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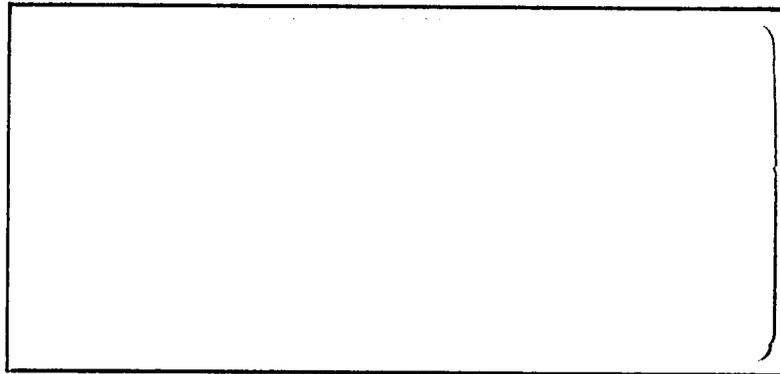
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**INTERNATIONAL ECONOMIC DEVELOPMENT PROGRAM**



**Southern University and A & M College  
Post Office Box 9846  
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SERIES #117-76

IMPACT OF A LARGE SCALE COOPERATE-TYPE FARM  
ON SMALL AND INTERMEDIATE FARM FIRM

BY

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FOREWORD

The Unemployment and Underemployment Institute was created to coordinate all international economic development activities of the 211(d) grant at Southern University.

In 1972, the Agency for International Development (AID) approved a five year grant to Southern University to strengthen and increase its capacity in economic/ agricultural economics to enhance Southern's capabilities to contribute to the resolution of problems of rural unemployment and underemployment in developing countries.

The general objectives of the Institute are (a) to develop and coordinate the activities of the University for greater participation in international economic development programs; (b) to make available the capacities and expertise thus developed to public and private agencies involved in industrial development programs; and (c) to conduct research, seminars, and workshops on domestic and international development problems including cooperatives, manpower utilization, small farmers, housing, population, nutrition, leadership training, and community development.

In keeping with objective (a), the University supports several faculty members working towards advanced degrees in the area of economic development and related disciplines, supports undergraduate scholarships to foreign and U. S. nationals in the Department of Agricultural Economics and Economics, provides travel to professional seminars for faculty, foreign exposure to development experiences, and special training on techniques of program design and evaluation.

In keeping with objective (b), the Institute sponsors an International Development Seminar Series, Student-Faculty & Staff Seminar Series, and hosts foreign individuals and groups interested in economic development programs at Southern University.

Results of research projects consistent with the objectives of this program are published under the Institute's Faculty-Staff Research Paper Series. Papers published under this series reflects the diversity of interests and specialties of our faculty and staff.

The above activities of the Institute demonstrate the capacities and expertise of Southern University developed through the 211(d) program. As a result of the 211(d) grant, the Unemployment-Underemployment Institute at Southern University is in a position to offer expert and technical personnel to private and public agencies involved in international economic development programs.

T. T. Williams  
Director



IMPACT OF A LARGE SCALE COOPERATE-TYPE FARM  
ON SMALL AND INTERMEDIATE FARM FIRM\*

BY  
LEROY DAVIS\*\*

The aim of this paper is to delineate some of the significant consequences of a large farm on small and immediate size farms in a given community. The impact is stated in rather general terms because the specific consequences can not be determined a priority, that is, before on site investigation and collection of data relative to the particular aspects of the community or communities where the large firm will be located. The near-by communities will also be affected to some degree by the large firm. In the first sections of this paper the general setting and background of the farm sector subject to corporate type farms is delineated. Later sections deal with more specific consequences and impact. A set of assumptions are made; and inferences are drawn based on the assumptions and economic theory.

\*Paper prepared for The Emergency Land Fund, Atlanta, Georgia  
May 30, 1975

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The development of 6,000 acres of farm will have a tremendous impact on a farm community. Its initial impact could be felt by various subjects of the community including other farms (small, medium, and large), credit institutions, institutions supplying farm services and supply, the transportation system and local markets. Numerous factors will come into play relative to the extent and magnitude of the impact of this non-normal unit. Such factors are inherent in the farming community itself. Each community has its own peculiarities. Therefore, a detailed description of the recipient community would enhance the accuracy of the projected effects of a large scale farm firm.

#### Dis-Equilibrium

A 6,000 acre farm would cause a serious disturbance in most any farming area in the world. There are few exceptions. One exception is the cattle and sheep producing area of Australia; where one million acres are not uncommon. Certain areas of Texas may be able to absorb a large unit of the common type without severe consequences. But for most farming areas the average size farm is well under 1,000 acres. Some adjustments in the organization and structure of the existing community would be necessary for a movement toward equilibrium. It must be pointed out that farm communities generally, in the United States are in a comparative state of equilibrium. That is, very few changes are taking place. The changes that are occurring are long term and gradual. Presently we note a gradual decline in the number of farms, some shifting in the location of production, moderate increases in farm size, and a

rather constant increase in farm output. Such changes are constant and the farm communities have adjusted to the changing conditions. Such changes are expected to continue in the foreseeable future.

The new large farm will create a disturbance in the passive system. This firm will compete for the limited resources of the community. The firm will affect the demand and price of land. It will compete for credit in the local financial market. It will compete for supplies and farm implements. It may flood local markets with supplies, if the bulk of its products are marketed in the surrounding area. The ramification of these adjustments are discussed in more detail in succeeding sections of this paper.

#### The Farm Community

The effect of a large farm unit entry into a farm community will be determined in part by the characteristics of the community itself. In order to delineate the potential effect, it is necessary to characterize how farm communities differ. Farms are defined by the production and marketing areas. Here we will ignore the legal boundaries such as county lines and state lines. This is done because production and marketing areas often do transcend legal boundaries.

The production area is limited by the physical and biological characteristics inherent in nature. Soil and weather conditions are the factors that determine the type or types of crops produced in the region, which has been defined as a farm community. In many sections of this country a variety of crops and livestock enterprises

can be produced. However, it can be safely said that the total possible number of crops that can be produced in a given area is never exhausted. Even though many crops and enterprises may be produced, some thrive better than others in different regions. This leads to specialization of production. The phenomena is referred by economists as the law of comparative advantage, which has been known for quite some time. The specialization occurs among countries, states or provinces within countries, and sections within the state themselves. Specialization of crop and livestock production has been increasing in the south and southeastern parts of the United States in recent years. This movement toward further specialization is apt to continue for some time in the future, if trends in profit margins and competition persist.

Both physical and economic factors determine the extent of a market area. The area is a geographical space of a varying size over which farm products are exchanged. Specific factors limiting the magnitude of the market area are the demand for the product, the transportation system and the physical location of the producer. (This list is not meant to be exhaustive; the more significant factors are cited here.) Market areas are inseparately tied to production areas. When local supply (production) exceeds local demand, the excess supply (production) must be marketed outside the local area. Thus, the market area is, in effect, determined by local demand and access to other markets. This leads to the transportation system which plays a significant role in influencing the extent of the marketing area. Firms and localities

having access to efficient low cost transportation have a definite advantage in production and marketing farm products. Low cost producing areas, must have an efficient market system to fully realize the economies of comparative advantage. Low cost transportation exists usually in areas where competition among the different mode of transportation is intense. A highly competitive transportation system exists in the midwest where corn and soybean have relative advantage over other crops. Shippers of corn and soybean have access to rail, truck and water transportation. In the last decade several new, more efficient (less costly) innovations have come forth. Physical location of the producing area is of great importance. That is, the location of the production area with respect to market outlets. For instance, fruits grown in Florida have a locational advantage over fruits emanating from California because Florida is located closer to the heavily populated areas along the eastern seaboard. However, California fruits fair relatively well because of blanket transportation rates that have been implemented to enhance the competitive position. Producing areas which have access to several market outlets have an advantage over areas where only one or two market alternatives are available. Grain elevators in Illinois with larger numbers of available markets and modes of transport consistently offered higher prices to farmers for grain sold at local sites.

#### Corporate Farm

There has been a recent trend toward large scale farm firms in the United States. These units consist of several thousand acres of

land, are usually diversified (produce several enterprises), are highly capital intensive, and may be vertically intergrated. The large firms are able to take advantage of the economies of size available in farming. The lower production costs associated with large production are a result of greater utilization of capital for labor, better use of physical capital inputs (machinery, equipment, building, etc.), purchasing in bulk at lower per unit cost, a better bargaining position in marketing products, and better management of marketing activities. Large corporate farm firms have the management skills and technique to stay abreast with current and past market conditions. Their knowledge of the markets enable them to sell when prices are favorable, hedge against risk of price change or even speculate to earn additional profits on the purchase and sale of farm commodities.

Large firms usually have the resources and skills to produce several crop and livestock enterprises. A combination of enterprises is chosen to maximize the profits from the firm's operation. The amount and type of enterprise will vary among time periods, depending on relative prices of inputs and outputs (factors of production and products). This technique is usually computerized and performed by state universities or other agencies associated with farming. By producing several enterprises some insurance is created against losses due to weather, diseases and falling output prices. Total agricultural production has remained relative constant from year-to-year, but total output of individual crops will vary because of adverse biological and physical conditions. The

effect of weather, diseases and insects will not be the same for all type of enterprises. Thus, causing damage at different degrees and on different crops and livestock. In effect, leaving the farmer insured against total or complete loss.

Capital-labor substitution has been occurring in the American farm sector for more than a century. This substitution has in a large degree been responsible for the rapid rise in labor productivity. Large farm units have been more successful in substituting relatively low cost capital for relatively high cost labor. Small farms have been subject to higher per unit cost of production due to the inability to substitute capital for labor at sufficient rates to compete with large farms. The rising labor productivity has lead to increases in total farm output and therefore falling product prices.

The vertically intergrated farm firm retains ownership of the raw produce through more than one production stage. It is at the latter production stages that the product becomes more valuable. Such firms increase their profits as well as enhance their relative competitive positions. Small firms are lacking in capital and technical skills and are unable to do more than primary for production (raw products).

#### Effect on Small and Intermediate Farms

In order to systematically outline the effects of a large scale firm on small and intermediate firms in a given community a set of necessary assumptions are made. The assumptions are (1) the area consist of a large number of small and intermediate

size firms, (2) farming is the major industry in the area, (3) a large proportion of the existing firms are inefficient, (4) there exist no effective organization for collective action by the small firms, and (5) land must be acquired by the incoming large; that is the land must be purchased, leased, etc. Under this set of assumptions the impact of a large corporate farm will be felt in the following categories:

1. Demand for land and land values
2. Purchased inputs
3. Transportation system
4. Product prices
5. Farm services
6. Labor market
7. Financial market

Demand for land and land values---The incoming firm will enter the land market to acquire the necessary land to organize the farm. Since there is very little land available for farming that is not in use, prices of land will be bid higher to attract the necessary quantity and quality. The higher prices of land would benefit the land owners, but would adversely affect farmers who try to expand via purchase acquisition. If the incoming firm decided to lease the land, land rents may be bid higher. Inefficient small farm operators may find it more advantageous to lease their farm rather than continue to operate. On the other hand, if the firm decides to purchase the land, these same inefficient farmers may decide to sell their land and earn higher rate returns in some investment opportunities.

Production costs will also rise because the price of the input land has increased. In fact, investments in land by large non-farm corporations have increased the price of land in recent years. These firms have been attracted to farm land investment because of the tax incentives.

Purchased inputs---The new firm's entry will also be felt in the purchased input market. It will increase the demand and drive prices upward. Increases in output do not ordinarily come without increases in purchased inputs. Large farms tend to use greater quantities of such inputs than small farms because large farms are more capital intensive. Inputs such as feed, seed, fertilizer, and farm machinery and implement will show some increase in demand in the local market. The smaller farms will experience a disadvantage at higher prices of these inputs. The farm sector has shown some shortages of supplies in the last two years. Shortages of fertilizer have particularly affected the supply of farm products.

Transportation system---If the large firm increases the quantity of production in the local area, the transportation network will be affected. The effect will be an increase in the demand for transportation services in the form of more trucks, railroad cars or barges. During the harvesting season, shortages of transport units frequently appear. Unregulated carriers (barges) may and do raise transport rate during periods of large demand and shortage. This usually works to the disadvantage of small farmers, and losses due to weather damage do occur. Railroads set lower rates for bulk shipment; this also is in the favor of large firms that are better able to utilize volume rates.

Product prices---Agricultural producers are price takers.

This is especially true on an individual basis. The individual farmer acting alone will have little or no influence on prices of products. The farm sector approximates the perfectly competitive market with many buyers, many sellers and a homogeneous product. The situation stated above would approach the perfect market model. It should be noted that a large firm may have a strong influence on local markets. It may depress prices in the local market if it is located in a surplus producing area. If the firm engages in vegetable production or other products consumed locally, the prices may be affected by this firm if it supplies a major proportion of the products sold. In many cases only the low quality vegetables are marketed in the producing area. With durable products such as corn and cotton, the large producers will have less effect because the products are sold for consumption in areas other than local markets. Studies have shown that surplus producing areas consistently have lower prices than deficit producing areas.

Some buyers of farm products will offer higher prices to large firms because of their ability to provide the quantity and quality desired in the desired time period.

Farm Services---Large farm firms utilize farm services to greater extents than do small firms. These services are provided by both public and private institutions. The services include technical assistance for state universities, state departments of agriculture, federal agencies in local communities and state, and services provided by suppliers of farm implements and other inputs.

The larger farm will seek out the services of these units. The agencies to some degree favor the larger farm operator because the chances for significant results are greater than with small operators. Nonetheless, this works to the advantage of large scale producers.

Labor market---The effect of a large farm on the local market may be undesirable. This is true because large farms tend to use less labor rather than more labor. Remember, small farms are more labor intensive. Our studies show that the incidence of poverty is greater in areas with high concentration of large farms. The inefficient small farmer may lease or sell his land and continue to reside in the rural area and become seasonally or totally unemployed. Unemployment will definitely increase unless out-migration occurs or additional jobs are created by other industries.

Financial market---Money capital is needed for the purchase of land and for financing production activities. Farm capital usually comes from local or surrounding financial markets. Financial institutions are, for the most part, limited in the size area where loans can be made. The market area is usually well delineated and very little overlapping occurs; that is, banks and federal agencies make loans to farmers only within a certain radius of their location. Hence, barring outside sources of money capital, the large firm will put additional pressure on local lenders to provide the necessary funds for expansion and production. Interest rates in the local area may be bid up; or the available capital may be spread further among the producers. All this works to the disadvantage of small operators. Adequate quantities of capital are essential to small farm worth as

well as the survival. The farm sector has been experiencing shortages of capital in recent years. The shortages have occurred because of the low returns on investment in the farm sector, increase use of purchase inputs and rising input prices.

### Integration of Large and Small Farms

Whether the development of a large farm located in a community dominated by small farm operators will benefit or detriment the small farm will depend in a large part on the objectives of the incoming large firm. There are some possible mutual benefits if such benefits are actively sort by organizers of the large farm. The objectives of this institution should be clearly defined and adhered to. If the large firm sets a policy of peaceful coexistence and mutual survival, then this is reasonably possible. But if its objectives are to drive out the small land holders via higher prices of land and other inputs, this is also possible with adequate amounts of capital.

There are certain areas where a large unit can benefit the small operators. For instance, it may act as a laboratory or experimental unit to demonstrate new technologies, new techniques, and new more advance managerial know how. Such a firm could hold small firms purchasing inputs; by purchasing in bulk and reselling to small farms at costs. It could buy commodities from farms; that is, acting as a marketing cooperative and passing on the benefits to small farms. It could provide custom services to the small operator thus reducing the investment in large scale machinery and reducing

the indivisibilities in inputs. This is a popular and profitable operation. The number of custom service units have increased in the past few years. The large firm could be an incentive for the small firm to increase its size and operate more efficiently. The influence of the large firm must be initiated by the large firm itself. Farmers are traditionally very independent and self sufficient. This is especially true of small farm operators.

The imposing time constraint limits further elaboration on this topic.

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