ECONOMIC CONCENTRATION IN AGRICULTURAL PRODUCTION AND MARKETING

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Economic concentration is taking place in agricultural production and marketing. By 1980, one-fourth of the United States farms will have gross sales in excess of $40,000. These farms will account for three-fourths of the agricultural production. Factors which contribute to economic concentration include, (1) government farm programs such as price supports and tax laws which stimulate the growth of farms through tax write-offs, (2) short-comings of the open market system such as price instability, and unacceptable levels of income risk to farmers, and (3) economies of scale through the use of cost-saving technology. The economic concentration trend will continue as long as it improves productivity, increases producers' profits and provides quality products at lower costs to consumers.

The purposes of this paper are (a) to investigate economic concentration in agricultural production and marketing, and (b) to discuss some factors that contribute to economic concentration in agricultural production and marketing in the United States.

Concentration in Agricultural Production

During the last 20 years, significant advances in mechanical, biological and chemical technology have increased resource productivity and changed the production pattern in agriculture. The resource mix has been modified through the substitution of capital inputs for farm labor. In 1973, for example, total farm output per unit of input was 53 per cent above 1950 (1).

The nature of this change in the economic structure of agriculture is demonstrated by the data on farm numbers and output according to different economic classes. The number of farms declined between 1960 and 1972 from 4 million to 2.9 million. According to the United States Department of Agriculture the only economic classes of farms that have grown in numbers since 1960 are those with gross sales of $20,000 or more per year (2). In 1972, more than 60 per cent of the total farm output was produced on farms with annual sales of $40,000 or above (Class 1); while in 1960, only one-third of the output come from Class 1 farms (3).

Concentration in Cattle Industry

Table 1 shows that 63 per cent of the cattle marketed for slaughter came from small feedlots (less than 1,000 head capacity) in 1962. Feedlots with capacities between 1,000 and 16,000 head were responsible for most of the remaining shipments. However, by 1973, this relationship between marketings from large and small feedlots was reversed, as 65 per cent of the slaughter cattle were produced by large commercial feeders. In 1973, 19 per cent of all fed cattle were produced in feedlots with capacities of 32,000 head or more versus 2 per cent in 1962 (3).

Production Marketing-Coordination

The marketing system has evolved into a highly coordinated production-marketing system in which merchandising policies may often dictate production practices. As evidence of this trend the broiler and fluid milk industries are linked directly to processors through production contracts. Thus, these commodities are procured by the processor according to a set of specifications for which the producer receives certain amenities, such as an assured outlet for his output and price guarantees. The proportion of total farm production under various forms of contracting and vertical integration increased between 1960 and 1970, from 19 per cent to 22 per cent (Table 2).

Commodities that are highly coordinated through formal arrangement include milk, broilers, turkeys, sugar cane, fruits and vegetables. In many commodity groups that are highly coordinated, agricultural cooperatives have come to play an integral role in negotiating the terms of trade, particularly in the case of fluid milk where cooperatives handle about 80 per cent of the

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TABLE 1. *Number of Feedlots and Cattle Marketed*[a]

Capacity	1962			1973		
	Lots	Marketings		Lots	Marketings	
		(000)	(%)		(000)	(%)
Under 1,000	234,646	9,527	63	144,380	8,968	35
1,000— 7,999	1,380	2,873	19	1,616	4,236	17
8,000—15,999	106	1,523	10	218	3,170	13
16,000—31,999	26	862	6	137	4,124	16
32,000 and over	5	314	2	69	4,833	19
Total 1,000 and over	1,517	5,572	37	2,040	16,363	65

[a] Source: (4).

TABLE 2. *Percentage of farm commodities under production-marketing coordination*[a]

Commodity	Production Contracts		Vertical Integration	
	1960	1970	1960	1970
Fresh Vegetables	20	21	25	30
Processed Vegetables	67	85	8	10
Dry Beans and Peas	35	1	1	1
Citrus Fruits	60	55	20	30
Sugar Beets	98	98	2	2
Sugar Cane	40	40	60	60
Seed Crops	80	80	1	1
Fed Cattle	10	18	3	4
Fluid Milk	95	95	3	3
Broilers	93	90	5	7
Turkeys	30	42	4	12
All Commodities	15	17	4	5

[a] Source: (5)

output through large regional and national federated cooperatives. In terms of total U.S. Agricultural output, farm cooperatives are now responsible for about one-third of the total cash receipts from farm market ings, up from 22 per cent in 1950 (4).

Most agricultural commodities however, are still handled through the open market. It has been estimated that more than three-fourths of the total output in 1970 was exchanged between buyers and sellers in this manner (Table 2).

Factors That Contribute To Concentration

The trends toward economic concentration in agricultural production and marketing are the result of efforts by farmers, businessmen and government to make agriculture more efficient and profitable through the use of modern technology. Through the adoption of new technology farmers and businessmen have been able to improve resource productivity, widen their profit margin and provide higher quality products at lower costs to consumers.

Factors that contribute to concentration trends include: (a) Government farm programs and tax laws, (b) shortcomings of the open market system and (c) economies of scale.

Government farm programs have removed price risks from the open market and helped increase farm income through price support and direct payments to farmers. For example, government payments to farmers have run above $3 billion per year since 1966 (2, p. 16). While benefiting both large and small farmers, the ultimate effect has been to make capital investment in large farms relatively more attractive than investment in smaller farms because large farms are able to use financial leverage to greater advantage.

Tax laws have stimulated the growth of large farms because tax dollar savings through expense write-offs and capital gains tax treatments are greater for farmers in higher tax brackets. Thus, the tax system of capital gains has contributed to the trend toward larger farms (6).

Shortcomings of the open market system causes some farmers to enter into contracts with processors and manufacturers. Professor James Rhodes has listed some inadequacies of the open market system. Among these inadequacies are (1) economic inefficiency in the areas of logistics and quality control, (2) price instability, and (3) unacceptable levels of income risks to farmers (7). For example, the broiler and fluid milk producers are linked directly to processors through production contracts.

These commodities are procured by processors according to a set of specifications for which producers receive an assured market and price for his product.

The economies of scale have led to the growth of large farms in both crop and livestock production. Previous research by Krause and Kyle has shown that agriculture enjoys significant economies of scale (greater output with lower per unit cost) as output is increased beyond small operations, and once the minimum cost point is reached production can be expended sharply before incurring any diseconomies (8).

Two advantages of market-production coordination may be found in the economies of scale, i.e. in the movement of raw materials and in the supervision of labor. As certain farm production enterprises become more concentrated, thereby reducing the problem of assembling adequate quantities at desirable locations, many of these cost-saving economies of scale can be employed. Agricultural commodities that are produced under contract, or are vertically integrated, possess a number of characteristics which separate them from commodities normally handled on the open market. Generally, the more formally coordinated products, such as vegetables, tend to use land and capital more intensively, are more perishable and are initially less homogenous in terms of size, quality, and appearance. In addition the production and processing activities are capable of being reduced to technological routines that result in substantial cost savings. This may result in the production of higher quality products at a lower cost to the consumer for such products as poultry, beef, eggs, milk, fruits and vegetables.

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