products. These enterprises could be very profitable for an individual farmer, but if a large number of farmers were to enter these activities their profitability would decrease. Also, other areas appear to have physical and management resources that are better adapted to the production of fruits, nuts, and vegetables.

Optimum farm plans were computed considering all of the activities stated above. In the aggregate, these farm plans included much more Coastal bermudagrass hay than could be utilized in the Wiregrass and surrounding areas. A second set of optimum farm plans were computed with Coastal limited to that used on the farm on which it was produced. To further limit adjustment alternatives to land based activities, a third set of farm plans was developed with corn-buying eliminated.

Enterprise Budgets

Input-output budgets had previously been developed and published for the major enterprises of the area for both existing and improved management practices.[2/] The budgets assuming the use of the best available technology and a high level of managerial ability were used in this study. These budgets were modified by using the assumed prices for this study and by using machinery coefficients fitted to the size of farm under consideration.

Row cropland classified as having poor drainage (Classes IIw and IIIw) was considered as not suitable for cotton production. Eliminating this land restricted cotton production to 94 per cent of the row cropland. Class I soils with good management should produce continuous cotton without reduction in yield. Class IIe soils should produce the same yields as Class I soils if planted in 1-1 rotation. However, if Class II soils are planted continuously to cotton, there would be some reduction in yield. Therefore, 46 per cent (all of Class I and one half of Class IIe) of the row cropland was programmed with cotton yields of 625 pounds of lint per acre. The other one half of Class IIe land and all of Class IIs (30 per cent of all row cropland) was programmed at 575 pounds of lint per acre. Yields of 500 pounds of lint per acre were used for the Class IIIe land, which accounted for 15 per cent of the row cropland.

2/See Clark, George W., and Partenheimer, Earl J., Costs and Returns from Crop Production in the Wiregrass Area, Lower Coastal Plains, Alabama, Alabama Agricultural Experiment Station in cooperation with Farm Economics Division, ERS, USDA, August, 1961; and Partenheimer, Earl J., and Clark, George W., Costs and Returns from Livestock Production in the Wiregrass Area, Lower Coastal Plains, Alabama, Alabama Agricultural Experiment Station in cooperation with Farm Economics Division, ERS, USDA, December, 1961.

Continuous planting of peanuts on the same acreage leads to disease and nematode infestations which seriously limit yields. Thus, peanuts could be planted on the same land only one year in three if the 2,000-pound yield is to be attained.

A second peanut budget was based on a two-year rotation. Planting peanuts on the same land every other year would decrease yield approximately 300 pounds per acre as compared with that of a one year in three rotation. To get one additional acre of peanuts per year after one-third of the row cropland was in peanuts, three acres would have to be converted to a one-in-two rotation. Thus, the yield on the second peanut budget was reduced to 1100 pounds per acre [2,000 - (3 x 300)]. However, the one year in two peanut rotation did not enter the optimum programs even with peanut price at 40 per cent above base.

For crops other than cotton, the yields used were: 55 bushels per acre for corn; 60 bushels per acre for oats; 40 bushels per acre for grain sorghum; 5.0 tons per acre for Coastal bermudagrass hay; 28 bushels per acre for wheat; and 22 bushels per acre for soybeans. Livestock production rates were a 90 per cent calf crop for beef cows, and an average of 8 pigs per litter raised to market weight. In the case of hogs and beef cows, replacement gilts and heifers were subtracted from production. Market hogs were sold at a weight of 210 pounds and fat calves were sold at 475 pounds. Steers were purchased at 400 pounds and sold at 1,055 pounds less 3.5 per cent shrinkage. Included in the livestock budgets were 1.15 acres of pasture per sow; 0.836 acre of pasture, hay, and corn silage per steer; 1.46 acres of pasture and 1.26 tons of hay per cow in beef-cow budgets. The steer pasture and hay land produced an excess of 20.7 tons of hay which was either sold or fed

to beef cows. No land was double-cropped except for the oats-grain sorghum rotation which did not enter the programs.

Hogs were the only livestock enterprise considered on the small farms. Even if all resources on a farm of this size were devoted to production of any of the other livestock enterprises, an efficient-size operation could not be attained. Likewise, the beef-cow enterprise was not considered on the medium-size farm. The large and extra large farms had sufficient acreage so that all livestock enterprises could be considered.

Since some of the open land acreage was specified to be suitable only for hay production and pasture for beef enterprises, this acreage became idle open land when no such enterprises entered the optimum program. This always occurred on the small farms and occasionally on medium-size farms. Similarly, other acreages were specified as usable only for close-growing crops. This land was always used, but occasionally it was planted to sod crops. Row cropland was always planted to row crops.

Prices

The base product prices used in the analysis were estimated to represent assumed prices in a "free" market economy under conditions of full employment.3/ Specifically, they were the market prices that would be expected to exist in 1975 if all marketing controls and

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3/The base prices were determined cooperatively by members of the S-42 Technical Committee. This committee is composed of representatives from each of the 12 State Experiment Stations cooperating and from the Economic Research Service, USDA. The basic price assumptions were used in each cooperating state, but modifications were made by each State to reflect normal transportation and quality differentials.

price supports were removed from agricultural production within the next few years. Except for labor, the input prices were at or near 1959 levels (Table 3). Base product prices varied considerably from 1959 levels (Table 4).

Optimum programs were computed only at base product prices for the situations where corn-buying was permitted, and where both corn purchases and hay sales were permitted. With corn-buying and hay sales excluded, the effects of several price changes were investigates. Optimum programs were computed for all prices of cotton from 40 per cent below to 40 per cent above base price, with peanuts held constant at base price. This process was repeated with peanuts at 30 per cent below and at 30 per cent above base price. Similarly, cotton was held at its base price and the optimum programs were determined for all prices of peanuts between 40 per cent below base and 40 per cent above base.

Allotments

With the assumption of "free" market prices as base prices, no production control or acreage allotments were used in the analysis.

Labor

It was assumed that most operations on the farm would be performed by resident labor, the operator or full-time hired men. Seasonal labor would be hired for such tasks as filling fertilizer distributors and hauling hay. All crops were assumed to be mechanically harvested and on the smaller farms this harvesting was assumed to be a custom operation.

The resident labor supply was calculated in units of one man year-round. The part-time resident labor supply consisted of an operator who worked full time off the farm and operated the farm after work hours

Table 3. Assumed Input Prices, Wiregrass Area, Alabama

Item	Unit	Price
Feeds and feed additives		
Corn	Bushel	$ 1.25
Cottonseed meal (41%)	Cwt.	3.60
Meat and bone scraps (50%)	Cwt.	5.00
Soybean oil meal (44%)	Cwt.	4.00
Alfalfa leaf meal (17%)	Cwt.	4.10
Wheat middlings	Cwt.	3.40
Commercial creep feed for hogs	Cwt.	4.75
Dicalcium phosphate	Cwt.	4.00
Salt, loose	Cwt.	1.80
Swine formula	Cwt.	2.80
50 lb. blocks (mineralized)	Block	1.55
Antibiotic for hogs	Pound	.90
Vitamin mixture for hogs	Pound	.40
Livestock		
Feeder calves	Cwt.	$ 23.00
Bull	Head	600.00
Boar	Head	100.00
Seed		
Cotton	Pound	$ 0.11
Peanuts	Pound	.26
Corn	Pound	.17
Grain sorghum	Pound	.19
Oats	Bushel	1.50
Wheat	Bushel	4.25
Rye	Bushel	4.00
Vetch	Pound	.20
Millet	Pound	.14
Coastal bermuda stolons	Bushel	.50
Fertilizer		
4-12-12	Cwt.	$ 1.90
0-10-20	Cwt.	1.70
0-20-20	Cwt.	2.35
Ammonium nitrate	Cwt.	3.80
Pesticides		
4-2 Toxaphene, DDT	Gallon	$ 2.80
Copper, sulfur, DDT (5%DDT)	Cwt.	8.50
10% DDT dust	Cwt.	7.25
Karmex (3 lb. per gallon)	Gallon	18.00
CIPC (4 lb. per gallon)	Gallon	8.35
Dinitra (3 lb. per gallon)	Gallon	5.20
Post-emergence oil	Gallon	.35
Insecticide for cattle	Head	.18
Phenothiazine	Pound	.70

(Continued)

Table 3 (Continued)

Item	Unit	Price
Custom work		
Drilling and fertilizing small grain	Acre	$ 0.50
Applying lime (includes materials)	Ton	7.75
Applying fertilizer	Acre	1.00
Picking cotton (machine)	Pound	.06
Ginning cotton (includes bagging and ties)	Bale	13.00
Defoliant application by plane (does not include materials)	Pound	.06
Digging and shaking peanuts	Acre	3.50
Combining and hauling peanuts	Ton	20.00
Drying peanuts	Ton	10.00
Picking corn	Acre	6.00
Combining small grain	Acre	6.00
Cutting silage	Ton	1.00
Shelling corn	Bushel	.50
Mixing feed	Cwt.	.10
Grinding and mixing feed	Cwt.	.30
Hauling livestock	Cwt.	.25
Miscellaneous		
Seasonal labor	Hour	$ 0.90
Stilbestrol implants	Head	.07
Cotton defoliant	Pound	.07

Table 4. Assumed Product Prices, Wiregrass Area, Alabama

Product	Unit	Base price
Cotton	Cwt.	$ 25.00*
Cottonseed	Ton	50.00
Peanuts	Ton	160.00
Corn	Bushel	1.10
Oats	Bushel	.65
Wheat	Bushel	1.25
Coastal hay	Ton	21.00**
Soybeans	Bushel	2.00
Grain sorghum	Bushel	1.05
Fat calves	Cwt.	22.00
Fat steers	Cwt.	23.00
Cull cows	Cwt.	15.00
Cull bulls	Cwt.	18.00
Slaughter gilts and barrows	Cwt.	14.50
Sows	Cwt.	11.00
Boars	Cwt.	5.00

*This price is for machine picked cotton and compares with a price of $26.00 per hundredweight for hand picked cotton.

**This price was reduced to $18.90 in programming to allow for 10 per cent weather damage.

and on Saturday. A one-man labor supply consisted of a full-time owner-operator. The two-man supply was one full-time owner-operator and a full-time hired man. Ten per cent of the operator's time was assumed to be used to supervise the hired man. The monthly distributions for these situations are presented in Table 5.

Capital

Capital was divided into operating and investment capital. Operating capital is the money used to purchase items normally used in one production period, such as fertilizer, feed, seed, and seasonal labor. Investment capital is the amount of money tied up in resources used for more than one production period. Examples are machinery, storage facilities, buildings for livestock, livestock equipment, breeding herds, and land. However, land was not included in the investment capital figures in this publication since returns were figured as the net returns to resident labor, management, and land.

Table 5. Monthly Distribution of Resident Labor for Specified Labor Forces, Wiregrass Area, Alabama

Month	Labor force		
	Part-time man	One man	Two men
	Hours	Hours	Hours
January	35	206	391
February	30	194	369
March	40	239	454
April	39	231	439
May	66	266	505
June	64	257	488
July	64	257	488
August	66	266	505
September	64	257	488
October	40	239	454
November	33	199	378
December	35	206	391
Total	576	2,817	5,350

Operating capital estimates were computed on the basis of the length of time the funds were used. Time is expressed as a fraction of a year. For example, $12 worth of nitrogen applied 4 months before harvest would add $4 ($12 times 1/3) to operating capital. No additions were made to operating capital if substantial returns occurred within 30 days after incurring an expense. Thus, harvesting costs were not included in operating capital.

Investment capital, as used in this report, is the average value over the life of an input, and not a new cost. For example, a fence that costs $1,000 to build was considered as $500 of investment capital, since this is the average value of the fence over its useful life.

Interest at 6 per cent on both operating and investment capital (other than investment in land) is included as an expense in the optimum farm plans, regardless of whether the capital is owned or borrowed.

Representative Farms

The farms of the area were classified into five major groups according to size (cropland plus open pasture). One of these groups, 0 to 9.9 acres of open land, was considered as nonfarm rural residences. They were not considered in the study. A representative farm was selected for each of the other four groups, (Table 6). The classifications and representative farms were determined from a 10 per cent sample of the Agricultural Stabilization and Conservation Service farm records in the area.

Table 6. Farm Size Groups, Representative Farm Sizes, Wiregrass Area, Alabama

Size group (acres of open land)	Acreage on representative farms		
	Open	Plowable	Row crop
Nonfarm (0 to 9.9)	*	*	*
Small (10 to 49.9)	31	26.6	17.9
Medium (50 to 149)	81	69.5	46.7
Large (150 to 249)	184	157.9	106.1
Extra large (250 and over)	438	375.8	252.6

*Farms with less than 10 acres of open land considered as rural residences.

OPTIMUM ORGANIZATIONS FOR REPRESENTATIVE FARMS

The organization of individual farms is determined by personal preferences and the availability of resources as well as potential profits. However, the use in this study of the term "optimum" denotes only profit maximization. Using the base prices for farm products, optimum programs were computed for each representative farm: (1) with all activities considered, (2) with Coastal bermudagrass hay selling excluded, and (3) with hay-selling and corn-buying activities excluded. For the third group, programs were computed with five cotton prices and three prices of other commodities to show the effect of product price variations on farm organization.

Small Farm

The representative small farm had 31 acres of open land with 17.9 acres available for cultivation in row crops. The farm was suitable for a part-time operation with the owner working full time off the farm and operating the farm enterprises after work and on Saturdays. The farm

was not large enough to provide a reasonable income for a full-time operator. Hog production was the only livestock enterprise that the farm was large enough to support. A two-plow tractor and appropriate land preparation, planting, and cultivating equipment was assumed to be owned by the operator. As no harvesting equipment was assumed to be owned by the farm operator, all crops were custom harvested.

When all enterprises were considered and base prices assumed, the optimum farm organization included 11.9 acres of cotton, 6.0 acres of peanuts, 8.7 acres of oats, and 4.4 acres of idle land, (Table 7). Total investment capital other than land was $2,226 and operating capital was $523. The optimum plan required 156 hours of resident labor and 46 hours of hired seasonal labor. Net return to resident labor, land, and management was $1,086.

Since neither the corn-buying nor the hay-selling activity entered the optimum porgram when all enterprises were considered, the remaining two programs are identical with the first.

Programming with corn-buying and hay-selling activities eliminated was expanded to determine the effects of changes in cotton and peanut prices on optimum farm organization. With peanuts at base price, cotton prices were varied from 15 to 35 cents per pound (Table 8). No cotton was produced until a price of just over 20.0 cents per pound, when all of the high-yield cotton entered the optimum program. At a price of 21.4 cents per pound, 3.7 acres of the medium cotton entered the program, and the remaining 1.7 acres entered at a price of 31.0 cents. All of the high-yield peanuts were planted until cotton price reached 31 cents. Between cotton prices of 31.0 and 35.0 cents, peanut acreage declined from 6 acres to 1 acre.

Table 7. Optimum Farm Plans, Small Farm, Part-Time Operator Labor Force, Advanced Technology, Base Prices for All Products, Wiregrass Area, Alabama

Enterprise	Unit	Program assumptions		
		All enterprises included	Hay-selling excluded	Corn-buying and hay-selling excluded
Land Use				
Cotton, high yield	Acre	8.2	8.2	8.2
medium yield	Acre	3.7	3.7	3.7
Peanuts, high yield	Acre	6.0	6.0	6.0
Oats	Acre	8.7	8.7	8.7
Idle open land	Acre	4.4	4.4	4.4
Cotton sold	Cwt.	72.7	72.7	72.7
Peanuts sold	Ton	6.0	6.0	6.0
Capital				
Investment*	Dol.	2,226	2,226	2,226
Operating	Dol.	523	523	523
Resident labor used	Hour	156	156	156
Seasonal labor hired	Hour	46	46	46
Net return to resident labor, management, and land	Dol.	1,086	1,086	1,086

*Investment capital does not include the investment in land.

Resident Labor Distribution

Program assumptions	Dec. Jan. Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
	Hours										
All enterprises considered	20	14	28	27	32	17	6	6	5	1	156
Hay-selling excluded	20	14	28	27	32	17	6	6	5	1	156
Corn-buying and hay-selling excluded	20	14	28	27	32	17	6	6	5	1	156
Resident labor available	100	40	39	66	64	64	66	64	40	33	576

Table 8. Optimum Program, Small Farm, Part-Time Labor Supply, Specified Prices for Cotton and Peanuts, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
Peanuts at base prices						
Cotton	Acre	----	----	11.9	11.9	16.9
Peanuts	Acre	6.0	6.0	6.0	6.0	1.0
Corn	Acre	11.9	11.9	----	----	----
Oats	Acre	4.4	4.4	8.7	8.7	8.7
Pasture*	Acre	4.3	4.3	----	----	----
Idle open land	Acre	4.4	4.4	4.4	4.4	4.4
Sows	No.	3.7	3.7	----	----	----
Capital Investment**	Dol.	2,886.00	2,886.00	2,225.56	2,225.56	2,300.06
Operating	Dol.	676.41	676.41	522.96	522.96	561.05
Resident labor	Hour	331.9	331.9	156.5	156.5	169.3
Seasonal labor	Hour	22.5	22.5	46.5	46.5	57.1
Net revenue***	Dol.	751.92	751.92	1,085.77	1,449.37	1,851.44
Peanuts at 30% below base prices						
Cotton	Acre	----	----	13.6	16.9	16.9
Peanuts	Acre	6.0	6.0	4.3	1.0	1.0
Corn	Acre	11.9	11.9	----	----	----
Oats	Acre	4.4	4.4	8.7	8.7	8.7
Pasture*	Acre	4.3	4.3	----	----	----
Idle open land	Acre	4.4	4.4	4.4	4.4	4.4
Sows	No.	3.7	3.7	----	----	----
Capital Investment**	Dol.	2,886.00	2,886.00	2,250.56	2,300.06	2,300.06
Operating	Dol.	676.41	676.41	535.74	561.05	561.05
Resident labor	Hour	331.9	331.9	160.8	169.3	169.3
Seasonal labor	Hour	22.5	22.5	50.0	57.1	57.1
Net revenue***	Dol.	465.52	465.52	821.85	1,309.44	1,803.44

(Continued)

Table 8. (Continued) Optimum Program, Small Farm, Part-Time Labor Supply, Specified Prices for Cotton and Peanuts, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
Peanuts at 30% above base prices						
Cotton	Acre	----	----	11.9	11.9	11.9
Peanuts	Acre	6.0	6.0	6.0	6.0	6.0
Corn	Acre	11.9	11.9	----	----	----
Oats	Acre	4.4	4.4	8.7	8.7	8.7
Pasture*	Acre	4.3	4.3	----	----	----
Idle open land	Acre	4.4	4.4	4.4	4.4	4.4
Sows	No.	3.7	3.7	----	----	----
Capital						
Investment**	Dol.	2,886.00	2,886.00	2,225.56	2,225.56	2,225.56
Operating	Dol.	676.41	676.41	522.96	522.96	522.96
Resident labor	Hour	331.9	331.9	156.5	156.5	156.5
Seasonal labor	Hour	22.5	22.5	46.5	46.5	46.5
Net revenue***	Dol.	1,038.32	1,038.32	1,372.17	1,735.77	2,099.37

*Some hay was harvested from pasture.

**Investment capital does not include the investment in land.

***Net return to resident labor, management, and land.

Some corn and hogs were produced at low cotton prices but these enterprises were completely eliminated when cotton reached 21.4 cents. The corn land was shifted to cotton production and the hog pasture was used to increase the oats acreage.

With peanut prices at 30 per cent below base price, optimum farm organizations followed the same pattern. However, the last 1.7 acres of medium-yield cotton entered the optimum program at 22.7 cents per pound rather than 31.0 cents, and the low-yield cotton entered the program at 25.4 cents for cotton compared with 35.0 cents with peanuts at base price. Thus the decline from 6 acres to 1 acre of peanuts occurred between cotton prices of 22.7 and 25.4 cents per pound.

With peanut prices at 30 per cent above base prices, optimum programs were again the same as above through the 21.4-cent cotton price. However, the last 1.7 acres of medium-yield cotton and the low-yield cotton did not enter the optimum program below 35 cents per pound. Six acres of peanuts were produced at all cotton prices.

Cotton prices were then held at base, while peanut prices were varied from $96 to $224 per ton (Table 9). One acre of peanuts entered the optimum program at a price of $104.50 per ton. At a price of $110.06 per ton, peanut acreage increased to 4.3 acres by replacing the low-yield cotton. Peanuts reached their rotational restriction of 6 acres at $125.46 per ton by replacing 1.7 acres of medium-yield cotton.

These programs indicate that cotton and peanuts are the only really profitable enterprises on the small farm. Reliance on custom work for all harvesting operations eliminated Coastal bermudagrass hay production and, along with low yields, made corn production a marginal alternative. The 8.7 acres of oats added only $67 to returns to land, resident labor, and management.

Table 9. Optimum Program, Small Farm, Part-Time Labor Supply, Specified Prices for Peanuts and Cotton, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
Cotton at base prices						
Cotton	Acre	16.9	11.9	11.9	11.9	11.9
Peanuts	Acre	----	6.0	6.0	6.0	6.0
Corn	Acre	1.0	----	----	----	----
Oats	Acre	8.3	8.7	8.7	8.7	8.7
Pasture*	Acre	.4	----	----	----	----
Idle open land	Acre	4.4	4.4	4.4	4.4	4.4
Sows	No.	.31	----	----	----	----
Capital Investment**	Dol.	2,370.40	2,225.56	2,225.56	2,225.56	2,225.56
Operating	Dol.	581.58	522.96	522.96	522.96	522.96
Resident labor	Hour	186.6	156.5	156.5	156.5	156.5
Seasonal labor	Hour	57.2	46.5	46.5	46.5	46.5
Net revenue***	Dol.	807.92	894.83	1,085.77	1,276.72	1,467.66

*Some hay was harvested from pasture.

**Investment capital does not include the investment in land.

***Net return to resident labor, management, and land.

Medium Farm

The representative medium farm had 81 acres of open land with 46.7 acres available for row crop production. A one-man resident labor force was assumed. The equipment consisted of a two-plow tractor and appropriate land preparation, planting, and cultivation equipment. As no harvesting equipment was assumed to be owned by the farm operator, all crops were custom harvested.

When all enterprises were considered and base prices assumed, cotton and peanuts were the main sources of income (Table 10). The farm organization consisted of 26.6 acres of cotton, 15.6 acres of peanuts, 22.8 acres of oats, and 19 steers and the roughage needed to feed them. Corn was purchased to feed the steers. Total investment capital other than land was $4,140 and operating capital was $3,885. A total of 584 hours of resident labor and 166 hours of seasonal labor was used in production. The highest labor use was in April, when 36 per cent of the available resident labor was used. Net return to resident labor, land, and management was $3,222.

Since no Coastal bermudagrass hay was produced for sale in the above program, the elimination of this alternative did not change the optimum program. When corn-buying was excluded, the optimum combination of enterprises did change. The steer enterprise was eliminated and the nonplowable open land that had been used for hay and pasture was left idle. Land that had been used for corn silage was shifted to cotton production. Investment capital dropped from $4,140 to $2,510, while operating capital declined from $3,885 to $1,366. Resident labor required was 1,366 hours and hired seasonal labor requirements were 433 hours. Even with these changes,

Table 10. Optimum Farm Plans, Medium Farm, One-Man Labor Force, Advanced Technology, Base Prices for All Products, Wiregrass Area, Alabama

Enterprise	Unit	Program assumptions		
		All enterprises included	Hay-selling excluded	Corn-buying and hay-selling excluded
Land Use				
Cotton, high yield	Acre	21.4	21.4	21.4
medium yield	Acre	5.2	5.2	9.7
Peanuts, high yield	Acre	15.6	15.6	15.6
Oats	Acre	22.8	22.8	22.8
Corn silage	Acre	4.5	4.5	----
Pasture (and hay)	Acre	11.5	11.5	----
Idle open land	Acre	----	----	11.5
Steers	No.	19.2	19.2	----
Corn purchased	Bu.	674.7	674.7	----
Hay produced	Ton	14.4	14.4	----
Cotton sold	Cwt.	163.7	163.7	189.7
Peanuts sold	Ton	15.6	15.6	15.6
Capital				
Investment*	Dol.	4,140	4,140	2,510
Operating	Dol.	3,885	3,885	1,366
Resident labor used	Hour	584	584	433
Seasonal labor hired	Hour	166	166	130
Net return to resident labor, management, and land	Dol.	3,222	3,222	3,175

*Investment capital does not include investment in land.

Resident Labor Distribution

Program assumptions	Dec. Jan. Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
	Hours										
All enterprises considered	103	55	83	72	76	60	39	46	33	17	584
Hay-selling excluded	103	55	83	72	76	60	39	46	33	17	584
Corn-buying and hay-selling excluded	60	38	73	71	83	45	19	26	14	4	433
Resident labor available	606	239	231	266	257	257	266	257	239	199	2,817

net return to resident labor, land, and management declined only $47 to $3,175. Thus the programs are almost identical from an income standpoint.

With both hay-selling and corn-buying activities eliminated and with peanuts at base prices, there was no cotton in the optimum farm plan at a cotton price of 15 cents per pound (Table 11). This plan consisted of the maximum permitted acreage of high-yield peanuts (15.6 acres) along with 13 acres of oats, 35.5 steers, and the feed required by the steers. The maximum acreage of high-yield cotton (21.4) entered the optimum plan with cotton between 21.1 and 21.8 cents, while the steer and feed enterprises declined and oats increased to 22.8 acres. At a cotton price of 23.2 cents per pound, 9.7 acres of medium-yield cotton entered the plan and the steer and feed enterprises were completely eliminated. The remaining 4.3 acres of medium-yield cotton was included in the plan at a cotton price of 31.1 cents and peanuts declined a like amount.4/

With peanut prices at 30 per cent below base, somewhat different changes took place but at slightly lower cotton prices. The high-yield cotton entered the optimum program between 21.1 and 21.3 cents per pound of lint. Both the steer and feed enterprises and the peanut enterprise were reduced as the cotton entered the program. At a cotton price of 22.8 cents the remaining 8.5 acres of peanuts were replaced by medium-yield cotton. At 23.3 and 26.1 cents, the remaining 5.5 acres of medium-yield cotton and 8.7 acres of low-yield cotton entered the optimum program and the size of the steer and feed enterprises were further reduced.

4/The low-yield cotton did not enter the optimum program until the cotton price reached 35.1 cents per pound.

Table 11. Optimum Program, Medium Farm, One-Man Labor Supply, Specified Prices for Cotton and Peanuts, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
Peanuts at base prices						
Cotton	Acre	----	----	31.1	31.1	35.4
Peanuts	Acre	15.6	15.6	15.6	15.6	11.3
Corn	Acre	22.7	22.7	----	----	----
Oats	Acre	13.0	13.0	22.8	22.8	22.8
Corn silage	Acre	8.4	8.4	----	----	----
Pasture*	Acre	21.3	21.3	----	----	----
Idle open land	Acre	----	----	11.5	11.5	11.5
Steers	No.	35.5	35.5	----	----	----
Capital Investment**	Dol.	5,280.41	5,280.41	2,509.83	2,509.83	2,482.78
Operating	Dol.	5,614.32	5,614.32	1,366.07	1,366.07	1,398.79
Resident labor	Hour	635.3	635.3	433.2	433.2	441.2
Seasonal labor	Hour	147.1	147.1	130.4	130.4	139.5
Net revenue***	Dol.	2,586.13	2,586.13	3,175.05	4,123.65	5,167.04
Peanuts at 30% below base prices						
Cotton	Acre	----	----	35.4	44.1	44.1
Peanuts	Acre	15.6	15.6	----	----	----
Corn	Acre	22.7	22.7	8.3	1.9	1.9
Oats	Acre	13.0	13.0	22.8	22.8	22.8
Corn silage	Acre	8.4	8.4	3.0	.7	.7
Pasture*	Acre	21.3	21.3	7.7	1.8	1.8
Idle open land	Acre	----	----	3.8	9.7	9.7
Steers	No.	35.5	35.5	12.9	3.0	3.0
Capital Investment**	Dol.	5,280.41	5,280.41	3,502.92	2,662.34	2,662.34
Operating	Dol.	5,614.32	5,614.32	3,086.83	1,853.92	1,853.92
Resident labor	Hour	635.3	635.3	547.2	482.0	482.0
Seasonal labor	Hour	147.1	147.1	171.2	165.4	165.4
Net revenue***	Dol.	1,838.93	1,838.93	2,513.83	3,755.01	5,043.76

(Continued)

Table 11. (Continued) Optimum Program, Medium Farm, One-Man Labor Supply, Specified Prices for Cotton and Peanuts, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
Peanuts at 30% above base prices						
Cotton	Acre	----	----	31.1	31.1	31.1
Peanuts	Acre	15.6	15.6	15.6	15.6	15.6
Corn	Acre	22.7	22.7	----	----	----
Oats	Acre	13.0	13.0	22.8	22.8	22.8
Corn silage	Acre	8.4	8.4	----	----	----
Pasture*	Acre	21.3	21.3	----	----	----
Idle open land	Acre	----	----	11.5	11.5	11.5
Steers	No.	35.5	35.5	----	----	----
Capital Investment**	Dol.	5,280.41	5,280.41	2,509.83	2,509.83	2,509.83
Operating	Dol.	5,614.32	5,614.32	1,366.07	1,366.07	1,366.07
Resident labor	Hour	635.3	635.3	433.2	433.2	433.2
Seasonal labor	Hour	147.1	147.1	130.4	130.4	130.4
Net revenue***	Dol.	3,333.33	3,333.33	3,922.26	4,870.86	5,819.46

*Some hay was harvested from pasture.

**Investment capital does not include the investment in land.

***Net return to resident labor, management, and land.

With peanuts at 30 per cent above base price, the 21.4 acres of high-yield cotton entered the optimum plan at prices between 21.1 and 21.8 cents per pound of lint while steer numbers were reduced from 35.5 to 11.1 head. At a cotton price of 23.3 cents, the remaining steers were eliminated and 9.7 acres of medium-yield cotton entered the optimum plan. No other changes took place as cotton prices were increased to 35 cents.

When cotton prices were held constant at the base price and peanut prices were varied, 11.3 acres of peanuts entered the optimum plan at a price of $114.80 per ton (Table 12). The remaining 4.3 acres of high-yield peanuts were included at $124.73 per ton. At the lower price peanuts replaced corn and corn silage for steers, while the last 4.3 acres of peanuts replaced medium-yield cotton.

The 81-acre farm is very inefficient from a labor use standpoint. Only during April was as much as 35 per cent of the available resident labor used. An operator on this size farm could get a part-time farm job or add a labor-intensive enterprise such as poultry. If he relied strictly on the organizations outlined above his income potential was quite low.

Large Farm

The representative large farm had 184 acres of open land, of which 106.1 acres were suitable for row crops. The resident labor supply consisted of one man. A three-plow tractor with appropriate land preparation equipment and four-row planting and cultivation equipment was assumed. All harvesting equipment except a cotton picker was owned.

Table 12. Optimum Program, Medium Farm, One-Man Labor Supply, Specified Prices for Peanuts and Cotton, Other Enterprises at Base Price, Advanced Tachnology, Wiregrass Area, Alabama

Enterprise	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
Cotton at base prices						
Cotton	Acre	35.4	31.1	31.1	31.1	31.1
Peanuts	Acre	----	15.6	15.6	15.6	15.6
Corn	Acre	8.3	----	----	----	----
Oats	Acre	22.8	22.8	22.8	22.8	22.8
Corn silage	Acre	3.0	----	----	----	----
Pasture*	Acre	7.7	----	----	----	----
Idle open land	Acre	3.8	11.5	11.5	11.5	11.5
Steers	No.	12.9	----	----	----	----
Capital Investment**	Dol.	3,502.92	2,509.83	2,509.83	2,509.83	2,509.83
Operating	Dol.	3,086.83	1,366.07	1,366.07	1,366.07	1,366.07
Resident labor	Hour	547.2	433.2	433.2	433.2	433.2
Seasonal labor	Hour	171.2	130.4	130.4	130.4	130.4
Net revenue***	Dol.	2,513.75	2,676.85	3,175.05	3,673.19	4,171.34

*Some hay was harvested from pasture.

**Investment capital does not include the investment in land.

***Net return to resident labor, management, and land.

When all enterprises were considered and base prices were assumed for cotton and peanuts, the optimum plan consisted of 69.6 acres of cotton, 35.4 acres of peanuts, 75.0 acres of Coastal bermudagrass hay, 4.8 steers, and roughage for the steers (Table 13). A total of $3,840 of operating capital and $11,405 of investment capital other than land was required. Labor requirements were 1,203 hours of resident labor and 942 hours of hired seasonal labor. Labor was restricting only in June. Net return to operator labor, land, and management was $9,661.

When the sale of Coastal bermudagrass hay was prohibited, 72 steers and 23.7 beef cows entered the optimum program. Cotton acreage declined to 53.7 acres, 17.0 acres of row cropland was used for corn silage production, and peanut acreage remained constant at the maximum acreage. A total of 2,535.4 bushels of corn was purchased to feed steers. Capital requirements increased sharply because of the steers and beef cows. Investment capital other than land increased to $18,163 and operating capital rose to $12,476. Resident labor requirements increased to 1,418 hours but hired seasonal labor was reduced to 352 hours. Net returns to resident labor, land, and management declined significantly to $8,219.

Eliminating the corn-buying activity caused considerable changes in the optimum combination of enterprises but had little effect on net revenue. Cotton was increased to 70.7 acres and peanut acreage remained at 35.4. Oats replaced Coastal on the plowable land not suited for row crops. The 22.3 acres of nonplowable open land was used to produce pasture and hay for 15.2 beef cows. Investment capital other than land declined to $11,410 and only $3,690 of operating capital was required. Net returns to operator labor, land, and management declined only $55 to $8,164.

Table 13. Optimum Farm Plans, Large Farm, One-Man Labor Force, Advanced Technology, Base Prices for All Products, Wiregrass Area, Alabama

Enterprise	Unit	Program assumptions		
		All enterprises included	Hay-selling excluded	Corn-buying and hay-selling excluded
Land Use				
Cotton, high yield	Acre	48.6	48.6	48.6
medium yield	Acre	21.0	5.1	22.1
Peanuts, high yield	Acre	35.4	35.4	35.4
Oats	Acre	----	----	51.8
Coastal hay	Acre	75.0	----	3.8
Corn silage	Acre	1.1	17.0	----
Pasture (and hay)	Acre	2.9	77.9	22.3
Steers	No.	4.8	72.0	----
Beef cows	No.	----	23.7	15.2
Corn purchased	Bu.	168.9	2,535.4	----
Hay produced	Ton	378.7	54.0	19.2
Cotton sold	Cwt.	424.5	333.3	431.0
Peanuts sold	Ton	35.4	35.4	35.4
Hay sold	Ton	377.1	----	----
Capital				
Investment*	Dol.	11,405	18,163	11,410
Operating	Dol.	3,840	12,476	3,690
Resident labor used	Hour	1,203	1,418	947
Seasonal labor hired	Hour	942	352	266
Net return to resident labor, management, and land	Dol.	9,661	8,219	8,164

*Investment capital does not include investment in land.

Resident Labor Distribution

Program assumptions	Dec. Jan. Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
	Hours										
All enterprises considered	108	81	96	193	257	180	59	170	50	9	1,203
Hay-selling excluded	264	124	145	94	138	146	117	200	112	78	1,418
Corn-buying and hay-selling excluded	113	64	99	112	173	102	83	137	43	21	947
Resident labor available	606	239	231	266	257	257	266	257	239	199	2,817

With peanuts at base price and corn-buying and hay-selling activities eliminated, no cotton entered the optimum program until the cotton price reached 19.1 cents per pound (Table 14). Below this level the optimum program consisted of 35.4 acres of peanuts, 23.7 beef cows, 72 steers, and the feed crops for the livestock. A total of 420 bushels of corn was produced for sale. At 19.1 cents, 7.6 acres of cotton replaced the corn for sale. At a cotton price of 21.3 cents per pound, the remaining 41 acres of high-yield cotton and 50.6 acres of oats entered the optimum program and the feed and livestock activities were reduced accordingly. A total of 22.1 acres of medium-yield cotton were added between prices of 22.7 and 22.9 cents per pound, while steers and their feed were eliminated and beef-cow numbers increased to 15.2. The remaining 9.6 acres of medium-yield cotton entered the program at 32.8 cents while peanuts were reduced a like amount.5/

Changing the price of peanuts to 30 per cent below base price had no effect on the optimum combination of enterprises up to and including the changes at a cotton price of 22.9 cents per pound. However the last 9.6 acres of medium cotton replaced a like acreage of peanuts when cotton reached 24.4 cents as compared with 32.8 cents with peanuts at base price. Another 19.7 acres of peanuts was replaced by low-yield cotton at a cotton price of 27.4 cents per pound.

When the peanut price was raised to 30 per cent above base price, the optimum farm plans were again identical up through the 22.9-cent

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5/Low-yield cotton did not enter the optimum program until cotton prices reached 37 cents per pound.

Table 14. Optimum Program, Large Farm, One-Man Labor Supply, Specified Prices for Cotton and Peanuts, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Cotton prices (cents per pound of lint) 15.0	20.0	25.0	30.0	35.0
Peanuts at base prices						
Cotton	Acre	----	7.6	70.7	70.7	80.3
Peanuts	Acre	35.4	35.4	35.4	35.4	25.8
Corn	Acre	53.7	46.1	----	----	----
Oats	Acre	----	----	51.8	51.8	51.8
Coastal hay	Acre	----	----	3.8	3.8	3.8
Corn silage	Acre	17.0	17.0	----	----	----
Pasture*	Acre	77.9	77.9	22.3	22.3	22.3
Cows	No.	23.7	23.7	15.2	15.2	15.2
Steers	No.	72.0	72.0	----	----	----
Capital Investment**	Dol.	19,237.71	19,084.98	11,409.81	11,409.81	10,974.53
Operating	Dol.	11,697.29	11,808.02	3,690.06	3,690.06	3,792.14
Resident labor	Hour	1,286.4	1,305.3	945.9	945.9	958.4
Seasonal labor	Hour	402.0	394.9	266.3	266.3	261.9
Net revenue***	Dol.	6,659.43	6,703.72	8,163.93	10,319.03	12,597.72
Peanuts at 30% below base prices						
Cotton	Acre	----	7.6	80.3	100.0	100.0
Peanuts	Acre	35.4	35.4	25.8	6.1	6.1
Corn	Acre	53.7	46.1	----	----	----
Oats	Acre	----	----	51.8	51.8	51.8
Coastal hay	Acre	----	----	3.8	3.8	3.8
Corn silage	Acre	17.0	17.0	----	----	----
Pasture*	Acre	77.9	77.9	22.3	22.3	22.3
Cows	No.	23.7	23.7	15.2	15.2	15.2
Steers	No.	72.0	72.0	----	----	----
Capital Investment**	Dol.	19,237.71	19,084.98	10,974.53	10,078.18	10,078.18
Operating	Dol.	11,697.28	11,808.02	3,792.14	4,002.34	4,002.34
Resident labor	Hour	1,286.4	1,305.3	958.4	984.2	984.2
Seasonal labor	Hour	402.0	394.9	261.9	252.9	252.9
Net revenue***	Dol.	4,961.83	5,006.12	6,499.15	9,186.26	12,108.86

(Continued)

Table 14. (Continued) Optimum Program, Large Farm, One-Man Labor Supply, Specified Prices for Cotton and Peanuts, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
Peanuts at 30% above base prices						
Cotton	Acre	----	7.6	70.7	70.7	70.7
Peanuts	Acre	35.4	35.4	35.4	35.4	35.4
Corn	Acre	53.7	46.1	----	----	----
Oats	Acre	----	----	51.8	51.8	51.8
Coastal hay	Acre	----	----	3.8	3.8	3.8
Corn silage	Acre	17.0	17.0	----	----	----
Pasture*	Acre	77.9	77.9	22.3	22.3	22.3
Cows	No.	23.7	23.7	15.2	15.2	15.2
Steers	No.	72.0	72.0	----	----	----
Capital Investment**	Dol.	19,237.71	19,084.98	11,409.81	11,409.81	11,409.81
Operating	Dol.	11,697.29	11,808.02	3,690.06	3,690.06	3,690.06
Resident labor	Hour	1,286.4	1,305.3	945.9	945.9	945.9
Seasonal labor	Hour	402.0	394.9	266.3	266.3	266.3
Net revenue***	Dol.	8,357.02	8,401.31	9,537.41	11,084.71	12,632.01

*Some hay harvested from pasture.

**Investment capital does not include the investment in land.

***Net return to resident labor, management, and land.

cotton price. However, no additional cotton was brought into the optimum program as cotton prices were increased to 35 cents per pound.

With cotton prices held constant at base price, 25.8 acres of peanuts entered the optimum program at peanut prices between $102.23 and $103.61 per ton (Table 15). The peanuts replaced corn and corn silage for steers. Peanuts reached their rotational restriction of 35.4 acres at a price of $115.43 per ton. The last 9.6 acres of peanuts replaced medium-yield cotton.

A one-man resident labor force could handle more land than was included in the large farm, and still have enough time to handle maintenance chores, under most of the organizations outlined above. The larger acreages and owned harvesting equipment made Coastal bermudagrass hay a relatively more profitable alternative than on the two smaller size farms.

Extra Large Farm

The representative extra large farm contained 438 acres of open land, of which 252.6 acres were suitable for row crops. It was programmed with a resident labor force consisting of the owner-operator and one full-time hired man. Ten per cent of the operator's time was assumed to be used to supervise hired labor. Two 3-plow tractors, two sets of appropriate land preparation and 4-row cultivation equipment, and one set of planting equipment were assumed. All harvesting equipment including a 2-row cotton picker was owned.

When all enterprises were considered and base prices were used, all of the high-yield cotton (115.7 acres) but none of the medium-yield cotton entered the optimum plan (Table 16). The maximum

Table 15. Optimum Program, Large Farm, One-Man Labor Supply, Specified Prices for Peanuts and Cotton, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
Cotton at base prices						
Cotton	Acre	80.3	70.7	70.7	70.7	70.7
Peanuts	Acre	----	35.4	35.4	35.4	35.4
Corn	Acre	18.8	----	----	----	----
Oats	Acre	46.0	51.8	51.8	51.8	51.8
Coastal hay	Acre	----	3.8	3.8	3.8	3.8
Corn silage	Acre	7.0	----	----	----	----
Pasture*	Acre	31.9	22.3	22.3	22.3	22.3
Cows	No.	9.7	15.2	15.2	15.2	15.2
Steers	No.	29.5	----	----	----	----
Capital Investment**	Dol.	10,940.10	11,409.82	11,409.82	11,409.82	11,409.82
Operating	Dol.	7,368.41	3,690.06	3,690.06	3,690.06	3,690.06
Resident labor	Hour	1,108.5	945.9	945.9	945.9	945.9
Seasonal labor	Hour	288.9	266.3	266.3	266.3	266.3
Net revenue***	Dol.	6,276.37	7,032.20	8,163.93	9,295.66	10,427.40

*Some hay was harvested from pasture.

**Investment capital does not include the investment in land.

***Net return to resident labor, management, and land.

Table 16. Optimum Farm Plans, Extra Large Farms, Two-Man Labor Force, Advanced Technology, Base Prices for All Products, Wiregrass Area, Alabama

Enterprise	Unit	Program assumptions: All enterprises included	Hay-selling excluded	Corn-buying and hay-selling excluded
Land Use				
Cotton, high yield	Acre	115.7	115.7	115.7
medium yield	Acre	----	39.1	52.7
Peanuts, high yield	Acre	84.2	84.2	84.2
Corn	Acre	37.8	----	----
Oats	Acre	5.3	123.2	123.2
Coastal hay	Acre	142.3	----	9.1
Corn silage	Acre	14.9	13.6	----
Pasture (and hay)	Acre	37.8	62.2	53.1
Steers	No.	63.0	57.5	----
Beef cows	No.	----	18.9	36.3
Corn purchased	Bu.	137.0	2,024	----
Hay produced	Ton	758.8	43.1	45.6
Cotton sold	Cwt.	723.1	948.1	1,026.2
Peanuts sold	Ton	84.2	84.2	84.2
Hay sold	Ton	737.7	----	----
Capital				
Investment*	Dol.	31,662	34,363	36,215
Operating	Dol.	15,044	15,750	8,784
Resident labor used	Hour	3,064	2,718	2,454
Seasonal labor hired	Hour	2,177	851	836
Net return to resident labor, management, and land	Dol.	23,705	21,557	21,514

*Investment capital does not include investment in land.

Resident Labor Distribution

Program assumptions	Dec. Jan. Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
	Hours										
All enterprises considered	368	223	248	407	488	383	218	488	171	70	3,064
Hay-selling excluded	367	192	263	254	374	258	320	471	148	71	2,718
Corn-buying and hay-selling excluded	268	152	235	267	411	239	289	423	103	49	2,454
Resident labor available	1,151	454	439	505	488	488	505	488	454	378	5,350

amount of high-yield peanuts (84.2 acres) was also grown. The remaining acreage was used to produce 5.3 acres of oats, 737.7 tons of hay for sale, and feed for 63.0 steers. An additional 137.0 bushels of corn were purchased. Operating capital of $15,044 and investment capital other than land of $31,662 were required. Labor used for production included 3,064 hours of resident labor and 2,177 hours of hired seasonal labor. Labor was restricting in June and September. Net return to resident labor, land, and management was $23,705.6/

When the hay-selling activity was excluded, cotton acreage increased to 154.8 acres and peanuts remained at 84.2 acres. The Coastal was largely replaced by 123.3 acres of oats. Steer numbers decreased to 57.5 and 18.9 beef cows entered the program. The remaining land was used to produce roughage for livestock. A total of 2,024 bushels of corn was purchased for the steers. Investment capital other than land and operating capital requirements were $34,363 and $15,750 respectively. Labor requirements decreased to 2,718 hours of resident labor and 851 hours of hired seasonal labor. Labor was not restricting in any month but almost all of the September resident labor was used. Net returns to resident labor, land, and management dropped over $2,100 to $21,557.

With the corn-buying activity eliminated, cotton acreage increased to 168.4 acres while peanut and oat acreages remained constant. Steers were eliminated and beef cows increased to 36.3. The remaining acreage was used to produce feed for beef cows. Requirements for investment

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6/This figure included returns to all resident labor, including both the operator and the one full-time hired man. To make the figure a return to operator labor, management, and land, subtract a total of $2,800 to account for cash wages and perquisites for the full-time hired man.

capital other than land increased to $36,215 but only $8,784 of operating capital was needed. Labor requirements declined to 2,454 hours of resident labor and 836 hours of hired seasonal labor. Net returns to resident labor, land, and management declined only $43 to $21,514.

With peanuts at base price and corn-buying and hay-selling eliminated, 18.2 acres of cotton entered the optimum farm plan at 17.8 cents per pound (Table 17). Below this cotton price the program consisted of 84.2 acres of peanuts, 47.9 beef cows, 192 steers, and feed for the livestock. The first 18.2 acres of cotton reduced steer numbers to 171.5, increased beef cows to 56.5, and led to corresponding changes in feed crops. The remaining 97.5 acres of high-yield cotton entered the optimum plan at a cotton price of 19.8 cents per pound. The size of feed and livestock enterprises was drastically reduced and 120.3 acres of oats were sown. A total of 52.7 acres of medium-yield cotton entered the optimum plan at prices between 21.7 and 22.2 cents per pound. Oats increased to 123.2 acres. Steers were eliminated and beef cows increased to 36.3 with corresponding shifts in feed crops. The maximum acreage of medium-yield cotton (75.8) was reached at a cotton price of 32 cents per pound. The last 23.1 acres of medium-yield cotton replaced a like acreage of peanuts.7/

When peanut prices were reduced to 30 per cent below base, optimum plans were identical with those above up through a price of 22.2 cents per pound. However, the last 23.1 acres of medium-yield cotton replaced the same acreage of peanuts at 23.7 cents as

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7/Low-yield cotton replaced 47 additional acres of peanuts at a cotton price of 37.1 cents per pound of lint.

Table 17. Optimum Program, Extra Large Farm, Two-Man Labor Supply, Specified Prices for Cotton and Peanuts, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Cotton prices (cents per pound of lint) 15.0	20.0	25.0	30.0	35.0
Peanuts at base prices						
Cotton	Acre	----	115.7	168.4	168.4	191.5
Peanuts	Acre	84.2	84.2	84.2	84.2	61.1
Corn	Acre	123.0	38.5	----	----	----
Oats	Acre	----	120.3	123.2	123.2	123.2
Coastal hay	Acre	----	----	9.1	9.1	9.1
Corn silage	Acre	45.4	14.2	----	----	----
Pasture*	Acre	185.4	65.1	53.1	53.1	53.1
Beef cows	No.	47.9	19.8	36.3	36.3	36.3
Steers	No.	192.2	60.2	----	----	----
Capital Investment**	Dol.	37,066.20	31,516.63	36,214.94	36,214.94	37,993.64
Operating	Dol.	30,407.11	15,516.36	8,784.27	8,784.27	9,030.75
Resident labor	Hour	3,100.6	2,583.2	2,453.9	2,453.9	2,511.9
Seasonal labor	Hour	1,008.2	848.1	836.1	836.1	853.2
Net revenue***	Dol.	17,016.54	17,029.68	21,513.86	26,644.61	32,168.24
Peanuts at 30% below base prices						
Cotton	Acre	----	115.7	191.5	238.5	238.5
Peanuts	Acre	84.2	84.2	61.1	14.1	14.1
Corn	Acre	123.0	38.5	----	----	----
Oats	Acre	----	120.3	123.2	123.2	123.2
Coastal hay	Acre	----	----	9.1	9.1	9.1
Corn silage	Acre	45.4	14.2	----	----	----
Pasture*	Acre	185.4	65.1	53.1	53.1	53.1
Cows	No.	47.9	19.8	36.3	36.3	36.3
Steers	No.	192.2	60.2	----	----	----
Capital Investment**	Dol.	37,066.20	31,516.63	37,993.64	41,612.64	41,612.64
Operating	Dol.	30,407.11	15,516.36	9,030.75	9,532.24	9,532.24
Resident labor	Hour	3,100.6	2,583.2	2,511.9	2,629.9	2,629.9
Seasonal labor	Hour	1,008.2	848.1	853.2	888.0	888.0
Net revenue***	Dol.	12,626.64	12,988.08	17,645.89	24,035.15	31,005.00

(Continued)

Table 17. (Continued) Optimum Program, Extra Large Farm, Two-Man Labor Supply, Specified Prices for Cotton and Peanuts, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
Peanuts at 30% above base prices						
Cotton	Acre	----	115.7	168.4	168.4	168.4
Peanuts	Acre	84.2	84.2	84.2	84.2	84.2
Corn	Acre	123.0	38.5	----	----	----
Oats	Acre	----	120.3	123.2	123.2	123.2
Coastal hay	Acre	----	----	9.1	9.1	9.1
Corn silage	Acre	45.4	14.2	----	----	----
Pasture*	Acre	185.4	65.1	53.1	53.1	53.1
Cows	No.	47.9	19.8	36.3	36.3	36.3
Steers	No.	192.2	60.2	----	----	----
Capital Investment**	Dol.	37,066.20	31,516.63	36,214.94	36,214.94	36,214.94
Operating	Dol.	30,407.11	15,516.36	8,784.27	8,784.27	8,784.27
Resident labor	Hour	3,100.6	2,583.2	2,453.9	2,453.9	2,453.9
Seasonal labor	Hour	1,008.2	848.1	836.1	836.1	836.1
Net revenue***	Dol.	20,709.84	21,071.28	25,555.73	30,686.48	35,817.23

*Some hay was harvested from pasture.

**Investment capital does not include the investment in land.

***Net return to resident labor, management, and land.

compared with 32 cents with peanuts at base price. The maximum possible low-yield cotton (47.0 acres) replaced a like acreage of peanuts at a cotton price of 27.5 cents per pound.

With peanuts at 30 per cent above base price, optimum plans were again identical through cotton prices of 22.2 cents per pound. However, no additional cotton entered the plan up through cotton prices of 35 cents per pound of lint.

When cotton price was held constant at base price and peanut price was varied, 10.7 acres of peanuts entered the optimum plan at a peanut price of $100.32 per ton (Table 18). An additional 50.4 acres of peanuts were planted at $103.18 per ton. Maximum acreage of high-yield peanuts was reached at a price of $119.53 per ton. At this price the total agronomic limit of peanuts (84.2 acres) was reached. The remaining 23.1 acres of peanuts replaced a like acreage of cotton.

Comparison of Responses for Different Size Groups

On the two largest size farms, beef cows or steers utilized the nonplowable open land with steers entering the optimum plan at low cotton or peanut prices. On the medium farm, steers utilized the nonplowable open land at low cotton or peanut prices but it was idle at higher prices. Nonplowable open land was always idle on the small farm. However, hogs entered the optimum plan on small farms at low cotton or peanut prices. Otherwise, the Wiregrass representative farms were primarily crop farms with the main sources of income being cotton and peanuts.[8/]

[8/] If current allotments had been used, there would still be considerable land available to produce feed for livestock.

Table 18. Optimum Program, Extra Large Farm, Two-Man Labor Supply, Specified Prices for Peanuts and Cotton, Other Enterprises at Base Price, Advanced Technology, Wiregrass Area, Alabama

Enterprise	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
Cotton at base prices						
Cotton	Acre	191.5	168.4	168.4	168.4	168.4
Peanuts	Acre	----	84.2	84.2	84.2	84.2
Corn	Acre	44.6	----	----	----	----
Oats	Acre	110.0	123.2	123.2	123.2	123.2
Coastal hay	Acre	----	9.1	9.1	9.1	9.1
Corn silage	Acre	75.4	53.1	53.1	53.1	53.1
Pasture*	Acre	16.5	----	----	----	----
Cows	No.	23.0	36.3	36.3	36.3	36.3
Steers	No.	69.8	----	----	----	----
Capital Investment**	Dol.	38,667.31	36,214.93	36,214.93	36,214.93	36,214.93
Operating	Dol.	17,499.66	8,784.27	8,784.27	8,784.27	8,784.27
Resident labor	Hour	2,834.9	2,453.9	2,453.9	2,453.9	2,453.9
Seasonal labor	Hour	921.2	836.1	836.1	836.1	836.1
Net revenue***	Dol.	17,076.49	18,819.46	21,513.86	24,208.26	26,902.66

*Some hay was harvested from pasture.

**Investment capital does not include the investment in land.

***Net return to resident labor, management, and land.

Corn yields are the key to the poor competitive position of steers and hogs. The 50-bushel yield per acre leads to high feed costs. Even with cotton and peanut prices at 20 per cent below base, these crops had a relatively high net return per acre when compared with crops used for livestock feed.

Producing Coastal bermudagrass hay for sale was a profitable alternative on the two largest representative farms at base prices for cotton and peanuts. However, it was not profitable on the smaller farms that were not large enough to own their own hay-making equipment. When Coastal was eliminated, either arbitrarily or because of high custom harvesting costs, the plowable open land unsuitable for row crops was used for oats.

The effect of corn-buying was studied only at base prices for cotton and peanuts. When this activity was considered, it usually entered the optimum plan. Livestock could then be produced with less competition from these two crops. However, the elimination of corn-buying and the resulting decline in livestock numbers had only a small effect on net revenue. At the same time, capital and labor requirements were reduced sharply.

Since most of the productive labor was used in crop production, the labor distribution on the representative farms was highly seasonal. Furthermore, all of the available resident labor was not used even in the peak months except in a few cases. Thus, farm size could be expanded, especially when the corn-buying and Coastal bermudagrass hay-selling activities were eliminated. Other alternatives include part-time off-farm jobs; the addition of labor intensive enterprises such as poultry or vegetables; and replacement of hired seasonal labor with resident labor where time and crew requirements do

not interfere. Sufficient resident labor must be left above production requirements to perform maintenance activities.

There was consistency among farm sizes as to the levels of cotton prices required to bring cotton into the optimum plan when peanut prices were held constant at base price. All high-yield cotton entered the optimum plans between cotton prices of 17.8 and 21.3 cents per pound. Medium-yield cotton entered the plans in two groups: (1) that which replaced feed crops for steers and hogs, and (2) that which replaced peanuts. Medium-yield cotton replaced feed crops at cotton prices of 21.4 to 23.3 cents, and it replaced peanuts at prices between 31.0 and 32.0 cents per pound. Low-yield cotton replaced additional peanuts at prices between 35.0 and 37.1 cents per pound. Reducing or raising peanut prices by 30 per cent, respectively, lowered or raised the cotton price at which cotton replaced peanuts.

When cotton price was held constant at base price and peanut prices were varied, peanuts replaced feed grains at peanut prices between $100.32 and $114.80 per ton. Except for the medium-size farm the upper limit of this range would have been $104.50 per ton. Part of the medium-yield cotton was replaced at peanut prices ranging from $115.43 to $125.46 per ton.[9/] Rotational restrictions on peanuts prevented further competition with cotton.

9/Low-yield cotton was grown on only the small farm at base cotton prices. It was replaced by peanuts at a price of $110.06 per ton.

AGGREGATE AREA SUPPLY RESPONSE

The individual farm organizations have shown the most profitable farm plan with the various specified situations. Usually when an individual farmer changes his production practices or enterprise combination, there is little effect on the overall supply of farm products. However, if a large number of farmers adopt the same practices and combination of enterprises, there could be a decided effect on supply. Therefore to fully evaluate farming adjustment alternatives, consideration should be given to the aggregate effect of many farmers making such adjustments.

Aggregation Models

The soil base acreage determined for this study includes all Wiregrass soils (Table 19). Some of this acreage is presently being used for dairy farms, vegetables, and fruit and nut trees, which have been excluded as adjustment opportunities for this study. Similarly, the farms with 0.0 to 9.9 acres of open land were classified as nonfarm rural residences and were not studied for adjustment opportunities. The land utilized by these excluded situations was eliminated from the base acreage before determining the area aggregates.

Furthermore, any number of assumptions can be made as to which groups of farmers actually would make the specified adjustment. For this analysis, two such sets of assumptions have been made and for brevity each set is called a model.

Table 19. Wiregrass Soils, by Current Use and Capability Class and Classification as Used in Study*

Class	Current use	
	Cropland	Pasture
	Acres	Acres
I	151,804	26,525
IIe	461,967	86,405
IIs	18,222	3,065
IIw	26,472	10,600
IIIe	258,711	109,352
IIIs	228,268	50,926
IIIw	21,083	15,634
IVe	44,468	36,492
IVs	105,674	47,012
IVw	2,272	7,426
Total	1,318,941	393,437

Classification used in study**	Definition	Acreage
Open land	Class I through IV cropland and pasture	1,712,378
Plowable land	Class I, II, and III cropland and pasture	1,469,034
Row cropland	Class I, II, and ½ Class IIIe and IIIw cropland and pasture	987,450

*Current use and capability classes were determined from county work sheets for: Alabama Conservation Needs Committee, Alabama Soil and Water Conservation Needs Inventory published by the State Soil Conservation Committee, 1961.

**See page 9 for definition of classifications.

Model One

Model One assumes that all of the farms and acreages not specifically excluded will make farming adjustments as specified by the optimum representative farm programs for their size group.

Model Two

Model Two further assumes that there would be no adjustment on farms and acreages that were classified as Economic Class VI, part-time, or semi-retired farmers in the 1959 Census of Agriculture. The acreages in these farms not previously excluded were excluded in Model Two. All other farms would make the adjustment in farm organization as specified by the optimum representative farm program for their size group.

Farm Size Distributions

Further variations in the aggregate estimates were made by using two farm size distributions. The 1959 distribution represents the estimated distribution of the various farm size groups and excluded situations that existed in 1959. Using projected changes in farm sizes, an estimate was made of the expected farm size distribution for 1975. The acreage to be excluded for the nonadjustment alternatives and aggregating models were estimated for the two farm size distributions (Table 20).

Table 20. Excluded Acreages of Open Land, by Type of Farm, Wiregrass Area, Alabama

Item	Farm size distribution	
	1959	1975
	Open land acreage	
Dairy, vegetables, fruits, and nuts	27,900	31,500
Nonfarm rural residences	9,602	12,828
Class VI, part-time and semi-retired farmers	437,509	437,509
Total Model One exclusion	37,502	44,328
Total Model Two exclusion	475,011	481,837

For each model and each farm size distribution, the excluded acreage for that situation was removed (subtracted) from the total soil base of the area. The remainder of the soil base acreage was then distributed to the four farm size groups (Table 21). The acreage in each size group was then divided by the open land acreage on the representative farm for that size group to determine the number of representative farms for that group. These farm numbers were used to expand the representative farm optimum programs to the area estimates or aggregates.

Table 21. Estimated Acreages of Open Land for Aggregation and Maximum Number of Representative Farms, by Size Groups and by Aggregation Models, Wiregrass Area, Alabama

Size groups (open land acreage)	Open land acreage		Representative farms	
	Farm size distribution		Farm size distribution	
	1959	1975	1959	1975
	Acres		Number	
	Model One			
Small (10 - 49.9)	207,700	173,600	6,700	5,600
Medium (50 - 149.9)	703,080	457,650	8,680	5,650
Large (150 - 249.9)	466,256	651,360	2,534	3,540
Extra large (250 & over)	297,840	385,440	680	880
Total	1,674,876	1,668,050	18,594	15,670
	Model Two			
Small (10 - 49.9)	46,500	12,400	1,500	400
Medium (50 - 149.9)	435,051	189,621	5,371	2,341
Large (150 - 249.9)	457,976	643,080	2,489	3,495
Extra large (250 & over)	297,840	385,440	680	880
Total	1,237,367	1,230,541	10,040	7,116

The Aggregates

The foregoing assumptions established two aggregating models with eight sets of assumptions for each. With each model, aggregate area production and resource use can be determined at the five cotton prices for three levels of peanut prices and for two farm size distributions. In addition, aggregate area production can be determined at five peanut prices for the base level of cotton prices with both farm size distributions.

Model One Aggregates

The aggregates for Model One assume full adjustment to the optimum program of all adjustable resources in the area (Appendix Tables 1 through 8). Therefore, cotton or peanut production at each price level for any set of assumptions is an estimate of a point on a normative supply curve for cotton or peanuts for that given set of assumptions. These points have been plotted and the corresponding supply curve drawn for the eight sets of assumptions in Model One (Figures 2,3, and 4). The long vertical segments on the cotton supply functions with peanuts at base price or 30 per cent above base show the cotton production level at which cotton must compete with peanuts for row cropland. Apparently, the comparative advantage of cotton over other enterprises is greater on the larger farms than on the smaller farms.

Model Two Aggregates

The assumption that part of the resources in the area would not adjust causes the aggregates under Model Two to become pseudo-optimum estimates. The estimates for the adjustment-responding acreages were

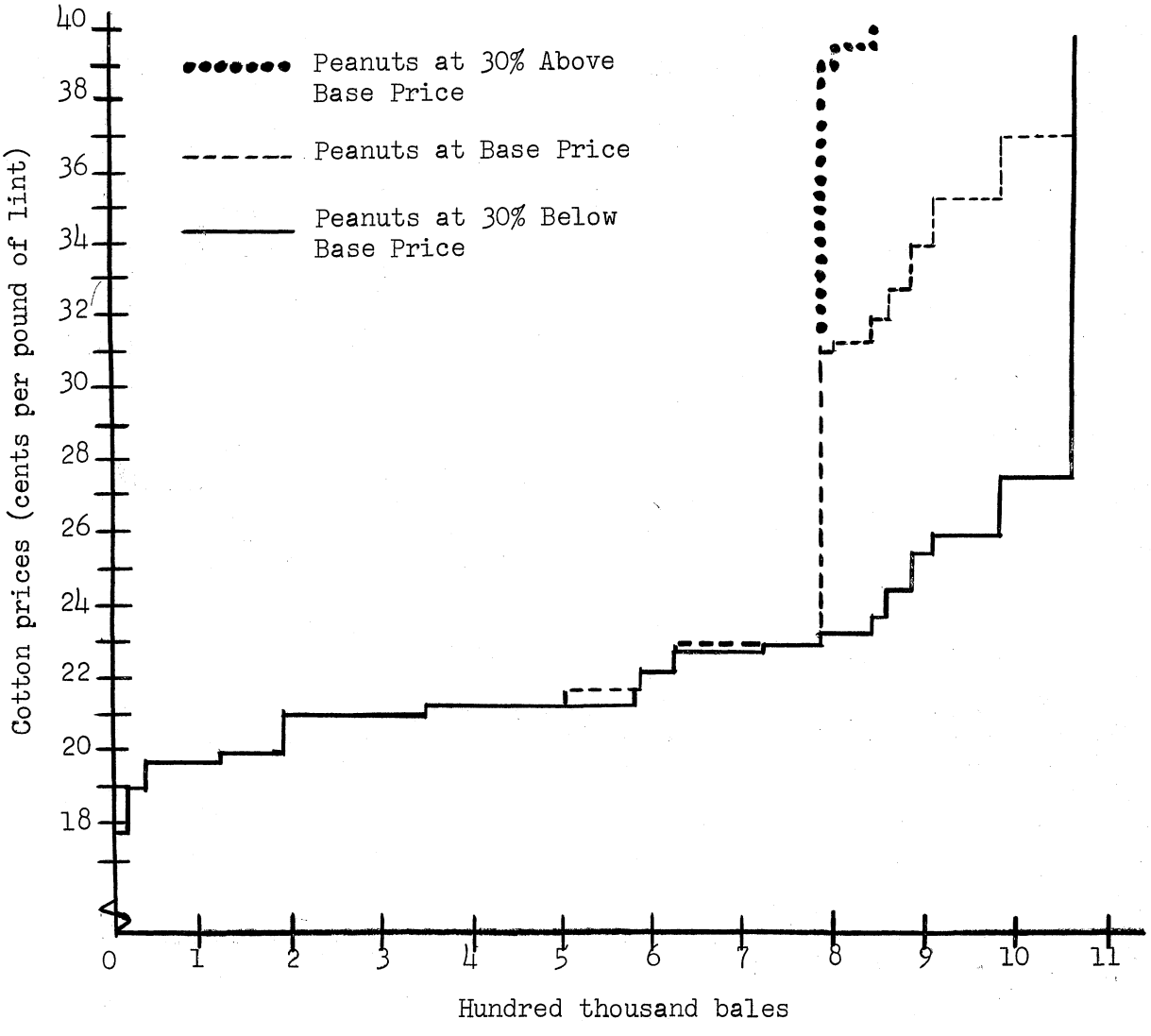

Figure 2. MODEL ONE: Estimated Aggregate Cotton Production at a Range of Cotton Prices and Three Peanut Prices, 1959 Farm Size Distribution, Wiregrass Area, Alabama

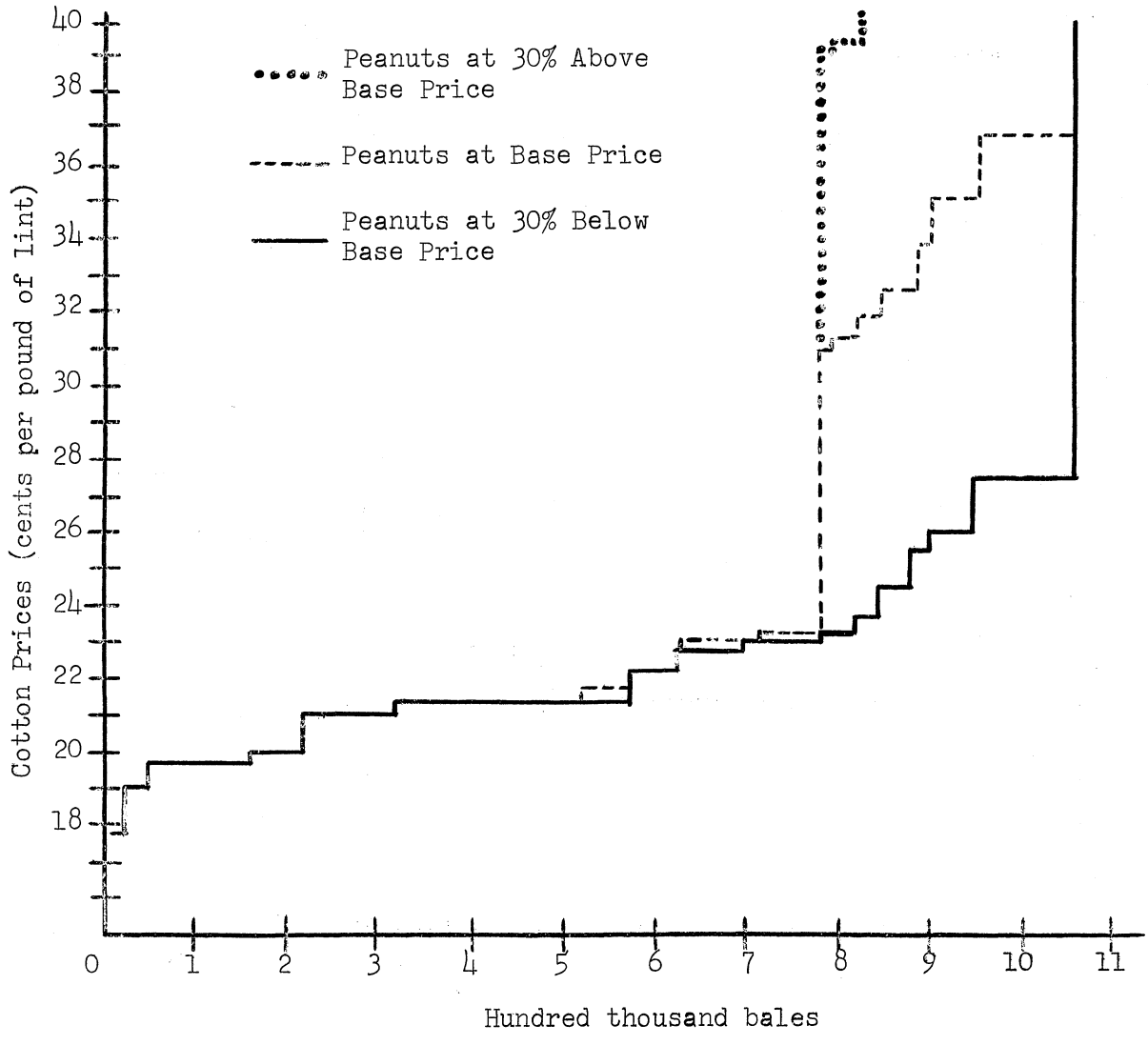

Figure 3. MODEL ONE: Estimated Aggregate Cotton Production at a Range of Cotton Prices, and Three Peanut Prices, 1975 Farm Size Distribution, Wiregrass Area, Alabama

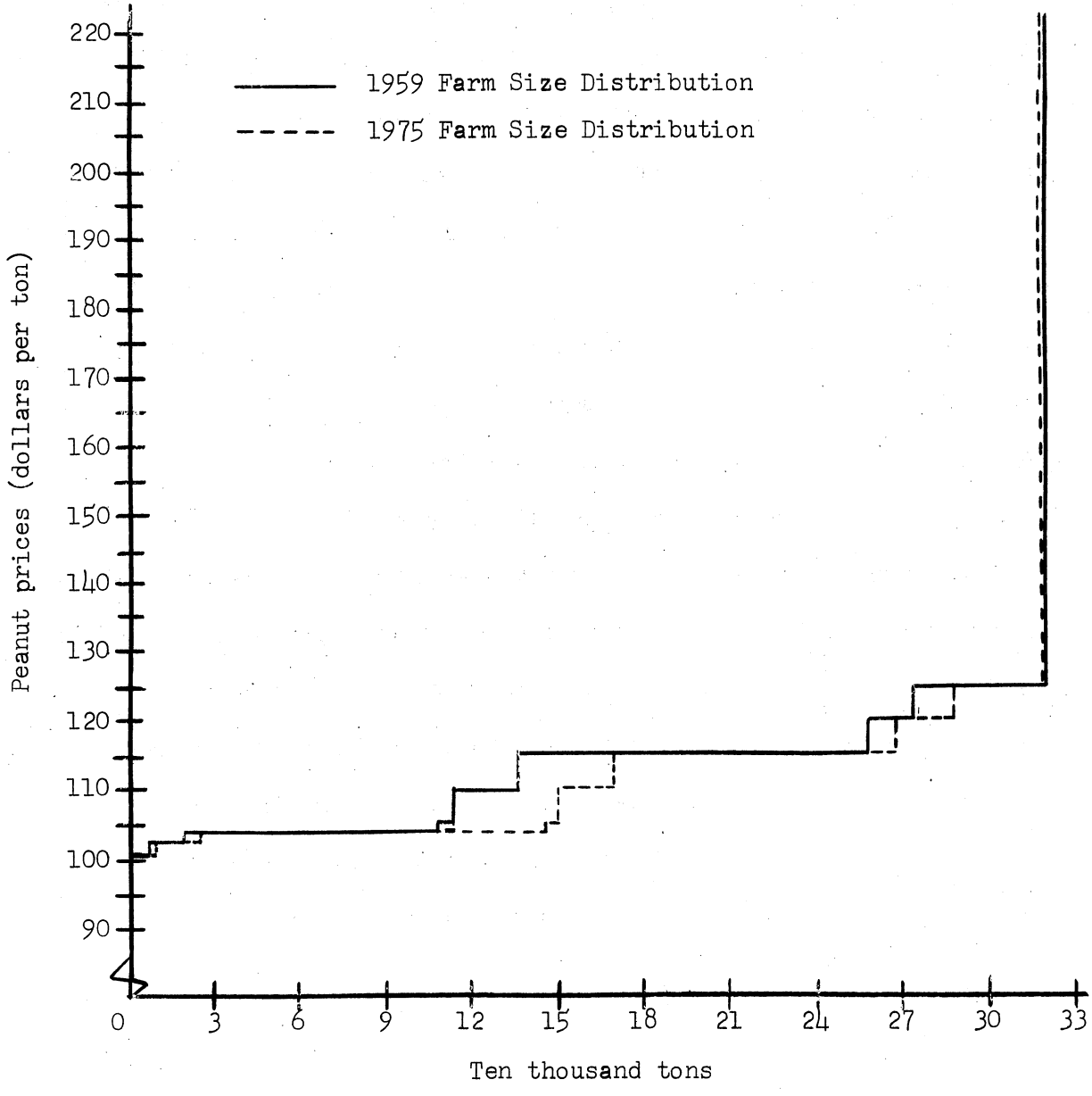

Figure 4. MODEL ONE: Estimated Aggregate Peanut Production at a Range of Peanut Prices and Base Cotton Price, 1959 and 1975 Farm Size Distributions, Wiregrass Area, Alabama

determined from the optimum programs. The estimates for the nonadjustment acreage were determined from the 1959 census data and are for the current organization. It would be possible to add the two estimates of acreage and production to determine total acreage and production. However, the net revenue, operating capital, investment capital, and labor used on the nonadjusting farms were indeterminate so that an overall estimate of these could not be obtained. Therefore, to make all the estimates compatible, they are presented in two categories. The data in Table 22 show the current acreage and production of important enterprises on the nonadjustment responding farms. The Model Two aggregates in Appendix Tables 9 through 16 are only for the resources that were assumed to make full adjustment.

Similar estimates of supply functions were made for the adjusting resources of Model Two as were made for Model One (Figures 5, 6, and 7). These functions had the same general relationships as the Model One functions. However, both farm size distributions for Model Two had a smaller proportion of the acreage in the smaller farm group than did Model One. Thus, the differences between the curves for the 1959 distribution and the 1975 distribution were less for Model Two than for Model One.

Table 22. Resources and Production Estimates for Nonrespondent Situations* in Aggregation Model Two, Wiregrass Area, Alabama

Item	Unit	Quantity
Open land	Acre	437,509
Plowable land	Acre	375,335
Row cropland	Acre	252,291
Cotton	Acre	41,197
Cotton production	Bale	22,121
Peanuts	Acre	38,197
Peanut production	Ton	12,104
Corn	Acre	175,624
Corn harvested for grain	Acre	133,378
Corn production	Bushel	2,554,320
Oats for grain	Acre	470
Oat production	Bushel	11,463
Hay	Acre	1,200
Hay production	Ton	1,060
Cropland used only for pasture	Acre	43,491
Cows on farms during year	Number	34,990
Cattle and calves sold during year	Number	20,310
Hogs and pigs on farms during year	Number	164,590
Hogs sold during year	Number	106,431

*Nonrespondent situations are the commercial Class VI, part-time and semi-retired farms as classified by the U. S. Census of Agriculture.

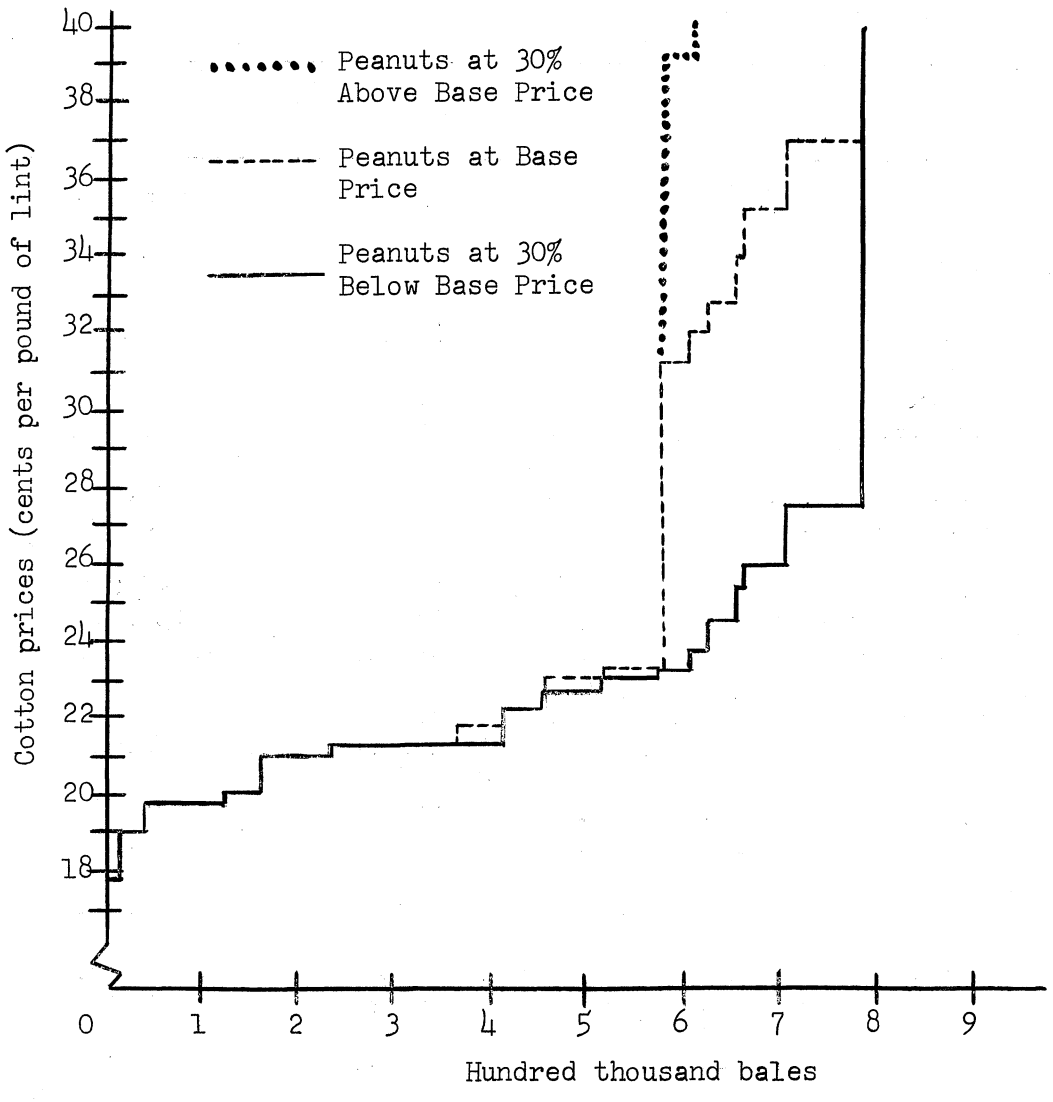

Figure 5. MODEL TWO: Estimated Aggregate Cotton Production at a Range of Cotton Prices and Three Peanut Prices, 1959 Farm Size Distribution, Wiregrass Area, Alabama

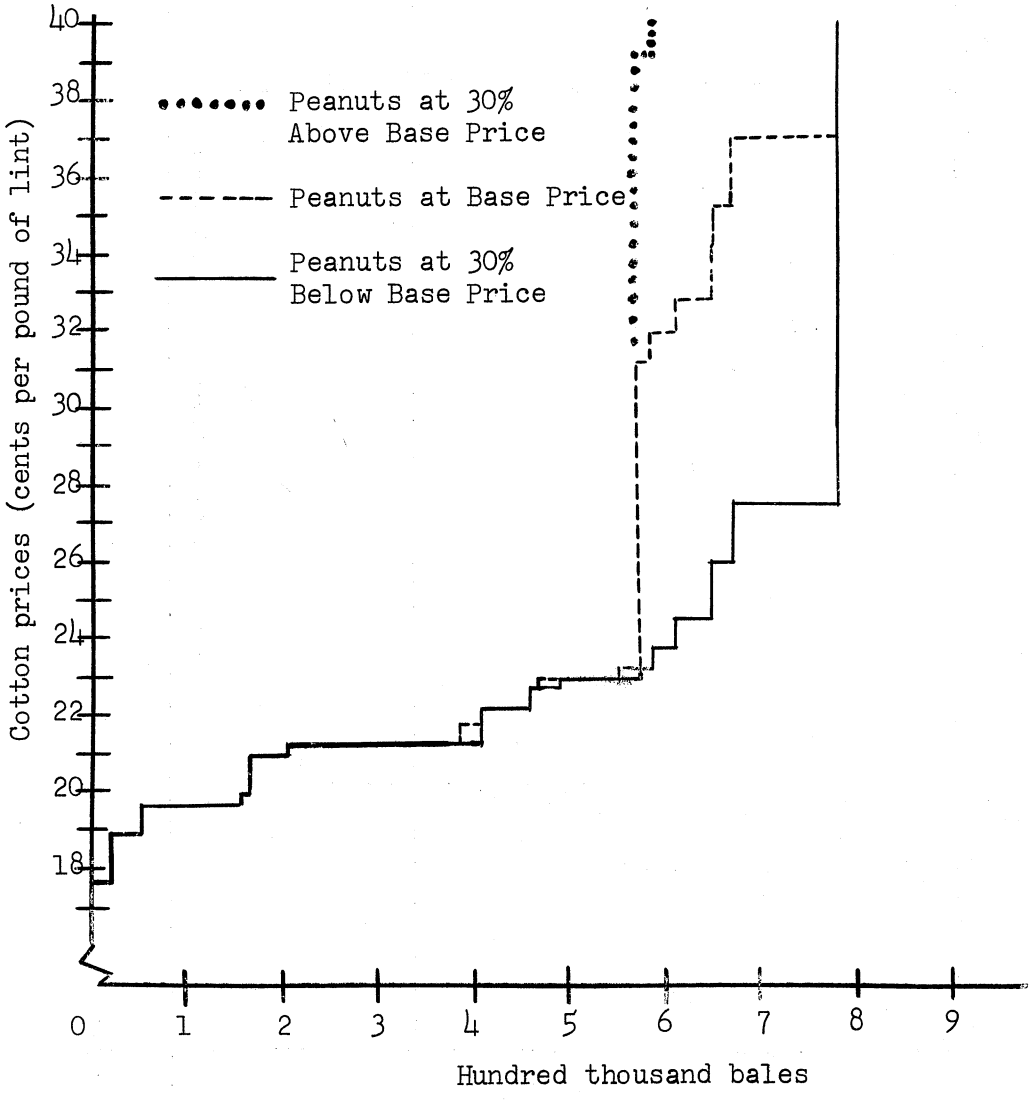

Figure 6. MODEL TWO: Estimated Aggregate Cotton Production at a Range of Cotton Prices and Three Peanut Prices, 1975 Farm Size Distribution, Wiregrass Area, Alabama

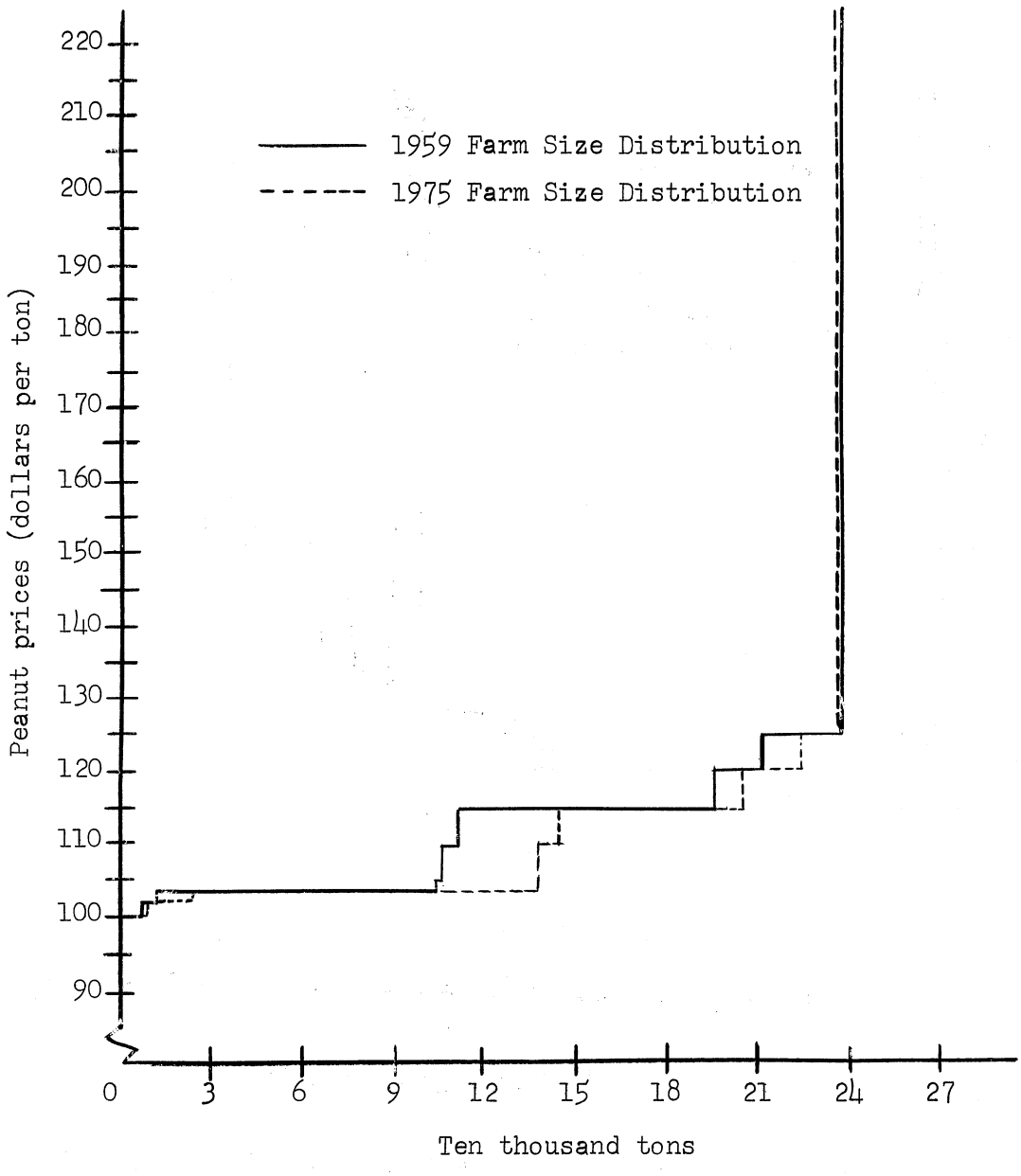

Figure 7. MODEL TWO: Estimated Aggregate Peanut Production at a Range of Peanut Prices and Base Cotton Price, 1959 and 1975 Farm Size Distributions, Wiregrass Area, Alabama

APPENDIX

Appendix Table 1. - Model 1: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1959 Farm Size Distribution - Varying Prices for Cotton - Peanuts at Base Prices)

Item	Unit	Cotton prices (cents per pound of lint) 15.0	20.0	25.0	30.0	35.0
				Acreage		
Cotton	Acre	-------	97,934	643,344	643,344	754,203
Peanuts	Acre	322,568	322,568	322,568	322,568	211,709
Corn	Acre	496,482	419,763	-------	-------	-------
Oats	Acre	142,320	224,124	471,231	471,231	471,231
Coastal bermudagrass hay	Acre	-------	-------	15,817	15,817	15,817
Corn silage	Acre	146,862	125,646	-------	-------	-------
Pasture	Acre	537,164	455,361	92,616	92,616	92,616
Idle open land	Acre	29,480	29,480	129,300	129,300	129,300
Total open land	Acre	1,674,876	1,674,876	1,674,876	1,674,876	1,674,876
				Livestock		
Cows	No.	93,228	73,520	63,201	63,201	63,201
Steers	No.	621,284	531,524	-------	-------	-------
Sows	No.	24,790	24,790	-------	-------	-------
				Resources		
Investment capital	Dol.	139,123,532	134,962,807	90,235,194	90,235,194	90,605,546
Operating capital	Dol.	103,582,012	93,736,892	30,685,235	30,685,235	31,650,725
Resident labor available*	Hour	39,087,038	39,087,038	39,087,038	39,087,038	39,087,038
Resident labor used	Hour	13,106,280	12,802,340	8,874,289	8,874,289	9,100,604
Seasonal labor hired	Hour	3,131,822	3,004,963	2,686,774	2,686,774	2,837,261

(Continued)

Appendix Table 1. - Model 1 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bales	-------	122,535	784,796	784,796	908,265
Peanuts	Ton	322,568	322,568	322,568	322,568	211,709
Corn sold	Bu.	1,064,280	-------	-------	-------	-------
Corn produced for feed	Bu.	26,242,230	23,086,965	-------	-------	-------
Oats	Bu.	8,539,200	13,447,440	28,273,860	28,273,860	28,273,860
Hay fed	Ton	466,648	399,260	79,661	79,661	79,661
Market hogs sold	No.	384,245	384,245	-------	-------	-------
Fat calves sold	No.	45,042	55,140	47,401	47,401	47,401
Net return to operator labor, management and land	Dol.	54,027,715	54,158,881	68,246,916	87,866,818	109,147,581
Return to land**	Dol.	8,793,099	8,793,099	8,793,099	8,793,099	8,793,099
Net return to operator labor and management	Dol.	45,234,616	45,365,782	59,453,817	79,073,719	100,354,482

*Includes 6,700 part-time operators, and 11,894 full-time operators, and 680 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 2. - Model 1: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1959 Farm Size Distribution - Varying Prices for Cotton - Peanut Prices at 30 Per Cent Below Base)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Acreage			
Cotton	Acre	-------	97,934	732,093	911,598	911,598
Peanuts	Acre	322,568	322,568	135,735	31,746	31,746
Corn	Acre	496,482	419,763	72,044	16,492	16,492
Oats	Acre	142,320	224,124	471,231	471,231	471,231
Coastal bermudagrass hay	Acre	-------	-------	15,817	15,817	15,817
Corn silage	Acre	146,862	125,646	26,040	6,076	6,076
Pasture	Acre	537,164	455,361	159,452	108,240	108,240
Idle open land	Acre	29,480	29,480	62,464	113,676	113,676
Total open land	Acre	1,674,876	1,674,876	1,674,876	1,674,876	1,674,876
			Livestock			
Steers	No.	621,284	531,524	111,972	26,040	26,040
Cows	No.	92,628	73,520	63,201	63,201	63,201
Sows	No.	24,790	24,790	-------	-------	-------
			Resources			
Investment capital	Dol.	139,123,532	134,962,807	99,129,232	92,354,217	92,354,217
Operating capital	Dol.	103,582,012	93,736,892	46,133,335	36,474,913	36,474,913
Resident labor available*	Hour	39,087,038	39,087,038	39,087,038	39,087,038	39,087,038
Resident labor used	Hour	13,106,280	12,802,340	9,963,734	9,600,365	9,600,365
Seasonal labor hired	Hour	3,131,822	3,044,963	3,064,847	3,062,931	3,062,931

(Continued)

Appendix Table 2. - Model 1 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bale	-------	122,535	886,155	1,065,661	1,065,661
Peanuts	Ton	322,568	322,568	135,735	31,746	31,746
Corn sold	Bu.	1,064,280	-------	-------	-------	-------
Corn produced for feed	Bu.	26,242,230	23,086,965	3,962,420	907,060	907,060
Oats	Bu.	8,539,200	13,447,440	28,273,860	28,273,860	28,273,860
Hay fed	Ton	466,648	399,260	163,857	98,757	98,757
Market hogs sold	No.	384,245	-------	-------	-------	-------
Fat calves sold	No.	69,471	55,140	47,401	47,401	47,401
Net return to operator labor, management, and land	Dol.	38,336,289	38,694,299	53,890,491	79,084,620	105,726,136
Return to land**	Dol.	8,793,099	8,793,099	8,793,099	8,793,099	8,793,099
Net return to operator labor and management	Dol.	29,543,190	29,901,200	45,097,392	70,291,521	96,933,037

*Includes 6,700 part-time operators, 11,894 full-time operators, and 680 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 3. - Model 1: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1959 Farm Size Distribution - Varying Prices for Cotton - Peanut Prices at 30 Per Cent Above Base)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Acreage			
Cotton	Acre	-------	97,934	643,344	643,344	643,344
Peanuts	Acre	322,568	322,568	322,568	322,568	322,568
Corn	Acre	496,482	419,763	-------	-------	-------
Oats	Acre	142,320	224,124	471,231	471,231	471,231
Coastal bermudagrass hay	Acre	-------	-------	15,817	15,817	15,817
Corn silage	Acre	146,862	125,646	-------	-------	-------
Pasture	Acre	537,164	455,361	92,616	92,616	92,616
Idle open land	Acre	29,480	29,480	129,300	129,300	129,300
Total open land	Acre	1,674,876	1,674,876	1,674,876	1,674,876	1,674,876
			Livestock			
Cows	No.	92,628	73,520	63,201	63,201	63,201
Steers	No.	621,284	531,524	-------	-------	-------
Sows	No.	24,790	24,790	-------	-------	-------
			Resources			
Investment capital	Dol.	139,123,532	134,962,807	90,235,194	90,235,194	90,235,194
Operating capital	Dol.	103,582,012	93,736,892	30,685,235	30,685,235	30,685,235
Resident labor available*	Hour	39,087,038	39,087,038	39,087,038	39,087,038	39,087,038
Resident labor used	Hour	13,106,280	12,802,340	8,874,289	8,874,289	8,874,289
Seasonal labor hired	Hour	3,131,822	3,004,963	2,686,774	2,686,774	2,686,774

(Continued)

Appendix Table 3. - Model 1 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bales	-------	122,535	784,796	784,796	784,796
Peanuts	Ton	322,568	322,568	322,568	322,568	322,568
Corn sold	Bu.	1,064,280	-------	-------	-------	-------
Corn produced for feed	Bu.	26,242,230	23,086,965	-------	-------	-------
Oats	Bu.	8,539,200	13,447,440	28,273,860	28,273,860	28,273,860
Hay fed	Ton	466,648	399,260	79,661	79,661	79,661
Market hogs sold	No.	384,245	384,245	-------	-------	-------
Calves sold	No.	69,471	55,140	47,401	47,401	47,401
Net return to operator labor, management, and land	Dol.	69,245,428	69,603,438	82,880,449	100,960,185	119,039,922
Net return to land**	Dol.	8,793,099	8,793,099	8,793,099	8,793,099	8,793,099
Net return to operator labor and management	Dol.	60,452,329	60,810,339	74,087,350	92,167,086	110,246,823

*Includes 6,700 part-time operators, and 11,894 full-time operators, and 680 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 4. - Model 1: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1975 Farm Size Distribution - Varying Prices for Cotton - Peanuts at Base Prices)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Acreage			
Cotton	Acre	-------	128,720	640,825	640,825	747,432
Peanuts	Acre	321,152	321,152	321,152	321,152	214,545
Corn	Acre	493,233	391,969	-------	-------	-------
Oats	Acre	98,090	203,954	469,328	469,328	469,328
Coastal bermudagrass hay	Acre	-------	-------	21,460	21,460	21,460
Corn silage	Acre	147,592	120,136	-------	-------	-------
Pasture	Acre	583,343	477,479	125,670	125,670	125,670
Idle open land	Acre	24,640	24,640	89,615	89,615	89,615
Total open land	Acre	1,668,050	1,668,050	1,668,050	1,668,050	1,668,050
			Livestock			
Cows	No.	126,050	101,322	85,752	85,752	85,752
Steers	No.	624,591	508,431	-------	-------	-------
Sows	No.	20,720	20,720	-------	-------	-------
			Resources			
Investment capital	Dol.	146,715,666	141,291,380	98,903,550	98,903,550	99,191,943
Operating capital	Dol.	103,675,467	90,963,592	31,439,842	31,439,842	32,416,279
Resident labor available*	Hour	33,821,830	33,821,830	33,821,830	33,821,830	33,821,830
Resident labor used	Hour	12,730,469	12,342,063	8,831,898	8,831,898	9,044,068
Seasonal labor hired	Hour	3,267,411	3,101,389	2,675,630	2,675,630	2,785,877

(Continued)

Appendix Table 4. - Model 1 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bales	-------	161,064	781,595	781,595	900,839
Peanuts	Ton	321,152	321,152	321,152	321,152	214,545
Corn sold	Bu.	1,486,800	-------	-------	-------	-------
Corn produced for feed	Bu.	25,641,015	21,558,295	-------	-------	-------
Oats	Bu.	5,885,400	12,237,240	28,159,680	28,159,680	28,159,680
Hay fed	Ton	468,911	381,703	108,096	108,096	108,096
Market hogs sold	No.	321,160	321,160	-------	-------	-------
Fat calves sold	No.	62,924	75,992	64,314	64,314	64,314
Net return to operator labor, management, and land	Dol.	54,907,324	55,075,674	69,387,854	88,927,718	110,001,820
Return to land**	Dol.	8,757,262	8,757,262	8,757,262	8,757,262	8,757,262
Net return to operator labor and management	Dol.	46,150,062	46,318,412	60,630,592	80,170,456	101,244,558

*Includes 5,600 part-time operators, and 10,070 full-time operators, and 880 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 5. - Model 1: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1975 Farm Size Distribution - Varying Prices for Cotton - Peanut Prices at 30 Per Cent Below Base)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Acreage			
Cotton	Acre	-------	128,720	728,952	907,685	907,685
Peanuts	Acre	321,152	321,152	169,180	39,602	39,602
Corn	Acre	493,233	391,969	46,895	10,735	10,735
Oats	Acre	98,090	203,954	469,328	469,328	469,328
Coastal bermudagrass hay	Acre	-------	-------	21,460	21,460	21,460
Corn silage	Acre	147,592	120,136	16,950	3,955	3,955
Pasture	Acre	583,343	477,479	169,175	135,840	135,840
Idle open land	Acre	24,640	24,640	46,110	79,445	79,445
Total open land	Acre	1,668,050	1,668,050	1,668,050	1,668,050	1,668,050
			Livestock			
Cows	No.	126,050	101,322	85,752	85,752	85,752
Steers	No.	624,591	508,431	72,885	16,950	16,950
Sows	No.	20,720	20,720	-------	-------	-------
			Resources			
Investment capital	Dol.	146,715,666	141,291,380	104,678,873	100,218,437	100,218,437
Operating capital	Dol.	103,675,467	90,963,592	41,811,969	36,173,183	36,173,183
Resident labor available*	Hour	33,821,830	33,821,830	33,821,830	33,821,830	33,821,830
Resident labor used	Hour	12,730,469	12,342,063	9,595,368	9,469,760	9,469,760
Seasonal labor hired	Hour	3,267,411	3,101,389	2,925,222	2,930,976	2,930,976

(Continued)

Appendix Table 5. - Model 1 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bale	-------	161,064	882,359	1,061,092	1,061,092
Peanuts	Ton	321,152	321,152	169,180	39,602	39,602
Corn sold	Bu.	1,486,800	-------	-------	-------	-------
Corn produced for feed	Bu.	25,641,015	21,558,295	2,579,225	590,425	590,425
Oats	Bu.	5,885,400	12,237,240	28,159,680	28,159,680	28,159,680
Hay fed	Ton	468,911	381,703	162,901	120,526	120,526
Market hogs sold	No.	321,160	321,160	-------	-------	-------
Fat calves sold	No.	94,538	75,992	64,314	64,314	64,314
Net return to operator labor, management, and land	Dol.	39,209,188	39,684,042	54,876,874	79,754,963	106,282,272
Return to land**	Dol.	8,757,262	8,757,262	8,757,262	8,757,262	8,757,262
Return to operator labor and management	Dol.	30,451,926	30,926,780	46,119,612	70,997,701	97,525,010

*Includes 5,600 part-time operators, 10,070 full-time operators, and 880 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 6. - Model 1: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1975 Farm Size Distribution - Varying Prices for Cotton - Peanut Prices at 30 Per Cent Above Base)

Item	Unit	Cotton Prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Acreage			
Cotton	Acre	-------	128,720	640,825	640,825	640,825
Peanuts	Acre	321,152	321,152	321,152	321,152	321,152
Corn	Acre	493,233	391,969	-------	-------	-------
Oats	Acre	98,090	203,954	469,328	469,328	469,328
Coastal bermudagrass hay	Acre	-------	-------	21,460	21,460	21,460
Corn silage	Acre	147,592	120,136	-------	-------	-------
Pasture	Acre	583,343	477,479	125,670	125,670	125,670
Idle open land	Acre	24,640	24,640	89,615	89,615	89,615
Total open land	Acre	1,668,050	1,668,050	1,668,050	1,668,050	1,668,050
			Livestock			
Cows	No.	126,050	101,322	85,752	85,752	85,752
Steers	No.	624,591	508,431	-------	-------	-------
Sows	No.	20,720	20,720	-------	-------	-------
			Resources			
Investment capital	Dol.	146,715,666	141,291,380	98,903,550	98,903,550	98,903,550
Operating capital	Dol.	103,675,467	90,963,592	31,439,842	31,439,842	31,439,842
Resident labor available*	Hour	33,821,830	33,821,830	33,821,830	33,821,830	33,821,830
Resident labor used	Hour	12,730,469	12,342,063	8,831,898	8,831,898	8,831,898
Seasonal labor hired	Hour	3,267,411	3,101,389	2,675,630	2,675,630	2,675,630

(Continued)

Appendix Table 6. - Model 1 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bale	-------	161,064	781,595	781,595	781,595
Peanuts	Ton	321,152	321,152	321,152	321,152	321,152
Corn sold	Bu.	1,486,800	-------	-------	-------	-------
Corn produced for feed	Bu.	25,641,015	21,558,295	-------	-------	-------
Oats	Bu.	5,885,400	12,237,240	28,159,680	28,159,680	28,159,680
Hay fed	Ton	468,911	381,703	108,096	108,096	108,096
Market hogs sold	No.	321,160	321,160	-------	-------	-------
Fat calves sold	No.	94,538	75,992	64,314	64,314	64,314
Net return to operator labor, management, and land	Dol.	69,992,416	70,467,270	83,632,395	101,020,647	118,408,899
Return to land**	Dol.	8,757,262	8,757,262	8,757,262	8,757,262	8,757,262
Net return to operator labor and management	Dol.	61,225,154	61,710,008	74,875,133	92,263,385	109,651,637

*Includes 5,600 part-time operators, 10,070 full-time operators, and 880 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 7. - Model 2: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1959 Farm Size Distribution - Varying Prices for Cotton - Peanuts at Base Prices)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Acreage			
Cotton	Acre	-------	97,592	475,372	475,372	545,570
Peanuts	Acre	238,154	238,154	238,154	238,154	167,956
Corn	Acre	357,071	280,695	-------	-------	-------
Oats	Acre	76,423	158,227	348,215	348,215	348,215
Coastal bermudagrass hay	Acre	-------	-------	15,646	15,646	15,646
Corn silage	Acre	118,301	97,085	-------	-------	-------
Pasture	Acre	440,818	359,014	91,613	91,613	91,613
Idle open land	Acre	6,600	6,600	68,367	68,367	68,367
Total open land	Acre	1,237,367	1,237,367	1,237,367	1,237,367	1,237,367
			Livestock			
Cows	No.	91,561	72,453	62,517	62,517	62,517
Steers	No.	500,575	410,815	-------	-------	-------
Sows	No.	5,550	5,550	-------	-------	-------
			Resources			
Investment capital	Dol.	105,777,758	101,623,906	69,843,813	69,843,813	69,936,059
Operating capital	Dol.	80,960,517	71,110,414	23,279,465	23,279,465	23,934,023
Resident labor available*	Hour	26,643,620	26,643,620	26,643,620	26,643,620	26,643,620
Resident labor used	Hour	9,220,304	8,915,514	6,584,464	6,584,464	6,717,185
Seasonal labor hired	Hour	2,509,978	2,383,438	2,001,497	2,001,497	2,066,950

(Continued)

Appendix Table 7. - Model 2 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bale	-------	122,106	579,731	579,731	659,348
Peanuts	Ton	238,154	238,154	238,154	238,154	167,956
Corn sold	Bu.	1,045,380	-------	-------	-------	-------
Corn produced for feed	Bu.	18,593,525	15,438,225	-------	-------	-------
Oats	Bu.	4,585,380	9,493,620	20,892,900	20,892,900	20,892,900
Hay fed	Ton	375,868	308,480	78,797	78,797	78,797
Market hogs sold	No.	86,025	86,025	-------	-------	-------
Fat calves sold	No.	44,242	54,340	46,888	46,888	46,888
Net return to operator labor, management, and land	Dol.	41,260,553	41,379,726	51,727,295	66,220,580	81,855,460
Return to land**	Dol.	6,496,177	6,496,177	6,496,177	6,496,177	6,496,177
Net return to operator labor and management	Dol.	34,764,376	34,883,549	45,231,118	59,724,403	75,359,283

*Includes 1,500 part-time operators, 8,540 full-time operators, and 680 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 8. - Model 2: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1959 Farm Size Distribution - Varying Prices for Cotton - Peanut Prices at 30 Per Cent Below Base)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
				Acreage		
Cotton	Acre	-------	97,592	540,620	673,291	673,291
Peanuts	Acre	238,154	238,154	112,214	26,271	26,271
Corn	Acre	357,071	280,695	44,579	10,205	10,205
Oats	Acre	76,423	158,227	348,215	348,215	348,215
Coastal bermudagrass hay	Acre	-------	-------	15,646	15,646	15,646
Corn silage	Acre	118,301	97,085	16,113	3,760	3,760
Pasture	Acre	440,818	359,014	132,970	101,280	101,280
Idle open land	Acre	6,600	6,600	270,010	58,699	58,699
Total open land	Acre	1,237,367	1,237,367	1,237,367	1,237,367	1,237,367
				Livestock		
Cows	No.	91,561	72,453	62,517	62,517	62,517
Steers	No.	500,575	410,815	69,286	16,113	16,113
Sows	No.	5,550	5,550	-------	-------	-------
				Resources		
Investment capital	Dol.	105,777,758	101,623,906	75,341,304	71,130,703	71,130,703
Operating capital	Dol.	80,960,517	71,110,414	32,962,520	27,242,727	27,242,727
Resident labor available*	Hour	26,643,620	26,643,620	26,643,620	26,643,620	26,643,620
Resident labor used	Hour	9,220,304	8,915,514	7,273,761	7,080,778	7,080,778
Seasonal labor hired	Hour	2,509,978	2,383,438	2,226,560	2,207,322	2,207,322

(Continued)

Appendix Table 8. - Model 2 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bale	-------	122,106	654,398	787,069	787,069
Peanuts	Ton	238,154	238,154	112,214	26,271	26,271
Corn sold	Bu.	1,045,380	-------	-------	-------	-------
Corn produced for feed	Bu.	18,593,525	15,438,225	2,451,845	561,275	561,275
Oats	Bu.	4,585,380	9,493,620	20,892,900	20,892,900	20,892,900
Hay fed	Ton	375,868	308,480	130,896	90,613	90,613
Market hogs sold	No.	86,025	86,025	-------	-------	-------
Fat calves sold	No.	68,671	54,340	46,888	46,888	46,888
Net return to operator labor, management, and land	Dol.	29,607,283	29,963,300	41,006,145	59,436,822	79,113,548
Return to land**	Dol.	6,496,177	6,496,177	6,496,177	6,496,177	6,496,177
Net return to operator labor and management	Dol.	23,111,106	23,467,123	34,509,968	52,940,645	72,617,371

*Includes 1,500 part-time operators, 8,540 full-time operators, and 680 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 9. - Model 2: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1959 Farm Size Distribution - Varying Prices for Cotton - Peanut Prices at 30 Per Cent Above Base)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Acreage			
Cotton	Acre	-------	97,592	475,372	475,372	475,372
Peanuts	Acre	238,154	238,154	238,154	238,154	238,154
Corn	Acre	357,071	280,695	-------	-------	-------
Oats	Acre	76,423	158,227	348,215	348,215	348,215
Coastal bermudagrass hay	Acre	-------	-------	15,646	15,646	15,646
Corn silage	Acre	118,301	97,085	-------	-------	-------
Pasture	Acre	440,818	359,014	91,613	91,613	91,613
Idle open land	Acre	6,600	6,600	68,367	68,367	68,367
Total open land	Acre	1,237,367	1,237,367	1,237,367	1,237,367	1,237,367
			Livestock			
Cows	No.	91,561	72,453	62,517	62,517	62,517
Steers	No.	500,575	410,815	-------	-------	-------
Sows	No.	5,550	5,550	-------	-------	-------
			Resources			
Investment capital	Dol.	105,777,758	101,623,906	69,843,813	69,843,813	69,843,813
Operating capital	Dol.	80,960,517	71,110,414	23,279,465	23,279,465	23,279,465
Resident labor available*	Hour	26,643,620	26,643,620	26,643,620	26,643,620	26,643,620
Resident labor used	Hour	9,220,304	8,915,514	6,584,464	6,584,464	6,584,464
Seasonal labor hired	Hour	2,509,978	2,383,438	2,001,497	2,001,497	2,001,497

(Continued)

Appendix Table 9. - Model 2 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bale	-------	122,106	579,731	579,731	579,731
Peanuts	Ton	238,154	238,154	238,154	238,154	238,154
Corn sold	Bu.	1,045,380	-------	-------	-------	-------
Corn produced for feed	Bu.	18,593,525	15,438,225	-------	-------	-------
Oats	Bu.	4,585,380	9,493,620	20,892,900	20,892,900	20,892,900
Hay fed	Ton	375,868	308,480	78,797	78,797	78,797
Market hogs sold	No.	86,025	86,025	-------	-------	-------
Fat calves sold	No.	68,671	54,340	46,888	46,888	46,888
Net return to operator labor, management, and land	Dol.	52,440,109	52,796,126	62,337,223	75,317,694	88,298,164
Return to land**	Dol.	6,496,177	6,496,177	6,496,177	6,496,177	6,496,177
Net return to operator labor and management	Dol.	45,943,932	46,299,949	55,841,046	68,821,517	81,801,987

*Includes 1,500 part-time operators, 8,540 full-time operators, and 680 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 10. - Model 2: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1975 Farm Size Distribution - Varying Prices for Cotton - Peanuts at Base Prices)

Item	Unit	Cotton prices (cents per pound of lint) 15.0	20.0	25.0	30.0	35.0
			Acreage			
Cotton	Acre	-------	128,378	472,853	472,853	538,800
Peanuts	Acre	236,739	236,739	236,739	236,739	170,792
Corn	Acre	353,822	252,900	-------	-------	-------
Oats	Acre	32,193	138,057	346,312	346,312	346,312
Coastal bermudagrass hay	Acre	-------	-------	21,289	21,289	21,289
Corn silage	Acre	119,031	91,575	-------	-------	-------
Pastrue	Acre	486,996	381,132	124,666	124,666	124,666
Idle open land	Acre	1,760	1,760	28,682	28,682	28,682
Total open land	Acre	1,230,541	1,230,541	1,230,541	1,230,541	1,230,541
			Livestock			
Cows	No.	124,984	100,256	85,068	85,068	85,068
Steers	No.	503,882	387,722	-------	-------	-------
Sows	No.	1,480	1,480	-------	-------	-------
			Resources			
Investment capital	Dol.	113,369,892	107,952,479	78,512,169	78,512,169	78,522,457
Operating capital	Dol.	81,053,972	68,337,114	24,034,071	24,034,071	24,699,577
Resident labor available*	Hour	21,378,412	21,378,412	21,378,412	21,378,412	21,378,412
Resident labor used	Hour	8,844,493	8,455,237	6,542,074	6,542,074	6,660,649
Seasonal labor hired	Hour	2,645,567	2,479,865	1,990,353	1,990,353	2,015,566

(Continued)

Appendix Table 10. - Model 2 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bale	-------	160,634	576,530	576,530	651,923
Peanuts	Ton	236,739	236,739	236,739	236,739	170,792
Corn sold	Bu.	1,467,900	-------	-------	-------	-------
Corn produced for feed	Bu.	17,992,310	13,909,500	-------	-------	-------
Oats	Bu.	1,931,580	8,283,420	20,778,720	20,778,720	20,778,720
Hay fed	Ton	378,131	290,923	107,232	107,232	107,232
Market hogs sold	No.	22,940	22,940	-------	-------	-------
Fat calves sold	No.	62,124	75,192	63,801	63,801	63,801
Net return to operator labor, management, and land	Dol.	42,140,161	42,306,518	52,868,232	67,281,479	82,709,699
Return to land**	Dol.	6,460,340	6,460,340	6,460,340	6,460,340	6,460,340
Net return to operator labor and management	Dol.	35,679,821	35,846,178	46,407,892	60,821,139	76,249,359

*Includes 400 part-time operators, 6,716 full-time operators, and 880 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 11. - Model 2: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1975 Farm Size Distribution - Varying Prices for Cotton - Peanut Prices at 30 Per Cent Below Base)

Item	Unit	Cotton prices (cents per pound of lint) 15.0	20.0	25.0	30.0	35.0
			Acreage			
Cotton	Acre	-------	128,378	537,480	669,378	669,378
Peanuts	Acre	236,739	236,739	145,659	34,127	34,127
Corn	Acre	353,822	252,900	19,430	4,448	4,448
Oats	Acre	32,193	138,057	346,312	346,312	346,312
Coastal bermudagrass hay	Acre	-------	-------	21,289	21,289	21,289
Corn silage	Acre	119,031	91,575	7,023	1,639	1,639
Pasture	Acre	486,996	381,132	142,692	128,880	128,880
Idle open land	Acre	1,760	1,760	10,656	24,468	24,468
Total open land	Acre	1,230,541	1,230,541	1,230,541	1,230,541	1,230,541
			Livestock			
Cows	No.	124,984	100,256	85,068	85,068	85,068
Steers	No.	503,882	387,722	30,199	7,023	7,023
Sows	No.	1,480	1,480	-------	-------	-------
			Resources			
Investment capital	Dol.	113,369,892	107,952,479	80,890,945	78,994,924	78,994,924
Operating capital	Dol.	81,053,972	68,337,114	28,641,154	26,940,996	26,940,996
Resident labor available*	Hour	21,378,412	21,378,412	21,378,412	21,378,412	21,378,412
Resident labor used	Hour	8,844,493	8,455,237	6,905,395	6,950,173	6,950,173
Seasonal labor hired	Hour	2,645,567	2,479,865	2,086,936	2,075,367	2,075,367

(Continued)

Appendix Table 11. - Model 2 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bale	-------	160,634	650,603	782,501	782,501
Peanuts	Ton	236,739	236,739	145,659	34,127	34,127
Corn sold	Bu.	1,467,900	-------	-------	-------	-------
Corn produced for feed	Bu.	17,992,310	13,909,500	1,068,650	244,640	244,640
Oats	Bu.	1,931,580	8,283,420	20,778,720	20,778,720	20,778,720
Hay fed	Ton	378,131	290,923	129,940	112,382	112,382
Market hogs sold	No.	22,940	22,940	-------	-------	-------
Fat calves sold	No.	93,738	75,192	63,801	63,801	63,801
Net return to operator labor, management, and land	Dol.	30,480,182	30,953,043	41,992,528	60,107,165	79,669,684
Return to land**	Dol.	6,460,340	6,460,340	6,460,340	4,460,340	6,460,340
Net return to operator labor and management	Dol.	24,019,842	24,492,703	35,532,188	53,646,825	73,209,344

*Includes 400 part-time operators, 6,716 full-time operators, and 880 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 12. - Model 2: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1975 Farm Size Distribution - Varying Prices for Cotton - Peanut Prices at 30 Per Cent Above Base)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Acreage			
Cotton	Acre	-------	128,378	472,853	472,853	472,853
Peanuts	Acre	236,739	236,739	236,739	236,739	236,739
Corn	Acre	353,822	252,900	-------	-------	-------
Oats	Acre	32,193	138,057	346,312	346,312	346,312
Coastal bermudagrass hay	Acre	-------	-------	21,289	21,289	21,289
Corn silage	Acre	119,031	91,575	-------	-------	-------
Pasture	Acre	486,996	381,132	124,666	124,666	124,666
Idle open land	Acre	1,760	1,760	28,682	28,682	28,682
Total open land	Acre	1,230,541	1,230,541	1,230,541	1,230,541	1,230,541
			Livestock			
Cows	No.	124,984	100,256	85,068	85,068	85,068
Steers	No.	503,882	387,722	-------	-------	-------
Sows	No.	1,480	1,480	-------	-------	-------
			Resources			
Investment capital	Dol.	113,369,892	107,952,479	78,512,169	78,512,169	78,512,169
Operating capital	Dol.	81,053,972	68,337,114	24,034,071	24,034,071	24,034,071
Resident labor available*	Hour	21,378,412	21,378,412	21,378,412	21,378,412	21,378,412
Resident labor used	Hour	8,844,493	8,455,237	6,542,074	6,542,074	6,542,074
Seasonal labor hired	Hour	2,645,567	2,479,865	1,990,353	1,990,353	1,990,353

(Continued)

Appendix Table 12. - Model 2 (Continued)

Item	Unit	Cotton prices (cents per pound of lint)				
		15.0	20.0	25.0	30.0	35.0
			Production			
Cotton	Bale	-------	160,634	576,530	576,530	576,530
Peanuts	Ton	236,739	236,739	236,739	236,739	236,739
Corn sold	Bu.	1,467,900	-------	-------	-------	-------
Corn produced for feed	Bu.	17,992,310	13,909,500	-------	-------	-------
Oats	Bu.	1,931,580	8,283,420	20,778,720	20,778,720	20,778,720
Hay fed	Ton	378,131	290,923	107,232	107,232	107,232
Market hogs sold	No.	22,940	22,940	-------	-------	-------
Fat calves sold	No.	93,738	75,192	63,801	63,801	63,801
Net return to operator labor, management, and land	Dol.	53,187,098	53,659,958	63,089,169	75,378,155	87,667,141
Return to land**	Dol.	6,460,340	6,460,340	6,460,340	6,460,340	6,460,340
Net return to operator labor and management	Dol.	46,726,758	47,199,618	56,628,829	68,917,815	81,206,801

*Includes 400 part-time operators, 6,716 full-time operators, and 880 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 13. - Model 1: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1959 Farm Size Distribution - Varying Prices for Peanuts - Cotton at Base Prices)

Item	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
			Acreage			
Cotton	Acre	754,202	643,344	643,344	643,344	643,344
Peanuts	Acre	-------	322,568	322,568	322,568	322,568
Corn	Acre	156,711	-------	-------	-------	-------
Oats	Acre	444,878	471,231	471,231	471,231	471,231
Coastal bermudagrass hay	Acre	-------	15,817	15,817	15,817	15,817
Corn silage	Acre	54,998	-------	-------	-------	------
Pasture	Acre	201,623	92,616	92,616	92,616	92,616
Idle open land	Acre	62,464	129,300	129,300	129,300	129,300
Total open land	Acre	1,674,876	1,674,876	1,674,876	1,674,876	1,674,876
			Livestock			
Cows	No.	40,220	63,201	63,201	63,201	63,201
Steers	No.	234,062	-------	-------	-------	-------
Sows	No.	2,077	-------	-------	-------	-------
			Resources			
Investment capital	Dol.	100,303,010	90,235,213	90,235,213	90,235,213	90,235,213
Operating capital	Dol.	61,261,590	30,685,235	30,685,235	30,685,235	30,685,235
Resident labor available*	Hour	39,087,038	39,087,038	39,087,038	39,087,038	39,087,038
Resident labor used	Hour	10,736,587	8,874,289	8,874,289	8,874,289	8,874,289
Seasonal labor hired	Hour	3,228,013	2,686,640	2,686,640	2,686,640	2,686,640

(Continued)

Appendix Table 13. - Model 1 (Continued)

Item	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
			Production			
Cotton	Bale	909,611	784,796	784,796	784,796	784,796
Peanuts	Ton	-------	322,568	322,568	322,568	322,568
Oats	Bu.	26,715,120	28,273,860	28,273,860	28,273,860	28,273,860
Hay fed	Ton	175,761	79,661	79,661	79,661	79,661
Market hogs sold	No.	32,194	-------	-------	-------	-------
Fat calves sold	No.	30,165	47,401	47,401	47,401	47,401
Net return to operator labor, management, and land	Dol.	54,748,749	59,847,247	70,150,916	80,454,132	90,757,394
Return to land**	Dol.	8,793,099	8,793,099	8,793,099	8,793,099	8,793,099
Net return to operator labor and management	Dol.	45,955,650	51,054,148	61,357,817	71,661,033	81,964,295

*Includes 6,700 part-time operators, 11,894 full-time operators, and 680 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 14. - Model 1: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1975 Farm Size Distribution - Varying Prices for Peanuts - Cotton at Base Prices)

Item	Unit	Peanut prices (dollars per ton) 96	128	160	192	224
			Acreage			
Cotton	Acre	747,432	640,825	640,825	640,825	640,825
Peanuts	Acre	-------	321,152	321,152	321,152	321,152
Corn	Acre	158,295	-------	-------	-------	-------
Oats	Acre	434,940	469,328	469,328	469,328	469,328
Coastal bermudagrass hay	Acre	-------	21,460	21,460	21,460	21,460
Corn silage	Acre	56,250	-------	-------	-------	-------
Pasture	Acre	225,023	125,670	125,670	125,670	125,670
Idle open land	Acre	46,110	89,615	89,615	89,615	89,615
Total open land	Acre	1,668,050	1,668,050	1,668,050	1,668,050	1,668,050
			Livestock			
Cows	No.	54,578	85,752	85,752	85,752	85,752
Steers	No.	238,562	-------	-------	-------	-------
Sows	No.	1,736	-------	-------	-------	-------
			Resources			
Investment capital	Dol.	105,820,925	98,903,577	98,903,577	98,903,577	98,903,577
Operating capital	Dol.	62,181,310	31,439,842	31,439,842	31,439,842	31,439,842
Resident labor available*	Hour	33,821,830	33,821,830	33,821,830	33,821,830	33,821,830
Resident labor used	Hour	10,555,442	8,831,898	8,831,898	8,831,898	8,831,898
Seasonal labor hired	Hour	3,121,186	2,675,518	2,675,518	2,675,518	2,675,518

(Continued)

Appendix Table 14. - Model 1 (Continued)

Item	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
			Production			
Cotton	Bale	901,968	781,595	781,595	781,595	781,595
Peanuts	Ton	-------	321,152	321,152	321,152	321,152
Oats	Bu.	26,118,900	28,159,680	28,159,680	28,159,680	28,159,680
Hay fed	Ton	179,063	108,096	108,096	108,096	108,096
Market hogs sold	No.	26,908	-------	-------	-------	-------
Fat calves sold	No.	40,934	64,314	64,314	64,314	64,314
Net return to operator labor, management, and land	Dol.	55,972,600	61,590,363	71,851,854	82,113,061	92,374,304
Return to land**	Dol.	8,757,262	8,757,262	8,757,262	8,757,262	8,757,262
Net return to operator labor and management	Dol.	47,215,338	52,833,101	63,094,592	73,355,799	83,617,042

*Includes 5,600 part-time operators, 10,070 full-time operators, and 880 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 15. - Model 2: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1959 Farm Size Distribution - Varying Prices for Peanuts - Cotton at Base Prices)

Item	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
			Acreage			
Cotton	Acre	545,570	475,372	475,372	475,372	475,372
Peanuts	Acre	-------	238,154	238,154	238,154	238,154
Corn	Acre	123,200	-------	-------	-------	-------
Oats	Acre	324,203	348,215	348,215	348,215	348,215
Coastal bermudagrass hay	Acre	-------	15,646	15,646	15,646	15,646
Corn silage	Acre	44,756	-------	-------	-------	-------
Pasture	Acre	172,628	91,613	91,613	91,613	91,613
Idle open land	Acre	27,010	68,367	68,367	68,367	68,367
Total open land	Acre	1,237,367	1,237,367	1,237,367	1,237,367	1,237,367
			Livestock			
Cows	No.	39,783	62,517	62,517	62,517	62,517
Steers	No.	190,051	-------	-------	-------	-------
Sows	No.	465	-------	-------	-------	-------
			Resources			
Investment capital	Dol.	75,893,463	69,843,831	69,843,831	69,843,831	69,843,831
Operating capital	Dol.	47,691,475	23,279,465	23,279,465	23,279,465	23,279,465
Resident labor available*	Hour	26,643,620	26,643,620	26,643,620	26,643,620	26,643,620
Resident labor used	Hour	7,905,700	6,584,464	6,584,464	6,584,464	6,584,464
Seasonal labor hired	Hour	2,350,863	2,001,467	2,001,467	2,001,467	2,001,467

(Continued)

Appendix Table 15. - Model 2 (Continued)

Item	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
			Production			
Cotton	Bale	659,654	579,731	579,731	579,731	579,731
Peanuts	Ton	-------	238,154	238,154	238,154	238,154
Oats	Bu.	19,462,020	20,892,900	20,892,900	20,892,900	20,892,900
Hay fed	Ton	142,670	78,797	78,797	78,797	78,797
Market hogs sold	No.	7,208	-------	-------	-------	-------
Fat calves sold	No.	29,837	46,888	46,888	46,888	46,888
Net return to operator labor, management, and land	Dol.	41,947,129	46,019,985	53,631,295	61,242,298	68,853,365
Return to land**	Dol.	6,496,177	6,496,177	6,496,177	6,496,177	6,496,177
Net return to operator labor and management	Dol.	35,450,952	39,523,808	47,135,118	54,746,121	62,357,188

*Includes 1,500 part-time operators, 8,540 full-time operators, and 680 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.

Appendix Table 16. - Model 2: Aggregates for Specified Items, Wiregrass Area, Alabama (Advanced Technology - 1975 Farm Size Distribution - Varying Prices for Peanuts - Cotton at Base Prices)

Item	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
			Acreage			
Cotton	Acre	538,800	472,854	472,854	472,854	472,854
Peanuts	Acre	-------	236,739	236,739	236,739	236,739
Corn	Acre	124,784	-------	-------	-------	-------
Oats	Acre	314,265	346,312	346,312	346,312	346,312
Coastal bermudagrass hay	Acre	-------	21,289	21,289	21,289	21,289
Corn silage	Acre	46,008	-------	-------	-------	-------
Pasture	Acre	196,028	124,666	124,666	124,666	124,666
Idle open land	Acre	10,656	28,681	28,681	28,681	28,681
Total open land	Acre	1,230,541	1,230,541	1,230,541	1,230,541	1,230,541
			Livestock			
Cows	No.	54,142	85,068	85,068	85,068	85,068
Steers	No.	194,551	-------	-------	-------	-------
Sows	No.	124	-------	-------	-------	-------
			Resources			
Investment capital	Dol.	81,411,378	78,512,195	78,512,195	78,512,195	78,512,195
Operating capital	Dol.	48,611,195	24,034,071	24,034,071	24,034,071	24,034,071
Resident labor available*	Hour	21,378,412	21,378,412	21,378,412	21,378,412	21,378,412
Resident labor used	Hour	7,724,555	6,542,074	6,542,074	6,542,074	6,542,074
Seasonal labor hired	Hour	2,244,037	1,990,345	1,990,345	1,990,345	1,990,345

(Continued)

Appendix Table 16. - Model 2 (Continued)

Item	Unit	Peanut prices (dollars per ton)				
		96	128	160	192	224
			Production			
Cotton	Bale	652,011	576,530	576,530	576,530	576,530
Peanuts	Ton	-------	236,739	236,739	236,739	236,739
Oats	Bu.	18,865,740	20,778,720	20,778,720	20,778,720	20,778,720
Hay fed	Ton	145,971	107,232	107,232	107,232	107,232
Market hogs sold	No.	1,922	-------	-------	-------	-------
Fat calves sold	No.	40,606	63,801	63,801	63,801	63,801
Net return to operator labor, management, and land	Dol.	43,171,081	47,763,102	55,332,232	62,901,226	70,470,275
Return to land**	Dol.	6,460,340	6,460,340	6,460,340	6,460,340	6,460,340
Net return to operator labor and management	Dol.	36,710,741	41,302,762	48,871,892	56,440,886	64,009,935

*Includes 400 part-time operators, 6,716 full-time operators, and 880 full-time hired men.

**Open land valued at $105 per acre. Return to land is 5% per year or $5.25 per acre per year.