1955

Economic Integration in the Broiler Industry.

Ewell Paul Roy  
*Louisiana State University and Agricultural & Mechanical College*

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ECONOMIC INTEGRATION IN THE BROILER INDUSTRY

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY OF THE LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

IN

THE DEPARTMENT OF AGRICULTURAL ECONOMICS

BY

EWELL PAUL ROY
B. S., LOUISIANA STATE UNIVERSITY, 1949
M. S., LOUISIANA STATE UNIVERSITY, 1950
AUGUST, 1955
ACKNOWLEDGMENTS

Acknowledgment is extended to Dr. Bueford M. Gile who served as Major Professor and guided this study. Professor Emeritus James M. Baker is also recognized for the help and counsel extended in the initial phases of the study. Appreciation is extended to Mrs. Norma Cross for stenographic assistance.

Appreciation is extended also to the many people engaged in the broiler business who gave liberally of their time and facilities in making this study possible.
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ABSTRACT

THE BROILER INDUSTRY HAS DEVELOPED AT A RAPID RATE IN LOUISIANA AND IN OTHER PARTS OF THE COUNTRY. RESEARCH WORKERS AND OTHERS RECOGNIZED THAT FIRMS IN THIS INDUSTRY HAVE DEVELOPED VARIOUS CHANNELS FOR ACQUIRING THEIR "INPUT" FACTORS AND FOR DISPOSING OF "OUTPUTS." NO FORMAL THEORY HAD BEEN DEVELOPED TO IDENTIFY AND APPRAISE THESE INTEGRATION PATTERNS.

THIS STUDY INDICATES THAT IN ADDITION TO NON-INTEGRATION, FIRMS MAY ADOPT EITHER QUASI OR COMPLETE INTEGRATION IN BUYING INPUTS AND SELLING OUTPUT. QUASI-INTEGRATION REFERS TO FIRMS WHICH DEVELOP CONTRACTS AND AGREEMENTS BETWEEN THEM BUT RETAIN THEIR SEPARATE IDENTITY AND ENTREPRENEURSHIP. COMPLETE INTEGRATION REFERS TO FIRMS WHICH CREATE OR ABSORB OTHER ENTITIES IN THE ECONOMIC PROCESS BUT WITH CONTROL RESIDING IN ONLY ONE ENTREPRENEURSHIP, EITHER PROFIT-TYPE OR OF A COOPERATIVE NATURE.

FIRMS IN THE FEED MILLING, CHICK HATCHERY, BROILER PROCESSING AND BROILER FINANCE FIELD WERE STUDIED WITH THE USE OF THE CASE METHOD WHICH ILLUSTRATED THE EXISTENCE OF EACH THEORETICAL INTEGRATION PATTERN AND OF NON-INTEGRATION AS WELL.

FEED MILLS QUASI-INTEGRATE THEIR OUTPUT WITH FRANCHISED DEALERS WHILE COOPERATIVE MILLS DEAL WITH ASSOCIATIONS WHICH ARE OWNED AND OPERATED BY BROILER growers. CHICK HATCHERIES ARE HIGHLY INTEGRATED PARTICULARLY IN
PROCURING THEIR EGG SUPPLIES WHILE DISTRIBUTING THEIR OUTPUT TO FRANCHISED DEALERS AND COOPERATIVES. BROILER PROCESSING EXHIBITS THE MODERN MARKETING TREND WHERE FIRMS CLOSE TO THE RETAIL LEVEL INTEGRATE BACKWARDS FOR THEIR SUPPLY, EITHER PRODUCING IT THEMSELVES OR USING AGREEMENTS WITH SUPPLY FIRMS. THE DEPENDENCE OF LARGE SCALE BUYERS SUCH AS CHAINS ON A REGULAR SUPPLY OF PROCESSED BROILERS RENDERS NON-INTEGRATION A LESS DESIRABLE PATTERN TO ADOPT DESPITE POSSIBLE THEORETICAL ADVANTAGES.

In growing broilers, four main patterns of integration are identified: (1) Non-integration where grower and dealer are independent, (2) Quasi-integration where growers purchase supplies and obtain credit from a dealer but manage their own enterprise, (3) Complete integration through cooperatives where associations buy inputs for growers and market their output and (4) Complete integration through a dealer where growers raise broilers for a fee or on salary. It is shown that the growers' need for credit and for sharing of disease and price risks lead them into various integration patterns of growing broilers. It is likely that any change in integration would have to come from a change in present credit policies.

Non-integration in growing broilers is recommended if the grower is a capable entrepreneur, has sufficient financial reserves and if broiler prices are expected to be considerably above cost of production. Quasi-integration
IS RECOMMENDED WHEN THE GROWER CAN EFFECTIVELY MANAGE HIS ENTERPRISE BUT IS IN NEED OF CREDIT AND CANNOT OBTAIN IT DIRECTLY FROM CREDIT AGENCIES. THIS PATTERN SHOULD NOT BE RECOMMENDED WHEN DEALERS ARE CHARGING EXCESSIVE PRICES FOR INPUTS OR WHEN BROILER PRICES ARE IN A DEPRESSED PERIOD SINCE THE GROWER ASSUMES ALL LOSSES AND RISKS. COMPLETE INTEGRATION THROUGH COOPERATIVES IS HIGHLY RECOMMENDED FOR GROUPS OF TEN OR MORE CAPABLE BROILER GROWERS DESIRING TO PERFORM THE NECESSARY ECONOMIC SERVICES FOR AND BY THEMSELVES. HOWEVER, CREDIT SOURCES MUST BE WELL-ESTABLISHED AND INPUT FACTORS OBTAINED AT THE LOWEST POSSIBLE PRICE. COMPLETE INTEGRATION THROUGH A DEALER IS RECOMMENDED TO BROILER GROWERS WHO HAVE LESS MANAGERIAL ABILITY, BUT WHO CAN SATISFACTORILY CARRY OUT DECISIONS OF OTHERS. IT IS PARTICULARLY RECOMMENDED FOR GROWERS LEAST ABLE TO ASSUME PRICE AND DISEASE RISKS.

FURTHER RESEARCH SUGGESTED BY THIS STUDY ARE:
(1) OBTAIN ECONOMIC DATA FROM BROILER GROWERS ACCORDING TO THE KIND OF INTEGRATION PATTERN FOLLOWED AND APPLY STATISTICAL METHODS TO DETERMINE IF ONE INTEGRATION PATTERN IS SUPERIOR TO ANOTHER AND (2) CONDUCT MACRO-ECONOMIC STUDIES DESIGNED TO UNCOVER THE WIDER IMPLICATIONS OF ECONOMIC INTEGRATION IN THE BROILER INDUSTRY SUCH AS ITS EFFECT ON BROILER OUTPUT, PRICE FLUCTUATIONS AND MARKET MONOPOLIZATION.
CHAPTER I

THE PROBLEM, SCOPE AND METHOD OF STUDY

The primary purpose of this study is to appraise the formal and informal arrangements developed by firms in the broiler industry for the purchase of inputs and the disposition of output. These arrangements are commonly referred to as the process of economic integration. The study is directed toward achieving better coordination among broiler growers, feed dealers, feed mills, chick hatcheries, processing plants and finance agencies. Firms contemplating economic integration are in need of guidance as a basis for better decision-making.

The main objectives of the study are: (1) To develop a theoretical framework for isolating the nature and extent of integration patterns in the broiler industry, (2) To determine the present organization and integration of business units related to broiler growing, (3) To identify the integration patterns within the broiler growing enterprise, (4) To indicate how social integration in broiler cooperatives is necessary for economic integration and (5) To make recommendations concerning the kind of integration pattern broiler growers should adopt under various situations.
REASONS FOR MAKING THE STUDY

The broiler enterprise in Louisiana expanded at a rapid rate during the decade from 1943 to 1953 as production increased from 1,540,000 to 12,575,000 head of broilers (Table 1). During World War II and up to 1952, the price per pound of broiler averaged over 30 cents. In relation to growing costs, these high prices stimulated production in Louisiana and throughout the country. Since 1952 prices have shown a downward trend as production reached new highs. There were over 1 billion broilers grown in the United States in 1954. Consumption of broiler meat reflects this expansion in broiler growing as indicated by a per capita use of 13.7 pounds in 1951 compared with only 3.7 pounds in 1941 (Appendix Table 1). It should be noted, however, that a shortage of "red meats" during and after World War II gave considerable impetus to the broiler industry. Lower broiler prices during 1953 and 1954 may have been related to the heavy marketings of beef and other competing meats, in addition to the increase in broiler supplies.

In relation to other poultry enterprises in Louisiana, the broiler segment made the greatest gain, as shown by data in Table 2. From 1950 to 1953, the per capita broiler meat requirements of the state were supplied in the equivalent of 27 and 88 per cent, respectively. Despite this large increase in broiler output, Louisiana is still behind her three neighboring states of Arkansas, Mississippi and Texas.
Table 1. Commercial Broilers: Production, Price and Value, Louisiana, 1934-53.*

<table>
<thead>
<tr>
<th>Year</th>
<th>Production Number</th>
<th>Volume 1,000 Pounds</th>
<th>Weight per Bird Pounds</th>
<th>Price per Pound Cents</th>
<th>Gross Income 1,000 Dollars</th>
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<td>1934</td>
<td>250</td>
<td>575</td>
<td>2.3</td>
<td>18.5</td>
<td>106</td>
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<tr>
<td>1935</td>
<td>300</td>
<td>890</td>
<td>2.3</td>
<td>19.0</td>
<td>131</td>
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<tr>
<td>1936</td>
<td>350</td>
<td>805</td>
<td>2.4</td>
<td>18.1</td>
<td>146</td>
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<tr>
<td>1937</td>
<td>400</td>
<td>960</td>
<td>2.4</td>
<td>21.5</td>
<td>206</td>
</tr>
<tr>
<td>1938</td>
<td>450</td>
<td>1,080</td>
<td>2.4</td>
<td>18.6</td>
<td>201</td>
</tr>
<tr>
<td>1939</td>
<td>500</td>
<td>1,100</td>
<td>2.2</td>
<td>17.0</td>
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<tr>
<td>1940</td>
<td>600</td>
<td>1,380</td>
<td>2.3</td>
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<tr>
<td>1941</td>
<td>700</td>
<td>1,610</td>
<td>2.3</td>
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<tr>
<td>1942</td>
<td>1,100</td>
<td>2,420</td>
<td>2.2</td>
<td>26.0</td>
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<td>1943</td>
<td>1,540</td>
<td>3,234</td>
<td>2.1</td>
<td>31.0</td>
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<tr>
<td>1944</td>
<td>1,232</td>
<td>3,203</td>
<td>2.6</td>
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<td>1945</td>
<td>1,540</td>
<td>3,542</td>
<td>2.3</td>
<td>35.0</td>
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<td>1946</td>
<td>1,309</td>
<td>3,011</td>
<td>2.3</td>
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<td>1947</td>
<td>1,244</td>
<td>3,234</td>
<td>2.6</td>
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<td>1948</td>
<td>1,493</td>
<td>3,732</td>
<td>2.5</td>
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<td>1949</td>
<td>1,866</td>
<td>5,038</td>
<td>2.7</td>
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<td>1950</td>
<td>2,146</td>
<td>5,794</td>
<td>2.7</td>
<td>30.2</td>
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<td>1951</td>
<td>4,507</td>
<td>12,620</td>
<td>2.8</td>
<td>31.0</td>
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<td>1952</td>
<td>8,113</td>
<td>22,716</td>
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<td>1953</td>
<td>12,575</td>
<td>33,952</td>
<td>2.7</td>
<td>27.0</td>
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*A broiler is defined as a young tender meated chicken from 9 to 14 weeks of age, of either sex and weighing from 2 1/2 to 3 1/2 pounds, live weight.
Table 2. Relative Deficit Position of Various Poultry Enterprises in Louisiana, 1953 Compared With 1950.

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<th>Per Capita Use*</th>
<th>Per Capita Production</th>
<th>Per Cent Production Was of Use</th>
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<td></td>
<td>1950 1953</td>
<td>1950 1953</td>
<td>1950 1953</td>
</tr>
<tr>
<td>Broilers (lbs.)</td>
<td>11 14</td>
<td>3 12.3</td>
<td>27 88</td>
</tr>
<tr>
<td>Farm Chickens (lbs.)</td>
<td>15 18</td>
<td>12 6.8</td>
<td>80 38</td>
</tr>
<tr>
<td>Chicks (No.)</td>
<td>5 6</td>
<td>2 3.0</td>
<td>40 50</td>
</tr>
<tr>
<td>Table Eggs (No.)</td>
<td>386 409</td>
<td>118 138</td>
<td>31 34</td>
</tr>
<tr>
<td>Turkeys (lbs.)</td>
<td>5 6</td>
<td>.3 .7</td>
<td>6 12</td>
</tr>
</tbody>
</table>


*Per Capita use in Louisiana assumed to be the same as for United States.

Which, in 1953, produced 500, 215 and 115 per cent of their per capita broiler meat needs, respectively (Appendix Table 2).

Broiler growing may be characterized as a decreasing cost enterprise according to Boulding's definition:

It is possible that a rise in demand, although it will at first cause an increase in the price of the product, will also cause an increase in output, a lowering of costs and therefore a rise in supply and possibly a fall in price. Where a rise in demand can in this way cause a fall in price the industry is said to be one of decreasing cost.¹

Technological advances in the growing of broilers such as better stock, improved feed, management practices, and better disease control have all contributed to lower

GROWING COSTS. THIS HAS ENABLED THE BROILER ENTERPRISE TO EXPAND OUTPUT EVEN WHEN PRICES WERE DECLINING AS IN 1954. THE PROFIT MARGIN PER BIRD HAS NARROWED BUT SOME GROWERS HAVE ATTEMPTED TO MAINTAIN INCOMES BY EXPANDING PRODUCTION. SINCE FOUR OR FIVE BROODS OF BROILERS CAN BE PRODUCED ANNUALLY, THE NUMBER OF BROILERS GROWN MAY FLUCTUATE WIDELY DURING A GIVEN YEAR AS HIGH PRICES STIMULATE PLACEMENTS WHICH SOMETIME LATER CAUSE DEPRESSED MARKETS. THEN, THESE LOW PRICES DISCOURAGE PLACEMENTS AND SOMETIME LATER PRICES RISE AGAIN. IN THIS WAY, SOME BROILER GROWING RESOURCES ARE OPERATED BELOW CAPACITY AND SOME RESOURCES TAKE EXIT FROM THE INDUSTRY DUE TO THESE PRICE FLUCTUATIONS. POULTRY WORKERS HAVE ADVANCED THE HYPOTHESIS THAT A GREATER DEGREE OF COORDINATION, INCLUDING RISK-SHARING AMONG FEED DEALERS, GROWERS AND OTHERS, WOULD CONTRIBUTE TO A MORE STABLE BROILER ENTERPRISE.

TECHNOLOGICAL ADVANCES IN THE MARKETING OF BROILERS HAVE INCLUDED THE CONSTRUCTION OF PROCESSING PLANTS CLOSER TO PRODUCTION AREAS, THE DEVELOPMENT OF FRESH-KILLED-CHILLED BROILER PROCESSING WHICH PROVIDES RAPID MOVEMENT OF BROILERS INTO CONSUMPTION CHANNELS AND BETTER MERCHANDISING OF THE PRODUCT IN RETAIL SHOPS. GROCERY STORES, EATING ESTABLISHMENTS, AND OTHER OUTLETS HAVE REPORTED AN INCREASING DEMAND FOR POULTRY MEAT DUE TO INCREASED URBANIZATION, HIGHER PER CAPITA INCOMES, AVAILABILITY OF BROILERS AND CONTINUED EDUCATIONAL EMPHASIS ON THE VALUE OF POULTRY IN THE DIET.
Within Louisiana, the developments in growing broilers have not always been well coordinated with the marketing function. Consequently, certain maladjustments have perhaps caused the broiler enterprise to be less remunerative than it otherwise would have been. For example, the Southern part of the state is producing eggs for broiler-chick purposes but many of the eggs are sold and hatched in states other than Louisiana. Often, the chicks hatched from these eggs re-enter the Northern part of Louisiana to be grown but a majority are sent out to be processed and then a portion re-enter the state to be consumed.

Several economists have expressed the need for studies in firm integration especially in areas where monopolistic elements may have arisen and where finance plans may have fostered economic integration. Also, the growing interest in cooperatives as a means toward providing farmers with greater control over their products emphasizes further the need for a study of integration. The broiler industry in particular has experienced rapid changes in methods of growing and marketing which have called attention more forcefully to the need for an appraisal of integration patterns.

There is reason to believe that integration in agriculture is being instituted at a rapid rate as relatively few firms become dominant in certain agricultural products with the result that monopolistic structures are created in the marketing process. This led Nicholls to state that he feared the monopsonistic elements in local country-buying
AGENCIES AS MUCH AS HE DID THOSE OF THE LARGER PROCESSORS OR WHOLESALE DISTRIBUTORS.

The price the farmer receives is just as dependent upon margins taken by such assembling agencies as by large processors. Of course, there has been an increasing tendency in recent years for the large processors to integrate back to perform the local assembling function.2

Baum, in addressing the American Farm Economic Association, stated that:

"The broiler industry is not in a position to achieve the defined condition of orderly marketing in many areas because it is relatively unorganized, i.e., there exists a lack of coordinated effort among the segments necessary to insure a proper allocation of productive resources in meat production, processing, and distribution." He presents the thesis that a high degree of vertical integration in the commercial poultry meat industry is necessary if it is to expand and remain profitable. The achievement of stability in the system would result in the elimination of market gluts and the "in-and-out" nature of the poultry meat industry.3

Many economists have supported the idea that agriculture would be in better position if more farmers gained efficient control of the marketing system for their products. Doane in his recent book said:

"The poultry farmer may go from eggs to fried chicken, with little or no help from others, while the wheat, corn, or hog producer may find it advantageous to cooperate with his neighbors in turning

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GRAIN INTO BREAD OR HOGS INTO HAMS." Doane's contention is that marketing margins are rather rigid and fluctuate little, while the price of the raw product itself fluctuates widely. Therefore, if producers of raw products can absorb some of the marketing functions such as grading, cleaning and packing, they would be in better position to reduce margins, maintain quality and even out fluctuations in their incomes.¹

It is generally known that economic integration is taking place in both broiler growing and marketing. The effect of this integration on broiler output, price fluctuations and market competition needs additional study. It may be assumed that improved coordination at all levels in the growing and marketing process would help to reduce cycles of over-and-under production and provide a long-range stability that would benefit all segments of the industry. Whether this will be beneficial in terms of lower prices to consumers or whether anticipated benefits will accrue only to the firms involved is a matter of great public interest.

Integration is sometimes erroneously considered to be the antithesis of specialization. In some instances, this may be true where a broiler grower attempts to perform all needed services. However, the average broiler grower depends on other firms for inputs and for output disposition. Specialization in growing and marketing has separated the grower from his input-output factors. Certain patterns

OF INTEGRATION MAY SERVE TO RE-UNITE THE GROWER WITH CONTROL OVER HIS PRODUCT WHILE RETAINING THE BENEFICIAL EFFECTS OF SPECIALIZATION. THIS MAY BE OF HELP IN GROWING BROILERS MORE CHEAPLY AND INSURING A BETTER DIVISION OF INCOME TO BROILER GROWERS.

SOURCE OF DATA, SCOPE AND METHOD OF STUDY

Sources of data include: (1) Economic journals, texts, and theses bearing on firm integration, (2) Federal documents such as the Temporary National Economic Committee monographs, (3) Agency information including those of the Agricultural Marketing Service, Farmer Cooperative Service and the Poultry Section of United States Department of Agriculture, (4) Research reports of various agricultural experiment stations, poultry departments and divisions of agricultural economics and (5) Research studies on poultry marketing conducted by the Louisiana Agricultural Experiment Station since 1948, in cooperation with ten other Southern states. These and other sources of information will be acknowledged in footnotes at the appropriate place in the thesis.

Various methods of study are employed but, principally, the case method is utilized since it proved to be more adaptable to integration analysis. After an integration pattern is theoretically delineated, a case study empirically illustrating the particular pattern is cited which serves to illustrate the type of firm behavior associated with the
INTEGRATION PATTERN. Statistical methods could be employed if specific data were available on a large number of firms. This study lays the foundation for statistical analyses that should follow and which could be aimed at measuring the differences between the various integration patterns.

Inductive and deductive reasoning methods were employed in conjunction with the case method. Induction allows ascertaining general uniformity among phenomena under observation such as devising a general integration pattern by observing individual firm behavior. Deduction allows the labeling of specific firm behavior with a more general integration pattern. Under induction, the individual firm's action suggests broader generalizations. Deduction allows a testing of the generalization or hypothesis. The case method, therefore, serves as a useful tool in deduction.

The numerous case studies utilized in this thesis are drawn from Louisiana and other broiler growing areas of the country such as the broiler cooperatives in Arkansas; dealer-grower finance plans in Georgia and the feed milling industry in Missouri. The theoretical aspects of the study should be applicable to any broiler growing area even though firms may employ different techniques in developing integration patterns.

There seems to be general agreement that empirical testing of integration hypotheses is lagging behind some of the theoretical frameworks that have been developed.
One difficulty in testing theoretical hypotheses is that a thorough knowledge of an industry is necessary before valid empirical testing can occur. Another difficulty is that the issue of firm integration is a controversial one involving questions relating to margins, pricing policies, market control and the like; and a third one concerns the inadequacy of the conventional analytical tools such as the "perfect market" concept which is far from reality.

The first objective of this study is to develop a theoretical framework for isolating the nature and extent of firm integration as it may exist in the broiler industry at the present time. Theory developed in the following chapter provides this framework.
CHAPTER II

PROCESSES IN FIRM INTEGRATION

In economic literature three basic forms of firm integration are recognized: horizontal, vertical and circular. Horizontal integration refers to a situation where a number of similar business units are brought together under a common management such as in chain retail stores. Vertical integration is commonly defined as that combination which results when a firm controls several or all of the stages of production from the growing or mining of the raw materials to the marketing of the finished product. Circular integration is the adding of products to the specialized line which firms sell in order to effect operating economies such as a meat-packing company selling cheese and butter. It may also refer to firms that are both horizontally and vertically integrated.

Various economists have advanced modifications and refinements in defining integration patterns. For example, Hirsch has delineated several types of firm integration including: (1) horizontal, (2) complementary horizontal, (3) vertical, (4) complementary vertical, (5) joint horizontal-vertical and (6) complementary horizontal-vertical.

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HORIZONTAL INTEGRATION

According to Hirsch, a horizontally integrated firm is a single profit maximizing entity in which a single management controls a number of units, which together or separately, handle commodities either similar or complementary, on one and the same level of the production process.

For our purposes, Hirsch's definition of a horizontally integrated firm may have two limitations: (1) A strict interpretation of his reference to a "single" profit maximizing entity may automatically reject all types of cooperative entities because, as Emelianoff has pointed out, a cooperative may be neither a firm nor a profit maximizing entity, but simply a coordinating agency for other profit maximizing firms. Cooperative entities represent an aggregate of economic units into one coordinated control rather than a complete obliteration of the member parts as is common under proprietary integration. In accepting Emelianoff's concept of a cooperative entity we shall then use the terms "a single profit maximizing entity or an entity of a cooperative nature."

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7 Ibid., p. 36.
The second limitation is Hirsch's reference to a single management "controlling" a number of units. Oxenfeldt, among others, has differentiated between firms "owning" and firms "controlling" other firms or business units. The former he labels as horizontal extension through ownership and the latter as horizontal extension through contract or agreement.9

For purposes in this study, extension through ownership is labeled "complete integration" and extension through contract is called "quasi-integration." This is not, however, a particularly new interpretation of integration patterns. In 1939, Professor Frank Fetter, in testifying before the Temporary National Economic Committee pointed to the extremes in integration procedure:

"At one extreme, any contract between business units independently owned, which even temporarily substitutes unity for independent action and competition in management, production and selling policies, is, insofar and for the time, a combination in the wider sense. At the other extreme is the completest possible combination of plural units, by which all separate ownership of the constituent parts is extinguished and all legal identity and independence of control is merged into a single governing whole."10

Complete integration, according to Fetter, includes all devices effecting ownership control while integration

9Oxenfeldt, op. cit., p. 220.

THROUGH CONTRACTS OR QUASI-INTEGRATION IS EFFECTED BY FRAN-
CHISED DEALERSHIPS, PRICE ARRANGEMENTS, INTER-LOCKING
DIRECTORATES AND THE BASING-POINT PRACTICE.

BOULDING ALSO RECOGNIZES THE FACT THAT FIRM INTEGRA-
TION MAY VARY WITH THE EXTENT OF OWNERSHIP AND/OR CONTROL.
IN DOING SO, HE CLASSIFIES INTEGRATION UNDER: (1) A "MERGER"
WHERE ONE FIRM ABSORBS ANOTHER AND (2) A "TRUST" WHERE ONE
FIRM OR FIRMS MAY CONTROL OR HAVING WORKING AGREEMENTS WITH
OTHER FIRMS. 11 IT WILL BE NOTED THAT BOULDING'S "MERGER"
CORRESPONDS TO OUR (1) COMPLETE INTEGRATION AND HIS "TRUST"
CORRESPONDS TO OUR (2) QUASI-INTEGRATION.

therefore, it is recognized that there are at least
two patterns of horizontal integration rather than one as
commonly believed. These two patterns may now be defined
more completely as follows:

1. A COMPLETE HORIZONTALLY INTEGRATED FIRM MAY BE
   EITHER A SINGLE PROFIT MAXIMIZING ENTITY OR AN ENTITY OF A
   COOPERATIVE NATURE IN WHICH A SINGLE MANAGEMENT "OWNS" OR
   IS "OWNED" BY A NUMBER OF UNITS, TOGETHER OR SEPARATELY
   HANDLING COMMODITIES, SIMILAR OR COMPLEMENTARY, ON ONE AND
   THE SAME LEVEL OF THE PRODUCTION PROCESS.

2. A QUASI-HORIZONTALLY INTEGRATED FIRM MAY BE EITHER
   A SINGLE PROFIT MAXIMIZING ENTITY OR AN ENTITY OF A COOPERA-
   TIVE NATURE IN WHICH A SINGLE MANAGEMENT "CONTROLS" ONE OR

A number of units through contract and/or agreement, which together or separately handle commodities, similar or complementary, on one and the same level of the production process.

3. For comparative purposes, a non-integrated firm refers to a single profit maximizing entity or an entity of a cooperative nature in which the management neither owns, controls or influences one or a number of units handling commodities, similar or complementary, on one and the same level of the production process.

It should be noted that when the expressed purpose of horizontal integration is to restrict competition, the firm or firms thus involved may be subject to anti-trust prosecution.

VERTICAL INTEGRATION

In line with the previous limitations cited under horizontal integration, two types of vertical integration may be defined:

1. A complete vertically integrated firm is a single profit maximizing entity or an entity of a cooperative nature in which one or a number of units on successive levels in the production process are brought under a single managerial control and ownership. 12

12 According to Hirsch, "A vertically integrated firm is a single profit maximizing entity, in which a number of units, each performing different functions in the production
2. A **quasi-vertically integrated firm** is a single profit maximizing entity or an entity of a cooperative nature in which one or a number of units on successive levels in the production process are brought into managerial coordination but not ownership.

3. For comparative purposes, a **non-integrated firm** is defined as a single profit maximizing entity or an entity of a cooperative nature in which no units on successive levels in the production process are brought under managerial control, either through contract, agreement or ownership.

To illustrate these two types of vertical integration, Figure 1 is presented.

In (A) and under a **quasi-integrated arrangement**, Broiler Raiser A enters into a yearly contract with Processor A and is expected to deliver all broilers at the price stipulated in the agreement. Decisions in managing the plant are left essentially with Broiler Raiser A.

Under (B) Processor A may decide to produce his own broiler supply. He may accomplish this by (1) Buying Broiler Raiser A's farm, (2) Building his own plant or (3) By renting Broiler Raiser A's plant and hiring him or some other person to operate the unit. Entrepreneurship rests with Processor A rather than with the manager or hired labor.

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And/or marketing of similar commodities on successive levels are brought under a single managerial control. *Op. cit.*, p. 36.
A. QUASI-INTEGRATION

B. COMPLETE INTEGRATION

C. NON-INTEGRATION

Figure 1. Two Types of Vertical Integration Patterns Commonly Found in the Broiler Growing Enterprise Compared With Non-Integration.
In (C) a non-integrated situation, the independence of action for both Processor and Broiler Raiser is recognized, viz: separate and distinct entities prevail in the absence of contracts or agreements.

Circular Integration

Firms that are both horizontally and vertically integrated may be classified as circularly integrated entities. Hirsch labeled this type of integration as joint horizontal-vertical integration. An additional meaning usually ascribed to circular integration concerns the handling of numerous commodities and/or the performance of multiple services by a single business entity.

For example, one of the more common circularly integrated firms is a large petroleum company which owns oil wells and refineries; transports fuel and owns around 100 filling stations where many different items are sold, including nursery stock and cigarettes.

For purposes of this study, the two basic types of circular integration are defined as follows:

1. A complete circularly integrated firm is either a single profit maximizing entity or an entity of a cooperative nature in which a single management owns or is owned by a number of units all handling similar or complementary

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COMMODITIES ON ONE AND SUCCESSIVE LEVELS OF THE PRODUCTION PROCESS.

2. A QUASI-CIRCULARLY INTEGRATED FIRM IS EITHER A SINGLE PROFIT MAXIMIZING ENTITY OR AN ENTITY OF A COOPERATIVE NATURE IN WHICH A SINGLE MANAGEMENT CONTROLS OR POSSESSES AGREEMENTS BUT DOES NOT OWN A NUMBER OF UNITS ALL HANDLING SIMILAR OR COMPLEMENTARY COMMODITIES ON ONE AND SUCCESSIVE LEVELS OF THE PRODUCTION PROCESS.

3. For comparative purposes, a non-integrated firm is defined as a profit maximizing entity which neither owns nor controls firms or units on one and successive levels in the production process. 14

ADVANTAGES AND DISADVANTAGES OF INTEGRATION

No attempt is made to classify the advantages and disadvantages of integration into horizontal, vertical and circular types. Also, since quasi-integration may produce conditions that are similar to complete integrations, both will be compared relative to a non-integrated pattern of firm behavior. It is assumed that the benefits or hindrances due to various integration patterns would differ by degree rather than by substance. It should be noted that the various economic groups in the society are affected differently by a given integration pattern, viz: what is

14 For our purposes, the production process is considered to be divided into growing and marketing phases.
"good" for the integrating firms may be "bad" for consumers and other groups in the society.

There may be two general advantages of integration for the integrating firms: (1) Economies of scale and (2) Control over price.

1. By integrating, firms may achieve economies of scale in growing or manufacturing, distributing, retailing or merchandising one or more products. The number of market transactions may be reduced and cost reductions that follow may be passed on to consumers depending on the scope and degree of competition in any given industry and the elasticity of the sales schedule of the commodity or commodities in question. In some integrations, goods and services complement other goods and services and provide a diversity of income to the integrated firms. Profitable items may compensate for others carried at a loss. Sometimes, substitute products for its main line can also be integrated. When buying inputs, management is given greater opportunity for bargaining and in obtaining credit. Also, greater opportunity is afforded in establishing and maintaining research facilities and in developing stable and dependable sources of supply and services. If the integrated firms cannot produce all their supply, they may quasi-integrate for the balance.

2. Firms in a purely competitive state seek to improve their economic position by integrating so that they can exert some control over the price for their output. This may be
accomplished by controlling a larger part of the supply, by product differentiation, control of substitutes, restricting imports or inhibiting firm entry and the like. Monopoly power would be greatest if all the industry merged, few substitutes were available, and no foreign imports were possible. Also, firms may want to determine prices at more "stages" on the way to the ultimate consumer in order to achieve a coordinated pricing policy offering both maximum incentives to other firms to carry their product and maximum attractiveness to buyers at subsequent stages. 

In contrast to a succession of firms pricing by the mark-up method, an integrated firm would determine price at one and all stages. It need not submit to successive restrictions in output each time the unfinished product is resold. It would, on the contrary, have strong incentives to prevent restrictions in output that would depress profits below the maximum attainable.

An integrated firm facing strong rivalry from an integrated competitor clearly would charge lower prices to the final buyer than would retailers at the end of a succession of markets in which goods were priced by mark-ups.

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An integrated firm would presumably price its goods backward from the consumer level where it would give some attention to and could experiment with the effect of price on sales volume. Non-integrated firms would, on the other hand, price their goods forward from the raw materials by the mark-up method. If there are a sufficient number of integrated and non-integrated firms competing at each stage, the price levels should approximate those of the perfect market. The consumer may benefit then if the integrated firms can lower production costs.

There are two general disadvantages to integration. The first disadvantage may directly affect the integrating firms by raising their cost of operations. Integrated units may run into diseconomies of scale by handling too many goods, by complexity in management and by technological limitations in size of firm, amount of capital required, and method of operations. In its quest for total self-sufficiency, it may run into severe procurement difficulties. Costs of operation may be difficult to ascertain for any particular segment of the business and thus inefficiencies may escape detection. Under non-integration, each firm is checked by the competitive market as to its efficiency in a particular operation. If competitive markets decline, however, for any reason, firms may have a legitimate excuse for integrating. In other instances, atomistic firms may be coerced into integration. Some integration attempts are purely for power and control and are only incidentally related to economies.
of production. In such cases, integrated units may be subject to prosecution for violation of the anti-trust laws. While vertical integration may be more tenable due to the economic efficiencies that may be achieved, horizontal integration, on the other hand, is often attempted to eliminate competitors. A cursory examination will reveal that horizontal integration may be more instrumental in reducing competition than vertical integration.

The second disadvantage may affect the consuming public by raising the prices of goods used and by otherwise creating less perfect markets. Integrated firms may effectively gain control of the supply of a given product and attempt to control its price. In its buying activities, it may be so large as to effect monopsony or oligopsony control. Through product differentiation it may gain exceedingly strong control over the pricing of its own products and may inhibit firm entry into its field and impede technological advances when discoveries pose a threat to its economic position. Integrated units may attempt to control the production, sale and advertising of products that are substitutable to its main line such as the "Big Four" packers entering into the cheese, egg, and poultry meat lines. The extent of their control over price depends on the elasticity of the commodities in question, ease of firm entry and other similar considerations. In cases where integrated firms possess a monopoly of processing or handling facilities, the "margins" on which they
Operate may be effectively controlled and maintained against the interests of either farmers or consumers or both. Also, integrated firms may choose not to pass-on to consumers cost reductions achieved through integration but, instead, may retain "supra-normal" profits for furthering their own economic position.

It has been shown that there are three basic types of integration, viz: horizontal, vertical and circular. Within each type, there are two patterns, either (1) complete or (2) quasi. For comparative purposes, non-integration is recognized. However, these patterns of integration have little meaning unless they are examined within the framework of competition existing in our present-day economy. The following section provides an analysis of both non-integration and integration relative to perfect competition, absolute or pure monopoly and, monopolistic or imperfect competition.

The hypothesis advanced is that integration patterns contribute to imperfect market structures when compared with the orthodox definition of "perfect markets." Therefore, two items need to be explored: (1) what constitutes a perfect or imperfect market? and (2) how do integration patterns develop and persist within perfect and imperfect market structures? At this point, a brief definition of four terms used is presented. These include: (1) nature of market structures, (2) competition, (3) input-output factors and (4) scope of integration.
(1) There are three basic market structures: (A) perfect competition or atomistic markets, (B) imperfect competition or those involving oligopoly and oligopsony and (C) pure monopoly or monopsony. Perfect competition exists when there are enough sellers or buyers, all relatively small, and none of them producing or buying a significant portion of the total market supply. The word "atomistic" refers to a firm having no influence in the market.

Imperfect or monopolistic competition exists when there is neither one seller/buyer nor very many sellers/buyers; moreover, the products they sell or buy, regardless of their numbers, are usually not identical but differentiated in some degree. If imperfect competition occurs on the selling side it is called oligopoly and if it is on the buying side it is oligopsony.

Pure monopoly exists when one firm sells an output for which there is no close competitor or rival. Pure monopsony exists when one firm represents the only outlet available for the goods produced.

(2) A basic point often confused in economic theory is the exact meaning of "competition." By competition is

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18 Ibid, p. 192.
MEANT THE RELATIONSHIP OF ACTIVITIES BETWEEN AND AMONG THE MEMBERS OF THE SAME OR RELATED GROUP SUCH AS THE COMPETITIVE RELATIONSHIPS AMONG SELLERS OF FARM PRODUCTS. COMPETITION IS NOT MEANT TO DESCRIBE THE COMPETITIVE RELATIONSHIPS BETWEEN NON-IDENTICAL OR "POLAR" GROUPS SUCH AS BUYERS AND SELLERS. OBVIOUSLY, THE SELLERS OF FARM PRODUCTS MAY BE PERFECTLY COMPETITIVE AMONG THEMSELVES WHILE FACING A GROUP OF BUYERS THAT ARE NOT SO COMPETITIVE AMONG THEMSELVES. VERTICAL FIRM INTEGRATION REFERS TO THE RELATIONSHIP BETWEEN BUYING AND SELLING FIRMS WHILE HORIZONTAL INTEGRATION CONCERNS FIRMS EITHER ON THE BUYING OR SELLING SIDE. BECAUSE OF THAT FACT, WE MAY SAY THAT VERTICAL INTEGRATION APPEARS LESS DANGEROUS THAN HORIZONTAL ARRANGEMENTS IN REDUCING COMPETITION.

(3) THROUGHOUT THE REMAINDER OF THE STUDY TERMS SUCH AS BUYERS AND SELLERS OF "INPUT" AND BUYERS AND SELLERS OF "OUTPUT" WILL BE USED. THE TERM "INPUT" REFERS TO RAW MATERIALS USED IN THE BROILER GROWING PROCESS SUCH AS FEED, CHICKS AND MEDICINES FOR GROWER-FIRMS. IN CASE OF A HATCHERY, INPUT WOULD MEAN PRINCIPALLY EGGS WHILE FOR PROCESSING PLANTS THEIR INPUT IS PRINCIPALLY LIVE BROILERS. OF COURSE, THE OUTPUT OF ONE FIRM CONSTITUTES AN INPUT FOR ANOTHER. FOR EXAMPLE, THE "OUTPUT" OF A BROILER GROWING PLANT IS LIVE BROILERS WHILE "OUTPUT" OF HATCHERIES WOULD BE BABY CHICKS AND THAT OF PROCESSING PLANTS, EVISCERATED BROILERS.

(4) A FIRM'S POSITION IN THE MARKET IS NOT ALWAYS
fixed and rigid. It has a relationship to its competitors on the selling side, for example, and a relationship to the firms on the buying side. In selling one commodity it may behave as an oligopolist and in buying input factors it may act as an atomistic firm. When a monopsonistic country buying agency is analyzed, one may visualize its absolute buying power relative to farmers and, in turn, its monopolistic power when selling them farm inputs. The extent and degree of imperfect competition depends on firm entry, substitutes, imports, and the like.

Integration occurs on either the buying or selling side of the firm's operations, viz: forward with "output" and/or backwards to "input". However, in case of a retail firm, it is integrated forward in the sense that it serves consumers as the final link in the production process. A clue to the difficulty of integrating grower-firms may be found in the statement above. Whereas food stores may ascertain more or less precisely the level of consumer demand for their "output" and thus facilitate their "backwards" integration, farmers must move forward in considerable uncertainty because of the intervening firms and links that usually separate them from the ultimate consumer.

Integration Patterns Within Market Structures

For comparative purposes, non-integration is first analyzed to ascertain the probable behavior of such firms under pure or perfect competition, imperfect or monopolistic
COMPETITION AND PERFECT OR PURE MONOPOLY-MONOPSONY.

(1) Non-Integration

A non-integrated firm is defined as a profit-maximizing entity which neither owns nor controls firms or units on one and successive levels in the production process. 19

Perfect Competition

Under perfect competition, each firm has such a small part of the market (atomistic) that it exerts no appreciable influence on the level of market prices. Its products are homogenous (undifferentiated) and are sold on the "open" market to whomever will pay the going price for a particular grade or quality. There is no control exercised over the atomistic firm in disposing of its product and the firm is free to decide when, where, how and to whom to sell. Under the perfect competitive model, there can exist nothing but atomistic and non-integrated firms. Quasi-integrative arrangements are excluded.

A non-integrated firm under perfect competition may purchase its input units at any place it chooses and on its own bargaining power. It pays the "going-price" for input factors and proportionalizes its inputs to maximize profits within the firm's capabilities. Any one firm can refuse to sell or to buy, and consequently, 19

19 Adapted from page 20 in this thesis.
PRICES WOULD NOT BE AFFECTED BECAUSE THE ELASTICITY FOR A
GIVEN FIRM IS "INFINITE." A PERFECT MARKET EXISTS FOR A
FIRM IF IT CAN BUY AS MUCH AS IT WANTS AT A GIVEN PRICE
BUT CAN PURCHASE NOTHING AT A LOWER PRICE. HOWEVER, LOWER
OR HIGHER PRICES ARE PAID BECAUSE OF IMPERFECT KNOWLEDGE
WHICH IS, OF COURSE, CONTRARY TO OUR ASSUMPTION OF PERFECT
COMPETITION. IN ADDITION, DEPARTURES FROM PERFECT COMPETI-
TION COULD RESULT FROM: (1) DIFFERENTIATION OF SERVICES,
(2) ADVANTAGES OF LOCATION AND (3) INTEGRATION ARRANGEMENTS,
AMONG OTHERS.

TRADITIONAL ECONOMIC THEORY ASSUMES THAT EACH FACTOR
USED BY A FIRM IS BOUGHT ON A PERFECT MARKET IN COMPETITION
WITH MANY OTHER FIRMS. THE PRICE OF INPUTS, HOWEVER, MAY
DEPEND NOT SO MUCH ON THE DEGREE OF COMPETITION AMONG THOSE
WHO ARE BUYING THE INPUTS BUT UPON THOSE WHO SELL THEM.

**Monopolistic Competition**

Monopolistic competition denotes a hybrid market
structure or one where perfect competition is found co-
existing with pure monopoly in addition to a wider range
OF FIRM BEHAVIOR WHICH IS NEITHER PERFECTLY COMPETITIVE
NOR PERFECTLY MONOPOLISTIC. NON-INTEGRATION OF FIRMS IS
COMMON UNDER IMPERFECT MARKET STRUCTURES. OF THREE FIRMS
LOCATED SIDE BY SIDE, ONE MAY BE NON-INTEGRATED, ONE COM-
PLETLY INTEGRATED AND THE OTHER QUASI-INTEGRATED. ALSO,
A FIRM MAY BE NON-INTEGRATED AS TO DISPOSAL OF ITS OUTPUT
BUT QUASI-INTEGRATED IN ACQUIRING INPUTS OR VICE VERSA.
ESSENTIALLY, THERE EXISTS VARYING DEGREES OF COMPETITION
AND FLUIDITY OF FIRMS ENTERING INTO AND DEPARTING FROM CONTRACTUAL ARRANGEMENTS. UNDER PERFECT MARKETS THERE IS NO NEED TO INTEGRATE, VIZ: PRICES FOR INPUT-OUTPUT UNITS ARE THE SAME OVER A WIDE RANGE. IT IS ONLY WHEN MARKETS DEVIATE FROM THE PERFECT MODEL THAT QUASI-INTEGRATION ARISES SUCH AS WHEN NON-PRICE FACTORS RECEIVE MAJOR EMPHASIS. OF COURSE, QUASI-INTEGRATION MAY CREATE IMPERFECT MARKETS AND VICE VERSA. THE EXISTENCE OF NON-INTEGRATED FIRMS UNDER IMPERFECT COMPETITION IS DUE, IN PART, TO A HOLD-OVER OF THE PERFECT MARKET CONCEPT, VIZ: SOME GROWERS DESIRE TO BE FREE IN THEIR MANAGERIAL FUNCTIONS AND TO ACCEPT PRICES DETERMINED BY COMPETITIVE MARKET FORCES.

MONOPOLISTIC COMPETITION BECOMES MORE SIGNIFICANT IN THE BROILER INDUSTRY WHEN FIRMS BEYOND THE GROWER LEVEL ARE CONSIDERED SUCH AS CHICK HATCHERIES, FEED DEALERS, AND THE LIKE. GROWERS MAY PREFER TO BUY FROM ONE FIRM RATHER THAN ANOTHER BECAUSE OF A NICE SMILE WITH WHICH THE PRODUCT IS SOLD, THE ATTRACTIVE PACKAGES OR ADVERTISING OR BECAUSE OF THE FIRMS' REPUTATION AND DEVELOPMENT OF PERSONAL OR CONTRACTUAL RELATIONSHIPS. INTEGRATIVE ARRANGEMENTS, CULMINATING INTO CONTRACTS OR QUASI-INTEGRATION BETWEEN FIRMS, IS A FORM OF MONOPOLISTIC COMPETITION IN OUTPUT DISPOSAL AS WELL AS IN INPUT BUYING. 20

EXISTENCE OF GROWERS' PREFERENCES FOR SELLERS OF

20 ADAPTED FROM BOULDING, OP. CIT., P. 572.
Broiler inputs (feed) may result in a higher selling price and a smaller volume of sales and scale of operations because of the affinity of some growers for some sellers. As a result, some feed dealers may lower prices and attract only a moderate amount of business while some can raise prices over competitors without alienating its more loyal buyers. This may help to explain why cooperative mills selling feed for $1.00 per hundred pounds lower than private feed mills have made only moderate gains in the feed business in Louisiana. Associated with this is the fact that auxiliary services are bound-up with feed prices. The fact that growers have to borrow from a bank to purchase the cheaper cooperative-milled feeds precludes some of them from buying it. Other producers prefer to pay higher feed prices but are then granted credit for these feed purchases.

Pure competition among the sellers of feed inputs would imply the perfect dependence of any given firm's volume of sales upon the price charged by all other sellers in the industry plus the inability of the firm to influence the price decisions of these other sellers of inputs. In addition, this means that buyers of feed input are indifferent as from whom they obtain their feed: (1) The services offered by the sellers to the buyers must be perfectly homogenous so that buyers have no reason such as for personality, reputation or convenience of location to prefer one seller over another and (2) There are at
LEAST A LARGE NUMBER OF SELLERS OFFERING EACH TYPE OF SERVICE.

IN SUMMARY, THE SELLERS OF INPUT FACTORS WHICH BROILER GROWERS FACE ARE USUALLY BUSINESS ENTERPRISES THAT ENJOY PRODUCT, SERVICE OR SPATIAL DIFFERENTIATION. A GROWER BUYS "BRANDED" FEED AND "PEDIGREED" CHICKS FROM FIRMS WHICH ARE RELATIVELY FEW IN NUMBER; ARE USUALLY PARTS OF A NATIONAL CONCERN; FOLLOW ADMINISTERED PRICE POLICIES AND DISPLAY COMPETITIVE CHARACTERISTICS THAT ARE LESS THAN PERFECT. SINCE INPUT SELLERS ARE INFINITELY LESS IN NUMBER THAN INPUT-PURCHASERS, PRICE COLLUSION OR "MARGIN FIXING" AMONG THE SELLERS IS LIKELY TO BE MORE PREVALENT.

IN DISPOSING OF OUTPUT, GROWERS' PREFERENCES ARE SIGNIFICANT WHEN IT COMES TO CHOOSING OUTLETS AMONG A MULTIPLE NUMBER OF FIRMS. SERVICES MOST VALUED BY PRODUCERS ARE APPARENTLY CONVENIENCE OF LOCATION, LESS RISK, SMALLER DOCKAGE FOR SHRINKAGE AND THE LIKE. WHEN A FEW BUYERS IN AN AREA FACE ATOMICISTIC GROWERS, THE PRICES THEY PAY MAY DEPEND ON (1) THE AFFINITY OF GROWERS' FOR CERTAIN BUYERS' AND (2) THE EXTENT OF COMPETITION BETWEEN TWO OR AMONG A FEW BUYERS, VIZ: THE EXTENT OF PRICE-FIXING OR COLLUSION EXISTING. IF COLLUSION EXISTS THEN THE EFFECT IS MONOPSONISTIC.

IF THERE ARE GROWERS' PREFERENCES FOR BUYERS, EACH BUYING FIRM HAS A PURCHASE CURVE UNEQUIVOCALLY ITS OWN.

This curve will be rising, its position and elasticity depending upon what the other buyers may offer. This firm is a monopsonist with regard to its own group of sellers. However, by payment of a relatively high price, the buyer may attract others who are lesser attached to their buyers. The existence of growers' preferences among buyers in general results in a lower buying price and a smaller volume of purchase and scale of operations than under pure competition. This is because the buyers' purchase curve veers from the horizontal (pure competition) to a positive inclination. Thus, the more efficient buyer cannot necessarily drive less efficient rivals from the market because of the affinity of some growers for some buyers. This affinity may be underwritten by a contract or agreement.

As Nicholls points out:

"General economists have failed to consider, outside of the labor market, the problem of monopsonistic elements in buying." While more or less perfect competition on the sellers' side may prevail, the corresponding or "buyers' side" do not always compete under perfect competition, viz: there are relatively few firms; freedom of entry is not altogether fluid and each firm has an appreciable effect on price. Such cases, then, are highly important in local markets where first buyers are usually involved. 22

The fundamental question posed under imperfect competition is whether a non-integrated firm can survive among all the contractual arrangements being developed by its competitors.

In broilers, as in many other enterprises, the problem is

WHETHER A BROILER GROWER CAN EVEN FIND A MARKET IF HE HAS NO CONTRACTS REGARDLESS OF THE PRICE HE IS WILLING TO ACCEPT FOR HIS BIRDS.

KEIRSTEAD HAS POINTED UP THE EFFECTS OF NON-INTEGRATION AND ITS RELATION TO SUBSEQUENT CONDITIONS OF INCREASED FIRM INTEGRATION.

"Technical advances, and the internal economies they embody, are frequently only possible to the firm able to command large accumulations of capital." Technical advance creates financial integration and sets in motion a series of amalgmations and combines. The industrial tendency is towards 'non-perfect competition and ownership integration with more of the gains as residual to the integrating firms than as gains passed on to consumers. For then, these firms, under imperfect competition, tend to restrict output as they feel their newly-located strength and influence on price. This represents the fundamental transition from "atomistic" to "aggregative" firm behavior or from non-integration to integrative set-ups.23

**Pure Monopoly-Monopsony**

Pure monopoly exists when a single government, private organization or individual controls either the entire demand for, or the entire supply of a given good. Unless the demand curve is completely inelastic, or unless the supply monopolist has power to coerce the buyers, he cannot raise selling prices without reducing the number of units sold.

Under monopoly-monopsony, non-integration is explicitly eliminated since the firm is either the sole buyer or the sole seller. Rather than being atomistic it is the "whole" industry. The firm enjoying a perfect monopoly position may

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BE NON-INTEGRATED, YET THIS IS NOT IMPORTANT BECAUSE ITS "OUTPUT" IS THE SOLE OUTPUT AND, THEREFORE, OTHER FIRMS AT SUBSEQUENT LEVELS IN THE PRODUCTION PROCESS MUST COME TO IT FOR THEIR "INPUTS". WITNESS THE CASE OF ALCOA A FEW YEARS AGO WHEN ITS "OUTPUT" OF ALUMINUM WAS THE SOLE SOURCE OF "INPUTS" OF ALUMINUM FOR OTHER FIRMS; CONSEQUENTLY, ALCOA HAD NO INTEGRATION PROBLEMS FOR IT DID NOT HAVE TO CONCERN ITSELF ABOUT CONTRACTS, AGREEMENTS OR OWNING SUBSEQUENT FIRMS IN ORDER TO DISPOSE OF ITS "OUTPUT". RARELY IS A FIRM SIMULTANEOUSLY A MONOPOLIST AND MONOPSONIST, HOWEVER. INSTEAD, A MONOPOLIST, WHILE HAVING ABSOLUTE CONTROL OVER HIS OUTPUT SUCH AS THE CALIFORNIA BREEDER OF "NORTHWESTER BROILERS", MAY FIND THAT HE IS ATOMICISTIC WHEN BUYING CERTAIN INPUTS SUCH AS FEED.

ON THE BUYING SIDE, THE EXISTENCE OF ONLY ONE FIRM IS TERMED MONOPSONY. A BUYER OF EGGS AND POULTRY IN THE LOCAL MARKET MAY CONSTITUTE A MONOPSONY BECAUSE THIS ONE BUYER IN A LOCALITY MAY OWN OR CONTROL ALL OF THE LOCAL DISTRIBUTING OR PROCESSING FACILITIES. THIS DOES NOT IMPLY THAT THE MONOPSONY CONTROL IS ABSOLUTE BECAUSE OF: (1) POSSIBILITY OF GROWERS GOING TO BUYERS IN THE NEXT TOWN, (2) THE NEARBY BUYERS MIGHT COME INTO THE LOCAL MARKET, (3) THE PRODUCERS MAY ORGANIZE A COOPERATIVE, (4) THE MONOPSONY PRICE MAY BE SO LOW AS TO CURTAIL PRODUCTION AND RAISE PRICES BY FORCING THE BUYER TO OBTAIN INPUTS ELSEWHERE AND (5) THE DEFINITE POSSIBILITY THAT OTHER OUTLETS IN THE SAME TOWN MIGHT BE DEVELOPED.
While these conditions tend to mitigate against any dealer extracting full monopsony profits, the fact remains that profits over and above "normal" may prevail, viz: the normal rate of return to entrepreneurship may be exceeded in such an imperfect market condition. Of course, there is always a possibility that firms may enter and attempt to "squeeze-out" this excess rate of return. This is not always done, even with multiple firm entry, because these new firms may collude with the "established" firm and maintain "margins". In fact, as Chamberlain and others have cautioned, excess capacity may develop, width of margin-taking may be expanded and even worse market conditions may develop. 24

The competitive relationship between atomistic broiler growers and a monopsonist buyer is a form of "compulsory integration" since none or only distant alternative outlets are available. The monopsonist has, therefore, integrated growers to the extent that the balance of market power is not shared or mutually determined but, instead rests with the monopsonist. In this case, the economist may be wise in recommending voluntary instead of compulsory integration. This might enable the grower to escape the penalties of non-integration when he and his fellow producers

FACE A MONOPSONIST. OTHER ALTERNATIVES THAT ECONOMISTS MIGHT CONSIDER RECOMMENDING ARE: (1) THE PRODUCER MERGING WITH THE MONOPSONIST AND BECOMING FUSED IN PRIVATE VERTICAL INTEGRATION, VIZ: WORKING FOR A MONOPSONIST ON A SALARY MAY BE BETTER THAN WORKING FOR HIM ON OR THROUGH A MARKET TRANSACTION, OR (2) PRODUCERS MAY FORM A COOPERATIVE IN AN ATTEMPT TO BREAK THIS MONOPSONY POWER AND TAKE OVER, IN PART OR IN FULL, THE MONOPSONY PROFITS.

(II) QUASI-INTEGRATION

A QUASI-INTEGRATED FIRM IS EITHER A SINGLE PROFIT MAXIMIZING ENTITY OR AN ENTITY OF A COOPERATIVE NATURE IN WHICH A SINGLE MANAGEMENT CONTROLS OR POSSESSES AGREEMENTS BUT DOES NOT OWN A NUMBER OF UNITS ON ONE AND SUCCESSIVE LEVELS OF THE PRODUCTION PROCESS. 25

OXENFELDT CITES MANY POSSIBLE FORMS WHICH "QUASI-INTEGRATION" MIGHT TAKE INCLUDING: (1) CONTRACTS OF PURCHASE AND SALE SPECIFYING THAT THE BUYER SHALL NOT RESELL THE GOOD AT LESS THAN A PRESCRIBED PRICE, (2) TYING CONTRACTS WHERE A BUYER IS FORCED TO ACCEPT MORE THAN ONE GOOD, (3) CONTRACTS WHICH SPECIFY THAT THE BUYER WILL NOT HANDLE ANY COMPETING PRODUCTS OR, IF HE DOES, THAT SUCH PRODUCTS SHALL ALL BE SOLD AT THE SAME PRICE, (4) CONTRACTS WHICH SPECIFY THAT THE OUTPUT OF THE FIRM SHALL BE COMPLETELY SOLD TO THE PRINCIPAL BUYER UNLESS THE LATTER GIVES PERMISSION TO

25ADAPTED FROM PAGE 20 IN THIS THESIS.
do otherwise, and (5) Contracts specifying that the grower-firm shall purchase from the dealer-firm all needed goods and services and that the grower-firm shall follow the management program prescribed by the dealer-firm. 26

Quasi-integration provides a number of advantages over the more-widely known process of complete integration such as: (1) Management is decentralized into more firms while at the same time affording advantages in certainty of supply, economies of operation and control over sales, (2) It allows a considerable degree of independent managerial effort on the part of quasi-integrated firms, (3) It does not necessitate changes in the corporate structure in order to do business and is very flexible and fluid and (4) Its very loose nature, however, is a disadvantage in the sense that dissolution and withdrawal is relatively easy.

Perfect Competition

Quasi-integration is automatically eliminated under perfect competition because of the non-price factors, differentiations and contractual arrangements existing between and among firms. There is no valid economic reason for quasi-integrating under perfect competition apart from "social" or other values.

Under the perfect competitive model, a firm will not purchase input factors in quasi-integration. There is no reason to quasi-integrate under perfect competition since

26 Oxenfeldt, op. cit., pp. 210-212.
INPUT UNITS MAY BE PURCHASED AT THE GOING MARKET PRICE FROM ANY FIRM. THE PURCHASE CURVE IS PERFECTLY ELASTIC.

Also, under perfect competition, quasi-integration of firms in disposal of output cannot theoretically exist since the firm cannot control the price of its product, viz: it is something given by economic forces. Its sales curve is perfectly elastic. In quasi-integration, a firm may negotiate prices for its output and, in fact, may circumvent the operations of the free market and decide to sell its output for more or for less than the going market price. Also, other conditions of sale may be negotiated which invalidate the assumptions of the perfect competitive model.

MONOPOLISTIC COMPETITION

Quasi-integration is one of the characteristics of monopolistic competition. By using contractual devices, quasi-integrated firms hope to circumvent the operations of an otherwise free market. Other characteristics of monopolistic competition are fewness of firms, impediments to firm entry plus a wide range of product and service differentiation. These characteristics and others like them may be associated with quasi-integration. Under monopolistic competition quasi-integrated firms may coexist with greater or lesser integrated firms and may shift its quasi-integration to complete or to non-integration. It is noted here that a single firm may be non-integrated yet exist in an

27 Boulding, op. cit., p. 454.
 Imperfect market because its competitors are quasi-integrated or completely integrated.

Broiler growing firms buy input factors under varying degrees of competition not only among themselves but in relation to the sellers of inputs. Among these grower firms, atomistic competition may prevail in buying inputs but the sellers of input-factors such as feed stores and chick hatcheries are in competitive relationships that are usually less than perfect. Since oligopolistic conditions do prevail among sellers of inputs such as in feed, broiler grower firms seek to integrate themselves with particular feed dealers so as to obtain price concessions, better service, or for securing markets for their broilers.

Quasi-integration in the purchase of broiler production inputs is widespread. Let us assume broiler grower firms are contracting for feed, chick, supply and related inputs with a feed store. All types of services, including credit charges, may become part of the "asking price" or of "margins" charged. Managerial functions of the grower firm may be altered to conform to the management program recommended by the input-supplier. A basic feature of quasi-integration and input acquisition is the complementary features of the arrangement. Once a grower-firm decides to quasi-integrate with a supplier of feed, for example, it may obligate itself to the purchase of other inputs; obtain credit and even market its output through the input-supplier firm. In this case, the supplier firm
is extending its control by being free to charge whatever it can for certain items. This may help to explain the exorbitant prices charged growers for sulfa and other drugs. Cases have been reported where these drugs were sold for $20 per gallon when the wholesale price was only $9. The dealer is afforded the opportunity to "unload" high priced items on the grower which he (the dealer) could not ordinarily do without these tying clauses that are a part of quasi-integration and monopolistic competition.

This phase has other facets. The integrated feed concerns like to establish their "program" which is a form of "full-line forcing". The grower must follow what the company recommends. He must feed as they indicate; use company branded sprays, medicines and disinfectants; and he must use company recommended equipment and often company bought chicks and the like. It must not be overlooked that the same feed store may be selling inputs to producers who are non-integrated and who independently manage their business. This is a characteristic of imperfect competition.

Quasi-integrative arrangements between growers and input-suppliers are unstable and may be upset by firm entry such as a new feed dealer. This points out the instability of quasi-integration and how product and service differentiation, including advertising, are important in economic behavior. Growers often are so attached to a feed salesman
THAT THEY THREATEN TO CHANGE FEEDS IF THE SALESMAN-SERVICE-MAN CHANGES FEEDS. 28

Monopolistic competition also exists when a few large buyers of broilers, for example, face a large number of broiler growers, none of whom are capable of influencing prices by withholding their output. Because the market structure is no longer perfectly competitive on the buyers' side, the buyers' may seek and the producers may welcome integrative arrangements such as processors contracting for broilers. Why do buyers' desire to quasi-integrate? There are several reasons but, principally, a buyer or buyers may want a steady and dependable source of broilers and of a particular breed or weight. In addition, the buyer or processor may have a feed store or chick hatchery whose output he desires to stabilize by contracts.

Grower-firms may have several valid reasons for evaluating the buying side of their market as an initial step in deciding whether to integrate or not. When a dominant firm prevails, the grower firm may elect to develop integrative arrangements with this firm instead of the "fringe" firms in anticipation of greater market security. Under oligopsonistic conditions and with little or no price competition, the emphasis shifts to services, product differentiation, and the like. Grower-firms are often confused as to price and non-price competition and the provision

28Nicholls, op. cit., p. 198.
OF SERVICES WHICH OBSCURE THE REAL COST-PRICE RELATIONSHIPS.
Growers may not consider price differentials too meaningfully but, instead, may carefully examine the buying policies of processors.

There usually exists within this imperfect market, some growers and some buyers who are non-integrated. Furthermore, some buyers may contract for a part of their supply, produce another part and buy the remainder on the "open market". Within this imperfect market, there may exist a substantial competitive price-making market such as the Chicago egg market or the East Texas live broiler market. Actually, some of these "spot" markets approach the perfect market model and many transactions of an integrated and/or imperfect nature are based on such market price determinations. The inherent danger in integration patterns is that fewer and fewer of the market transactions are taking place on the "open markets" although the parties to integration rely on these market forces to set the price for them. Market manipulations, therefore, pose a threat to both the "open market" and the "integrated" transactions.

In summary, it is claimed that quasi-integration patterns have evolved because processors desire a stable source of supply while growers want a definite market outlet. Prices are sometime specified in such agreements but often price determination is not made except at time of sale when current market prices are used. The development of quasi-integration in place of free and open market operations may
be traced, in most cases, to a desire on the part of both parties for more price stability, less market risk, better quality of product, and in general, may result from the technological changes in growing, processing and retailing of broilers. Oligopsony which exists on the buying side often precipitates formation of oligopoly on the supply side in order to balance the market.

**Pure Monopoly-Monopsony**

Quasi-integration and disposal of output under pure monopoly is inherent and categoric. Suppose a firm had a monopoly of a product (output) and other firms desired it (as inputs). Quasi-integration is explicit since the input-buyers would have to negotiate for the product of the monopolist. Therefore, a firm under monopoly is quasi-integrated with purchasers of its output. It is more so "compulsory" quasi-integration rather than "voluntary". Also, the extent of compulsion will depend on the alternative uses or substitutes for the output in question.

Under monopsony, quasi-integration of firms is axiomatic since the firm constitutes all the "industry". In case the firm is the sole buyer of the good, then there is no alternative to quasi-integration. The arrangement is neither stable nor permanent, however. Freedom of entry, extent of monopoly power and substitution are important here. There is always the possibility of a shift from quasi-integration to complete integration. Instead of the monopsonist relying on other firms, it may decide to produce its own
inputs or process its own output. Growers, on the other hand, always pose a threat since they may establish an agency or firm in competition with the monopolist-monopsonist.

With reference to quasi-horizontal integration and monopoly, Scitovsky points out that quasi-integration on a horizontal basis may be better than complete horizontal integration. The end result is the same. When a few hatcheries (oligopolists) quasi-integrate, they then act as a (monopolist or monopsonist) much the same as if one hatchery would have bought out the entire group and gained control of output. However, the business arrangements thus negotiated may not be as secure under quasi-integration compared to pure monopoly or pure monopsony. A certain number of firms who are parties to the agreement may withdraw at any time. Still others may never consent to join the fraternity of oligopolists and thus thwart whatever agreement is negotiated. Vertical relations are somewhat different because a firm is in negotiation with a non-competitor and thus agreements are likely to be much more respected and enforced.

(III) Complete Integration

A completely integrated firm is either a profit maximizing entity or an entity of a cooperative nature in

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WHICH A SINGLE MANAGEMENT OWNS OR IS OWNED BY A NUMBER OF
UNITS HANDLING COMMODITIES ON ONE AND/OR SUCCESSIVE LEVELS
OF THE PRODUCTION PROCESS.

THERE ARE AT LEAST TWO METHODS BY WHICH COMPLETE
INTEGRATION MAY BE ACHIEVED: (1) WHERE A FIRM ABSORBS OR
CREATES ANOTHER UNIT, HORIZONTALLY OR VERTICALLY, BUT WITH
CORPORATE IDENTITY RESIDING IN ONLY ONE FIRM AND (2) WHERE
ENTREPRENEURS CREATE A NEW ENTITY AT ANOTHER STAGE IN THE
GROWING-MARKETING PROCESS BUT WITH ALL INTEGRATING UNITS
RETAINING THEIR IDENTITY AND PRIMARY FUNCTION. THE LATTER
INSTANCE TYPIFIES THE FORMATION OF COOPERATIVES OR NON-
PROFIT ASSOCIATIONS WHERE BROILER GROWERS, FOR EXAMPLE,
ORGANIZE TO HANDLE FEED OR PROCESS BROILERS. SIMILARLY,
A GROUP OF CORPORATE FIRMS MAY ORGANIZE A COMPANY TO PER-
FORM SOME SPECIFIC SERVICE EITHER ON A PROFIT OR NON-PROFIT
BASIS.

PERFECT COMPETITION

THEORETICALLY, COMPLETE INTEGRATION EITHER THROUGH
PROFIT OR NON-PROFIT VENTURES MAY OCCUR UNDER PERFECT COMPETI-
TION AS LONG AS THE FIRMS REMAIN ATOMIC WITHIN THE
GIVEN MARKET STRUCTURE. HOWEVER, COMPLETE INTEGRATION IS
MORE COMMONLY CONSIDERED TO BE WITHIN THE FRAMEWORK OF
IMPERFECT COMPETITION. IN FACT, THE GREAT FEAR CONCERNING
COMPLETE INTEGRATION IS IN THE POSSIBILITY OF TRANSFORMING
ATOMIC FIRMS INTO AGGREGATIVE UNITS AS OLIGOPOLY-OLIGOPSONY
STRUCTURES. COMPLETE INTEGRATION ATTAINED BY ONE FIRM ABSORB-
ing another, vertically or horizontally, is not explicitly
EXCLUDED UNDER PERFECT COMPETITION AS LONG AS THE ATOMISTIC NATURE OF THE FIRM IS PRESERVED. ADMITTEDLY, THIS IS A DELICATE SITUATION BUT NOT THEORETICALLY IMPOSSIBLE. FOR EXAMPLE, ATOMISTIC BROILER-GROWER FIRMS MAY INTEGRATE BY ABSORBING OTHER GROWER FIRMS (HORIZONTAL) AND/OR PROCESSING PLANTS (VERTICAL) AND STILL REMAIN ATOMISTIC DUE TO THE WIDESPREAD NATURE AND EXTENT OF THE BROILER MARKET. IF THE SCOPE OF THE "MARKET" IS NARROWED, HOWEVER, THEN THE MERGING OF ATOMISTIC FIRMS AND THEIR RESPECTIVE INFLUENCES ON PRICE DETERMINATION MAY CAUSE A MARKET TO BE LESS THAN "PERFECT". UP TO AND UNTIL ATOMISTIC BEHAVIOR IS LOST, COMPLETE INTEGRATION MAY BE WHOLLY DESIRABLE SUCH AS IN ACHIEVING ECONOMIES OF SCALE, LOWERING PRICES TO CONSUMERS AND THE LIKE.

A COMPLETELY INTEGRATED FIRM RELATIVE TO INPUT-FACTOR PURCHASE MAY EXIST UNDER A PERFECT MARKET PROVIDED IT LIKewise REMAINS ATOMISTIC. SUPPOSE THAT A BROILER PROCESSOR DECIDES TO INTEGRATE BACKWARDS INTO THE GROWING OF BROILERS. THE FACT THAT HE MAY BE ATOMISTIC ON BOTH THE PROCESSING AND THE GROWER LEVEL ALLOWS COMPLETE VERTICAL INTEGRATION UNDER PERFECT COMPETITION ALTHOUGH HE MUST NOT DIFFERENTIATE HIS PRODUCT OR IN ANY WAY DEVIATE FROM THE PERFECT MODEL. COMPLETE HORIZONTAL INTEGRATION IN BROILER GROWER FIRMS, FOR EXAMPLE, MAY NOT ALTER THE CHARACTER OF PERFECT COMPETITION SINCE THERE ARE THOUSANDS OF SUCH FIRMS. IF ATOMISTIC FIRMS MERGE TO THE EXTENT THAT THEY CEASE TO BE ATOMISTIC, THEN THE PERFECT COMPETITIVE MODEL IS LOST.
Complete integration through a profit or non-profit entity under output disposal is likewise possible under perfect competition as long as the atomistic nature of the firm is preserved. None of the characteristics of imperfect competition must prevail such as branding and differentiation. Atomistic broiler producers may form a selling cooperative which may proceed to sell at "auction" or on terminal markets, thereby, preserving the firm's atomistic nature and the perfect competitive market. If broiler producers integrate horizontally (assembly) and vertically (selling), they may do so under perfect competition and not change the atomistic nature of the market since the selling cooperative may remain atomistic depending on the scope and type of market.

Monopolistic Competition

Complete integration, either by profit or non-profit entities, is a common characteristic of imperfect markets where it coexists with non-integration and quasi-integration. In integration, firms may rely partly on their own resources, on other firms through contractual devices and on open-market operations. In such cases, the more integrated firm can gauge its costs and price scales with less integrated or non-integrated firms. There is a tendency for firms in an imperfect market to seek further integration, either horizontal or vertical, so that their position might eventually become pure monopoly and/or pure monopsony. This might characterize both cooperative and non-cooperative entities.
When do completely integrated firms depart from the perfect market and enter an imperfect environment? This may happen whenever complete integration alters the atomistic nature of a firm and transforms it into an aggregative unit. Also, use of contracts, branding, price-fixing and related devices may cause it to depart from the perfect market model.

Cooperative associations, like profit corporations, may organize as dealerships, selling agencies, manufacturers and distributors. These entities use techniques of differentiation, contractual arrangements and the like in a manner similar to profit corporations. Such cooperative entities are not atomistic in the sense that they have no control over the market and in essence they are not pure monopolists but may qualify as being imperfectly competitive.

Economists have maintained that there is no essential difference between a cooperative becoming monopolistic and a profit corporation which does likewise. However, if under an imperfect market, a producers' cooperative were to extract oligopoly profits, the "excess" returns would probably stimulate production and in turn affect the sales schedule. When a profit-type marketing agency extracts oligopoly profits, it may not respond similarly in stimulating output because it can more closely control production and the price it receives. A cooperative, on the other hand, may return these oligopoly profits to its member-firms in the form of patronage dividends. In the absence of any controls, the member-firms decide their own acreage and/or output schedule.
In acquisition of input, the objective of complete integration is mainly to stabilize the supply and to achieve economies in procurement. This would hold true for Ford Motor Company as well as for a local feed cooperative in Louisiana. In one case, Ford has gone into its own steel production; in the other, broiler growers have their own feed mill.

Farmer's cooperatives that integrate backwards into feed buying or milling may enter into competition with existing feed dealers that may be likewise integrated. For example, in some Louisiana broiler areas, as many as ten brands of feed were replaced with one cooperative brand where all growers joined their purchases through one unit, which resulted in lower feed margins. Previously, one atomistic grower buying from oligoplistic feed dealers had a decided lack of purchasing strength. In association with other growers, farmers shifted their "atomistic" position to one approximating "oligopsony" in the local feed input market. Growers had long recognized their lack of bargaining power since, as atomistic firms, they had to buy from oligopolists and in turn sell their broilers to oligopsonists.

In disposing of output, the objective of complete integration is mainly to extend the firm's control over price. As we have seen, under non-integration this was not possible. This objective would hold true for a manufacturer operating retail shops as it would for a broiler sales cooperative in Louisiana. In one case, the firm brands and sets the price on its product sold through its own stores; in the other, broiler
GROWERS SELL ALL THEIR BIRDS THROUGH ONE SALES AGENCY OR THROUGH THEIR OWN COOPERATIVE PROCESSING PLANT.

IT IS TRUE THAT INDIVIDUALLY THE PRODUCER IS ATOMIC While if he integrated cooperatively with other firms he would lose his atomic nature and become a "factor" in the market through greater bargaining power, contract negotiations, advertising, and the like. The individual producer is, therefore, more interested in evading the atomic market for a less price-competitive situation. Integration through a cooperative affords him his chance to escape the atomic market much as quasi-integration and mergers afford the "business" sector a chance to escape their atomic markets.

Pure Monopoly-Monopsony

The monopolist or monopsonist at one level may rather conveniently integrate backwards or forwards by absorbing firms or creating new units by being either the sole seller of "output" or the sole buyer of "input". In fact, monopoly effects are encouraged at other levels of economic activity. Monopolists may accomplish the objective of further integration by the use of quasi-integration techniques in conjunction with complete integration. Assuming the existence of monopoly at some stage in the economic process, then complete integration, either forwards or backwards, is readily visualized.

A completely integrated firm under perfect monopsony or monopoly illustrates the concept that monopolies, by virtue of their sale position, may extend their influence backwards or forwards as the case may be. In a local market, for example,
A feed dealer-processor may be the sole buyer of broilers (monopsony) and by virtue of this position may act as a monopsonist with reference to other poultry products such as hens and eggs. Also, the feed dealer may be the sole local seller of feed inputs, hence a monopolist. As such, he could decide to enter an atomistic market such as growing broilers or enter more protected market structures such as hatching broiler chicks.

A cooperative entity may integrate "output" under perfect monopoly by tending to combine a relatively few firms into one cooperative unit controlling all the supply in a certain locality or market area. This is sometimes an expressed purpose of cooperative associations and, to this extent, they contribute to imperfect markets. Members of the cooperative may argue, however, that their monopolistic behavior is simply to balance the power of the monopsonistic buyer which handles their product.

In essence, the cooperative did not create an imperfect market, viz: the imperfect market was already there. Similarly, cooperatives may act as a monopsonist by integrating and having complete buying power. It should be noted, however, that in all such instances cooperatives are acting as agents of the farmers.

Would the substitution of cooperative, non-profit monopoly for non-cooperative, profit monopoly be of benefit to consumers? The basic economic justification for local cooperation is certainly the elimination of monopoly profits. By cooperation, farmers in principle cease competing in the sale of their product to a local private dealer and integrate forward to take over his
FUNCTION. A CATEGORIC ANSWER IS THAT CONSUMERS WOULD NOT BENEFIT FROM ANY MONOPOLY, COOPERATIVE OR NOT. HOWEVER, CONSUMERS ARE LIKELY TO SUFFER LESS FROM A MONOPOLY SITUATION DOMINATED BY A COOPERATIVE SINCE THE "EXCESS PROFITS" MAY BE ALLOCATED BACK TO THE GROWERS, FOR EXAMPLE. THIS WOULD LIKELY STIMULATE THEIR OUTPUT AND RESULT IN MORE COMPETITIVE PRICING. A PROFIT-TYPE MONOPOLY WOULD RETAIN ITS "EXCESS PROFITS" EXCEPT FOR THAT DECLARED TO STOCKHOLDERS. IT WOULD ALSO BE IN A BETTER POSITION TO MAINTAIN THE MONOPOLY COMPARED WITH A FARMERS' COOPERATIVE COMPOSED OF MANY RATHER THAN ONE ENTREPRENEUR.

A SUMMARY OF THE VARIOUS INTEGRATION PATTERNS AND THEIR RESPECTIVE DEVELOPMENT WITHIN DIFFERENT MARKET STRUCTURES IS PRESENTED IN TABLE 3.

INTEGRATION THEORY IN RELATION TO THE BROILER INDUSTRY

THE THEORY THUS DEVELOPED IS CONCERNED WITH THE MICRO-ECONOMIC APPROACH, VIZ: THE ISOLATED BEHAVIOR OF ONE OR A FEW FIRMS. THE MACRO-ECONOMIC OR AGGREGATIVE-FIRM APPROACH IS NOT GENERALLY USED. IT IS CONCEIVABLE THAT THE USE OF THE LATTER METHOD WOULD CONTRIBUTE STILL MORE TO THE UNDERSTANDING OF INTEGRATION PATTERNS BY SHOWING THE INTERRELATIONSHIPS BETWEEN AND AMONG NON-INTEGRATION, QUASI-INTEGRATION AND COMPLETE INTEGRATION. MACRO-ECONOMIC ANALYSIS MAY ALSO CONTRIBUTE TO A BETTER APPRAISAL OF MARKET STRENGTH BETWEEN SELLERS WHO ARE IN PURE COMPETITION AMONG THEMSELVES (ATOMISTIC) BUT WHO FACE BUYERS WHO ARE NOT IN PERFECT COMPETITION AMONG THEMSELVES OR OLIGOPSONY (TABLE 4).
Table 3. Outline of Firm Behavior Under Various Integration Patterns and Market Structures.

<table>
<thead>
<tr>
<th>Type of Integration Pattern and Market Structure</th>
<th>Characteristics of Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. &quot;Model&quot;: Non-Integration</td>
<td></td>
</tr>
<tr>
<td>1. Perfect competition</td>
<td>Non-integration is more prevalent.</td>
</tr>
<tr>
<td>2. Imperfect competition*</td>
<td>Likely to exist alongside integrated firms.</td>
</tr>
<tr>
<td>3. Monopoly/monopsony</td>
<td>Impossible since firm constitutes &quot;all&quot; the industry.</td>
</tr>
<tr>
<td>II. Quasi-Integration</td>
<td></td>
</tr>
<tr>
<td>1. Perfect competition</td>
<td>Cannot exist under theory of perfect market.</td>
</tr>
<tr>
<td>2. Imperfect competition</td>
<td>A principal characteristic of imperfect competition.</td>
</tr>
<tr>
<td>3. Monopoly/monopsony</td>
<td>Inherent but more &quot;compulsory&quot; than &quot;voluntary&quot;.</td>
</tr>
<tr>
<td>III. Complete Integration</td>
<td></td>
</tr>
<tr>
<td>(a) Profit Entities</td>
<td></td>
</tr>
<tr>
<td>1. Perfect competition</td>
<td>May exist if firms remain atomistic.</td>
</tr>
<tr>
<td>2. Imperfect competition</td>
<td>Characteristic of imperfect markets.</td>
</tr>
<tr>
<td>3. Monopoly/monopsony</td>
<td>Method to further monopolize.</td>
</tr>
<tr>
<td>(b) Non-Profit Entities</td>
<td></td>
</tr>
<tr>
<td>1. Perfect competition</td>
<td>May exist if firms remain atomistic.</td>
</tr>
<tr>
<td>2. Imperfect competition</td>
<td>Cooperatives may create imperfect markets.</td>
</tr>
<tr>
<td>3. Monopoly/monopsony</td>
<td>May combine atomistic firms into aggregates.</td>
</tr>
</tbody>
</table>

*Same as monopolistic competition.*
This outline of competitive structures may be useful in ascertaining when integration could be used to effect a better balance of market power between broiler growers and broiler buyers. For example, organizing a cooperative may create an oligopoly market which could counteract an existing oligopsony (Table 4, Item 5).

Integration patterns do not develop in a vacuum. They develop within the scope of economic, social and political environments. Within any given industry there exists a variety of integration patterns, some of which are highly developed, some developing and some contemplated. Probably, the main root of integration is financing.**30** Firms which are atomistic and use relatively little capital, such as in some agricultural enterprises, are apt to have far less integration than those enterprises requiring large investments, such as in broiler growing and marketing. In order to protect this investment, financing firms and institutions extend their scope of control. Financial independence, therefore, may be a prerequisite to both firm independence and non-integration. As any industry develops in its technology and commercial aspects, the previously independent firms find their atomistic position becoming untenable. In the race to compete for input-output factors, the technological demands increase and financing comes into importance. This leads to a number of techniques which are

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UTILIZED TO SHELTER THIS INVESTMENT, EXTEND THE SIZE OF OPERA-
TION AND, IN GENERAL, STABILIZE THE ENTERPRISE.

Another point which warrants mention is the erratic price behavior under more or less perfect market operations. In other words, both buyers and sellers may feel the impact of price movements either up or down and both groups may dislike competition being centered on price alone. Therefore, producers may contract to avoid the risk of price declines at a cost of possible price rises while the buyer contracts to avoid risk of price increases at a cost of possible price decreases. An additional facet of the problem concerns the extent of these contractual price arrangements, viz: whether of micro or macro-economic significance. If only a small percentage of an industry is sheltered by price contracts, the effect of this on the economy may be nil. However, if a large part of the businesses enter into such price stabilizing agreements, this may cause uneconomic allocation of resources and, in turn, create permanent monopoly structures.

To provide a basis for developing subsequent chapters, the following hypotheses are advanced: (1) That integration patterns in the broiler industry, including broiler growing, consist mainly of quasi and complete integration but non-integration also exists, (2) That these integration patterns are of a horizontal, vertical and circular nature but particularly vertical, (3) That integration patterns are more consistent with imperfect rather than perfect market structures and that the chances for restoring the perfect market are slight, (4) That
IF INTEGRATION PATTERNS ARE GOING TO EXIST DESPITE SOME
THEORETICAL OBJECTIONS, EFFORTS SHOULD THEN BE DIRECTED
TOWARD THE DEVELOPMENT OF PATTERNS THAT ARE LEAST OBJECTIONABLE
AND HARMFUL TO SOCIETY, (5) THAT CONSUMER GROUPS CAN BE HARMED
BY SOME TYPES OF INTEGRATION IN THE SAME MANNER THAT THEY CAN
BE HARMED BY MONOPOLY OR MONOPSONY EVEN THOUGH SOME FIRMS
STAND TO BENEFIT BY EITHER OR BOTH INTEGRATION AND MONOPOLY,
(6) THAT NEITHER PERFECT COMPETITION NOR PURE MONOPOLY EXIST
IN THE BROILER INDUSTRY. PURE MONOPOLY, IN PARTICULAR, DOES
NOT EXIST BECAUSE: (A) THERE ARE MANY SUBSTITUTE MEATS FOR
BROILERS, (B) FIRM ENTRY IS RELATIVELY EASY ALTHOUGH IMPEDI-
MENTS TO ENTRY INCREASE BEYOND THE BROILER GROWING STAGE,
(C) THERE EXIST NO FORMAL PRODUCTION CONTROLS OR QUOTAS IN
RAISING BROILERS, (D) COOPERATIVE ASSOCIATIONS OFFER COMPET-
ITION IN CERTAIN KEY AREAS AS IN FEED MILLING, CHICK HATCHERIES,
PROCESSING AND FINANCING AND (E) TECHNOLOGICAL AND RESEARCH
INFORMATION IS WIDELY DISSEMINATED THROUGH COLLEGES AND OTHER
AGENCIES AND (7) THAT EXISTING IMPERFECT MARKET STRUCTURES
ARE MORE OF THE OLIGOPOLY-OLIGOPSONY TYPE WITH PRODUCT AND
SERVICE DIFFERENTIATION INCLUDING QUASI-INTEGRATIVE ARRANGE-
MENTS AND THAT SUCH IMPERFECT STRUCTURES MAY BE MORE PREVALENT
IN ONE AREA THAN IN OTHERS.
<table>
<thead>
<tr>
<th>Case</th>
<th>Seller</th>
<th>Buyer</th>
<th>Balance of Market Power 1/</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Atomistic*</td>
<td>Atomistic*</td>
<td>Even</td>
</tr>
<tr>
<td>2</td>
<td>Oligopolist**</td>
<td>Atomistic</td>
<td>Seller+</td>
</tr>
<tr>
<td>3</td>
<td>Monopolist***</td>
<td>Atomistic</td>
<td>Seller+ +</td>
</tr>
<tr>
<td>4</td>
<td>Atomistic</td>
<td>Oligopsony**</td>
<td>Buyer +</td>
</tr>
<tr>
<td>5</td>
<td>Oligopolist</td>
<td>Oligopsony</td>
<td>Even</td>
</tr>
<tr>
<td>6</td>
<td>Monopolist</td>
<td>Oligopsony</td>
<td>Seller +</td>
</tr>
<tr>
<td>7</td>
<td>Atomistic</td>
<td>Monopsony***</td>
<td>Buyer+ +</td>
</tr>
<tr>
<td>8</td>
<td>Oligopolist</td>
<td>Monopsony</td>
<td>Buyer+</td>
</tr>
<tr>
<td>9</td>
<td>Monopolist</td>
<td>Monopsony</td>
<td>Even</td>
</tr>
</tbody>
</table>

*Refers to perfect competition.

**Refers to imperfect or monopolistic competition.

***Refers to monopoly/monopsony.

1/A (+) denotes "one" degree of market power while (+++) denotes "two" degrees.
CHAPTER III

INTEGRATION IN ALLIED BROILER INDUSTRIES

The main businesses allied with the broiler growing enterprise are feed supply firms, chick hatcheries, processing plants and credit agencies. This chapter furnishes the background necessary for a more complete analysis of integration patterns in the broiler growing enterprise presented in Chapter IV. Two of the essential input factors needed to grow broilers are chicks and feed. In marketing the live broilers, the services of a processing plant are needed. To make possible the whole economic process, growers also need capital, both long-term and short-term.

FEED SUPPLY

Since feed constitutes about sixty-eight per cent of the cost of growing broilers, it is significant in determining whether the enterprise can expand in Louisiana relative to other areas of the country and to surrounding states. The expansion in the broiler industry and the shift from small to large scale operations has increased the demand for milled feeds substantially. The use of formula rations has supplanted home-mixed rations to a large extent. Broiler growing in Louisiana is concentrated in the less fertile areas of the state where the rolling topography may preclude
THE ECONOMICAL PRODUCTION OF CORN AND OATS FOR BROILER RATIONS.

Since Louisiana is a deficit feed state and imports both grain and milled feeds, the price which producers pay is high relative to surplus grain producing regions of the country. Also, the average price paid for broiler starter mash in Louisiana is higher than it is in the states of Georgia, Arkansas, Texas and Mississippi, which are competitors with Louisiana for some of the broiler markets in the South and elsewhere. (Table 5).

Feed Mills

The poultry feed milling industry is not well developed in Louisiana. Consequently, a considerable quantity of the formula feed used by broiler growers comes from mills located outside Louisiana. The only mills in Louisiana that formulate broiler rations in commercial quantities are located in Shreveport, Baton Rouge and New Orleans (Figure 2). Of the seven mills in these centers, only one is associated with a milling firm having nation-wide operations. The remaining six mills confine their distribution primarily to Louisiana, South Mississippi and East Texas. Mills located in Baton Rouge and New Orleans are disadvantaged in serving the Louisiana broiler area because of high freight rates in crossing the Mississippi River from east to west.

Of the fifteen different brands of feed used by a sample of Louisiana broiler growers from 1951 to 1953, six
were milled by "National" companies; seven by "Regional" mills and only two by "Local" firms. Of the fifteen brands only one was milled by a cooperative association. 31

"Local" brands refer to feeds milled and distributed intra-state; "Regional" brands refer to feeds distributed over more than one but not more than ten states while a "National" brand refers to feeds having more or less nationwide advertising and distribution.

According to Epps at least 28 feed brands were used in Louisiana during 1952. 32 Of these, only three were local brands, fifteen were regional and ten were by "National" firms. This may indicate that "local" feed milling including home-mixing is relatively unimportant in the present organization of Louisiana's broiler industry.

The very nature of the term "feed brand" indicates differentiation which may involve such factors as advertising, color of sack, announcement of special feed discoveries, use of special literature, employment of servicemen, special management and marketing programs, division of market territories, exchange of lists of prices and operating margins, use of tying clauses and use of discriminatory trade practices.

In general, it may be said that the feed mill industry demonstrates heterogeneous oligopolistic tendencies, viz: strong

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Table 5. Prices Paid by Farmers for Broiler Growing Mash, 1953 and 1954. Selected Comparisons.

<table>
<thead>
<tr>
<th>Year and Month</th>
<th>Louisiana</th>
<th>Arkansas</th>
<th>Georgia</th>
<th>Mississippi</th>
<th>Texas</th>
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</thead>
<tbody>
<tr>
<td>1953</td>
<td>5.90</td>
<td>5.60</td>
<td>5.30</td>
<td>4.80</td>
<td>5.70</td>
</tr>
<tr>
<td>1954</td>
<td>5.70</td>
<td>5.60</td>
<td>5.80</td>
<td>5.50</td>
<td>5.80</td>
</tr>
</tbody>
</table>

Dollars per cwt.

<table>
<thead>
<tr>
<th>Year and Month</th>
<th>Louisiana</th>
<th>Arkansas</th>
<th>Georgia</th>
<th>Mississippi</th>
<th>Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>5.90</td>
<td>5.60</td>
<td>5.30</td>
<td>4.80</td>
<td>5.70</td>
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<td>5.70</td>
<td>5.60</td>
<td>5.80</td>
<td>5.50</td>
<td>5.80</td>
</tr>
<tr>
<td>February</td>
<td>5.80</td>
<td>5.20</td>
<td>4.90</td>
<td>5.60</td>
<td>5.70</td>
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<td></td>
<td>5.70</td>
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<td>5.80</td>
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<tr>
<td>March</td>
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<td>5.20</td>
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<td>5.60</td>
<td>5.80</td>
<td>5.50</td>
<td>5.80</td>
</tr>
<tr>
<td>April</td>
<td>5.80</td>
<td>5.10</td>
<td>5.10</td>
<td>5.60</td>
<td>5.70</td>
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<td>5.70</td>
<td>5.60</td>
<td>5.80</td>
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<td>May</td>
<td>5.80</td>
<td>5.10</td>
<td>5.10</td>
<td>5.60</td>
<td>5.70</td>
</tr>
<tr>
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<td>5.60</td>
<td>5.80</td>
<td>5.50</td>
<td>5.80</td>
</tr>
<tr>
<td>June</td>
<td>5.80</td>
<td>5.10</td>
<td>5.10</td>
<td>5.60</td>
<td>5.70</td>
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<tr>
<td></td>
<td>5.70</td>
<td>5.60</td>
<td>5.80</td>
<td>5.50</td>
<td>5.80</td>
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<td>July</td>
<td>5.80</td>
<td>4.95</td>
<td>4.90</td>
<td>5.60</td>
<td>5.70</td>
</tr>
<tr>
<td></td>
<td>5.70</td>
<td>4.90</td>
<td>5.60</td>
<td>5.70</td>
<td>5.60</td>
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<tr>
<td>August</td>
<td>5.80</td>
<td>4.95</td>
<td>4.90</td>
<td>5.60</td>
<td>5.70</td>
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<td></td>
<td>5.70</td>
<td>4.90</td>
<td>5.60</td>
<td>5.70</td>
<td>5.60</td>
</tr>
<tr>
<td>September</td>
<td>5.80</td>
<td>4.85</td>
<td>4.85</td>
<td>5.60</td>
<td>5.70</td>
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<td></td>
<td>5.70</td>
<td>4.85</td>
<td>5.50</td>
<td>5.70</td>
<td>5.60</td>
</tr>
<tr>
<td>October</td>
<td>5.50</td>
<td>4.75</td>
<td>4.85</td>
<td>5.40</td>
<td>5.50</td>
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<tr>
<td></td>
<td>5.50</td>
<td>4.75</td>
<td>5.50</td>
<td>5.50</td>
<td>5.50</td>
</tr>
<tr>
<td>November</td>
<td>5.50</td>
<td>4.80</td>
<td>4.75</td>
<td>5.40</td>
<td>5.50</td>
</tr>
<tr>
<td></td>
<td>5.50</td>
<td>5.00</td>
<td>5.50</td>
<td>5.50</td>
<td>5.30</td>
</tr>
<tr>
<td>December</td>
<td>5.50</td>
<td>4.80</td>
<td>4.75</td>
<td>5.50</td>
<td>5.50</td>
</tr>
<tr>
<td></td>
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<td>5.00</td>
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<td>5.30</td>
</tr>
<tr>
<td>Average</td>
<td>5.74</td>
<td>5.70</td>
<td>5.05</td>
<td>4.90</td>
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</tr>
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<td></td>
<td>5.68</td>
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<td></td>
<td>5.50</td>
<td>5.50</td>
<td>5.50</td>
<td>5.50</td>
<td>5.47</td>
</tr>
</tbody>
</table>

Figure 2. Location of Feed Mills Operating in Louisiana and Mixing Commercial Quantities of Broiler and Other Poultry Feeds, 1954.
PRODUCT DIFFERENTIATION, DISTRIBUTOR-DEALER ARRANGEMENTS AND WHERE A NUMBER OF LARGE FIRMS ARE SURROUNDED BY A MULTIPlicity OF INTERMEDIATE AND SMALL SIZED COMPANIES.

Producers who argue about differences in feed efficiency ratios usually attempt to attribute the differences to the brand of feed when, as a rule, numerous other factors may be involved, such as: the season of the year, whether cool or warm temperatures prevail; the type and quality of the chick; the managerial ability of the operator; the kind of feeding practices and feeding equipment used; feed waste; the number of days chicks are held; floor space per bird; and mortality or disease out-breaks. Only through controlled experiments such as those by Epps and Watts can it be statistically determined that differences exist between and among brands of feed. 33

In view of the rapid growth of Louisiana's broiler industry, it would be expected that domestic mills would have obtained a larger share of the feed business but there are several reasons why this has not materialized: (1) Louisiana mills lack adequate distributive or retail outlets, (2) they have no specific broiler growing-marketing program and cannot extend credit as liberally as larger feed mills, (3) Louisiana mills are located outside of the surplus grain areas and cannot obtain a sufficient supply of local grain,

33 Dr. A. B. Watts, in cooperation with E. A. Epps of the L. S. U. Agricultural Experiment Station, conducts feeding trials on a year-round basis to ascertain qualities of various feeds.
Volume of feed purchased by most producers is small which leads to higher margins since the feed mill and dealers have a relatively small scale of operation and (5) the Louisiana feed mill capacity is located at a substantial distance from commercial broiler areas.

A large part of the grain ingredients of feed mixed and sold in Louisiana comes from Texas and Oklahoma. Since shipments moving west across the Mississippi River encounter a severe freight penalty, any feed mill designed to supply the Louisiana broiler area should be located somewhere in western Louisiana or at a point where the feeds can be manufactured and shipped on to local outlets in a direct line of haul under favorable milling-in-transit privileges. Careful study of rail rates is essential in determining the most advantageous point for location of a mill, taking into consideration the location of grain production and the outlets for the feed. For example, location of a mill on the Mississippi River to take advantage of barge shipments of grain should be considered.

There may exist considerable opportunity for local feed mixing and distribution whenever purchased concentrates can be mixed with locally produced grain. This "concentrate-grain" program has developed at a rapid rate in other states and holds some promise of development in Louisiana. A shift of this nature from commercially milled feeds to local concentrate-grain mixes could produce significant changes in present-day patterns of integration among the feed mill,
What is the exact integrative relationship between Louisiana's feed milling industry and the Louisiana broiler growing enterprise? Data and observations show that in feed procurement local feed mills are not important and that Louisiana broiler growers rely on out-of-state feed companies for their feed supply.

INTEGRATION PATTERNS

Feed milling companies have used various means of insuring more stable outlets for their feed output such as franchised dealerships and credit extension to growers. Because of this the larger feed mills have had considerably more success than smaller sized mills in the sale of broiler feeds. Local feed outlets have integrated with large feed mills in several ways depending upon the type of corporate structure characterizing the mill and the size of the feed milling operation, among others.

In disposing of their feed output, mills may utilize at least three patterns of economic integration: (1) Where the feed mill uses its feed output in its own broiler growing operation, or complete integration through a profit entity, (2) Where the mill distributes its output to feed cooperatives owned and controlled by growers, or complete integration through a non-profit entity and (3) Where the feed mill distributes its output to a franchised dealership which it does not own, or quasi-integration.34

34These patterns were theoretically developed in Chapter II.
Case studies are presented illustrating each of these patterns of integration in the feed milling industry and appraisal is made of the relative importance of these patterns to the broiler industry. These firms were selected because of their importance in developing the broiler industry. The case method used here is not so extensive that details of the firms' operating practices are revealed. The only purpose for using these firms as cases is to illustrate briefly the pattern of economic integration followed.

Case A

Complete Integration Through Profit Entities

The firm cited here represents a mixing operation geared to supplying feed for a combination of broiler and egg producing enterprises. The operator has had considerable experience in managing different types of poultry enterprises including a hatchery, hatching egg flocks and feed mixing. The latter undertaking began in 1946 and has continued as an integral part of the poultry growing program.

Approximately 3,600 bird-units are maintained on the farm, which require about 1,350 hundred pound bags of feed annually (Table 6). In addition, some feeds are mixed and sold locally to "backyard" flock producers and for larger flockowners, upon their request.

The estimated cost of mixing an average poultry ration under those conditions is $4.75 per hundred pounds. Of this
Amount, about $4.55 is for ingredients, $.10 for labor cost in mixing and sacking and $.10 for overhead or fixed costs. Some years the ingredient cost is lowered considerably by the production of corn and oats on the farm although this is not done consistently for lack of labor and time in the spring. Other ingredients such as soybean oil meal, sources of calcium and vitamin supplements are obtained from various firms on contract. The mixing operation is usually carried out on one or two days during the week, mostly with family labor.

What are the advantages in mixing feeds for his own poultry operations? A similar ration (18% protein) purchased at the local "retail" level would cost approximately $5.75 or about $1.00 more per cwt. In an operation using 1,350 bags per year, the net savings to the grower would amount to about $1,350. This is in addition to margins realized on feeds mixed and sold locally or mixed upon request. It was ascertained that this particular grower netted about $.10 more per broiler per lot by mixing his feed rather than purchasing it at the local level under a non-integrated situation. Likewise, this grower netted about 50 cents more per cwt. by mixing rather than by buying through an agreement with the local feed dealer, or quasi-integration. However, growers who attempt to mix feeds for their own operations must consider the cost of equipment such as a mixer and hammer mill as well as the capital necessary to produce or buy ingredients in economical quantities. Therefore, each
Table 6. Feed Requirements by Kind of Stock on Vertically Integrated Poultry Farm, Louisiana, 1954.

<table>
<thead>
<tr>
<th>Kind of Stock</th>
<th>Av. No. Birds</th>
<th>Pounds of Feed Required per Bird</th>
<th>Total Feed (lbs.)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table Egg</td>
<td>1,000</td>
<td>80</td>
<td>80,000</td>
<td>Laying season</td>
</tr>
<tr>
<td>Replacement Stock</td>
<td>1,500</td>
<td>20</td>
<td>30,000</td>
<td>Pullets only</td>
</tr>
<tr>
<td>Broiler Stock</td>
<td>1,500</td>
<td>10</td>
<td>15,000</td>
<td>Mostly males</td>
</tr>
<tr>
<td>Hatching Egg</td>
<td>100</td>
<td>100</td>
<td>10,000</td>
<td>Mated flock</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>★</strong></td>
<td><strong>★</strong></td>
<td><strong>135,000</strong></td>
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Producer must compare feed costs under various levels of integration and consider the feasibility of adopting one integration pattern over another.

**Case B**

Complete Integration Through Non-Profit Entities

In 1923, a cooperative feed milling concern was organized to serve the dairy and poultry feed needs of Southwestern Missouri, including the poorer agricultural areas of the Ozarks. In 1928, it established its main mill in Springfield, Missouri, and later, in 1943, it acquired another mill at Aurora. The former mill is a batch-type operation and is considerably less efficient than the continuous-type mixers located at the Aurora plant. Prior to 1943, the mill confined its feed distribution to cooperatives in Missouri. Since then, operations have been extended into Arkansas, Kansas, Oklahoma, Texas, Tennessee, Mississippi.
AND LOUISIANA.

This cooperative feed mill was organized on a non-stock, non-profit plan but with the aid of a state farmers' organization, viz: the Missouri Farmers' Association. However, the latter group has been repaid and now are only active to the extent of holding Class A membership on the Board of Directors. The farmers, who patronize the mill, have the Class B membership on the Board. Financing of the mill's operations in recent years has come from a revolving fund, known as Patrons' Equity Accounts. The cash dividends are paid and applied against the patrons' equity. It has been the policy of the mill to apply about two-thirds of the cash each year on the oldest year of the equities and about one-third on the current year. In their first year of operation, about one-third million bags of feed were milled including dairy, poultry, hog and other feeds. By 1942, the volume climbed to 1.25 million and 1952 it reached 7.5 million bags. It is anticipated that by 1955 volume should increase to more than 10 million bags annually.

The cooperative feed mill is a federation of local exchanges which organized the mill to serve the feed needs of poultry and other producers. In 1954, the mill was serving about 300 local cooperatives with a farmer membership of over 100,000. All the output of the mill is sold to cooperatives which in turn distribute the feed to their members. Any savings in the operation of the mill are
passed on to the growers who have bought the feed, hence a non-profit organization. In the past fiscal year, the mill operated on a 30 cent per sack margin but returned 15 cents of this as patronage dividends.

In acquiring feed ingredients and other input factors, the cooperative mill transacts business with both cooperative and non-cooperative firms and may use integrative arrangements that range from contractual (quasi-integration) to non-contractual (non-integration).

Cooperative feed milling is becoming an important factor in the livestock and poultry development throughout the country. An individual poultry producer has several alternatives in procuring his feed such as mixing it himself, buying from a private dealer or patronizing a feed cooperative. Economic studies of the broiler industry in Louisiana have shown that cooperative milled feeds have returned the broiler grower the highest returns. Where cooperative feed mills are efficiently operated such as the one studied here, growers may benefit to a substantial extent by patronizing and becoming part-owner of a feed mill. This may be more profitable than for the grower to attempt to mix feeds himself on a relatively small scale.

Case C

Quasi-Integration of Mill and Dealer

As stated in Chapter II, quasi-vertical integration refers to contractual arrangements between buying and selling

firms. Feed milling companies may use this type of integration particularly in distributing feeds. The firm used for this case study is a large feed milling company located in Missouri but having several feed mills throughout the United States, including one in Louisiana. The company began in 1894 and expanded both horizontally (acquiring new mills) and vertically (through acquisition of input supply firms). Its integration pattern is also circular in the sense that the company manufactures cereal food, disinfectants, equipment and countless other products. Of the non-cooperative feed mills in the United States, this company has probably enjoyed the greatest success in milling and distributing feeds. Its research program has also been outstanding.

As stated, it is a joint horizontal-vertically integrated firm with extensive quasi-vertical arrangements in selling its feeds through retail stores throughout the United States and Canada. The company itself owns a few of these retail establishments in addition to its system of exclusive, franchised dealerships in different territories. The 80 feed and farm supply stores which the company owns are located in strategic spots in the country. Forty of these sell almost exclusively at retail (complete vertical integration) and the other 40 wholesale their output to franchised dealers in their territory (quasi-vertical integration). These 80 stores, however, distribute only 8 per cent of the company output with the balance, or 92 per cent,
BEING QUASI-VERTICALLY INTEGRATED THROUGH FRANCHISED DEALERS. IT IS THE QUASI-VERTICAL INTEGRATION FEATURE OF ITS FEED DISTRIBUTION WHICH IS OF PRINCIPAL INTEREST.

IN FIGURE 3 IS PRESENTED THE LOCATION OF ITS QUASI-VERTICALLY INTEGRATED RETAIL OUTLETS IN LOUISIANA. Feed dealerships are opened in almost every trade locality and exclusive sales are made to these dealers. A complete line of products is offered them in addition to other lines of goods which the local dealer may himself select or have recommended to him. A typical "margin" spread is suggested to the local dealer depending on the competition in a given area although drastic price-cutting is not usually allowed. If the local dealer fails to distribute a prescribed volume of feeds, his franchise may be withdrawn and allotted to another firm. The company is in no way active in growing broilers although their local dealer may do so. In acquiring feed ingredients and other input factors, the firm utilizes a combination of non-integration (bids); quasi-integration (contracts) and complete integration (subsidiary companies).

The firm reported on here has served the poultry feed needs of many farmers as evidenced by its rapid and continued growth in all areas of the United States. By quasi-integrating with local business men who know the farmers and the community, the firm has been successful in

36 ADAPTED FROM AN ADVERTISEMENT LIST APPEARING IN PROGRESSIVE FARMER, MARCH 1954. P. 102.
FIGURE 3. LOCATION OF FRANCHISED FEED DEALERS AFFILIATED WITH A NATIONAL FEED MILL, LOUISIANA 1954.
its milling and in other operations.

Appraisal

Feed is the most important cost element in broiler growing. Louisiana farmers have to pay more for their broiler feed than growers in surrounding states which may be due to the lack of feed milling capacity in the state. Therefore, broiler growers must rely on out-of-state mills and, in doing so, they must utilize either cooperative feed mills or mills operated by large profit-type companies. Growers may, in a limited sense, mix their own feeds.

Chick Hatcheries

The second most important cost item in growing broilers is the cost of the day-old baby chick. In order to meet the market demand for rapid-growing, fast feathering and efficient feed-converting chicks, breeders and hatcheries have developed large-scale operations which enable them to hatch and distribute chicks in mass numbers. These operations are sufficiently large to justify rather expensive breeding and research programs designed to improve chick quality. In recent years, a number of economic trends have developed in the hatchery industry which warrant analysis, especially when these trends concern the development of integration patterns.

The number of hatcheries in Louisiana declined from 81 in 1945 to 25 in 1954. (Table 7). Many of the smaller
Table 7. Number, Capacity and Output of Commercial Hatcheries Participating in the National Poultry Improvement Plan, Louisiana, 1936-54.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Hatcheries</th>
<th>Capacity (Mil.)</th>
<th>Capacity per Hatchery (000)</th>
<th>No. Chicks Hatched (Mil.)</th>
<th>Av. Price Pd. by Farmers (Cents ea.)</th>
<th>Gross Value Chicks Sold (Mil. $)</th>
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<td>9.6</td>
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Source: Louisiana Crop Reporting Service, Hatchery Production, Monthly Releases.

*Not ascertained.
Hatcheries have been forced out of business due to the declining demand for dual-purpose birds and the concomitant shift to broiler chicks which the smaller hatcheries were unable to supply. Many hatcheries with idle capacity did not make the appropriate shift from egg to broiler-strain chicks while new hatching capacity was being established to supply these broiler chick demands. Some dual-purpose hatcheries were merged with broiler-chick hatcheries as complete horizontal integration was achieved by the more secure broiler-hatchery firms.

Despite a decrease in the number of hatcheries, hatching egg capacity in Louisiana has not declined significantly. In 1945 there existed 1.9 million egg-capacity while in 1954 it stood at 1.5 million. The egg capacity per hatchery increased from 23,000 in 1945 to 60,000 in 1954.

In the past, relatively few Louisiana hatcheries obtained broiler-chick business since most of their capacity was devoted to dual-purpose and egg-strain chicks. However, in 1953, about 55 per cent of the state's egg capacity was devoted to meat-strain chicks and in 1954 this percentage rose to 60 (Table 8).

Louisiana hatcheries increased their output from 5.5 million in 1945 to 9.6 million in 1954, despite a contraction in capacity which indicates a greater use-rate of the existing capacity (Table 7). For example, the use-rate in 1945 was 2.9 while in 1954 the rate rose to 5.4. These changes are economically sound because fixed costs in the
FORM OF FIXED CAPACITY ARE DISTRIBUTED OVER A GREATER OUTPUT, RESULTING IN LOWER FIXED COSTS PER CHICK HATCHED. THESE REDUCED COSTS MAY HAVE BEEN PASSED ON TO CHICK CUSTOMERS IN THE FORM OF LOWER PRICES DEPENDING ON THE DEGREE OF COMPETITION. SINCE BABY CHICKS CAN BE TRANSPORTED OVER LONG DISTANCES AND SINCE MANY HATCHERIES AND DEALERS DO COMPETE IN A GIVEN AREA, IT IS LIKELY THAT PRICE REDUCTIONS HAVE BEEN PASSED-ON. IN 1945, FARMERS PAID AN AVERAGE OF 14.1 CENTS PER CHICK WHILE IN 1954 CHICK PRICES AVERAGED ABOUT 14 CENTS INDICATING THE EFFICIENCY OF HATCHERY FIRMS DESPITE RISING COSTS OF OPERATION.

WHAT IS THE RELATIONSHIP OF LOUISIANA'S CHICK HATCHERY INDUSTRY TO INTEGRATION IN THE LOUISIANA BROILER GROWING ENTERPRISE? SINCE 1950, LOUISIANA HATCHERIES HAVE BEEN SUPPLYING ABOUT 50 PER CENT OF THE BROILER-CHICKS USED BY LOUISIANA GROWERS. THE OTHER 50 PER CENT ARE OBTAINED FROM HATCHERIES IN ARKANSAS, MISSOURI, MISSISSIPPI AND TEXAS. HATCHERIES, WHETHER IN OR OUT OF LOUISIANA, HAVE USED SIMILAR METHODS IN INTEGRATING THEIR INPUT OF HATCHING EGGS WITH THE

| TABLE 8. NUMBER AND CAPACITY OF HATCHERIES IN LOUISIANA BY TYPE OF CHICK PRODUCED, 1953 AND 1954. |
|-------------------------------------------------|-----------------|-----------------|-----------------|
| TYPE OF CAPACITY | No. of HATCHERIES | CAPACITY REPORTED | PCT. OF CAPACITY |
| Meat-Strain | 12 | 10 | 963 | 870 | 55 | 60 |
| Dual Purpose | 21 | 13 | 582 | 405 | 34 | 29 |
| Egg-Strain | 2 | 2 | 153 | 133 | 9 | 8 |
| TURKEY, ETC. | 0 | 0 | 38 | 38 | 2 | 3 |
| TOTALS | 35 | 25 | 1,736 | 1,446 | 100 | 100 |
output of broiler chicks. Also, the hatchery industry has had a considerable amount of non-integration which means that baby chicks were often hatched and dumped on the market at cut-rate prices, usually aggravating the broiler production-price relationships. Therefore, if each hatchery has a well-adjusted operation between its egg supply and chick sales, the instability in broiler production could be reduced.

INTEGRATION PATTERNS

Hatcherymen may procure hatching eggs in at least four different ways: (1) Produce their own egg supply or, complete integration through a profit-entity, (2) In case of cooperative hatcheries, eggs may be obtained from farmers who organized and control the unit or, complete integration through a non-profit entity, (3) Purchase eggs from producers or egg brokers on contract or, quasi-integration and (4) Custom hatch eggs for producers on a fee basis or, non-integration. In Louisiana, nine hatcheries of the 25 operating produce their own egg supply (Figure 4). The balance, or 16 hatcheries, obtain their eggs in quasi-integration with egg producers and/or egg brokers. There are no cooperative hatcheries in Louisiana.

Integration patterns in procuring hatching eggs have developed rather extensively for these reasons:

(1) The National Poultry Improvement Plan (NPIP) with its pullorum testing program encouraged hatcheries
Figure 4. Location of Hatcheries Operating in Louisiana, 1954-55 Season.
AND EGG PRODUCERS TO SIGN CONTRACTS WHICH LED TO QUASI-INTEGRATION. While the producer could shift hatchery affiliation, he could not sell eggs from a "controlled" pullorum flock to a hatchery with a "passed" rating, for example. Before the NPIP, hatchery operations were far less integrated since hatching eggs could be purchased from any source and under any type of agreement. This is not to say that the NPIP was or is not a good program, however.

(2) The production of hatching eggs is a highly specialized undertaking and hatcherymen insist on strict producing and marketing methods. The hatchery operator needs to supervise the flock, recommend a management-marketing program and check on fertility and hatchability of eggs. Therefore, producers and hatcherymen negotiate contracts for these purposes, and

(3) Most broiler chick purchasers book their orders months in advance since broiler growing operations are conducted on a continuous basis. Purchasers may specify the breed, strain, and sex of chicks desired. Obviously, the hatchery has to enter into an agreement with flockowners or attempt to produce their own eggs in the quantity and quality desired.

Hatcherymen may dispose of their day-old broiler chicks in at least four different ways: (1) Utilize the chicks in a broiler growing enterprise operated and controlled by the hatcheryman or, complete integration through a profit-entity; (2) In case of a cooperative hatchery, the chicks may
BE SOLD TO MEMBERS OF THE COOPERATIVE OR, COMPLETE INTEGRATION THROUGH A NON-PROFIT ENTITY, (3) SELL THE CHICKS ON CONTRACT TO A FRANCHISED DEALER OR TO A GROWER OR, QUASI-INTEGRATION AND (4) DISPOSE OF THE CHICKS AS HATCHED WITH NO PRIOR SALE AGREEMENT, OR NON-INTEGRATION. IN LOUISIANA DURING 1954, THE EQUIVALENT OF TWO HATCHERIES OUT OF 25 WERE UTILIZING THEIR OWN CHICKS IN A BROILER GROWING ENTERPRISE; TEN WERE QUASI-INTEGRATED IN DISPOSING OF THEIR OUTPUT AND THE BALANCE OR 13 HATCHERIES, WERE NON-INTEGRATED. THE LATTER GROUP WERE NOT BROILER-TYPE HATCHERIES, HOWEVER. THERE WERE NO COOPERATIVE HATCHERIES IN LOUISIANA. BRIEF CASE STUDIES ARE PRESENTED TO ILLUSTRATE THE TYPE OF INTEGRATION PATTERN USED BY HATCHERIES IN DISPOSING OF BROILER-TYPE CHICKS. THE PATTERNS SUBSEQUENTLY PRESENTED SHOULD BE APPLICABLE TO HATCHERY OPERATIONS IN ANY PART OF THE UNITED STATES.

CASE A
COMPLETE INTEGRATION THROUGH PROFIT-ENTITIES

THE HATCHERY OPERATION CITED HERE IS VERTICALLY INTEGRATED TO THE EXTENT THAT HATCHING EGGS ARE PRODUCED AND INCUBATED ON THE FARM. SOME OF THE CHICKS ARE USED IN A BROILER GROWING OPERATION MANAGED BY THE HATCHERYMAN. IN ADDITION, A FEED AND SUPPLY STORE IS OPERATED AND SEVERAL LOCAL BROILER GROWERS ARE FINANCED THROUGH THIS DEALERSHIP. IN FACT, ABOUT 85,000 BROILERS ARE FINANCED, FED AND MARKETED DURING A 10 WEEK OPERATION. TWO SERVICE MEN ARE EMPLOYED IN
WORKING WITH THESE LOCAL GROWERS WHO PURCHASE THEIR FEED, CHICKS AND SUPPLIES ON CREDIT AND PAY BACK THE AMOUNT LOANED WHEN BROILERS ARE MARKETED. A SUM AS HIGH AS $35,000 IS OFTEN LOANED OUT WHEN BROILERS ARE BEING FINANCED.

The hatchery capacity on the farm is 160,000 and the annual chick output is around 800,000. These chicks are sold as follows: (1) To broiler growers and feed dealers not affiliated with the hatchery, (2) To growers who are being financed by the hatchery and (3) To the broiler growing operation being managed by the hatchery itself. Only the latter outlet is of interest here.

Broiler growing capacity on the farm amounts to about 20,000 broilers per 10 week period or 80,000 per year, which is about 10 per cent of the total hatchery output. Although this growing capacity is not large in relation to the total chick output, it is very significant. When chick prices are low or when orders are cancelled, these birds can be taken off the market and grown out on the farm. Feed, chicks, capital and processing services are thus integrated.

The hatchery has a standing agreement with a processor to purchase all the marketable broilers on a year-round basis, including those raised on finance plans. The agreement covers the approximate number of broilers the buyers will take; the time they will be accepted; the market from which the price will be determined and the discounts or premiums to be considered for quality and weight differentials.
Case B

Complete Integration Through Non-Profit Entities

The cooperative hatchery considered here operates under a state farmers organization. It was organized in 1945 for the purpose of providing better quality chicks for commercial broiler growers. It is both vertically and horizontally integrated. Hatching eggs are obtained from co-op members, incubated in the co-op hatchery and distributed through cooperatives. It is horizontally integrated under a unified cooperative management with the operation of five hatcheries in different parts of the state. The poultry division of this state association is circularly integrated with feed milling, broiler processing, financing and other activities.

In acquiring hatching eggs, the five hatcheries depend upon supplies from both the breeding farm operated by the cooperative and from members of the state association who produce eggs under contract, or a total of 160,000 breeder hens. The main breeding farm is the heart of the entire poultry program. Its purpose is to breed and distribute the increasingly better breeding stock to the farms that produce hatching eggs and which supply the hatcheries. If there is an excess of hatching eggs produced beyond its own requirements, the Association may sell them to other hatcheries. But, all of the eggs of the cooperatives' supply flocks that produce eggs for the hatcheries, must be sold or offered first to the hatcheries of the Association.
In disposing of the six million broiler chicks which are hatched annually, the cooperative hatchery uses several outlets: (1) it may sell chicks direct to local cooperatives affiliated with the state association, (2) it may sell chicks to cooperatives in Louisiana and elsewhere that are not affiliates, (3) it may sell direct to members of the state association or (4) it may sell direct to growers in Louisiana and elsewhere who are not members of the state farmers' organization.

There are at least two pricing methods by which day-old chicks are sold: (1) purchasers may agree to pay the going price for chicks at time of booking or at time of sale or, (2) contracts may be negotiated between the purchaser and the hatchery.

Such broiler chick contracts permit price reductions and consistent bookings which are advantageous to the hatchery in maintaining output and, also, to the purchaser who benefits by lower prices and steady supplies of chicks, even in summer periods or when chicks are scarce. For example, the price contract negotiated between the association and some Louisiana broiler growers stipulates that the hatchery will furnish growers four flocks of broiler-type baby chicks during a one year period. The first three placements are to be billed at the hatcheries regular market price and the fourth placement to be billed at a maximum of $0.1475 or at a price which will bring the average of all four placements to $0.1475 per chick. The above applies to placement in any
one house, consecutively. All prices refer to price of chicks at the hatchery. The grower agrees to accept the four placements as outlined above with the booking dates to be made by the grower subject to minor revision to fit production schedules at the hatchery. It is understood that the intent of the agreement is to provide benefits and a closer working relationship for both parties and that unintentionally some inequities may occur which can and will be worked out individually as the occasion may direct.

Louisiana broiler cooperatives may negotiate even more favorable contracts than the one cited above provided their membership agree to centralize their chick bookings with the cooperative hatcheries.

Case C
Quasi-Vertical Integration

The firm chosen here represents a horizontally integrated hatchery operation by virtue of its five hatcheries located in different parts of the United States. Originally, the firm was located in Michigan, but after World War II it expanded its poultry operations into Louisiana, Mississippi and Texas. The firm itself is highly integrated with ownership of hatcheries; an equipment company; breeding farms; feed mills and other enterprises. In the early 1940's, the hatchery was serving only the Mid-west. Because the broiler chick business failed to develop in the Mid-west, the hatchery operators decided to compete for the existing market for high
quality broiler chicks in the South. In order to produce these chicks, however, high quality hatching eggs had to be procured so the hatchery also launched a breeder-flock program.

In acquiring its hatching egg supply, the firm is quasi-integrated with hundreds of producers in different states including Louisiana. With such a large-scale hatchery operation, the firm could not economically produce its own egg supply and, therefore, has relied on contracts to obtain the necessary eggs. During 1954 in Louisiana, this hatchery-firm had at least 100,000 layers under contract for supplying eggs to its Texas and Mississippi branch hatcheries. It needs about 1,500 cases of eggs per week for the five hatcheries combined. Through quasi-integration this firm has demonstrated the rapidity with which a hatchery may develop supply flocks on a scale which it itself could not have economically performed. To be sure, quasi-integrated supplies may be lost to competitors or for other reasons but, nonetheless, it is a flexible type of arrangement which permits quick expansion.

The type of agreement used by this firm in quasi-integrating hatching egg producers in Louisiana is shown as follows:

In view of the fact that all stock put out for breeding purposes is purchased direct from the original breeder and is intended solely for the purpose of reproduction, the flockowner agrees: (1) To raise the stock on clean premises and to follow the program and instructions laid out by the hatchery, (2) To sell all his eggs to the hatchery at current terms and prices.
AND WILL NOT SELL EGGS ELSEWHERE WITHOUT THE WRITTEN PERMISSION OF THE HATCHERY, (3) TO PAY THE FEES CHARGED BY THE POULTRY IMPROVEMENT ASSOCIATION FOR FLOCKOWNER FEE AND BANDS PLUS 4¢ PER BIRD BLOODTESTING FEE IF BLOODTESTED BY A HATCHERY CREW. FLOCK MUST RATE AS U.S. APPROVED-PULLORUM CLEAN BEFORE EGGS CAN BE TAKEN, (4) TO PAY REGULAR CHARGES FOR VACCINATING IF DONE BY HATCHERY AND (5) PRICES ON BREEDING STOCK WILL BE ADJUSTED ACCORDING TO GENERAL SUPPLY AND DEMAND CONDITIONS.37

IN INTEGRATING ITS CHICK OUTPUT, THE HATCHERY USES AT LEAST TWO METHODS: (1) FRANCHISED DEALERS, INCLUDING BOTH PROFIT AND NON-PROFIT ENTERPRISES, ARE LOCATED IN THE MAJOR BROILER AND EGG PRODUCING AREAS OF THE SOUTH. SALESMEN FROM THE MAIN HATCHERY OFFICE WORK WITH THESE DEALERS IN INCREASING THEIR SALES AND IN CHECKING ON THE PROGRESS OF THE CHICKS THAT HAVE BEEN SOLD AND (2) DIRECT SALES TO GROWERS ARE MADE, IF PRODUCERS FIND THEMSELVES OUTSIDE OF A DEALERS' TERRITORY. THE FIRM OWNS NO BROILER GROWING FACILITIES. IT ATTEMPTS TO NEGOTIATE AS MANY "STANDING CONTRACTS" WITH BROILER GROWERS AND FEED DEALERS AS POSSIBLE IN ORDER TO STABILIZE OUTPUT AND PRICES. USUALLY, THE FIRM IS THE LAST ONE TO REDUCE PRICES ON CHICKS WITHIN THE LOUISIANA CHICK MARKET, INDICATING THAT THE FIRM IS SENSITIVE TO PRICE CHANGES ON ACCOUNT OF ITS EXTENSIVE CONTRACTS IN BOTH BUYING AND SELLING.

CASE D

NON-INTEGRATED HATCHERY OPERATION

NO SPECIFIC CASE STUDIES ARE PRESENTED TO ILLUSTRATE NON-INTEGRATION, BUT BRIEF MENTION WILL BE MADE OF TRADING

ARRANGEMENTS WHICH CAN BE CHARACTERIZED AS NON-INTEGRATED.

In acquiring inputs such as hatching eggs, a hatchery may operate on a custom basis where the eggs are set and hatched for a certain fee per egg set or chick hatched. Such hatcheries are common in the Vocational Agriculture Program of the State of Louisiana. This practice of setting eggs for farmers for a fee is rapidly disappearing. It had a sound economic basis for both producer and hatcheryman but problems such as disease infestation and the like are forcing its discontinuance. To the producer, it presents a more efficient way of hatching his own flock replacements instead of setting eggs under hens which may result in lower hatchability and requires considerable attention. To the hatcheryman, it means decreasing unit costs by utilizing existing capacity more fully. However, pullorum problems develop since custom hatched eggs come largely from non-tested flocks and, therefore, often spread the disease to healthy chicks. The National Poultry Improvement Plan has been instrumental in discouraging this practice. Non-integrative operations such as custom hatching are rapidly losing ground to other more highly integrated operations.

It has been shown previously that 13 of the 25 hatcheries operating in Louisiana during 1954 were non-integrated relative to the sale of chicks. This indicates the highly seasonal demand which exists for dual-purpose chicks and reveals the buying practices of chick customers who simply
COME TO THE HATCHERY UNANNOUNCED. IN THIS WAY, HATCHERY OPERATORS MUST SET EGGS ON PURE SPECULATION SINCE LITTLE OR NO GUARANTEE IS GIVEN THAT IN THREE WEEKS THE RESULTING CHICKS CAN BE SOLD. IF DEMAND FALLS SHORT OF THE HATCH, THE OPERATOR MUST EITHER PUT THE CHICKS ON SALE, GROW THEM OUT ON HIS FACILITIES OR DESTROY THEM. NADEN AND JACKSON IN A CALIFORNIA STUDY SUBSTANTIATE THESE POINTS AS FOUND IN LOUISIANA AND AS MENTIONED HERE.38

APPRAISAL

CHICK COST IS THE SECOND MOST IMPORTANT COST IN BROILER GROWING. LOUISIANA FARMERS HAVE TO PATRONIZE OUT-OF-STATE HATCHERIES FOR AT LEAST 50 PER CENT OF THEIR DAY-OLD CHICKS. THERE IS NO EVIDENCE TO INDICATE THAT LOUISIANA FARMERS HAVE TO PAY MORE FOR BABY CHICKS THAN DO GROWERS IN OTHER STATES. HOWEVER, THE QUALITY OF CHICKS OBTAINED MAY VARY. IN PATRONIZING HATCHERIES, EITHER IN OR OUT OF LOUISIANA, BROILER GROWERS MAY CHOOSE TO: (1) QUASI-INTEGRATE BY AGREEMENT WITH A HATCHERY OR A DEALER FOR A REGULAR SUPPLY OF CHICKS, (2) JOIN A COOPERATIVE ORGANIZATION WHICH HATCHES BABY CHICKS, (3) CONSTRUCT HATCHERY FACILITIES ON HIS OWN FARM AND HATCH HIS OWN SUPPLY OR, (4) PURCHASE CHICKS ON A NON-INTEGRATED BASIS. THE AVERAGE BROILER GROWER SHOULD CONSIDER THE FIRST TWO RATHER

than the latter two alternatives.

Hatcherymen desiring to produce their own hatching egg supply exclusively may do so but on a rather limited scale. If they were to attempt large-scale production on their own facilities and in one concentrated area, diseconomies of scale would likely occur. However, such operations can be carefully controlled and egg quality maintained at all times. Most hatcherymen utilize quasi-integrative arrangements where the individual egg producer is contracted with for a given period and paid a certain price per dozen. This method provides less risk to the hatcheryman and yet assures him of a dependable egg supply. However, hatcherymen may not have the degree of control over these operations that they would like. Some hatching egg producers in Arkansas and elsewhere have furthered their control over egg output by erecting hatcheries to incubate their own eggs, thereby, retaining all or a portion of the hatchery profit for themselves. In some cases this has worked well.

The hatchery segment is vital to the broiler industry in relation to the expansion or contraction of broiler chick placements. The apparent over-supply of chicks at one time and under-supply at another time is due to the difficulty of adjusting output of hatching egg flocks to the demand for broiler meat. Once a hatchery establishes an egg program, it finds difficulty in trying to equate this supply of eggs with its orders for chicks. If chick demand declines, egg flocks cannot be discontinued because of the time required
to produce a flock of breeder hens. Therefore, hatcheries may stimulate broiler expansion even when prices are depressed. Integration can help hatcherymen effect economies in operation to the extent that instability and risks are lessened.

BROILER PROCESSING

The input phases of broiler growing have been considered such as procuring chicks and feed. Another and similarly significant phase concerns the sale, processing, and distribution of broilers. The key agency in disposing of broiler output is the processing plant which is defined as a business establishment whose main undertaking is dressing and eviscerating broilers. By "dressing" broilers is meant plucking only with viscera and other body parts remaining. This type of processing is commonly referred to as "New York Dressed". By "evisceration" is meant the further removal of viscera, head and feet. "Evisceration" more properly describes the processing techniques used in Louisiana and in the South generally. Processing will, therefore, include both the dressing and eviscerating of broilers.

In the processing industry there has evolved at least two levels of operation, viz: commercial and home-type processing. For our purposes, a "commercial" processing plant is one whose total annual output exceeds 5,000 broilers while a "home type" plant is one whose annual output is less than 5,000 broilers. The latter type of units are not considered here.
There are 55 commercial poultry processing plants in Louisiana (Appendix Table 3). Twenty of the 55 plants are located in the New Orleans area and ten are in the Baton Rouge area. The remaining 25 plants are located near the consuming centers of Shreveport, Monroe, Alexandria, Lake Charles and Lafayette (Figure 5). A few miles across the Sabine River in East Texas are located six large processing plants that handle a considerable portion of Louisiana's broiler output. On the other hand, the plants located in New Orleans obtain much of their live broiler supplies from Mississippi, Alabama and other states. Relatively few Louisiana broilers are sold in New Orleans.

Of these 55 eviscerating plants, sixteen process from 5,000 to 50,000 broilers annually; 21 process from 50,000 to 100,000 broilers; nine plants eviscerate from 100,000 to 250,000 birds and the remaining nine handle over 250,000 birds annually (Table 9). These respective size groups are labeled as Groups I, II, III and IV. Their total annual output is estimated at 6,290,000 birds or an average output of 114,364 birds per plant per year. About two-thirds of the plants process only one-third of the poultry on an annual basis. Assuming that all their output were broilers and all their supplies were produced in Louisiana, these 55 plants could have processed 45 per cent of the Louisiana broilers grown in 1953. However, of the estimated 6,290,000 bird-units processed annually only two-thirds of this output or four million are broilers. The balance, or more than two
Figure 5. Location of Commercial Poultry Processing Plants in Louisiana, 1953.
Table 9. Poultry Processing Plants and Estimated Annual Output, 55 Units, Louisiana, 1953.

<table>
<thead>
<tr>
<th>Size Group of Plants</th>
<th>No. of Plants</th>
<th>Est. Annual Output</th>
<th>Av. Output per Plant</th>
<th>Percent of Total Output</th>
<th>Percent of All Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>16</td>
<td>440,000</td>
<td>27,500</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td>II</td>
<td>21</td>
<td>1,575,000</td>
<td>75,000</td>
<td>25</td>
<td>38</td>
</tr>
<tr>
<td>III</td>
<td>9</td>
<td>1,575,000</td>
<td>175,000</td>
<td>25</td>
<td>16</td>
</tr>
<tr>
<td>IV</td>
<td>9</td>
<td>2,700,000</td>
<td>300,000</td>
<td>43</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>55</strong></td>
<td><strong>6,290,000</strong></td>
<td><strong>114,364</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Million, consists of heavy and light hens, roosters, turkeys, ducks and geese.

Most of the commercial processing plants in Louisiana are small when compared with plants in Arkansas, Georgia and other States. Only nine of the 55 plants could be classified seriously as commercial dressing plants. Of these nine plants, only four are located in the commercial broiler growing areas of Louisiana. Although their processing capacity is substantial, the outlets for their dressed broiler output are small stores and eating establishments which do not permit very extensive dressing operations. Consequently, most commercially grown broilers in Louisiana are processed in East Texas where processing capacity is ample and where market outlets in the Southwest and Pacific Coast states can be tapped.
The average Louisiana processor dresses 2,000 birds per week which is only two-thirds of a commercial lot of broilers. Growers, being unable to sell such small numbers, and the processor, being unable to buy a whole house at once, cannot integrate at this level of operation. Therefore, an examination of integration patterns that are used is in order.

Integration Patterns

In acquiring inputs of live poultry, principally broilers, processing plants may: (1) Produce their own broilers or, complete integration through a profit-entity; (2) In case of a cooperative processing unit, broilers may be obtained from the growers who organized and control the plant or, complete integration through a non-profit entity; (3) Obtain broilers on contract from feed dealers and growers or quasi-integration and (4) Procure broilers on the open-market and from varied sources or, non-integration.

Of the 55 plants operating in Louisiana during 1953, the equivalent of seven plants were producing their own broiler inputs; twenty-four were quasi-integrated and twenty-four were non-integrated. There were no cooperative processing plants (Table 10).

These respective integration patterns in regards to poultry inputs were due mostly to the small scale of processing operations in Louisiana. Many processors cannot afford to contract for a full 3,000-house of broilers; consequently, purchase policies vary as each plant attempts
Table 10. **Vertical Integration Status of Louisiana Processing Plants, Input-Output Operations, 1953.**

<table>
<thead>
<tr>
<th>Size Group of Plants</th>
<th>Integration Type</th>
<th>Non-Integrated</th>
<th>Quasi-Integrated</th>
<th>Completely Integrated*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROUP I</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>16</td>
<td>6</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Output</td>
<td>16</td>
<td>1</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td><strong>GROUP II</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>21</td>
<td>11</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Output</td>
<td>21</td>
<td>0</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td><strong>GROUP III</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>9</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Output</td>
<td>9</td>
<td>0</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>GROUP IV</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>9</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Output</td>
<td>9</td>
<td>1</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>ALL LA. PLANTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>55</td>
<td>24</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>Output</td>
<td>55</td>
<td>2</td>
<td>21</td>
<td>32</td>
</tr>
</tbody>
</table>

*No cooperative processing plants in Louisiana.*

1/ **The six large processing plants in East Texas handling Louisiana broilers were quasi-integrated both in obtaining live broilers as inputs and in selling processed broilers as output.**
to procure its small supplies. Itinerant truckers, on-the-spot purchases, and other non-contractual devices are most often used. As the plants grow larger, however, the non-integration pattern blends into quasi-integration. For example, the six large East Texas plants are quasi-integrated in their purchase of live broilers because their sales operations require a high degree of stability of supply.

Processors may utilize at least two different methods in producing their own supply: (1) They may grow broilers on their facilities and under their direct management and control. The seven Louisiana processors previously cited follow this method, and (2) Processors may hire growers to raise broilers for a certain salary per week; a certain payment per pound produced or a certain fee per bird raised. This type of processor-grower contract is more common in the larger broiler growing areas such as in Georgia, Alabama, Texas and Mississippi. Processors, who hire growers, try to produce and process broilers as cheaply as possible. If they are to realize a profit from the processing operation, the plant must be operated at capacity. The processors are frequently willing to absorb a loss on the growing operation in order to insure an adequate supply of broilers. This may be an uneconomic situation since it may keep many inefficient growers in business. If a processor does not renew a grower's contract because of high costs and poor management, the grower can usually obtain a new contract from another
processor within a short time. There is some indication, however, that unfavorable market prices have made this practice difficult and some high-cost growers have been eliminated.

In disposing of their output, or dressed and eviscerated broilers, plants may utilize these integration patterns: (1) They may sell their output direct to consumers through their own retail units or, complete integration, (2) They may sell processed broilers to stores, cafes and other outlets on contract or, quasi-integration and (3) They may elect to sell broilers on the open-market without any prior agreement or, non-integration. In Louisiana during 1953, two of the 55 processors were non-integrated; 21 were quasi-integrated and the balance or 32 were completely integrated or selling direct to consumers, (Table 10). On the other hand, the six large East Texas plants were all quasi-integrated and neither owned retail facilities nor sold direct to consumers.

Complete integration in disposal of output is more characteristic of small processing operations while quasi-integration typifies larger plants that operate on a fixed schedule relative to purchase and sale of broilers. Most of the business done by large plants is based on eviscerated, ice-packed broilers that move on contract rather quickly into market channels. Processors that are completely integrated face less inflexibility because they sell through their own facilities and do not have contractual obligations. A special case of complete integration must be recognized. Not all the
"OUTPUT" OF AN INTEGRATED CONCERN NECESSARILY GOES THROUGH ITS OWN RETAIL OUTLETS SINCE A PORTION MAY BE SOLD THROUGH OTHER INTEGRATIVE OUTLETS. USUALLY A FIRM MAY EMPLOY SEVERAL CHANNELS FOR INPUT ACQUISITION AND OUTPUT DISPOSAL, SOME OF WHICH MAY INVOLVE FACILITIES OWNED BY THE FIRM; FACILITIES THAT ARE CONTRACTED FOR AND OTHERS MAY USE OUTLETS ON A NON-CONTRACTUAL BASIS.

BRIEF CASE STUDIES OF FIRMS ARE PRESENTED WHICH ILLUSTRATE THE TYPE OF INTEGRATION PATTERN USED BY PROCESSORS IN OBTAINING THEIR INPUTS OF LIVE BROILERS AND IN DISPOSING OF THEIR OUTPUT OF PROCESSED BROILERS.

CASE A

COMPLETE INTEGRATION THROUGH A PROFIT-ENTITY

THE FIRM STUDIED HERE REPRESENTS A COMBINATION BROILER GROWING AND PROCESSING OPERATION LOCATED OUTSIDE OF NEW ORLEANS AND CATERING TO SUBURBAN AND TOURIST CLIENTELE. BUSINESS OPERATIONS BEGAN AROUND 1940 AND EXPANDED DURING WORLD WAR II WHEN "RED MEAT" SUPPLIES WERE SCARCE AND BROILER PRICES WERE HIGH. AFTER THE WAR, CONSUMER SATISFACTION WITH THE PRODUCT AND SERVICES RENDERED BY THIS FIRM ENABLED IT TO SUSTAIN OPERATIONS AT A HIGH LEVEL. DURING 1953, ABOUT 45,000 BROILERS WERE GROWN AND PROCESSED ON THE FARM ALTHOUGH SOME BIRDS WERE SOLD ALIVE DIRECT TO CUSTOMERS.

IN ACQUIRING BROILERS FOR PROCESSING, THE OPERATOR ATTEMPTS A YEAR-ROUND PROGRAM OF BROILER GROWING. ABOUT 1,250 BROILER CHICKS ARE STARTED EVERY WEEK IN L. S. U. TYPE
CHICK BROODERS SO THAT THE NUMBER OF BIRDS PER LOT DOES NOT EXCEED 250. CHICKS ARE KEPT IN THESE BROODERS UNTIL THEY ARE ABOUT SIX WEEKS OF AGE AND THEN ARE TRANSFERRED TO GROWING PENS WHERE THEY ARE PROVIDED MORE SPACE AND KEPT UNTIL SLAUGHTER. IN THIS MANNER, BROILERS ARE AVAILABLE FOR SALE EVERY WEEK OF THE YEAR AND IN APPROXIMATELY THE SAME QUANTITY WHICH PROVIDES FOR A STABLE PROCESSING AND SALE OPERATION. THE USE OF THE BROODER SYSTEM MAY INCREASE GROWING COSTS BUT THE OPERATOR CLAIMS THAT THE UNIFORMITY AND REGULARITY OF THE OPERATION IS OF MORE IMPORTANCE SINCE PRICES RECEIVED FOR BROILERS ARE ALWAYS GOOD. FEED, CHICKS AND SUPPLIES ARE OBTAINED THROUGH QUASI-INTEGRATION WITH A FEED DEALER AND A HATCHERY ALTHOUGH THE OPERATOR FINANCES HIS OWN OPERATION.

EVERY WEEK, USUALLY ON SATURDAYS, BROILERS ARE PROCESSED AND EITHER SOLD FRESH-KILLED TO CUSTOMERS OR FROZEN FOR LATER SALE. SOME BROILERS ARE SOLD ALIVE DIRECT TO CUSTOMERS OR SOLD ALIVE AND THEN CUSTOM DRESSED FOR TEN CENTS PER HEAD. ONLY A SMALL PORTION OF THE DRESSED BROILERS ARE SOLD TO STORES AND CAFES. CONSEQUENTLY, PRICES RECEIVED PER POUND, IN LIVE WEIGHT EQUIVALENT, AVERAGE AROUND 10 CENTS OVER CURRENT MARKET QUOTATIONS. ON A THREE-POUND BIRD, THE OPERATOR RECEIVES ABOUT 30 CENTS MORE THAN IF HE HAD SOLD ON THE LIVE WHOLESALE MARKET. FROM THIS GROSS MARGIN, HOWEVER, MUST BE SUBTRACTED HIGHER GROWING COSTS AND THE COSTS OF PROCESSING AND SELLING. NEVERTHELESS, THE NET RETURN PER BIRD IN THIS OPERATION IS PROBABLY HIGHER THAN FOR COMPARABLE NON-PROCESSING ENTERPRISES.
Case B
Complete Integration Through Non-Profit Entities

The case firm chosen here is part of a state farmers' organization mentioned previously under cooperative chick hatcheries. The state association sponsored the development of the cooperative processing plant so that broiler grower-members of the association could be assured of a steady and dependable market for their live broilers. Although a number of profit-type processing units were located in this broiler area, they failed to adequately serve the broiler cooperatives which were using cooperative feed and cooperative financing. These profit-type processing enterprises discriminated against broiler growers who were patronizing non-profit businesses.

The cooperative processing plant was organized in 1946 and cost around $300,000 of which $150,000 was raised by the broiler growers and $150,000 borrowed from the bank for cooperatives. Growers purchased stock on the basis of their broiler-producing capacity of $75 per 1,000-birds. There were approximately 190 growers who subscribed and paid for stock in the cooperative. Each member agreed, in writing, to stand by his fellow producer and to see the association through its initial two years of operation. Each promised to market all his poultry through the association. The plant is modern in every respect from the spacious feeding room to the latest dressing equipment, ice-making
MACHINES, COLD STORAGE AND SHARP-FREEZE ROOMS, FEATHER-DRYER, RENDERING EQUIPMENT FOR SALVAGING INEDIBLE PARTS, AND EVISCERATING ROOM AND EQUIPMENT.

THE PLANT HAS A PROCESSING CAPACITY OF 10,000 BIRDS PER DAY OR 50,000 BROILERS PER 40-HOUR WEEK. THIS NORMALLY REQUIRES ABOUT 10 LOTS OF BROILERS OF 5,000 EACH. IN A TWELVE WEEK PERIOD, ALMOST ALL THE MEMBERS OF THE COOPERATIVE ARE GIVEN THE OPPORTUNITY TO MARKET THEIR LOTS OF BROILERS. THE PLANT ATTEMPTS TO OPERATE ON A FIXED SCHEDULE WHERE EACH MEMBER KNOWS THE APPROXIMATE TIME AT WHICH HIS BIRDS WILL BE MARKETED. IF DESIRED, BIRDS ARE PICKED-UP AT THE GROWER'S PLACE BY TRUCKS OWNED AND OPERATED BY THE COOPERATIVE.

IN DISPOSING OF THE BROILER OUTPUT, THE COOPERATIVE MAY: (1) ELECT TO HAUL THE LIVE POULTRY TO TERMINAL MARKETS INSTEAD OF PROCESSING THE BIRDS. THIS IS DONE WHEN LIVE BROILER PRICES RISE SUDDENLY, (2) PROCESS AND SELL BROILERS UNDER USDA STANDARDS IN FRESH-KILLED FORM TO STORES AND OTHER OUTLETS, AND (3) PROCESS AND FREEZE BROILERS FOR SALE AT MORE OPPORTUNE TIMES. THE PLANT MAY, THEREFORE, SELL BROILERS ALIVE, NEW YORK DRESSED, EVISCERATED, ICE-PACKED, FROZEN, WHOLE, CUT-UP, BRANDIED OR UNBRANDED. IT IS SET UP TO SALVAGE THE FEATHERS AND OFFAL AND TO ADD TO THE MEMBERS' INCOME BY SELLING BY-PRODUCTS MADE FROM THESE.

PROFIT MARGINS ON PROCESSING AND MARKETING ARE MORE DEPENDABLE THAN "GROWING" MARGINS. PRODUCERS WANTED GOOD MARKET OUTLETS AT ALL TIMES, HONEST WEIGHS, AND PAYMENT STRICTLY ACCORDING TO QUALITY. FURTHERMORE, THEY REALIZED
THAT THE BEST WAY TO MAINTAIN OR DEVELOP A BETTER REPUTATION FOR THEIR PRODUCT WAS TO PROCESS, PACK, SELL AND MERCHANDISE IT THEMSELVES.

CASE C
QUASI-INTEGRATION IN PROCESSING

The "Big Four" packers have long been a significant factor in the meat processing industry. In recent years, they have also become important in broiler processing since their salesmen can as readily place orders for chicken as they can for beef. The integration patterns which the "Big Four" have developed in procuring broilers are not uniform. For example, Armour has vertically integrated in the East by establishing its own broiler growing operations in conjunction with its processing facilities. In other regions, however, Armour has contracts for broilers produced by co-operatives such as in Southwest Missouri. Wilson and Cudahy have likewise depended more on quasi and non-integration than on producing their own. A few years ago, Swift abandoned its attempts to produce broilers and now have reverted to quasi-integration.

The integrated branch plant discussed here is controlled by one of the "Big Four" packers and is located in Mississippi. Originally, the plant was built by the State of Mississippi under its public industry statutes and later leased to one of the "Big Four". Therefore, after a certain period the lease could conceivably be terminated and given
to another firm. This has been a factor in the plant's policy of buying mostly Mississippi produced broilers.

In acquiring live broiler supplies, the plant enters into formal and informal agreements with feed dealers and growers in Mississippi, Alabama and Louisiana. No price guarantees are given but only an understanding that birds will be marketed within a specified period and that they will be paid for at current market quotations. Also, the plant follows a broiler grading system using numbers 1, 2 and 3 to designate birds of certain fat, flesh and feathering characteristics. Birds grading either number 2 or 3 are docked in price, the amount depending on the volume of broiler supplies. When birds are scarce, there is almost no docking, but when supplies are ample the No. 3 birds may bring 10 cents per pound less than No. 1 broilers.

About 100,000 broilers are normally needed per week or the equivalent of 20 lots of 5,000 each. This volume of operation, therefore, requires considerable coordination so that market outlets can be adequately and uniformly supplied. If markets were developed further, the plant could process 150,000 per week. Of course, if contracted supplies are inadequate to meet the market demand, the plant is forced to enter the open-market and bid on supplies from various areas. In such cases, the firm cannot maintain its grade buying since supplies could not be readily obtained.

In disposing of processed broilers, the plant has little difficulty since it is quasi-integrated with a food
CHAIN OPERATING STORES IN ALABAMA, MISSISSIPPI, LOUISIANA AND other areas. The plant packs three grades of dressed-broilers to correspond with the three live broiler grades. It may pack only the No. 1 birds under its brand name and permit the 2's and 3's to be sold unbranded and undifferentiated. All the output is sold ice-packed since there are no freezing facilities. Disposal of by-products poses a more difficult problem. In fact, no income is obtained from any of the processing wastes since the volume of by-products in that area is still insufficient to provide economical conversion.

CASE D
NON-INTEGRATION

In acquiring inputs of live broilers, processors may utilize a non-integrated pattern. In fact, twenty-four of the 55 Louisiana processors bought broilers on a non-integrated basis. Some of the buying practices that conform to a non-integrated pattern are: (1) Itinerant truckers may contact small processors and effect sales of broilers, hens or roosters, (2) Open market operations where the processor contacts dealers and growers a few days ahead of processing, (3) Where bidding on certain lots is done such as in Del-Mar-Va and in Indiana and (4) Operating a live poultry route(s) where supplies of broilers and older stock are obtained.

In the sale of processed broilers, plants may use
non-integrated patterns in the following ways: (1) Where the processor trucks dressed broilers to a certain area and proceeds to contact various retail outlets, (2) Several buyers may submit bids for a processor's output with the sale being made to the highest bidder. This is a valid case of non-integration for three reasons: (a) No buyer preferences exist on the part of the processor, (b) Competition is on price rather than on product or service differentiation and (c) The processor has no ownership of or control of any of the buyers nor does he have to sell to buyers submitting bids, (3) Where processors sell broilers to cafes and stores on calls from these outlets and with no prior agreements as to quantity to be taken or prices paid. A good criterion of non-integration rests in price rather than non-price competition. Various aspects of integrative movements focus on non-price factors and attempt to make the demand for the product less elastic through control of output, control of substitutes, impeding firm entry, product and service differentiation. Non-integrated operations are usually more "price conscious" and permit shopping around for the best buys in a certain area at a certain time. Small price differentials in one area will attract the non-integrated processor while those more so integrated will not seek broilers solely on price but on "quality-weight-type-breed" considerations plus allowance for their long-run position in the industry.
Appraisal

Before the major expansion in the Louisiana broiler industry occurred, broiler marketing was highly integrated, viz: scattered producers grew broilers in small lots and either dressed the broilers on the farm or sold them alive direct to customers, thereby, performing most or all of the processing and distribution functions. Since live broiler supplies were relatively scarce and eviscerated broilers were not often found in retail stores, the price per pound was relatively high. To some extent, this situation still prevails in South Louisiana where production is maintained on a relatively small scale and where various functions are still being performed by the growers themselves. Their growing costs are higher than in commercial growing areas but their gross returns per bird are higher, leaving a wider margin of profit per bird but a smaller total profit since the number of birds sold is relatively small. The effect of importing dressed birds into these deficit areas by packers and others has caused smaller processors to discontinue paying premiums for locally produced broilers. Thus, the broiler growing enterprise has lost considerable ground in South Louisiana and, at the same time, many local processors have taken exit from the business. An examination of broiler prices in both Louisiana and out-of-state markets from 1952 to 1954 shows that price changes in most broiler markets are somewhat similar and that they adjust to more or less a "single" price for a given breed and weight classification.
With changing techniques in growing, transporting, dressing and distributing broilers, this relatively high degree of vertical integration in relation to a small scale of production, is being replaced with mass production techniques which involve a scale of operation much too large for processors to produce all their broilers and, in turn, own all the facilities through which their output may be sold. The logical step for processors is to develop integrative arrangements with growers to produce broilers and, in turn, negotiate contracts with chain stores, for example, to sell them dressed poultry on a mass scale. However, researchers are not all in agreement as to the merit of having growing and marketing on such a mass scale. Yet, buying techniques and consumption patterns are such that small scale producers and processors cannot adequately meet the broiler meat needs of large supermarket stores and fit their operations to the buying policies of these chains.

If the large processors can develop adequate and regular markets and, in turn, integrate growers and dealers with them, they may create a more orderly production and marketing system embodying lower producing, processing and distributing costs. Such a processor-grower integration may be of a profit or non-profit nature and could include the feed dealer. The advantages for the processor are: (1) A quasi-integrated operation may enable him to enter into more permanent and dependable contracts with buyers, (2) It may lower his unit costs by stability of operations and enable
HIM TO SCHEDULE BROILER RECEIPTS IN AN ORDERLY MANNER AND,

(3) IT MAY ENABLE HIM TO PASS-ON TO GROWERS THE PREFERENCES
OF HIS MARKET. THE GROWER WOULD AT LEAST BE ASSURED OF A
"MARKET" EVERY TEN WEEKS AT THE GOING PRICE. IT MAY BE
EASIER FOR HIM TO OBTAIN CREDIT BECAUSE OF A MORE DEPENDABLE
MARKET. IN CONJUNCTION WITH HIS PROCESSOR, THE GROWER MAY
BE ABLE TO SAVE ON FEED AND CHICK COSTS. ADJUSTMENTS TO
MARKET NEEDS AND PROPER MARKET WEIGHTS MAY ALSO BE OBTAINED.
CONSUMERS MAY BE ASSURED OF A DEPENDABLE SUPPLY OF BROILERS
AT A FAIR PRICE. THE MARKET OUTLET COULD MAKE ITS DESIRES
KNOWN AND GET THE QUALITY IT WANTED. CONSUMERS WOULD NOT
BE SUBJECTED TO PRICE OSCILLATIONS BUT RATHER TO STABLE
PRICES.

BROILER FINANCING AND INTEGRATION

THE BROILER BUSINESS REQUIRES LARGE AMOUNTS OF BOTH
FIXED AND OPERATING CAPITAL. TO OBTAIN A HOUSE CAPACITY OF
4,000 BROILERS, ABOUT 3,200 SQUARE FEET OF FLOOR SPACE IS
NEEDED OR .8 SQUARE FEET PER BROILER. AT AN AVERAGE COST
OF 75 CENTS PER SQUARE FOOT FOR BUILDING AND EQUIPMENT,
THE GROWER NEEDS ABOUT $2,400 TO ERECT FIXED FACILITIES.
TO PRODUCE A 4,000 LOT OF BROILERS DURING A TEN WEEK PERIOD,
ABOUT $2,750 OF OPERATING CAPITAL IS REQUIRED. OF THIS
AMOUNT, ABOUT $1,900 IS FOR FEED, $650 FOR DAY-OLD CHICKS
AND $200 FOR MEDICINES, SUPPLIES AND THE LIKE. TO HOUSE
AND FEED THE FIRST LOT OF 4,000 BROILERS, A GROWER WOULD
require about $5,150. In the course of a year, an average broiler producer may need at least $11,000 to buy chicks, feed and medicate four broods of broilers.

It is generally recognized that financing plays a significant part in fostering integration patterns. Many broiler growers select a particular feed dealer not only on the basis of the feed brand handled but also on the dealer's ability to extend credit. Companies that are able to extend credit rather liberally may have a decided advantage in sales over firms operating on a cash basis. The rather erratic development of broiler cooperatives in Louisiana, for example, was due to the lack of financing available to members except that which was negotiated between a grower and his banker. On the other hand, the most rapid growth of the broiler industry occurred when feed dealers, hatcheries, and processors began to supply more liberal credit to their growers.

In varying degrees and according to the particular arrangement in effect, growers have shared with the financing agency their managerial functions in growing and marketing. Field men provide "expert" supervision to growers. The grower relinquishes management decisions to the field men who are employees of the financing agency. This appears to have resulted in an improvement in productive efficiency arising from a rapid adoption of better feeds and methods for reducing flock mortality. However, it has been questioned whether in some cases growers have not given up management functions that ought to have been retained, and the loss of which has
AFFECTED THEIR ECONOMIC STATUS. IMPORTANT ALSO ARE THE COSTS OF THE SERVICES RENDERED TO GROWERS BY THESE FINANCING AGENCIES AND THE EXTENT TO WHICH VESTING OF MANAGERIAL FUNCTIONS IN THE HANDS OF FINANCING AGENCIES RESULTS IN A PROPER USE OF RESOURCES IN AGRICULTURAL COMMUNITIES. FINANCING METHODS ARE ALSO CLOSELY LINKED WITH THE BROILER INDUSTRY FROM THE STANDPOINT OF THEIR EFFECTS ON THE DEVELOPMENT AND STABILITY OF MARKETS FOR BROILERS; EFFICIENCIES IN PRODUCING AND MARKETING BROILERS, AND FINANCIAL RETURNS TO PRODUCERS, DEALERS, PROCESSORS AND FINANCIERS.

The main development of integration patterns in the broiler industry may have resulted from the extensive use of credit for both the establishment of the broiler enterprise (long-term) and its subsequent operation (short-term). Consequently, the finance agencies responsible for providing both fixed and operating capital are analyzed for their possible contributions to integration in the broiler industry.

LONG-TERM FINANCE

The following agencies have functioned actively in Louisiana in providing capital for long-term purposes such as in the construction of broiler houses: (1) Federal Housing Administration Title I Loans processed through commercial banks, (2) Local commercial banks, (3) Private credit sources or through individuals, (4) Farmers' Home Administration housing loans, (5) Trade credit through feed dealers and
OTHERS AND (6) LOANS THROUGH INSURANCE AND INVESTMENT COMPANIES.

In Louisiana, only the F.H.A. Title I Loans have been of real significance in the construction of broiler houses and, therefore, only such type loans are discussed (Table 11).

Table 11. Sources of Long-Term and Short-Term Financing for 106 Broiler Growers by Areas, Louisiana, 1951.

<table>
<thead>
<tr>
<th>Source of Finance</th>
<th>Ruston-Hill</th>
<th></th>
<th>Northwest Louisiana</th>
<th></th>
<th>Scattered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banks (F.H.A.) Title I</td>
<td>21</td>
<td>80</td>
<td>28</td>
<td>74</td>
<td>4</td>
</tr>
<tr>
<td>Self</td>
<td>4</td>
<td>16</td>
<td>8</td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td>Feed dealers</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Other individuals</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Short-term:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feed dealers</td>
<td>23</td>
<td>89</td>
<td>12</td>
<td>32</td>
<td>21</td>
</tr>
<tr>
<td>Commercial banks</td>
<td>-</td>
<td>-</td>
<td>13</td>
<td>34</td>
<td>-</td>
</tr>
<tr>
<td>Self</td>
<td>3</td>
<td>11</td>
<td>10</td>
<td>26</td>
<td>19</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>


F.H.A. Title I Loans

Under the FHA Title I Act there are four classes of loans that may be made, but Class I A and Class II B are the two classes most important for broiler operations, especially Class II B which can be used for erecting new structures.
Only. Class I A may be used for repairing or remodeling existing structures. Most growers upon entering the broiler business seek to construct a house of sufficient size and durability to accommodate 3,000 broilers or more. This normally requires around $2,000 if wiring and plumbing are included. Under FHA loans, building plans are uniform with the main variation in building costs arising from the use of skilled or unskilled labor and quality of materials used.

Under the Class II B loan, a maximum of $3,000 may be obtained for a period of seven years or, if secured by a first mortgage, for fifteen years. The interest rate is equal to a discount of $5.00 per $100 per year. If the maturity exceeds seven years, the discount becomes $3.50 per $100. However, most commercial banks in processing FHA loans do not permit the use of the "maximum" clauses in the Act but, instead, adopt a more conservative loan policy. For example, most loans were held to around $2,000 and were made payable in three rather than seven years. In case of delinquency, the banks felt that re-financing could be done during the remaining four years. Growers were expected to repay the loan in twelve installments or four payments per year.

An appealing feature of the Title I loan is the fact that the plan calls for a minimum of red tape. Letters of


40Personal interviews with Ken Garvin, Commercial National Bank, Shreveport, Louisiana.
REFERENCE ARE REQUIRED BUT THERE IS NO MORTGAGE EXCEPT IN THE CASE OF THE CLASS II B LOAN WHERE ONE MIGHT DESIRE TO EXTEND IT TO 15 YEARS OR LONGER. THERE ARE NO ATTORNEY FEES, NO SURVEY FEES, NO RECORDING FEES OR ANY ADDITIONAL CHARGES BEYOND THE 5 PER CENT DISCOUNT. THE FORMS ARE SHORT AND CLEAR. IT IS ESSENTIAL THAT BANK REPRESENTATIVES BE ABLE TO ARRIVE AT AND DETERMINE THE INCOME STABILITY OF THE BORROWER. A FARMER MAY BE PROVIDED 36 MONTHLY INSTALLMENTS OR QUARTERLY, SEMI-ANNUAL OR ANNUAL PAYMENTS. THE AGENCY MUST DETERMINE FROM WHAT FARM PRODUCTS SUCH AS POULTRY, CATTLE, DAIRY, ETC. THE INCOME WILL BE DERIVED AND UPON WHAT BASIS A METHOD OF PAYMENT CAN BE ARRIVED. THE FHA TITLE I LOANS, THEREFORE, HAVE BEEN OF CONSIDERABLE HELP IN BUILDING BROILER HOUSES.

IT IS LIKELY THAT GROWERS IN LOUISIANA HAVE USED FHA TITLE I LOANS MORE EXTENSIVELY THAN GROWERS IN OTHER AREAS SINCE A MAJORITY OF THE LOUISIANA BROILER HOUSES WERE BUILT SINCE 1950. IF A LOUISIANA GROWER DESIRED TO ENTER THE BROILER BUSINESS, HE SIMPLY CONTACTED HIS LOCAL BANKER WHO IN TURN DETERMINED WHETHER AN FHA LOAN COULD BE GRANTED. SOME BANKS WERE, OF COURSE, MORE INSTRUMENTAL IN MAKING SUCH LOANS THAN WERE OTHERS. BANKS IN SHREVEPORT, FOR EXAMPLE, MADE HUNDREDS OF THESE LOANS TO GROWERS IN NORTH LOUISIANA.

LENDING AGENCIES PROVIDING LONG-TERM CAPITAL FOR POULTRY OPERATIONS HAVE HAD LESS INFLUENCE ON INTEGRATION PATTERNS COMPARED WITH SHORT-TERM LENDING POLICIES OF CERTAIN FINANCIAL INSTITUTIONS. THIS IS DUE TO THE MANNER IN WHICH LONG-TERM LOANS ARE NEGOTIATED. GROWERS NEGOTIATE DIRECTLY
WITH THE LENDING AGENCY IN QUESTION. THESE AGENCIES ARE NOT PARTICULARLY CONCERNED WITH WHOM THE BROILER GROWER INTEGRATES HIS OPERATIONS. FOR EXAMPLE, MEMBERS OF BROILER COOPERATIVES IN NORTHWEST LOUISIANA HAVE HAD ALMOST NO TROUBLE IN NEGOTIATING LONG-TERM LOANS. THE SAME HAS NOT BEEN TRUE FOR SHORT-TERM LENDING.

SHORT-TERM FINANCE

SOURCES OF SHORT-TERM CAPITAL FOR BROILER GROWERS ARE:
(1) FEED DEALERS, (2) COMMERCIAL BANKS, (3) PRODUCTION CREDIT ASSOCIATIONS, (4) FARMERS' HOME ADMINISTRATION OPERATING LOANS, (5) TRADE CREDIT THROUGH PROCESSING, HATCHERY AND OTHER COMPANIES AND (6) SPECIALIZED COOPERATIVE BROILER FINANCE AGENCIES. THE MOST IMPORTANT SOURCES OF CREDIT FOR BROILER GROWERS ARE THE FEED DEALERS AND COMMERCIAL BANKS (TABLE 11). THESE TWO PRINCIPAL LENDING AGENCIES ARE DISCUSSED IN RELATION TO THEIR EFFECTS ON INTEGRATION PATTERNS IN THE BROILER GROWING ENTERPRISE. ALSO, A MORE RECENT TYPE OF COOPERATIVE BROILER FINANCING IS DISCUSSED.

(1) FEED DEALERS

BROILER GROWERS USUALLY FIRST CONTACT THEIR LOCAL FEED DEALER FOR AID IN FINANCING THEIR OPERATION. SINCE THE FEED DEALER DOES NOT HAVE SUFFICIENT CAPITAL OF HIS OWN TO FINANCE A LARGE NUMBER OF GROWERS, HE CONTACTS HIS BANKER WHO LOANS FUNDS TO THE DEALER AND, SUBSEQUENTLY, TO THE DEALER'S GROWERS. THE FEED DEALER IS ACTUALLY A "FINANCING
MIDDLEMAN" who acts as a collateral cushion for both the banker, who loans the money, and the grower, who borrows it. Thus, dealers share in many of the managerial decisions involved in growing and marketing of broilers. By sharing in these managerial functions, dealers are able to introduce more flexibility into their businesses, giving them more opportunities for adjustment in their operations. In addition, they are able to see that growers care for the broilers in the manner best suited to local conditions, thereby offering some control over the dealer's investment.\footnote{Regional Poultry Committee, Financing Production and Marketing of Broilers; Part I. S.C.S. Bul. 38, L.S.U. Agr. Exp. Sta., June 1954. Pp. 11-30.}

The loan procedure used by dealers is a rather common one in the broiler industry. The dealer whether he be a hatcheryman, feed supplier or processor, applies to his bank for a line of credit. The bank is supplied with a copy of the dealer's financial statement, which is analyzed to determine net worth. If the bank decides that the dealer is honest, capable of properly managing a feed, hatchery or processing business and has proper equity or capital in his business, a line of credit is set up for the dealer's use. In an average case, this may amount to $25,000 or more. The dealer takes a signed note from the grower secured by a chattel mortgage on the broiler house, equipment or flock of chickens. In case of a poor credit risk, the dealer may ask for more security. The dealer then obtains a loan from the bank secured by the grower's note. Eighty to ninety days is the most general period that cash is borrowed.
At periodic intervals, the bank forwards credit funds to the dealer based on his financial statement, volume of growers' notes and need for feed and supplies for the growing chicks. In most cases, the amount of credit granted amounts to about 60 cents per broiler chick or $1,800 per 3,000-house. The dealer is charged from \( \frac{4}{6} \) to 6 per cent interest for the time the money is in use. The grower is thus obligated to feed and take care of the chicks under the feed dealer's guidance and, at marketing age, to repay the dealer the full amount of the loan. The price charged for the various input factors such as feed, chicks, and medicines is the dealer's province. Interest charges for the money loaned to the grower are usually bundled with the price of feed and other supplies. Financing plans such as "open-account" are used to implement these loans.

Why is this type of financing so widespread? The answer is simply that growers with relatively few assets and who are not operating diversified farm businesses cannot obtain operating capital direct from banks or PCA's. This is not a criticism of either the grower or the banks. Each cannot afford the other in negotiating broiler feed loans. There is a need for another party who can stand between the two groups and who is capable of assuming some of the risks of both the grower and the banker. That agency happens to be the feed dealer by virtue of his position in the feeding and marketing of the broilers.
All this is, of course, a strong stimulus to quasi-integration since the grower must then buy all his input factors from the dealer concerned and, in many cases, must sell his output through him also. Not only is this situation conducive to quasi-integration but also to complete integration by the feed dealer. If his growers become delinquent or are reluctant to grow broilers on credit, the feed dealer may conveniently "hire" them to grow broilers at a stipulated fee per pound or per bird. Numerous finance plans such as "flat fee" and "labor contract" may implement this type of loan. Ordinarily, most dealer-grower finance plans are classified as quasi-vertical integration since the grower is under contract to the feed dealer. However, if any grower-dealer plan causes a shift in managerial functions from grower to dealer and if the producer is simply acting in the capacity of a hired laborer, then complete vertical integration prevails and not quasi-vertical integration.

In general, broiler growers have shown little hesitation in entering into financing arrangements for the growing of broilers. It has meant that they could grow broilers with little risk except the use of their labor, broiler houses, and equipment. In some cases, no risk to the grower was involved. It has also meant that they have given up or shared some managerial decisions, sometimes considered to be performed best by the grower.

(2) Commercial Banks

Banks have been instrumental in financing broiler
growing in at least two ways: (a) Lending money to the feed dealer who in turn financed himself or his growers or, indirect financing; and (b) Lending funds straight to the broiler grower or, direct financing. It is the latter type which is of interest here.

Some broiler growers who have property or other assets prefer to deal directly with the bank rather than through a feed dealer. In case of broiler feed cooperatives, the grower may have no recourse other than going to his banker since no feed cooperative in Louisiana will or can finance him.

Banks are usually highly selective in their loans and will extend credit only to growers with diversified operations, substantial assets and to those who come with good recommendations. Loans up to about 60 cents per chick during a 10-week period are extended, secured by personal property, real estate, livestock or other assets. If the assets are not sufficient, the loan limit per chick may be reduced to 45-cents. Maturity dates vary from nine to twelve weeks. Interest rates are usually 8 per cent for the time the money is used. Some banks discount the loan at the time it is negotiated which would, of course, raise the effective interest rate. Insurance must usually be purchased on the chicks and on the farm house, broiler house, barns and the like, if mortgaged.

(3) Specialized Broiler Finance Associations

The development of poultry feed cooperatives in
Northwest Arkansas and Northwest Louisiana have brought attention to the serious need for operating capital by broiler growers who are members of these associations. In many cases, the growers cannot obtain credit either directly from the banks, PCA's or from their local cooperatives. The cooperative feed mills are not engaged in credit operations so growers who wish to use cooperative-milled feed are handicapped credit-wise. A brief case study is presented to illustrate how a group of cooperatives in Northwest Arkansas solved this problem of securing operating capital through complete integration.

**Case A**

*Complete Integration Through A Non-Profit Entity*

A federated broiler finance cooperative was organized in 1948 in Northwest Arkansas by four supply cooperatives which purchased $5,000 each of stock. In addition, the state farmers' organization bought $60,000 of stock and, later, four more cooperatives joined, raising the stock capitalization to $132,500.

The grower contacts his local cooperative and requests financial assistance. A preliminary loan application is taken and processed by the local management and loan committee. If approved, the loan is forwarded to the central finance cooperative. In turn, if this cooperative approves the loan, the papers are sent to the Federal Intermediate Credit Bank in St. Louis where the note is discounted and
PROCEEDS FORWARDED TO THE LOCAL COOPERATIVE WHERE THE MEMBER CAN PURCHASE CHICKS, FEED AND SUPPLIES ON CREDIT. THE CENTRAL COOPERATIVE IS PERMITTED TO BORROW UP TO FIVE TIMES ITS CAPITALIZATION OR ABOUT $600,000 AT THE PRESENT TIME.

Interest rates are budgeted and are usually 1½ PER CENT OVER THE DISCOUNT RATE OR ABOUT 6 PER CENT. MATURITY DATES CORRESPOND TO THE BROILER MARKETING PERIODS. COLLATERAL IN THE FORM OF THE CHICKS AND FEED ARE ACCEPTED IN ADDITION TO PROPERTY OR LIVESTOCK WHENEVER INDIVIDUAL CIRCUMSTANCES REQUIRE IT. NO STOCK IS BOUGHT BY THE GROWER AND NO FEES ARE CHARGED EXCEPT THOSE CONNECTED WITH THE ORDINARY PROCESSING OF LOANS. CHICKS GIVEN AS MORTGAGE NEED TO BE INSURED AT PREMIUMS OF 30 CENTS PER $100 OF DECLARED VALUE. LOAN LIMITS PER CHICK VARY FROM 40 TO 55 CENTS, DEPENDING ON THE GROWER'S FINANCIAL STATUS. THE LOCAL COOPERATIVE IS RESPONSIBLE FOR COLLECTING THE PROCEEDS AND OTHERWISE SERVICING THE LOAN. ESSENTIALLY, THIS TYPE OF COOPERATIVE BROILER FINANCING IS SIMILAR TO OPERATION OF PRODUCTION CREDIT ASSOCIATIONS.

APPRaisal

IT IS EVIDENT THAT LONG-TERM Financing THROUGH THE FEDERAL HOUSING ADMINISTRATION HAS NOT BEEN SIGNIFICANT IN FOSTERING INTEGRATION PATTERNS. HOWEVER, AGENCIES ENGAGED IN SHORT-TERM LENDING HAVE FOSTERED INTEGRATION. PRIVATE BANKERS HAVE PLAYED A MULTIPLE ROLE IN INTEGRATION, VIZ: (1) BANKERS HAVE ENCOURAGED QUASI-INTEGRATION BY LETTING FEED DEALERS ACT AS FINANCIAL MIDDLEMEN. SOMETIMES FEED DEALERS HAVE BECOME
COMPLETELY INTEGRATED BY GROWING BROILERS THEMSELVES WITH
THE FINANCIAL ASSISTANCE OF BANKERS AND (2) BANKERS HAVE
FOSTERED NON-INTEGRATION BY LENDING FUNDS DIRECT TO GROWERS
WHO IN TURN SELECTED THEIR OWN FEED; OR, THE BANK MAY HAVE
LOANED FUNDS TO MEMBERS OF COOPERATIVES WHICH ENABLED THEM
TO OWN AND OPERATE THEIR OWN FEED AND SUPPLY FACILITIES.
IN TOTAL, HOWEVER, PRIVATE BANKERS HAVE BEEN MORE DISPOSED
to Role (1).

PRIVATE BANKS USUALLY PREFER THE INDIRECT FINANCING
METHOD DUE TO THE SPREADING OF PRICE AND DISEASE RISKS;
PROPER SUPERVISION OF LOANS BY FEED DEALERS; LARGER LOAN
VOLUME WHEN CENTRALIZED THROUGH A DEALER AND A MORE RAPID
TURNOVER IN ACCOUNTS.

UNDER THE DIRECT BANK-GROWER LOAN SYSTEM BANKS
CANNOT OFF-SET INDIVIDUAL LOSSES BY CHARGING MORE ON THE
PROFITABLE OPERATIONS. EACH GROWER LOAN MUST SUCCEED ON
ITS OWN MERIT; THEREFORE, BANKS FEEL THAT RISKS ARE SPREAD
BETTER UNDER AN INDIRECT BANK-DEALER-GROWER LOAN. ALSO,
BANKERS CLAIM THAT, AT PRESENT, INTEREST RATES ARE NOT
HIGH ENOUGH TO COVER THE COSTS OF NEGOTIATING AND SERVIC­
ING DIRECT BANK TO GROWER LOANS. IT SHOULD BE NOTED,
HOWEVER, THAT BETWEEN THE BANK'S 8 PER CENT AND THE FEED
DEALER'S 28 PER CENT EFFECTIVE INTEREST RATES THERE IS
CONSIDERABLE ROOM FOR EITHER THE BANK TO INCREASE ITS RATE
OR THE FEED DEALER TO REDUCE HIS.

DEALERS ARE NOT ALL AGREED AS TO THE VIRTUE OF THEIR
"MIDDLEMAN'S FUNCTION" IN CREDIT. MOST OF THEM WOULD PREFER
NOT TO BE INVOLVED CREDIT-WISE BUT COMPETITION HAS FORCED THEM TO EXTEND CREDIT. IN ADDITION, SOME DEALERS MAY BE MAKING EXTRA INCOME BY BORROWING AT ABOUT 8 PER CENT AND RE-SELLING THE CREDIT AT 25 TO 28 PER CENT MINUS RISKS, BAD DEBTS, SERVICE CALLS, AND OTHER EXPENSES. BY EXTENDING CREDIT, THE DEALER KNOWS THAT HE CAN SELL OTHER ITEMS OF PRODUCTION TO THE GROWERS SUCH AS CHICKS AND MEDICINES. ALSO, HE MAY TRANSPORT AND SELL THE BROILERS PRODUCED BY HIS GROWERS.

MOST BROILER GROWERS HAVE FELT THAT FINANCING THROUGH FEED DEALERS WAS MUCH QUICKER; NO COLLATERAL WAS REQUIRED AND MORE PERSONAL SERVICE FROM THE DEALER COULD BE OBTAINED IN THIS MANNER, SUCH AS IN MARKETING THE BROILERS. MANY GROWERS, OF COURSE, HAVE NOT STOPPED TO ASCERTAIN THE COST OF FINANCING THROUGH THE DEALER AS COMPARED TO REGULAR LOAN AGENCIES SUCH AS DIRECTLY WITH BANKS OR PCA'S. BY PATRONIZING THESE LATTER AGENCIES, PRODUCERS MAY ENJOY LOWER INTEREST PAYMENTS, MORE FLEXIBLE CREDIT OPERATIONS AND OBTAIN SOME OWNERSHIP IN A COOPERATIVE CREDIT INSTITUTION IN THE CASE OF PCA'S OR A SIMILAR AGENCY. THE MAIN OBSTACLE IS THE COLLATERAL WHICH GROWERS NEED TO OFFER FOR SUCH LOANS. IN SOME AREAS SUCH AS IN ALEXANDRIA, BANKERS HAVE LIBERALIZED THEIR SECURITY REQUIREMENTS FOR MEMBERS OF BROILER COOPERATIVES. IT WAS FELT THAT THE USE OF COOPERATIVE FEED REPRESENTED SUCH A LOW INVESTMENT IN BROILERS THAT PRICE FLUCTUATIONS WOULD NOT ENDANGER THE LOAN. THIS APPEARS TO BE A REASONABLE ASSUMPTION AND MUCH ECONOMIC RESEARCH SUPPORTS THIS VIEW.
Short-term lending is associated with integration patterns in the broiler growing enterprise. In fact, the type of credit used is directly linked with the type of integration followed. If a grower obtains his credit direct from the bank or PCA, he may remain: (1) Non-integrated, (2) Quasi-integrate with a dealer, (3) Integrate with a cooperative or (4) Integrate a feed dealership with his growing of broilers. If a grower borrows from a specialized cooperative credit agency other than PCA, he has to patronize the cooperative with no alternatives. If a grower borrows from a feed dealer, he has to quasi-integrate with the dealer, with no alternatives. The financing and integration patterns briefly delineated here are analyzed more fully in the following chapter.
CHAPTER IV
INTEGRATION IN THE BROILER GROWING ENTERPRISE

Broiler growers vertically integrate their enterprise in at least four ways: (A) Complete integration through feed dealerships or other profit entities, (B) Complete integration through cooperative associations or non-profit entities, (C) Quasi-integration with a feed dealer or other agency through contract and (D) Non-integration where growers remain financially and managerially independent. These integration patterns may develop either in acquiring inputs such as feed or in disposing of broiler output or both. Since feed is the principal input factor in growing broilers it is used as the main basis for analyzing integration patterns in broiler growing.

What do integration patterns mean to a farmer who is contemplating growing broilers or to a grower who is already in business? First, integration patterns demonstrate certain characteristics such as how feed is procured, how it is financed, its cost, who has title to the broilers, and how returns are to be allocated? This is a micro-economic approach or where one grower and one dealer are concerned. Second, the integration patterns may demonstrate characteristics that are of macro-economic significance such as why growers integrate, how much monopoly is being
CREATED, HOW ARE FACTOR PRICES DETERMINED, HOW IS BROILER PRODUCTION AND QUALITY AFFECTED, HOW ARE RETURNS BEING DIVIDED AMONG THE VARIOUS ECONOMIC GROUPS AND HOW WILL BROILER GROWING FARE IN RELATION TO OTHER MEAT ENTERPRISES?

ALL THESE POINTS CANNOT BE ANSWERED AT PRESENT BUT THE PROPER DELINEATION AND DISCUSSION OF INTEGRATION PATTERNS IN THE BROILER GROWING ENTERPRISE ITSELF CAN PROVIDE HYPOTHESES WHICH LATER CAN BE TESTED EMPIRICALLY.

INTEGRATION PATTERNS

THE FOUR PATTERNS OF INTEGRATION IN BROILER GROWING ARE DISCUSSED IN GENERAL TERMS WITHOUT THE USE OF SPECIFIC CASE STUDIES, AS WERE EMPLOYED IN THE PREVIOUS CHAPTER. IT IS BELIEVED THAT THE CHARACTERISTICS OF THE PATTERNS CAN BE SET FORTH IN TERMS WHICH WILL NOT REQUIRE SPECIFIC CASE ILLUSTRATIONS. THE MICRO-ECONOMIC APPROACH IS UTILIZED IN DISCUSSING THESE VARIOUS INTEGRATIONS.

A. COMPLETE INTEGRATION THROUGH PROFIT ENTITIES

THERE ARE AT LEAST THREE WAYS IN WHICH COMPLETE INTEGRATION THROUGH PROFIT ENTITIES CAN OCCUR IN BROILER GROWING, VIZ: (I) THE BROILER GROWER MAY ESTABLISH HIS OWN FEED DEALERSHIP, CHICK HATCHERY OR PROCESSING PLANT ON A PROFIT-TYPE BASIS, (II) FEED DEALERS OR OTHER AGENCIES MAY VENTURE INTO BROILER GROWING WITH THEIR OWN RESOURCES AND (III) FEED DEALERS OR OTHER AGENCIES MAY GROW BROILERS BY FURNISHING FARMERS ALL THE NEEDED INPUTS ON CONTRACT.
The growers usually furnish the labor, broiler house and equipment only. For this, growers receive a guaranteed income per week, per bird or per pound produced. There are, of course, many modifications in these plans but the basic structure is as shown in Table 12. These three sub-patterns in complete integration through profit entities are discussed as follows:

I. An established broiler raiser who grows a sufficient volume of birds may mix his own feed or obtain a franchised dealership from a feed concern provided that it has no existing dealership in the locality. If there is a dealer in his trade area, the grower may still obtain the feed direct from the mill but the local dealer will have to be paid his regular "margin". Often, the feed mill will require that the feed dealer-grower handle other items besides feed, especially when the feed mill has a financial interest in these other lines. Such an arrangement requires a substantial amount of capital on the grower's part. In general, this sub-pattern is not too common in the broiler growing enterprise although it has economic possibilities.

On the other hand, several broiler growers may form a profit, capital stock corporation to act as a feed dealer both for their own use and for profit purposes in dealing with other growers. A case of this nature occurred in North Central Louisiana where a number of growers associated for the handling of feed milled by a rather small
MILLING COMPANY. Usually, the larger mills are somewhat reluctant in granting feed franchises to one or a group of broiler growers since many dealers are already established in their business. Financial limitations, lack of accord among growers and reluctance of feed mills to grant such franchises are reasons why this sub-pattern has not developed as widely as the theory would suggest. (Table 12, Item A1).

II. Feed dealers, hatcheries, processors and others may venture into broiler growing with their own resources. They may construct their own growing facilities and move at least a part of their feed through the broilers. A regional broiler study showed that about 38 per cent of the 175 dealers studied were growing some broilers on their own facilities. This involved feed dealers who used their own feed in growing broilers; hatcheries which used their own chicks or processors who produced their own birds or a combination of all three.

A complete circularly integrated dealer unit would consist of ownership in a feed mill or feed store, hatchery and egg flocks; broiler houses, processing plant and a retail outlet. Usually the integration is not this complete but may be backwards into "feed input" only or, in other cases, it may be mostly forward as in processing.

Regional Poultry Technical Committee, Schedules of Dealer Financing of Broilers, 1952.
Table 12. Characteristics of Integration Patterns in the Broiler Growing Enterprise.

<table>
<thead>
<tr>
<th>Integration Pattern and Sub-Patterns</th>
<th>Place Feed Obtained</th>
<th>Agency Financing Feed</th>
<th>Main Source of Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Complete Integration (Profit)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Broiler grower into dealership</td>
<td>MILL</td>
<td>Bank and mill</td>
<td>HIRED</td>
</tr>
<tr>
<td>2. Dealer into own broiler growing</td>
<td>MILL</td>
<td>Bank and mill</td>
<td>HIRED</td>
</tr>
<tr>
<td>3. Dealer hiring growers</td>
<td>MILL</td>
<td>Bank and mill</td>
<td>HIRED</td>
</tr>
<tr>
<td><strong>B. Complete Integration (Non-Profit)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Cooperative constructs own facilities</td>
<td>OWN MILL</td>
<td>Own agency</td>
<td>Grower</td>
</tr>
<tr>
<td>2. Cooperative joins other cooperatives</td>
<td>MILL</td>
<td>Bank or other</td>
<td>Grower</td>
</tr>
<tr>
<td><strong>C. Quasi-Integration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Grower contracts with dealer excluding credit</td>
<td>DEALER</td>
<td>Bank or other</td>
<td>Grower</td>
</tr>
<tr>
<td>2. Grower contracts with dealer including credit</td>
<td>DEALER</td>
<td>Dealer</td>
<td>Grower</td>
</tr>
<tr>
<td><strong>D. Non-Integration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Grower is independent of feed dealer or other agency</td>
<td>DEALER</td>
<td>Bank or grower</td>
<td>Grower</td>
</tr>
</tbody>
</table>
Table 12 (Continued).

<table>
<thead>
<tr>
<th>Integration Pattern and Sub-Patterns</th>
<th>Cost of Feed and Supplies</th>
<th>Title to Broilers</th>
<th>Division of Profits and Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Complete Integration (Profit)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Broiler grower into dealership</td>
<td>Wholesale</td>
<td>Grower-dealer</td>
<td>Grower-dealer, 100%</td>
</tr>
<tr>
<td>2. Dealer into own broiler growing</td>
<td>Wholesale</td>
<td>Dealer-grower</td>
<td>Dealer-grower, 100%</td>
</tr>
<tr>
<td>3. Dealer hiring growers</td>
<td>Wholesale</td>
<td>Dealer</td>
<td>Grower, fee or share profits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dealer, 100% or share profits</td>
</tr>
<tr>
<td><strong>B. Complete Integration (Non-Profit)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Cooperative constructs own facilities</td>
<td>Wholesale</td>
<td>Grower or cooperative</td>
<td>Grower, 100% or fee-share</td>
</tr>
<tr>
<td>2. Cooperative joins other cooperatives</td>
<td>Wholesale</td>
<td>Grower or cooperative</td>
<td>Grower, 100% or fee-share</td>
</tr>
<tr>
<td><strong>C. Quasi-Integration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Grower contracts with dealer excluding credit</td>
<td>Retail Discount</td>
<td>Grower</td>
<td>Grower, 100%</td>
</tr>
<tr>
<td>2. Grower contracts with dealer, including credit</td>
<td>Retail</td>
<td>Grower</td>
<td>Grower, 100% or share profits</td>
</tr>
<tr>
<td><strong>D. Non-Integration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Grower is independent of feed dealer or other agency</td>
<td>Retail or retail discount</td>
<td>Grower</td>
<td>Grower, 100%</td>
</tr>
</tbody>
</table>
AND DISTRIBUTION. Many large-scale dealers focus their integration backwards into input by operating feed mills or feed stores, hatcheries and even egg flocks. In disposing of their broilers, however, they may rely on contracts with large processors and, at best, are only quasi-integrated. These points are in general substantiated by a Regional Broiler Finance survey. In the four states of Georgia, Mississippi, South Carolina and Virginia, from 33 to 49 per cent of the dealers operated feed stores only; from 31 to 45 per cent operated or had ownership in either a feed mill, hatchery or processing plant; from 13 to 24 per cent operated or had ownership in two allied businesses such as a feed mill and hatchery and from 0 to 7 per cent of the dealers operated or had ownership in three units such as a feed mill, hatchery and processing plant. (Table 13).

Although this type of dealer integration in growing broilers is quite common, it is usually conducted on a small-scale or in combination with other integration patterns. If the feed dealer desired an operation of 500,000 broilers per year, he would have to have 25 broiler houses with 5,000 capacity each. Usually, an integrated operation of this kind is held to a maximum of 200,000 broilers per year, depending on how far the integration process can be economically carried through feed mills, hatcheries and processing plants. (Table 12, Item A2).

III. Feed dealers or other agencies may grow broilers entirely or partly on contract with farmers. This activity
Table 13. Extent of Circular Integration by Feed Dealers in Four Southern States, 1951-1952.

<table>
<thead>
<tr>
<th>Type of Circular Integration</th>
<th>Georgia</th>
<th>Mississippi</th>
<th>South Carolina</th>
<th>Virginia</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Dealers</td>
<td>51</td>
<td>52</td>
<td>27</td>
<td>45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Circular Integration</th>
<th>Georgia</th>
<th>Mississippi</th>
<th>South Carolina</th>
<th>Virginia</th>
</tr>
</thead>
<tbody>
<tr>
<td>None (feed store only)</td>
<td>43</td>
<td>49</td>
<td>33</td>
<td>47</td>
</tr>
<tr>
<td>One unit*</td>
<td>31</td>
<td>38</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td>Two units**</td>
<td>24</td>
<td>13</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Three units***</td>
<td>2</td>
<td>0</td>
<td>7</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Circular Integration</th>
<th>Georgia</th>
<th>Mississippi</th>
<th>South Carolina</th>
<th>Virginia</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Dealers</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

*Refers to either feed mill, hatchery or processing.

**Mostly feed milling and hatchery combined.

***Combined feed mill, hatchery and processing.

May be combined with broiler growing on the dealers' own resources. A Regional Broiler study showed that 66 out of 175 dealers in Georgia, Mississippi, South Carolina and Virginia, were growing broilers entirely or partly on contract. This integration sub-pattern is more common in Georgia and Virginia, the two oldest broiler areas in the South. Newer areas like Texas, Mississippi and Louisiana do not report this pattern being as widespread. The reason is that broiler financing usually goes through evolutionary stages, viz: in a new area growers operate more on their own finances but, after a time, they tend to want a spreading
or division of risks which feed dealers usually assume.

Feed dealers may "hire" growers to produce birds for them at a stipulated rate per pound, per head or on a salary basis. In such cases, the grower usually furnishes the broiler house, equipment and his labor but the dealer supplies the feed, chicks and medicines at his own risk. The broiler grower's remuneration includes "rent" of broiler house and equipment plus a "wage" for his labor. It does not include any "profits" for management since the grower simply executes the entrepreneurial decisions made by the feed dealer. This is the essential difference between a complete and a quasi-integration relationship, viz: In the former case there is only one entrepreneur while in the latter there are two entrepreneurs.

This particular situation is not quasi-vertical integration but, instead, represents complete forward vertical integration on the part of the dealer-firm as it moves toward utilizing its feed sales as feed inputs for its own broiler growing enterprise. The grower has withdrawn from a quasi-vertical integration pattern and has become a part of a vertically integrated operation, viz: He no longer is an entrepreneur, hence, there is no longer a "firm" existing. Therefore, the grower is relegated to the status of a labor "input" where in this case "labor" and "management" are divorced. The grower's labor assumes contractual input characteristics. This is quite important not only in firm theory but also in actual economic behavior for many of the former
BROILER ENTREPRENEURS (FIRMS) HAVE NOW BEEN ABSORBED INTO VERTICALLY INTEGRATED OPERATIONS AND REPRESENT A DISTINCT MOVEMENT AWAY FROM BOTH ATOMISTIC AND QUASI-INTEGRATED OPERATIONS.

WHAT ARE THE SPECIFIC FINANCE PLANS WHICH IN EFFECT PLACE GROWERS IN THE ROLE OF "HIREd LABORERS" RATHER THAN ENTREPRENEURS? THERE ARE AT LEAST FOUR SUCH PLANS: (1) A WEEKLY INCOME OF FROM $15 TO $25 PER WEEK PER 3,000 HOUSE MAY BE GUARANTEED THE GROWER, WITH OR WITHOUT BONUS PROVISIONS IF NET PROFITS EXCEED A PRESCRIBED AMOUNT. FOR EXAMPLE, IT MAY BE MUTUALLY AGREED BETWEEN THE GROWER AND THE DEALER THAT AFTER ALL EXPENSES ARE PAID, INCLUDING WAGES, THE GROWER WILL RECEIVE 50 PER CENT OF THE PROFITS AND THE DEALER 50 PER CENT. TO THE GROWER THIS "BONUS" IS NOT PROFIT OR A REWARD TO MANAGEMENT BUT RATHER IT IS A "WAGE INCENTIVE" FOR PERFORMING AN EFFICIENT GROWING JOB, (2) A FLAT FEE PLAN MAY BE USED WHERE THE DEALER PAYS THE GROWER-LABORER SO MUCH PER HEAD OR PER POUND OF BROILER PRODUCED. USUALLY, THESE FEES RUN FROM 5 TO 9 CENTS PER BROILER AND FROM 2 TO 3.5 CENTS PER POUND SOLD ALIVE, DEPENDING UPON THE NEGOTIATED AGREEMENT, (3) A FEED CONVERSION PLAN MAY BE USED WHERE A GROWER-LABORER IS PAID A CERTAIN FEE ACCORDING TO A PREDETERMINED FEED CONVERSION RATIO. FOR EXAMPLE, IF THE BROILERS CONVERT FEED INTO LIVE POUNDAGE AT A 3 TO 1 RATIO, THE GROWER-LABORER WILL RECEIVE 7 CENTS PER BROILER SOLD. HOWEVER, IF THE BIRDS CONVERT AT A 3.5 TO 1 RATIO,
THE GROWER WOULD RECEIVE ONLY 5 CENTS PER BROILER. ON
THE OTHER HAND, IF THE BIRDS CONVERTED AT A 2.5 TO 1
RATIO, THE GROWER COULD GET, HYPOTHetically, 9 CENTS PER
BIRD AND (4) SHARE PLANS MAY BE USED PROVIDED THE INPUT
FACTORS SUPPLIED BY THE DEALER AND THE TITLE TO THE BROILERS
REMAIN WITH THE DEALER. IN SUCH CASES, PROFITS ARE USUALLY
DIVIDED 90 PER CENT TO THE GROWER AND 10 PER CENT TO
THE DEALER AFTER ALL COSTS HAVE BEEN MET. IN CASE OF
LOSSES, BOTH THE DEALER AND GROWER LOSE WHAT EACH HAS
CONTRIBUTED (TABLE 12, ITEM A3).

THIS SYSTEM, BY WHICH DEALERS HIRE GROWERS, IS
WIDESPREAD. IT REPRESENTS A GRADUAL TRANSFORMATION OF
BROILER GROWER FIRMS FROM A QUASI-INTEGRATED RELATIONSHIP
WITH THE FEED DEALER TO A COMPLETELY INTEGRATED RELATIONAL-
SHIP OR FUSION. WHAT ARE SOME OF THE ADVANTAGES AND
DISADVANTAGES OF SUCH A SYSTEM AND HOW DOES IT OPERATE
IN ACTUAL BROILER GROWING OPERATIONS?

SOME INDUSTRy PEOPLE CRITICIZE THE DEALER-HIREd
LABOR PLAN AS FOLLOWS: (1) THESE CONTRACTS TEND TO MAKE
A "SHARECROPPER" OUT OF THE GROWER, (2) THE QUALITY OF
BIRDS IS POOR SINCE THE GROWER HAS LITTLE INCENTIVE, (3)
THESE CREDIT PRACTICES ENCOURAGE "OVER-PRODUCTION" OF
BROILERS, AND (4) SUCH CONTRACTS MAKE IT DIFFICULT FOR
THE INDEPENDENT GROWERS. FOR EXAMPLE, A PROCESSOR MAY
BE WILLING TO ABSORB A LOSS ON THE GROWING OPERATION IN
ORDER TO INSURE AN ADEQUATE SUPPLY FOR OPERATING THE
PROCESSING PLANT AT FULL CAPACITY. THE PROCESSOR MAKES
His profit on the processing and marketing phase. The feed dealer may be willing to absorb a loss on the growing operation in order to sell a large tonnage of feed. It appears that these so-called "unsound" credit practices may continue as long as the "loss" on the growing operation is not greater than the "profit" from the processing or the sale of feed and other supplies to the grower.

In defense of hired labor plans, feed dealers and others maintain that: (1) They are forced to offer such plans to meet competitors who appear as constant threats to the cash or quasi-integrated dealer, (2) In an integrated operation, dealers may use surplus chicks from the hatchery operation and contract them to "growers", (3) It is an effort to stabilize production and thus stabilize feed sales and the like, (4) It maintains the dealer's contact with the processing plant or other market outlets by having a continuous supply of birds and (5) Most plans guarantee the grower a minimum income, which reduces some of his risks in broiler production.

In actual operations, the feed dealer is often forced into these hired labor plans because of price fluctuations in the broiler market. To the growers, low prices create severe risks in growing broilers. Returns sometimes do not even cover cash or variable costs. For the dealer to maintain both his feed sales and the broiler enterprise in his area, it is necessary for him to integrate vertically by "contract" where the dealer "hires"

Under a hired labor plan, the average dealer may grow broilers for about 22 cents per pound, with inputs at list price (Table 14). If broiler prices are 25 cents-per-pound, then about 3 cents per pound or 9 cents per bird is available as "margin" for feed, chicks and medicines, excluding labor since that has been paid. Of this nine cent "margin", 6.3 cents may be allotted as "feed margin", 2.2 cents for "chick" margin and .5 cents as margin for "other supplies". By allocation, this would amount to a margin of $.70 per 100 pound bag of feed; 1.8 cents per chick raised and 16.7 cents margin for every $1.00 investment in medicines and other supplies.

If the grower had produced broilers under quasi-integration and received 25 cents per pound for live broilers, he would have netted one cent per pound over cash or variable costs but lost one cent per pound over total costs (Table 15). Under open account or quasi-integration, the grower would have gotten $.01 per pound for his labor and fixed costs while providing the dealer with
Table 14. Estimated Costs and Returns in Complete Vertical Growing of Broilers by Feed Dealers.

<table>
<thead>
<tr>
<th>Item</th>
<th>Units Used per Bird</th>
<th>Total Cost per Bird($)</th>
<th>Cost per Lb.(£)</th>
<th>Per Cent of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed</td>
<td>$.75 9 LBS.</td>
<td>$.43</td>
<td>.14</td>
<td>64</td>
</tr>
<tr>
<td>Chicks</td>
<td>.12 1.2 Chicks</td>
<td>.14</td>
<td>.05</td>
<td>23</td>
</tr>
<tr>
<td>Labor</td>
<td>.02 3 u.</td>
<td>.06</td>
<td>.02</td>
<td>9</td>
</tr>
<tr>
<td>Other</td>
<td>*</td>
<td>.03</td>
<td>.01</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>*</td>
<td>.66</td>
<td>.22</td>
<td>100</td>
</tr>
</tbody>
</table>

$.75 margin per sack of feed; 3 cents per chick and a comfortable margin on supplies.

The important point here is that under a complete vertically integrated arrangement, the grower gets two cents per pound for growing broilers which is also a guaranteed wage. On the other hand, under a quasi-vertical integration pattern and having to take the dealer's list prices, the grower would have only netted one cent per pound for his labor or a difference of about $80 in favor of complete vertical integration during a 10-week period.

If broiler prices appear to be low, the grower is better off to produce broilers for dealers because he has to pay too much for his input items. If it appears that prices are going to be 25 cents per pound and over, then, the grower is likely to fare better on his own.
Table 15. Estimated Costs and Returns in Quasi-Vertical Production of Broilers by Growers. 1/

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit Price ($)/Per Bird</th>
<th>Units Used</th>
<th>Total Cost Per Bird ($)</th>
<th>Total Cost Per Lb. ($)</th>
<th>Per Cent of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed</td>
<td>5.50</td>
<td>9 lbs.</td>
<td>0.495</td>
<td>0.17</td>
<td>65</td>
</tr>
<tr>
<td>Chicks</td>
<td>0.15</td>
<td>1.2</td>
<td>0.180</td>
<td>0.06</td>
<td>23</td>
</tr>
<tr>
<td>Labor</td>
<td>0.02</td>
<td>3 u.</td>
<td>0.060</td>
<td>0.02</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>*</td>
<td>*</td>
<td>0.040</td>
<td>0.01</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>*</td>
<td>*</td>
<td>0.775</td>
<td>0.262/</td>
<td>100</td>
</tr>
</tbody>
</table>

1/ On open-account plan and before shifting to guaranteed-income plan.

2/ Variable costs equal 24 cents and fixed costs two cents.

Account or under quasi-integration even if his growing costs are high.

If prices had fallen to 22 cents per pound, the dealer's costs, in the main, would have been covered since his feed, chicks and supplies were sold at cost. In addition, his growers would have earned a wage of about $160 per 3,000 house of broilers and would have appeared anxious to grow another brood. Also, under completely integrated operations, the dealer may not have fared badly even if prices had dropped to 20 cents. While the dealer would have lost two cents per pound of broiler produced, he may have mixed his own feed; or he may have
INCUBATED HIS OWN EGGS LEAVING HIM A MARGIN ON THIS IN ADDITION TO REALIZING A SUBSTANTIAL PROFIT ON DRESSING OPERATIONS, IF SUCH WERE PERFORMED.

In broiler production, it is not simply one segment that has to be appraised nor one time period. Analysis must be built on the over-all position of the firm and how it fares in a dynamic sense through several time periods. To the growers, these hired labor arrangements mean that he can utilize his buildings, equipment and labor at a conservative but safe margin even if prices are low. The dealer, provided his credit sources continue, stands to maintain his sales and market contacts in addition to the chance that prices may rise.

Summary

The depressed prices for live broilers during 1954 led many feed dealers and growers into complete integration so that they could continue selling their feed and supplies and thus be in a good position whenever broiler prices rose to more "normal" levels. Most dealers were justified in taking this position since broiler prices rose to new highs during the first five months of 1955. Many broiler growers who were producing birds either in quasi-integration or non-integration decided to shift toward complete integration and become part of the feed dealer's operation. Since many of these growers could make little profit, if any, by producing broilers themselves,
THEY DECIDED INSTEAD TO GROW THEM FOR THE FEED DEALER AT A
STIPULATED RATE PER POUND, PER BIRD OR ON A PER WEEK BASIS.
The feed dealer did not have much choice in this matter since
broiler prices were depressed and many of his growers, if not
all, were losing money growing broilers. By hiring producers
to grow broilers, dealers hoped to "ride-out the economic
storm" by maintaining feed sales, market contacts and credit
sources. By integrating, both forwards and backwards, and by
distributing some or all the losses over numerous enterprises
the dealer expected, in the aggregate, to sustain his enter-
prise. Economic losses in growing broilers could be recovered
in processing and distributing or at some other place in the
integrated process.

B. Complete Integration Through
Non-Profit Entities

There are at least two ways in which complete inte-
gration through non-profit entities can occur in broiler
growing: (1) Broiler growers may form a cooperative associa-
tion which ventures on its own resources into feed milling,
chick hatching, processing and/or financing. This enables
the growers to integrate both horizontally and vertically for
their own economic benefit, hence a non-profit entity and (2)
Broiler growers may form a cooperative association which joins
established cooperatives in feed milling, chick hatching,
processing and/or financing. The latter method requires
considerably less resources and permits quick organization
and functioning (Table 12, Items B1 and B2). Since this
Type of integration is the most prevalent in Louisiana, it is discussed from the standpoint of grower-cooperative relationships. Brief accounts of broiler grower-cooperative integration in Georgia and Virginia are also presented.

**Broiler Cooperatives in Louisiana**

The development of broiler cooperatives is a rather recent innovation in Louisiana. Their development neither preceded broiler expansion nor developed along with it but came after the broiler areas had been developed by private feed dealers and others. Co-ops were organized to correct some of the abuses that had arisen from rapid broiler expansion.

From February 1951 to April 1955, nine new broiler feed cooperatives were organized in or served Louisiana while three established cooperatives took on the distribution of cooperatively milled poultry feeds. By April 1955, ten of the twelve cooperatives remained in operation. These are located at Ashland, Marthaville and Natchitoches (Natchitoches Parish); Pineville (Rapides); Pollock (Grant Parish); Athens (Claiborne); Rosepine (Vernon); Many (Sabine); Shreveport (Caddo); and Rayville (Richland Parish). The organization which was instrumental in establishing these cooperatives by supplying them feed was the M.F.A. Milling Company, Springfield, Missouri, which is a cooperative feed milling company, discussed in Chapter III. The local cooperatives in Louisiana are all organized and incorporated under Louisiana law.

The fact that these Louisiana cooperatives have had trading relations with MFA, however, does not preclude them
FROM PURCHASING FEED COOPERATIVELY EITHER FROM OTHER COOPERATIVE FEED MILLS OR FROM PRIVATELY OPERATED, PROFIT-TYPE MILLING FIRMS. THE LATTER SITUATION IS NOT COMMON BECAUSE PROPRIETARY MILLING FIRMS Seldom GRANT A FEED FRANCHISE TO A BROILER GROWERS' COOPERATIVE. BUYING FEED FROM A COOPERATIVE MILL MAY ENABLE THE LOCAL CO-OP TO OBTAIN PATRONAGE DIVIDENDS ON ITS OPERATIONS WHICH IS AN ADDITIONAL SAVING TO ITS MEMBERS. THE COOPERATIVE FEED MILL MAY BE HELPFUL ALSO IN PURCHASING USED FEED SACKS AND ASSIST THE MEMBERSHIP IN VARIOUS OTHER WAYS. HOWEVER, IN FINANCING BROILER OPERATIONS, THE COOPERATIVE FEED MILL IS OF LESS HELP BECAUSE OF ITS EMPHASIS ON CASH-TRADING. FINANCING ARRANGEMENTS HAVE TO BE MADE BY THE GROWER, WITH OR WITHOUT THE ASSISTANCE OF THE LOCAL COOPERATIVE.

THE FEED COOPERATIVES IN LOUISIANA ARE ORGANIZED ON A NON-PROFIT, NON-STOCK BASIS WITH MEMBERSHIP FEES RANGING FROM $2.50 TO $25.00 PER MEMBER. ANY AGRICULTURAL PRODUCER MAY JOIN THESE COOPERATIVES ALTHOUGH THE HANDLING OF POULTRY AND, IN SOME CASES, DAIRY FEEDS ARE THE PRINCIPAL FUNCTIONS OF THESE ORGANIZATIONS. UNDER LOUISIANA LAW, AT LEAST TEN PRODUCERS ARE REQUIRED TO FORM A COOPERATIVE ALTHOUGH THEY NEED NOT BE ALL BROILER, EGG OR DAIRY PRODUCERS. FROM THESE TEN OR MORE PRODUCERS, AT LEAST FIVE OF THEM ARE NEEDED TO SET UP A BOARD OF DIRECTORS TO GOVERN THE AFFAIRS OF THE ASSOCIATION. THE NEXT STEP INVOLVES FILING AN APPLICATION FOR A CHARTER WITH THE SECRETARY OF STATE AND WITH THE PARISH CLERK OF COURT. A CHARTER FILING FEE OF AT LEAST $10 MUST ACCOMPANY THE APPLICATION TO THE SECRETARY OF STATE. AFTER
The charter is received, the by-laws are adopted and the cooperative organization is ready to operate.

Financing the cooperative organization itself is usually done through charges of from ten to twenty cents per sack of feed. Surpluses, if any, that accrue from the handling charges are divided at the end of each fiscal year in proportion to the patronage of the member. The refund may be in cash payment or its equivalent in book credit or equity certificates. For capital investments of a long-term nature, loans may be negotiated with private banks, the Bank for Farmers' Cooperatives in New Orleans or by borrowing from the members. As the cooperatives assume more functions, they may mark-up medicines, equipment and supplies from 10 to 15 per cent which may also provide patronage refunds after operating expenses are met. Non-member business may be done but it must not exceed the value of member business. If refunds are not paid to the non-members, the cooperative must pay Federal Income Taxes on this amount.

Most poultry feed cooperatives are faced with the problem of either selling feed below the price charged by feed dealers or by selling at the same price and refunding the surplus above cost of handling to their patrons at the end of the fiscal year. As a rule, cooperatives would do well to consider selling as low as possible and price feed independently of the feed dealer. This will stimulate greater scrutiny of feed margins and prices.
There are several stages in the development of poultry feed cooperatives in Louisiana. These stages may be broadly classified as follows: Stage 1 - Handling feed only with no warehouse or other fixed facilities. In this group belong the cooperatives located in Pineville, Pollock, Ashland and Athens. Stage 2 - Handling feed and various supplies with warehousing, supply store or other fixed facilities. In this group belong: the Natchitoches, Rayville, Shreveport and Rosepine cooperatives. Stage 3 - Operations where feed, chick and supplies are purchased; warehousing and various other fixed facilities are provided plus the cooperative sale of broilers and related services. In this group may be placed the co-ops at Many and Marthaville, Louisiana. The volume of business transacted by each cooperative from 1951 to 1954 and the patronage dividends earned are shown in Table 16.

Stage 1.

After the cooperative is set up and officers are elected, feed orders from various members are pooled and taken by the secretary-treasurer or by another elected or appointed person. In any event, feed orders amounting to at least one freight car (600 sacks) must be purchased for economy in shipment. Then, the order is forwarded to the cooperative feed mill, such as MFA in the case of Louisiana cooperatives. When the feed is received, the person in charge of the order receives payment from the producers within a
few days. Producers must pay the F.O.B. mill price plus freight charges and any delivery charges from the freight car to the producer's farm. In some cases, the grower has the option of either getting the feed at the freight car in his own vehicle or having it delivered to his farm for about 10 cents per sack.

Under these conditions, the cooperative owns no facilities and may have little or no direct expenses for labor. The main item handled is feed with all other supply items and services being left to the responsibility of the individual growers. It is obvious that a sufficient number of growers are necessary for prompt operation since it may take too long to pool a carload of feed when there are only a few members in the unit. The cost per sack for pooling and executing feed orders is around two cents. If higher charges are made, then the surplus accrues for later refund. In this stage, contracts with certain persons are often used to perform the task of ordering and delivering feed but under the control of the cooperative unit. Such an operation is referred to as a "contract merchant" where this agent delivers feed for so much per sack over the mill price plus freight. This is usually around $.25 per sack. The contract merchant keeps a patronage record which he turns over to the Secretary of the Cooperative's Board of Directors. Patronage refunds from the parent cooperative feed mill are sent directly to the Secretary who in turn passes these dividends to the patrons.
<table>
<thead>
<tr>
<th>Domicile</th>
<th>Cwt. Bags of Feed Used (No.)</th>
<th>Total Patronage Equity ($)</th>
<th>Cash Dividends Paid ($)</th>
<th>Equity Not Paid But Earned ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashland</td>
<td>12,075</td>
<td>2,692</td>
<td>1,224</td>
<td>1,468</td>
</tr>
<tr>
<td>Athens</td>
<td>14,077</td>
<td>2,384</td>
<td>1,047</td>
<td>1,337</td>
</tr>
<tr>
<td>Many</td>
<td>129,309</td>
<td>24,914</td>
<td>10,445</td>
<td>14,469</td>
</tr>
<tr>
<td>Marthaville</td>
<td>105,798</td>
<td>21,543</td>
<td>7,577</td>
<td>13,966</td>
</tr>
<tr>
<td>Natchitoches</td>
<td>5,859</td>
<td>1,303</td>
<td>609</td>
<td>694</td>
</tr>
<tr>
<td>Pollock</td>
<td>10,123</td>
<td>2,292</td>
<td>1,061</td>
<td>1,231</td>
</tr>
<tr>
<td>Rayville</td>
<td>4,643</td>
<td>948</td>
<td>430</td>
<td>518</td>
</tr>
<tr>
<td>Shreveport</td>
<td>95,914</td>
<td>17,488</td>
<td>6,953</td>
<td>10,535</td>
</tr>
<tr>
<td>Logansport1/</td>
<td>29,230</td>
<td>5,512</td>
<td>2,092</td>
<td>3,420</td>
</tr>
<tr>
<td>Rosepine2/</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Pineville2/</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>407,028</strong></td>
<td><strong>79,076</strong></td>
<td><strong>31,438</strong></td>
<td><strong>47,638</strong></td>
</tr>
</tbody>
</table>

1/*Now merged with Shelby County Cooperative in Center, Texas.*

2/*Organized during 1954-55 fiscal year.*

3/*Average patronage equity per 100-pound bag of feed was $ .19. This does not include the patronage dividends which local exchanges may have declared.*

4/*At the end of the 1953-54 fiscal year, about 40 per cent of the patronage equity earned had been paid out in cash by MFA.*
Stage 2.

The second stage in feed procurement involves the establishment of facilities to carry an inventory of feed and other broiler growing and marketing supplies. This usually consists of the cooperative constructing a warehouse only or a combination warehouse-retail supply store where various feeds are stocked. Members no longer need to pool orders as they formerly did although the cooperative management needs to know the feed needs of the member-growers so as to carry the necessary inventory. By operating such a supply store, a number of items may be stocked such as medicines, equipment, feed supplements, disinfectants, fertilizer, seeds and tools. It is usually necessary to hire a store manager and helpers but savings effected through the handling of these other items usually more than off-set the cost of operating such stores. Members are not obligated to patronize the co-op for supplies other than feed but it is in their interest to do so. Items other than feed are usually purchased from non-cooperative firms but are obtained at wholesale prices. This illustrates the fact that cooperative organizations transact business with private corporations as well as other cooperatives. In some cases, non-cooperative feed brands are also handled by the association although this may be more influenced by the demands for credit rather than for the feeds themselves.

Stage 3.

This stage represents a highly complex organization which most Louisiana broiler and egg feed cooperatives have

But, the most significant phase in this developmental stage concerns marketing services such as the cooperative sale of "live" broilers or the ownership of processing facilities for the evisceration and distribution of the members' broilers. In case of "live" sales, the cooperative membership may decide: (a) To compel all their members to channel their broilers through the cooperative where it may act as the sole agent of the producers in bargaining with processors. By taking bids on various lots of broilers or by agreement with certain processors or buyers, the broilers are moved although title never actually passes to the cooperative. In some instances, the cooperative may itself truck or contract-haul its members' broilers and may even weigh the birds on scales owned and operated by the cooperative. The cost of cooperatively selling live broilers varies depending upon the geographic area, amount of telephoning and the number of inspection calls. Costs are usually no higher than $20 per 9,000 pound lot or roughly 1/4 cents per pound, (b) To
Provide an option, the cooperative may sell only broilers offered to it by its members thus permitting the individual to make his own selling arrangements if he so desires and (c) the cooperative may elect to construct its own processing plant where birds from members and non-members may be eviscerated and sold, sometimes under the "brand" of the cooperative. In such cases, large buyers may be contracted with or operations conducted on a non-contractual basis. Such dressing operations are highly technical and investment is high.

Financing of cooperatives in this stage assumes more refined techniques such as mark-ups on goods sold; fees on chicks placed; fee on usage of truck scales, patronage retains and various other methods. Expenses become more varied as rent, salaries, taxes, utilities, interest, phone and legal fees become part of the operation.

A summary of the services performed by the cooperatives in Louisiana at different stages of their development is presented in Table 17. A comparison is made between these cooperative organizations and a typical feed dealer operating in quasi-integration with broiler growers in Louisiana. It should be noted that while the cost of these services may be ascertained, their value to the broiler grower is difficult to quantify.

Broiler Cooperatives in Georgia

Five cooperative feed dealers out of 51 were reported in a Regional Broiler Finance study. Cooperatives in this

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43 Southern Poultry Research Committee, op. cit., Georgia Schedules.
Table 17. Schedule of Services Provided and Prices Charged for Various Broiler Growing Factors by Profit and Non-Profit Organizations.

<table>
<thead>
<tr>
<th>Type of Unit</th>
<th>Extend Credit</th>
<th>Service Calls</th>
<th>Delivery of Feed</th>
<th>Haul Birds</th>
<th>Est. Average Feed Price ($)</th>
<th>Av. Price Per Chick ($/ )</th>
<th>Selling Costs Per Pound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Dealer(^1)</td>
<td>yes</td>
<td>yes(^*)</td>
<td>yes</td>
<td>yes(^*)</td>
<td>5.50</td>
<td>15.5</td>
<td>none**</td>
</tr>
<tr>
<td>Cooperatives(^2)</td>
<td>no</td>
<td>no</td>
<td>yes(^*)</td>
<td>no</td>
<td>4.70</td>
<td>14.0</td>
<td>***</td>
</tr>
<tr>
<td>Stage 1</td>
<td>no</td>
<td>no</td>
<td>yes(^*)</td>
<td>yes(^*)</td>
<td>4.85</td>
<td>14.5</td>
<td>***</td>
</tr>
<tr>
<td>Stage 2</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes(^*)</td>
<td>5.00</td>
<td>15.0</td>
<td>1/4 cents</td>
</tr>
<tr>
<td>Stage 3</td>
<td>no</td>
<td>yes(^*)</td>
<td>yes</td>
<td>yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Not all agencies may provide this service.

**In some cases, actual charges are made by dealers for selling birds.

***Members sell their own birds with costs not ascertained.

1/ Feed dealer operating mainly under open account and quasi-vertical integration.

2/ These stages correspond exactly to those discussed in Chapter IV.
HIGHLY DEVELOPED BROILER AREA SOLD FEED, SEED, FERTILIZER AND SOME FARM SUPPLIES. THEY ALSO SUPPLIED MEDICINES, LITTER AND EQUIPMENT FOR BROILER GROWING OPERATIONS.

A TOTAL OF 163 PRODUCERS WERE BEING SERVED OR AN AVERAGE OF 33 PRODUCERS PER UNIT. THE OUTPUT OF THESE PRODUCERS DURING 1951 WAS 3,440,000 BROILERS OR AN AVERAGE OF 21,000 BROILERS PER GROWER PER YEAR. OF THESE 163 PRODUCERS, 115 WERE BEING EXTENDED CREDIT AND 48 PAID CASH FOR FEED AND SUPPLIES. OF THOSE USING CREDIT, THE FOLLOWING CREDIT PLANS WERE USED: (A) OPEN ACCOUNT, (B) CHICKS AGAINST LABOR PLUS 50-50 SHARE, (C) FEED CONVERSION CONTRACT, AND (D) FLAT FEE AND 50-50 SHARE.


IT SHOULD BE NOTED HERE THAT COOPERATIVE DEALERSHIPS IN GEORGIA HAD TO EXTEND CREDIT BY THE USE OF FLAT FEE AND SHARE PLANS SIMILAR TO PRIVATE FEED DEALERS INDICATING THE COMPETITION WHICH EXISTS THERE IN THE CREDIT FIELD.

BROILER COOPERATIVES IN VIRGINIA

THERE WERE SEVEN COOPERATIVE FEED ASSOCIATIONS IN
In Virginia out of the 45 studied in a Regional Broiler Finance Project, these agencies served 168 producers or an average of 24 growers per agency with a total output of 1,900,000 broilers or an average of 11,000 broilers per year per grower. Of the 168 growers, 44 were on "cash" and 124 on various "credit" plans such as: (1) Open account, (2) 90-10 share contracts, (3) 75-25 share and (4) Flat fee contracts. A total of 173,000 broilers were raised on "cash" while the balance were on "credit" plans. Therefore, growers on "cash" constituted a relatively small part of the business.

Feed was obtained from co-op mills with a typical mark-up of 50 cents per cwt., 10 cents for delivery and 15 cents for interest. The cooperative association allowed 80 cents credit per broiler of which 20 cents were furnished initially; 20 cents up to four weeks of age and the balance of 40 cents after the 7th or 8th week. Notes from growers were discounted at 5 per cent interest for time in use. In most cases, a quota of 100,000 birds was placed or $80,000 credit maximum for a given 10-week period. Except for "open account" and "cash growers," the co-op agencies served as dealers growing broilers rather than as agencies financing independent growers.

Chick procurement was quasi-integrated with private hatcheries. Mark-ups on chicks averaged about 1.5 cents per chick including interest charges for credit growers.

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Southern Poultry Research Committee, op. cit., Virginia Schedules.
Most of the broiler sales were arranged by growers themselves although some agencies entered into agreement with processors in behalf of their members. In some cases, growers patronized auctions.

**Appraisal**

The development of completely integrated patterns in broiler production is closely associated with direct financing from a credit agency to broiler growers. In this way, the grower is able to purchase his input factors for cash and finds that the organization of cooperative aids him in obtaining feed at favorable prices. Without this direct agency as bank or PCA financing, growers would become either quasi-integrated or completely integrated with feed dealers in order to get feed, chicks and supplies. If the grower cannot obtain direct agency credit, he may still join a cooperative and grow birds for the association on flat fee or profit-sharing plans as in Georgia and Virginia. Those who argue that growers should become more independent of the feed dealer must recognize that credit needs to be liberalized in order for growers to achieve more independence.

It is apparent that integration patterns in most Louisiana broiler cooperatives are fluid and ill-defined but these co-ops are in the infantile stage. Several of the older ones demonstrate tendencies toward complete integration and with success. Membership difficulties have been
AND ARE STILL NUMEROUS AS GROWERS LEARN TO WORK TOGETHER. THE YOUTH OF THE CO-OP MOVEMENT MITIGATES AGAINST IT OBTAINING CREDIT AS ADVANTAGEOUSLY AS ESTABLISHED PROFIT CONCERNS. SINCE NO MEMBERSHIP CONTRACTS ARE USED, THE COOPERATIVES MUST DEPEND ON THE GOOD FAITH AND LOYAL PATRONAGE OF MEMBERS FOR THEIR EXISTENCE. IF THE CO-OP MEMBER FAILS TO PATRONIZE THE CO-OP BY BUYING FEED, HE MAY LOSE THE OPPORTUNITY TO BUY OTHER SUPPLIES AND ALSO TO MARKET HIS BIRDS COOPERATIVELY.

C. QUASI-INTEGRATION OF DEALER AND GROWER

There are at least two ways in which quasi-integration can occur in broiler growing: (1) Broiler growers may, by agreement, patronize a feed dealer for one or all needed inputs and/or for disposing of live broilers but with no financing arrangements between them and (II) Broiler growers may, by agreement, patronize a feed dealer for one or several production items, including financing. It is the latter case which is of interest here (Table 12, Items C1 and C2).

As stated previously, quasi-integration exists if and when two distinct entrepreneurship negotiate a contract or agreement specifying the nature and extent of the responsibility of each party in the agreement. In broiler contracts of this nature, growers agree to accept inputs provided by the dealer; to manage the broiler flock in the best manner possible and to market the birds and liquidate the loan

THREE QUESTIONS MAY BE RAISED CONCERNING QUASI-INTEGRATION: (1) WHAT ARE ITS ADVANTAGES AND DISADVANTAGES? (2) HOW WIDESPREAD IS THIS TYPE OF FINANCING COMPARED WITH OTHER PLANS? (3) AND WHAT ARE THE MOST IMPORTANT FEATURES IN NEGOTIATING THIS TYPE OF LOAN?

FEELS THAT THE DEALER MAY BE QUALIFIED TO MAKE THESE DECISIONS,
(4) SINCE THE DEALER HAS A LARGE FINANCIAL STAKE IN THE ENTER-
PRISE EITHER BY GRANTING CREDIT AND/OR SHARING PROFITS AND
LOSSES, THE GROWER FEELS THAT HIS PERSONAL INTERESTS ARE
BEING PROTECTED BY THE DEALER IN ANY MARKET TRANSACTION AND
(5) IN GLUT PERIODS AND EVEN IN PERIODS OF LOW PRICES, THE
GROWER FEELS THAT HIS MARKETS WILL TAKE THE BIRDS AND PRO-
DUCTION WILL GO ON AS USUAL. IN TIMES OF FACTOR SHORTAGES,
THE GROWER FEELS THAT HE MAY BE ABLE TO GET FEED, CHICKS
AND SUPPLIES ADVANTAGEOUSLY.

SOME OF THE DISADVANTAGES OF A QUASI-INTEGRATED
SYSTEM ARE: (1) THE ENTIRE SUCCESS OF THE INTEGRATION
SCHEME REVOLVES AROUND THE LEVEL OF INTEGRATION. IF THE
MARKETS THUS INTEGRATED ARE SMALL AND SLOW IN EXPANDING,
THIS WILL REFLECT IN BELOW-CAPACITY OPERATIONS FOR THE
DRESSING PLANT AND THUS REDUCE THE DEALER'S AND GROWER'S
ALLOTMENT OF BROILERS TO PRODUCE, (2) THE INFRINGEMENT IT:
MAKES ON GROWERS IN TELLING THEM WHAT QUANTITY TO PRODUCE;
WHAT BREED TO USE; WHAT WEIGHT TO SELL AND THE LIKE, (3)
THE GROWER MUST OFTEN ACCEPT ITEMS AND PRICES SUPPLIED HIM
BY THE DEALER, (4) PERSONAL CONFLICTS ARE APT TO ARISE AS
CONTRACTS ARE NEGOTIATED AND INTERPRETED. OFTEN, IN
EXECUTING THESE AGREEMENTS, THERE IS EVIDENCE OF BAD FAITH
ON THE PART OF ONE OR BOTH OF THE PARTIES, (5) SINCE MANY
OF THE AGREEMENTS AND UNDERSTANDINGS ARE RARELY ENFORCED
IN COURTS OF LAW, THESE FACTS ARE NOT BINDING AND CONSIDER-
ABLE DEVIATION TAKES PLACE WITH SLIGHT CHANCES FOR DAMAGE
CLAIMS AND (6) Parties to the negotiation may possess unequal bargaining strength such as when growers face one feed dealer-processor who may be in a monopoly-monopsony position and capable of negotiating more favorably for his own interests.

Quasi-integration between feed dealers and growers constitutes a significant part of broiler financing as shown in Table 18. It was least important in Georgia where 14 per cent of the dealers and growers were quasi-integrated but most important in Mississippi and Louisiana where 33 and 40 per cent, respectively, of the dealers and growers were under this type of integration. Older broiler areas such as Georgia and Virginia relied mostly on complete integration through feed dealers in growing their broilers. In Louisiana, complete integration occurred more so through non-profit entities. South Carolina and Mississippi exhibited a substantial mixture of integration patterns or where dealers experimented with from one to three different patterns. These two broiler areas appeared to be in a transitory stage.

The basic features of finance plans associated with quasi-integration are:

(1) Loan and service procedure. Under a quasi-integrated plan in Louisiana, the grower contacts the local feed dealer and, after an examination of the farm lay-out, the dealer may agree to finance the grower by selling him feed, chicks and supplies on 90-day "open account". The grower signs a promissory note to the dealer for goods to
BE SUPPLIED WHICH IS DISCOUNTED BY THE DEALER AT A COMMERCIAL
bank. After the broilers are grown, the dealer assists in
the marketing and deducts the growing costs from the gross
proceeds. If there is a profit, it goes to the grower; if
a loss, the producer is liable for the whole amount. Under
share plans, the grower would get up to 90 per cent of the
profits and the dealer 10 per cent. This 10 per cent margin
is expected to cover the dealer's losses when costs exceed
returns since the grower is not liable for losses under
"share" plans.

(2) Title to input and output factors. Open account
and some profit-sharing plans foster quasi-vertical integra-
tion because they involve two distinct "entrepreneurs"
or "firms" in negotiating broiler growing contracts. Share
plans may involve the dealer as a partner in the operation
but he does not necessarily dominate the management. In
fact, feed and other production supplies sometimes are
"sold" to the grower rather than "furnished" as under those
plans fostering complete vertical integration. Title to
the broilers must remain with the grower if quasi-integra-
tion is to exist under share plans. If title passes to
the dealer, then complete vertical integration exists.

(3) Interest rates. By virtue of their large number
of flocks and the possibility of spreading risks more evenly,
feed dealers obtain funds for about 4 to 6 per cent per annum
but, in effect, may charge their growers an interest rate
<table>
<thead>
<tr>
<th>Type of Pattern</th>
<th>Georgia</th>
<th>Mississippi</th>
<th>South Carolina</th>
<th>Virginia</th>
<th>Total</th>
<th>Louisiana</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. Dealers</td>
<td>51</td>
<td>52</td>
<td>27</td>
<td>45</td>
<td>175</td>
<td>1/</td>
</tr>
<tr>
<td>GROWING BROILERS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Integration 2/</td>
<td>65</td>
<td>17</td>
<td>19</td>
<td>40</td>
<td>37</td>
<td>40</td>
</tr>
<tr>
<td>Quasi-Integration</td>
<td>14</td>
<td>33</td>
<td>30</td>
<td>22</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td>Non-Integration</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Combined Patterns 3/</td>
<td>21*</td>
<td>50*</td>
<td>51**</td>
<td>38*</td>
<td>39</td>
<td>10**</td>
</tr>
<tr>
<td>SELLING BROILERS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Integration</td>
<td>14</td>
<td>15</td>
<td>15</td>
<td>7</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>Quasi-Integration</td>
<td>76</td>
<td>38</td>
<td>56</td>
<td>9</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>Non-Integration</td>
<td>6</td>
<td>37</td>
<td>26</td>
<td>71</td>
<td>35</td>
<td>30</td>
</tr>
<tr>
<td>Combined Patterns</td>
<td>4</td>
<td>10</td>
<td>3</td>
<td>13***</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>


*Quasi and complete integration.

**Quasi combined with some complete and non-integration.

***Quasi and non-integration.

1/ Based on unpublished data on file with Louisiana Agricultural Experiment Station.

2/ Through both profit and non-profit entities or feed dealers and cooperatives respectively.

3/ Combined patterns refer to dealers using more than one pattern.
of from 10 to 30 per cent. This credit "marg in" which dealers make on feed, chicks and supplies serves to pay for some or all of the service and inspection calls they make. Growers must realize that services demanded by them and performed by the dealer have to be paid whether in actual interest costs or through higher margins on feed and baby chicks or both. If and when growers feel that they can do without all or part of these services, then growing broilers on a cash basis may prove to be more economical in growing broilers (see Table 17). In some cases, the feed dealer may obtain considerable credit for as long as 90 to 120 days at no interest from his feed mill supplier. This provides some dealers with interest-free capital while charging their growers substantial rates of interest either in the form of higher feed mark-ups or outright interest charges. Growers on open account, along with those under other credit plans, may pay as much as 2 cents extra per chick above the cash price at the hatchery. Feed bought on credit may be from 5 to 25 cents higher per hundredweight than feed bought on a cash basis.

(4) **Marketing broilers.** Dealers financing broiler growers have taken a leading part in the marketing of the broilers. In order to assure a market, a number of dealers have entered into agreements with processing plants to take broilers financed by them. Some of these agreements are verbal understandings, while others involve written contracts. Agreements between dealers and processors generally
STATE THE NUMBER OF BROILERS THE PROCESSOR IS WILLING TO TAKE, THE APPROXIMATE TIME AT WHICH THEY WILL BE TAKEN, PRICES TO BE PAID, AND/OR THE MARKET TO BE USED FOR PRICING IN ADDITION TO ADVICE RECEIVED FROM THE PROCESSOR REGARDING THE NUMBER OF BROILER CHICKS TO PLACE.

Usually, the feed dealer is in a more favorable position to handle the marketing of broilers than the grower. He usually is in a better bargaining position with processors because he is able to book broilers for sale weeks or months in advance. In some cases, processing plants become dependent upon the feed dealers' supply of broilers.

(5) Division of returns. From the dealer's standpoint, financing growers on open account or in quasi-integration is but one step removed from supplying the grower on a cash basis. The risk of loss is held to a minimum since the grower is held liable for all the charges made against his account regardless of whether or not the proceeds from broilers cover the cost of supplies. On the other hand, the risk of not being able to collect an account is taken. If the better risks and more efficient growers are supplied, open account financing is satisfactory to the dealer who can profit from the regular mark-up on the increased feed, chicks and supplies sold. Under quasi-integration the dealer has no chance to build a reserve during good times to off-set losses in depressions. Therefore, reserves must come in the form of high mark-ups on feed and supplies so that the dealer is in a position to stand losses from bad debts.
Under profit-sharing plans, the grower may be in quasi-integration with the dealer and may share profits as well as losses. But, the grower must follow closely the prices of input factors which dealers might charge because the producer only gets from 75 to 90 per cent of the profits after feed, chicks and supplies have been paid for at retail prices plus cost of credit. Two types of share plans used under quasi-vertical integration are presented:

A. 50-50 Plan - Agency sells the producer all feed, chicks, fuel, litter and other items at wholesale prices. The producer furnishes the house, equipment and labor. When the birds are sold, the out-of-pocket cost items are paid for and the agency and grower split profit fifty-fifty. In case of financial loss, the grower fails to get any return for his labor and the use of his house. The agency loses the amount of out-of-pocket cost which is unpaid.

B. 75-25 and 90-10 Plans - Agency sells the producer all the feed, chicks, fuel, litter, medicine and insurance at retail prices. These items are paid for when the birds are sold. The grower furnishes the labor and facilities for growing broilers. The grower is guaranteed 75 to 90 per cent of the profit above out-of-pocket costs listed above and the agency receives the remaining 10 or 25 per cent. In case of a loss, the grower will not lose any more than his labor and the amount of depreciation on his facilities.

Which of the plans should be recommended to growers? On the surface, the 90-10 plan would appear considerably best.
However, consider this situation:

<table>
<thead>
<tr>
<th>Plan</th>
<th>50-50 Plan</th>
<th>75-25 Plan</th>
<th>90-10 Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growing cost per pound (¢)</td>
<td>20*</td>
<td>22**</td>
<td>22**</td>
</tr>
<tr>
<td>Marketing price per pound (¢)</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Net profit per 8,000 lb. lot ($)</td>
<td>400</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>Growers' share of profit ($)</td>
<td>200</td>
<td>180</td>
<td>216</td>
</tr>
</tbody>
</table>

*Inputs at wholesale price.

**Inputs at retail price.

Summary

Quasi-integration in growing broilers is usually more extensive in newer broiler areas while complete integration characterizes the older areas. These newer quasi-integrated areas are often transformed into complete integration by virtue of open accounts not being paid or the dealer taking heavy losses. To protect himself, the dealer decides to take 10 per cent or more of the profits so as to cover losses in poor price periods or when death losses are heavy. The basic difference between quasi and complete integration through a dealer is the entrepreneurial characteristics. In the former case, two entrepreneurs exist (grower and dealer) and they negotiate agreements that are mutually satisfactory. In the latter case, only one
ENTREPRENEUR EXISTS (THE DEALER) WITH THE GROWER AS A HIRED LABORER RATHER THAN AS AN ENTREPRENEUR. THE TERM "BROILER SHARECROPPER" IS USED IN THE SOUTHERN BROILER AREAS TO DENOTE THIS LATTER GROWER-DEALER RELATIONSHIP.

D. Non-Integration

Non-integrated broiler growing refers to operations conducted independently of the feed dealer or other agency although feed dealers may be patronized for the purchase of feed and other supplies. Purchases made by the grower under such circumstances are usually for cash or for 30-day account and do not involve any dealer finance plans. No cooperatives are formed or patronized for feed and supplies. Booking of baby chicks is usually done by the individual grower irrespective of the feed dealer's wishes or interest in this transaction. Growers under non-integration may also patronize more than one source for their chicks and feed supply since the payment for these items is mainly in cash and, therefore, do not require the continuous patronage of one dealer as under credit arrangements. In the sale of their broilers, non-integrated growers may process their birds, sell them to a processor with or without agreement or sell them alive direct to consumers or buyers. It is assumed that non-integrated growers have small operations where credit is not too important for them. Also, sales of broilers are made frequently and at favorable prices which enable growers to finance themselves (Table 12, Item D1).
Two questions may be raised concerning non-integration:
(1) What are its advantages and disadvantages? and (2) How widespread is it as a pattern of broiler growing?

The advantages of a non-integrated system are: (1) The grower is left free to bargain and is able to shop around for the best prices. The grower is afforded the opportunity to buy his input factors wherever he chooses and no one controls his management practices, (2) All the profits and losses in the enterprise belong to the grower and are not shared with anyone. If he is a good grower, this is probably advantageous to him because he retains all profits, (3) The growers are afforded the alternative of ceasing production and/or restocking whenever they desire and (4) If competitive market outlets are developed such as through the auction method, the non-integrated producer is not at a disadvantage since processors and/or live buyers will buy under similar competitive conditions.

Disadvantages of a non-integrated system are: (1) Broiler growers may not know beforehand the quantity, quality, breed, age and weight preferences of the processors to whom they will sell. This condition may be uneconomic for it may involve waste of feed, labor, housing space and other resources that could be more advantageously employed, (2) Growers have to locate suppliers and buyers which involve time and expense, (3) The bargaining position of the grower is weak since he may not be well informed as to market conditions either in buying or selling, (4) No price guarantees
ARE GIVEN BY PROCESSORS AND FRAUDULENT PRACTICES IN WEIGHING AND BUYING MAY OCCUR AND (5) GROWERS MAY HAVE DIFFICULTY IN BOOKING CHICKS FOR THE NEXT GROWING PERIOD DUE TO THE UNCERTAIN TIME ELEMENT INVOLVED IN SELLING OFF THEIR BROILERS. WHEN BROILERS ARE PLENTIFUL, THE WHOLE MARKETING PROCESS BREAKS DOWN BECAUSE ESTABLISHED BUYER-GROWER CONTRACTS ARE GIVEN PREFERENCE.

HOW WIDESPREAD IS NON-INTEGRATION IN BROILER GROWING?

According to the data shown in Table 18, there are relatively few non-integrated operations reported in Georgia, Mississippi, South Carolina and Virginia. It is estimated that in Louisiana about 10 per cent of the broilers are grown under non-integration. This is found mostly in South Louisiana or in the non-commercial broiler growing areas.

Data on non-integrated broiler growing in Louisiana were obtained during 1951 in the course of a state-wide broiler study. Of the 42 non-integrated growers in the 1951 survey, about 30 per cent were full-time, specialized growers with considerable experience in broiler production. These growers reported lower housing costs since construction occurred around 1945 and most of the growers financed their own building program. Size of broods varied more widely for the non-integrated growers or from very small (1,000) to very large (4,500). Production practices were about equal to the

OTHER GROUPS IN EFFICIENCY ALTHOUGH FEED COSTS WERE HIGHER.

In marketing, these groups were highly integrated, viz: processing was performed by the growers themselves. This was necessitated partly by high growing costs which had to be recovered by eviscerating broilers in their own facilities.

Data obtained in Louisiana showed that growers who were fully integrated in disposing of their output received about six cents more per pound (alive) than growers who were either quasi-integrated or non-integrated in disposing of their birds. From this gross margin of six cents per pound, however, must be subtracted the cost of performing these various functions under complete vertical integration.

Also, these highly integrated producers relative to output, reported costs of production from 1.7 to 2.7 cents per pound more than growers who were less integrated relative to output disposal. The paradox is that those producers who were highly integrated relative to output were practically non-integrated in input factors while those growers who were highly integrated in input acquisition were less integrated in disposing of their birds. Of course, there were some growers who were strongly integrated both in input and output operations.

Some broiler growers in South Louisiana who operate on their own funds do not quasi-integrate as to feed and chicks but purchase these inputs in whichever way they desire. Broilers are often sold to different customers either in live or dressed form. Cash growers may obtain their feed cheaper
but usually receive little attention from the dealer in the way of management and marketing help. The non-integrated grower, however, is not seriously hampered because he prefers to sell his birds himself and usually has enough experience to produce his broilers efficiently. It is recognized that in some instances growers do not like to use credit extended by dealers because of institutional or cultural conditioning against the use of credit. This is characteristic of several French, Italian and German nationality groups in South Louisiana; consequently, many are induced to remain on a smaller production scale where their finances are adequate to run their enterprise. While their over-all output may not be significant, they may represent a marginal group of producers that may be important in providing a limited quantity of fresh-killed broilers in the smaller towns and cities of South Louisiana.

Non-integration relative to output disposal can be found more so in the "bid" method of selling broilers as well as by the "auction" method as developed in Delaware, Indiana and other places. In effect, the auction method of selling broilers is to loosen the ties of quasi-vertical integration which may bind dealer and grower. It is designed also to prevent duplications and excess capacity as several dealers attempt to quasi-integrate producers in a given area. It may also be designed for improving non-integrated buyer-seller relationships where buyers obtain the product indiscriminately and where producers sell their produce without benefit of
MARKET NEWS AND ADEQUATE BARGAINING POWER. IT MAY ALSO PREVENT BUYERS FROM TAKING UNDUE ADVANTAGE OF THOSE BROILER GROWERS LACKING FACILITIES TO DISPOSE OF THEIR BIRDS.

SUMMARY COMMENTS ON NON-INTEGRATION AS WELL AS OTHER BUT MORE INTEGRATED PATTERNS OF GROWING BROILERS ARE PRESENTED IN TABLE 19.

IF ECONOMIC INTEGRATION IS TO BE PURSUED IN BROILER GROWING, GROWERS ALSO NEED TO CONSIDER PROBLEMS THAT ARE OF A NON-ECONOMIC NATURE, PARTICULARLY WHEN UTILIZING COOPERATIVES AS A MEDIUM FOR COMPLETE INTEGRATION. THE OTHER TWO CASES OF INTEGRATION INVOLVING FEED DEALERS AND RELATED AGENCIES OFFER FEWER PROBLEMS OF A NON-ECONOMIC NATURE SINCE THE GROWER AND THE DEALER ARE NEGOTIATING PROFIT-TYPE CONTRACTS. THE GROWERS IN SUCH CASES ARE NOT ATTEMPTING TO CREATE A NEW ENTITY AND ARE NOT CONCERNED ABOUT THEIR RELATIONS WITH FELLOW BROILER PRODUCERS SINCE ONLY ONE VERTICAL RELATIONSHIP EXISTS BETWEEN THE GROWER AND DEALER.

IN FORMING COOPERATIVE ENTITIES, HOWEVER, THEIR EXIST BOTH SOCIAL AND ECONOMIC PROBLEMS. THE FORMER REFERS TO THE HORIZONTAL INTEGRATION OF DIFFERENT PERSONALITIES AND CULTURAL BACKGROUNDS WHILE THE LATTER CONCERNS THE HORIZONTAL AND VERTICAL INTEGRATION OF PROFIT-MAXIMIZING BUSINESS UNITS. YET, THE LATTER CASE OF MAXIMIZING PROFIT CANNOT TAKE PLACE UNLESS THE SOCIAL INTEGRATION IS FIRST SUCCESSFUL. THEREIN LIES A MAJOR AREA FOR RESEARCH AND ANALYSIS, VIZ: HOW CAN SOCIAL INTEGRATION BE ACHIEVED IN ORDER TO PERMIT SUCCESSFUL ECONOMIC INTEGRATION? THE FOLLOWING CHAPTER CONTAINS AN
ANALYSIS OF THE SOCIOLOGICAL IMPLICATIONS OF INTEGRATING BROILER GROWERS THROUGH A COOPERATIVE ENTITY.

Table 19. Summary of Each Integration Pattern and Sub-Pattern in Growing Broilers.

<table>
<thead>
<tr>
<th>Main Integration With</th>
<th>Sub-Patterns</th>
<th>Summary Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Complete Integration (Profit)</td>
<td>1. Broiler grower(s) establishes own dealership.</td>
<td>Not always feasible due to high capital requirements.</td>
</tr>
<tr>
<td></td>
<td>2. Feed dealer grows broilers with own resources.</td>
<td>Quite common but small scale production only.</td>
</tr>
<tr>
<td></td>
<td>3. Feed dealer hires broiler growers.</td>
<td>Widely used method which permits large scale operations.</td>
</tr>
<tr>
<td>B. Complete Integration (Non-Profit)</td>
<td>1. Cooperative constructs its own facilities (mills, etc.).</td>
<td>Not always feasible due to capital needed.</td>
</tr>
<tr>
<td></td>
<td>2. Cooperative joins other cooperatives for services.</td>
<td>More common method of operation.</td>
</tr>
<tr>
<td></td>
<td>2. Grower contracts with dealer, including credit.</td>
<td>Extensively used method.</td>
</tr>
</tbody>
</table>
| D. Non-Integration | 1. Grower is independent of dealers. | Not widespread but considered as the "perfect model" in growing broilers.
CHAPTER V

SOCIOLOGICAL ASPECTS OF INTEGRATION THROUGH COOPERATIVES

A cooperative is a non-profit entity which is formed voluntarily for the purpose of meeting common needs by mutual action, democratic control and sharing of economic returns on the basis of participation. The agricultural cooperative represents an extension of the farm activities of each of its members as they operate the cooperative jointly to make their separate business operations more successful. Cooperatives, in our capitalistic economy, may function within the market structures either to increase or to lessen competition at certain levels in the growing-marketing process. Cooperative associations may either integrate horizontally by coordinating business units at the same economic level or they may move vertically, forward or backward, by coordinating successive levels in the production process. In addition, some cooperatives follow a quasi-integration pattern by negotiating with private firms for input units or for disposing of output.

There are two basic sociological aspects in cooperative integration, viz: (1) An intra-cooperative problem where only a local membership is involved and (2) An inter-cooperative situation where relations between and among cooperatives and profit-type firms are important. Cooperative
LITERATURE DEALS WITH THE SOCIOLOGICAL IMPLICATIONS OF INTEGRATING MEMBERS AND FUNCTIONS WITHIN A COOPERATIVE, BUT THE LITERATURE IS DEFICIENT CONCERNING THE RELATIONSHIP BETWEEN AND AMONG COOPERATIVES AS THEY INTEGRATE AND/OR COORDINATE THEIR ACTIVITIES. TO HAVE A SUCCESSFUL COOPERATIVE ASSOCIATION, BOTH ECONOMIC AND SOCIAL FACTORS NEED TO BE FAVORABLE. THE MORE IMPORTANT SOCIAL FACTORS ARE GROUP MOTIVATION, COMMUNICATION AMONG MEMBERS AND MUTUAL ACCEPTANCE BY ONE ANOTHER. THE MORE IMPORTANT ECONOMIC FACTORS WERE CONSIDERED IN CHAPTER IV.

BEFORE PROCEEDING INTO A MORE DETAILED DISCUSSION OF MEMBERSHIP RELATIONS IN COOPERATIVE ENTITIES, IT MAY BE PROFITABLE TO ASCERTAIN SOME OF THE BASES FOR COMPETITIVE AND COOPERATIVE BEHAVIOR.

BASES FOR COMPETITION AND COOPERATION

MANY COOPERATIVE AND NON-COOPERATIVE VENTURES RESULT IN AT LEAST PARTIAL SUBSTITUTION OF COOPERATIVE BEHAVIOR FOR COMPETITIVE STRUGGLE. THE MOTIVE FOR STRIVING, COOPERATIVELY OR COMPETITIVELY, CAN BE FOUND IN THE DISCREPANCY BETWEEN A PERSON'S LEVEL OF ATTAINMENT AND LEVEL OF ASPIRATION, WHAT WE WANT TO BE CONTRASTED WITH WHAT WE ARE. MAY AND DOOB LAY DOWN A FUNDAMENTAL PRINCIPLE OF MOTIVATION:

"WHEN AN INDIVIDUAL COMPETES OR COOPERATES WITH OTHERS HE DOES IT IN ORDER TO CLOSE THE GAP BETWEEN HIS LEVEL OF ACHIEVEMENT AND THAT OF HIS ASPIRATIONS BY ACHIEVING CERTAIN GOALS. AN IMPORTANT COROLLARY IS THAT HE WILL NEITHER COMPETE NOR COOPERATE UNLESS THE SITUATION SEEMS TO AFFECT THE DISCREPANCY BETWEEN HIS TWO LEVELS."

The next step is to explore why some persons seek to achieve their goals through competition and others through cooperation:

"The goals for which an individual will compete or cooperate are a function of his knowledge concerning the objects or prestige, the attainment of which appears to him to raise one or more of his levels of achievement toward the corresponding levels of aspiration. If he is aware that the goals sought in a given situation are limited so that they cannot be shared, or if shared will not satisfy him, he will compete; conversely, if he is aware that the goals sought can be shared and be reached best by working with others who are also seeking them, he will cooperate."47

It should be noted that so-called competitive, non-cooperative firms "cooperate" between and among themselves to fix prices, divide market territories and the like. However, this is not the type of "cooperation" under discussion here.

Some persons will choose not to cooperate even if it is in their own pecuniary or economic interest to do so; therefore, attitude must be added to the previous concept. The individual has acquired a set of attitudes that have conditioned him in the direction of competition or cooperation. For example, the idea is often expressed that some persons cannot integrate themselves in a cooperative; consequently, they are dismissed as being either troublemakers or basically anti-cooperative. The reasons for this are not overnight occurrences but may have developed in the person's early life. This may have come about in the person's youth

47IBID, p. 11.
WHEN HIS PARENTS JOINED A COOPERATIVE WHICH FAILED, PERHAPS
WITH SOME FINANCIAL LOSS.

HOW PERSONS COMPETE OR COOPERATE IS ANOTHER PERPLEXITY
WHICH IS CONDITIONED LARGELY BY EXISTING INSTITUTIONAL FORCES
SUCH AS LAW, BUSINESS PRACTICES AND ALSO BY PERSONAL SKILLS
OR STATE OF THE ARTS. MAY AND DOOB DELINEATE TWO SETS OF
BEHAVIOR LEVELS IN DETERMINING HOW PERSONS MAY COMPETE OR
COOPERATE:

(1) THE OBJECTIVE OR 'SOCIAL' LEVEL AND THE (2)
SUBJECTIVE OR 'PSYCHOLOGICAL' LEVEL. IN FORMING THEIR
BASIC HYPOTHESIS, MAY AND DOOB CONCLUDED: ON A 'SOCIAL'
LEVEL, INDIVIDUALS COMPETE WITH ONE ANOTHER WHEN: (A)
THEY ARE STRIVING TO ACHIEVE THE SAME GOAL THAT IS SCARCE;
(B) THEY ARE PREVENTED BY THE RULES OF THE SITUATION FROM
ACHIEVING THIS GOAL IN EQUAL AMOUNTS; (C) THEY PERFORM
BETTER WHEN THE GOAL CAN BE ACHIEVED IN UNEQUAL AMOUNTS,
AND (D) THEY HAVE RELATIVELY FEW PSYCHOLOGICALLY AFFILIATIVE
CONTACTS WITH ONE ANOTHER. ON A 'SOCIAL' LEVEL,
INDIVIDUALS COOPERATE WITH ONE ANOTHER WHEN: (A) THEY
ARE STRIVING TO ACHIEVE THE SAME GOALS THAT CAN BE SHARED;
(B) THEY ARE REQUIRED BY THE RULES OF THE SITUATION TO
ACHIEVE THIS GOAL IN NEARLY EQUAL AMOUNTS; (C) THEY PERFORM
BETTER WHEN THE GOAL CAN BE ACHIEVED IN EQUAL AMOUNTS;
AND (D) THEY HAVE RELATIVELY MANY PSYCHOLOGICAL AFFILIATIVE
CONTACTS WITH ONE ANOTHER.

ON A 'PSYCHOLOGICAL' LEVEL, AN INDIVIDUAL COMPETES
WITH OTHERS WHEN: (A) THERE IS A DISCREPANCY BETWEEN
HIS LEVEL OF ACHIEVEMENT AND HIS LEVEL OF ASPIRATION;
(B) HIS KNOWLEDGE OF THE GOAL THAT HE SEeks INDICATES
THAT IT IS LIMITED AND CANNOT BE SHARED, AT LEAST EQUALLY,
BY OTHER PERSONS IN THAT SITUATION; (C) HIS ATTITUDES
PRODUCE WITHIN HIM A STATE IN WHICH HIS COMPETING OVER-
BALANCES POSSIBLE CONFLICTING ATTITUDES TOWARD POTENTIAL
COMPETITORS, TOWARD THE RULES OF THE SITUATION, TOWARD
COOPERATING RATHER THAN COMPETING AND (D) HIS SKILL IS
OF SUCH A NATURE THAT UNDER THE RULES OF THE SITUATION
HE HAS A REASONABLE CHANCE OF SUCCESS BY COMPETING. ON
A 'PSYCHOLOGICAL' LEVEL, AN INDIVIDUAL COOPERATES WITH
OTHERS WHEN: (A) THERE IS A DISCREPANCY BETWEEN HIS
LEVEL OF ACHIEVEMENT AND HIS LEVEL OF ASPIRATION; (B)
HIS KNOWLEDGE OF THE GOAL THAT HE SEEKS: INDICATES THAT
IT CAN BE REACHED BY STRIVING WITH OTHERS; (C) HIS
ATTITUDES PRODUCE WITHIN HIM A STATE IN WHICH HIS ATTI-
TUDES TOWARD COOPERATING OVERBALANCES POSSIBLE CONFLICTING
ATTITUDES TOWARD POTENTIAL COOPERATORS, TOWARD THE RULES OF THE SITUATION, TOWARD COMPETING RATHER THAN COOPERATING AND (d) HIS SKILL IS OF SUCH A NATURE THAT UNDER THE RULES OF THE SITUATION HE HAS A REASONABLE CHANCE OF SUCCESS BY COOPERATING.40

TWO SITUATIONS ARE USED TO ILLUSTRATE HOW THESE CONCEPTS ARE RELATED TO A PERSON'S DECISION IN ONE CASE, TO COMPETE AND, IN ANOTHER CASE, TO COOPERATE:

BROILER GROWERS LOCATED NEAR AN URBAN CENTER MAY HAVE THE CHOICE OF EITHER SELLING THEIR BIRDS THEMSELVES DIRECT TO A "MARKET" OR TO SELL BROILERS IN COOPERATION WITH OTHER GROWERS. ONE PRODUCER MAY DECIDE TO "COMPETE", VIZ: NOT COOPERATE, BECAUSE THE MARKETS ARE RELATIVELY SCARCE; BY THE PRACTICES IN THE ECONOMIC SYSTEM THIS GOAL (MARKET) CANNOT BE SHARED; HE MAY PERFORM BETTER WHEN KNOWING THAT THE GOAL (MARKET) CAN BE ACHIEVED IN UNEQUAL AMOUNTS; HE HAS RELATIVELY FEW CONTACTS WITH OTHER GROWERS; HIS ATTITUDE TOWARDS COMPETING DOES NOT INHIBIT HIS PERFORMANCE AND HE HAS A REASONABLE CHANCE OF SUCCESS BY COMPETING, VIZ: HE IS QUITE SKILLED AS A BROILER MARKETER. IN ADDITION, PREVIOUS FAILURE AT COOPERATION MAY BE A STRONG INDUCEMENT NOT TO COOPERATE BECAUSE THE INDIVIDUAL MAY FEEL THAT HIS ASPIRATION LEVEL COULD NOT BE ATTAINED IN THIS WAY.

ON THE OTHER HAND, A GROWER IN THE SAME LOCALITY MAY DECIDE TO COOPERATE WITH OTHER PRODUCERS SINCE HE MAY FEEL THAT THE GOAL (MARKET) CAN BE SHARED. FOR EXAMPLE, THE GOAL (MARKET) IS SUCH THAT A LARGE VOLUME OF BROILERS IS REQUIRED WHICH CAN BE TAPPED ONLY BY THE GROWERS' POOLING THEIR LIMITED QUANTITIES; HE MAY PERFORM BETTER IN KNOWING

THAT THIS MARKET COULD BE HAD ONLY THROUGH COOPERATION BECAUSE INDIVIDUALLY HE COULD NOT HAVE SUPPLIED THIS MARKET; HIS RETURNS PER POUND WILL BE NO MORE OR LESS THAN WHAT OTHER GROWERS WILL OBTAIN; HE HAS PERHAPS MANY AFFILIATIVE CONTACTS WITH OTHER PRODUCERS, VIZ: FEELINGS ARE ABOUT THE SAME CONCERNING THE LOCAL PROCESSORS; HE REALIZES THAT BY COOPERATING HE MAY GAIN MORE THAN BY COMPETING WITH NEIGHBORS AND, LASTLY, HIS SKILL IS SUCH THAT HE CAN MEET THE REQUIREMENTS OF THE COOPERATIVE AND PERFORM AN EFFICIENT JOB IN THIS UNDERTAKING. ADDITIONAL FACTORS THAT MAY INDUCE COOPERATION ARE THOSE ASSOCIATED WITH PREVIOUS COOPERATIVE SUCCESS, SUCH AS IN A PURCHASING COOPERATIVE, WHERE SUPPLIES MAY HAVE BEEN BOUGHT SUCCESSFULLY.

INTRA-COOPERATIVE MEMBERSHIP RELATIONS

BY INTRA-COOPERATIVE RELATIONS IS MEANT THE TASK OF INTEGRATING THE MEMBERSHIP WITHIN ONE COOPERATIVE UNIT. THE BROADER ASPECTS OF AFFILIATION AND INTEGRATION BEYOND THE "LOCAL" WILL BE CONSIDERED UNDER INTER-COOPERATIVE RELATIONS.

SOME OF THE FACTORS AFFECTING INTRA-COOPERATIVE DEVELOPMENT AND MAINTENANCE OF MEMBERSHIPS ARE: (1) MEMBERSHIP HOMOGENEITY, (2) STAGE OF ORGANIZATION, (3) SHIFTS IN ATTITUDES, (4) TRANSFER OF MANAGEMENT PREROGATIVES, (5) MANAGEMENT OF GRIEVANCES AND (6) DEVELOPMENT OF ALTRUISTIC MOTIVES. IT IS EXPECTED THAT SOME OF THESE FACTORS CITED WOULD APPLY EQUALLY TO INTEGRATION OF COOPERATIVE MEMBERSHIPS AT THE INTER-COOPERATIVE LEVEL.
(1) Membership Homogeneity

Integration of economic activities and personalities within a cooperative poses a fundamental problem which cooperatives have not yet entirely solved. Some specialists refer to the homogeneity of cooperatives in economic pursuits such as broiler cooperatives, yet neglect the fact that even if the commodity and the functions are homogeneous the membership, on the other hand, may be heterogeneous. Many organizers of cooperatives insist on "economic need" as the adhesive which will hold all heterogeneous elements together. This is not necessarily true for memberships may disintegrate in the face of economic need. Homogeneous memberships from the standpoint of income, race, religion, nationality, education, social standing and the like offer more promise than commodity homogeneity in achieving maximum social and economic efficiency. Since most of the people are on much the same level, they find it easy to work together to promote each other's general well-being. This feeling partly accounts for the extensive organization of cooperatives in some areas such as Minnesota and Wisconsin. Such groups cooperate naturally because their members have common interests, economically and socially.

(2) Stage of Organization

Economic integration beyond the farm level and with a new membership should be considered carefully. The formation of a co-op should always be as close as possible to the farm
or production level where the closeness of contact and commodity familiarity can first be tested. The farther the integration is from basic production, the more risky the venture. For example, entering into the cooperative processing of broilers without first associating in the cooperative purchase of broiler feeds and supplies would be too risky from a membership relations standpoint. Large cooperatives such as Missouri Farmers' Association began with a few "egg circles" in Missouri; Land O' Lakes started as a small dairy organization which later integrated other units. The cooperative should first demonstrate that it can successfully integrate its membership on a local level before it attempts to integrate other and more complex functions, commodities and even other cooperatives.

(3) Shifts in Attitudes

Bringing together many different people into one business enterprise calls for innumerable adjustments in the opinions and actions of those comprising the new organization. Members must reconcile themselves to new standards of economic behavior which are, of course, sometime quite apart from their ordinary or normal standards. Members often carry over the modes and techniques of the private marketing system into the cooperative, such as the cash method of payment and a host of others. Members may object to delayed payments under pooling arrangements and desert the co-op for a private dealer because the dealer pays cash even though he may pay lower prices. In other
WORDS, THERE IS OFTEN A TRANSITORY PERIOD RATHER CRUCIAL TO
THE EXISTENCE OF THE COOPERATIVE IN WHICH MEMBERS MUST SHIFT
FROM A "COMPETITIVE" REALITY TO A "COOPERATIVE" IDEALITY.
THIS POINT IS MOST CRUCIAL IN DETERMINING THE EXTENT AND
LEVEL OF COOPERATIVE INTEGRATION. ONE AUTHOR HAS STATED
THAT COOPERATIVE MEMBERS MUST NOT BE MADE TO "LEARN A NEW
LANGUAGE". THEY MUST NOT BE LED TOO FAR INTO A "NEW SITUATION" BUT SHOULD BE PATIENTLY GUIDED TOWARD THE GOALS OF
THE COOPERATIVE.

(4) Transfer of Management Prerogatives

A NEW COOPERATIVE ORGANIZATION IS USUALLY CONCERNED
WITH PROBLEMS OF ASSEMBLING FARM PRODUCTS OR PURCHASING
FARM SUPPLIES AND WITH BUILDING MEMBERSHIP IN HASTE IN ORDER
TO ACHIEVE AN ECONOMIC VOLUME. THE LARGER AND PERHAPS MORE
FUNDAMENTAL PROBLEM OF MEMBERSHIP RELATIONS IS USUALLY PUT
ASIDE. MEMBERS OFTEN EXPECT IMMEDIATE RESULTS AND HAVE
BEEN PROMISED SUBSTANTIAL IMPROVEMENTS THAT ARE SLOW TO
MATERIALIZE. WITH A SHALLOW-ROOTED MEMBERSHIP, DISSENSION
QUICKLY SETS IN AND THE COOPERATIVE MAY MOVE TOWARDS DIS-
INTEGRATION.

THE KEY PROBLEM MAY BE THE SHIFT FROM A COMPETITIVE,
INDIVIDUAL, PRIVATE DECISION-MAKING PROCESS TO A COOPERATIVE,
GROUP DECISION-MAKING BODY. AN EXAMPLE OF THIS OCCURRED IN
A BROILER COOPERATIVE ORGANIZED IN LOUISIANA IN 1951. BEFORE
THE COOPERATIVE WAS FORMED, GROWERS THEMSELVES DECIDED WHEN
TO BUY CHICKS, THE BREED TO USE, WHEN TO MARKET AND THE LIKE.
After the co-op was formed, members then drew lots to start baby chicks; the breed to use was decided upon by the membership and the cooperative manager decided when the chicks would be sold. Essentially, the membership had delegated and transferred some of their managerial rights to the cooperative manager. Individual interests and preferences had to be subjugated to the group interest and preferences. We have already seen that members will do this only if there is a discrepancy between their level of aspiration and level of achievement. The grower's resentment at giving up managerial control may be balanced or over-balanced by the satisfaction of knowing that such action will help him and that the benefits of selling broilers cooperatively can be shared, in fact, enhanced by cooperation.

(5) Management of Grievances

Intra-cooperative relations are often taxed by the sudden amelioration of competitive defects which originally prompted organization of the cooperative. There commences a tirade of persuasion on the part of private competitive enterprises to entice co-op members away from their association. Some members are quickly displeased and quickly critical of co-op policy but are slow in acknowledging genuine co-op success.

Co-op leaders so often fail to detect trouble in advance. One dissatisfied member is often dismissed with the comment that he is unsociable and irresponsible. Regardless
OF THE SEEMINGLY TRIVIAL DISCONTENT, CARE MUST BE EXERCISED IN DEALING WITH THE DISCONTENT BECAUSE ONE DISSATISFIED MEMBER MAY DRAW WITH HIM SEVERAL OTHER MEMBERS AND EVENTUALLY DEVELOP A "CIRCLE OF DISCONTENTS" THAT MAY CAUSE SEVERE TROUBLE. THE TRUE SUCCESS OF INTRA-COOPERATIVE RELATIONS RESTS ON SATISFYING EACH MEMBER OF THE COOPERATIVE AND MEETING CRITICISMS, NOT DISMISSING THEM.

(6) Development of Altruistic Motives

IN A PENNSYLVANIA STUDY, STERN AND DORAN FOUND THAT APPROXIMATELY ONE-THIRD OF THE MEMBERS FELT A MORAL OBLIGATION TO SUPPORT COOPERATIVES. WHEN IT IS A QUESTION OF JOINING A COOPERATIVE WHICH HELPED A NEIGHBOR PRIMARILY, APPROXIMATELY 61 PER CENT OF ALL FARMERS REPORTED THAT THEY WOULD JOIN. EIGHTY-ONE PER CENT OF THE FARMERS INTERVIEWED REPORTED THAT THEY THOUGHT FARMERS SHOULD DO BUSINESS COOPERATIVELY EVEN THOUGH THERE WERE NO FINANCIAL BENEFITS. THE REPLIES TO THE QUESTION ON MORAL OBLIGATION VARIED DEPENDING UPON THE TYPE OF COOPERATIVE WITH WHICH THEY WERE AFFILIATED. MEMBERS OF SERVICE AND MARKETING TYPE COOPERATIVES HAD THE GREATEST FEELING OF MORAL OBLIGATIONS. MEMBERS OF ALL TYPES OF COOPERATIVES COMPARE CLOSELY IN THEIR FEELINGS ABOUT DOING BUSINESS COOPERATIVELY EVEN IF THERE WERE NO FINANCIAL BENEFITS. ⁴⁹

Between the members' level of attainment and level of aspiration rests a gap that may be satisfied with monetary or psychic income or both. Co-ops can usually resort to psychic approaches as well as to monetary considerations, such as recognition of effort, acknowledgments, and the like. There is no doubt that the sense of creativeness can also be called upon to spur interest. Why is it some co-op leaders work tirelessly, without pay, to organize and promote co-ops among their neighbors? This is certainly a source of creativeness that has not too often been exploited. What about the altruistic motives that lie dormant, and have rarely, if ever, been stimulated?

Appraisal

Individual members of cooperatives must recognize that they must make an effort to integrate successfully into the cooperative since total integration is the sum of individual integration. Raper cites the following as factors which members should consider:

1. Keep informed and inform others,
2. Attend and participate in meetings,
3. Abide by the cooperative's established policies,
4. Adequately finance his cooperative,
5. Assist in planning and promoting programs,
6. Vote in all elections,
7. Voluntarily patronize his cooperative,
8. Offer management and directors constructive criticisms, and
9. Represent cooperatives in and out of farm circles.50

Garnett and Seymour in a Virginia study reported on the major problems in getting farm people to cooperate and work together. These problems cited below reflect the obstacles which limit maximum social integration as reported by the authors:

"On the question as to why farm people fail to cooperate, two hundred and eighty-one of the 636 informants expressed no definite ideas on this subject. Suspiciousness of each other was named by 65; lack of knowledge of what organizations can accomplish was most emphasized by 61; indifference to measures of improvement by 51; selfishness by 34; too much loss of freedom by 29; suspiciousness of the purposes of the organizations by 24; lack of confidence in leaders by 24; lack of finances by 16. Among the other most frequently named obstacles to organizational success were: "Discouragement from previous organizational failures," "lack of cooperative spirit," "social class divisions," "lack of vision and lack of judgment," "feeling of self-sufficiency," "people too busy to attend meetings," "lack of loyalty to organizations," "too much timidity for self-expression at meetings," "competing attractions for time," "difficulty of getting together large enough groups to be effective," "domination of organizations by small groups of whom others are jealous, or in whom others have little confidence," "too many meetings without definite objectives," "lack of sufficient social features in the meetings," and "cooperative effort in other organizations discouraged by church denominational divisions."51

A closer understanding of the factors leading to disintegration of co-ops should prove helpful in detecting weaknesses before damage occurs. Henning and Mann in an Ohio study found the following as principal "trouble" points:

(1) Cooperative too far from the farm, (2) Improved service and more points of operation needed, (3) Dissatisfied with management, (4) Line of merchandise handled too

LIMITED, (5) DISSATISFIED WITH PRICES RECEIVED FOR GRAIN AND LIVESTOCK, (6) HAVE NOT ENOUGH ROOM (SHOULD ENLARGE FACILITIES), (7) EMPLOYEES INDIFFERENT, MORE EFFICIENT HELP NEEDED, (8) OUT OF SUPPLIES TOO OFTEN, (9) COOPERATIVE BEING UNDERSOLD BY COMPETITION, OR COOPERATIVE'S PRICES TOO HIGH AND (10) EDUCATIONAL PROGRAM NOT GOOD ENOUGH.

GIBSON, in an extensive study of membership relations of farmers' cooperatives in Michigan, reported that 54 PER CENT OF THE MEMBERS INTERVIEWED HAD NO CRITICISM OF THEIR COOPERATIVE, 15 PER CENT COMPLAINED ABOUT SOME INEFFICIENCY IN MANAGEMENT; 4 PER CENT STATED THAT THE CO-OP WAS BEING RUN BY "CLAIQUES" AND THE BALANCE, OR 27 PER CENT, HAD VARIED CRITICISMS WHICH WERE NOT ALL IDENTIFIED.

INTER-COOPERATIVE MEMBERSHIP RELATIONS

Membership relations at the inter-cooperative level are less personal because the cooperative memberships are rarely in contact. Instead, it is the cooperative leadership consisting of the Board of Directors and Management drawn from several organizations who are more closely involved. It becomes relatively more important to consider the structural organization of cooperatives in the integration process as one cooperative becomes affiliated with another. Instances where cooperatives may have trading relations or affiliations with non-cooperative businesses are omitted.


FROM THIS ANALYSIS. AT LEAST TWO FORMAL TYPES OF STRUCTURAL ORGANIZATION MAY AFFECT THE STATUS OF MEMBERSHIP RELATIONS BETWEEN AND AMONG COOPERATIVES: (A) FEDERATION AND (B) CENTRALIZATION. IN ADDITION, THERE IS AN INFORMAL STRUCTURE TERMED "COOPERATIVE COUNCILS" WHICH IS ALSO CONSIDERED.

A. FEDERATION

Federations are formed by uniting or coordinating existing local co-op units into a larger association. One aspect of the problem is that long established locals often hesitate in uniting into a federation for fear of becoming less autonomous. Another obstacle in the way of inter-cooperative relations through federation is provided by the local leaders themselves who sometime resist federation because they may lose their power and influence. Also, older co-ops may resist federation with other or younger co-ops for fear of losing their identity in a much larger organization.

Through federation, the integration of cooperative memberships would in time have the effect of standardizing economic practices and institutionalizing the behavior patterns and norms of different cooperatives. When progressive cooperatives take the lead, as they usually do in federation, they tend to diffuse the better and more efficient practices toward the more backward cooperatives. In federated cooperatives, like the California Fruit Growers Association, the local units retain some autonomy and also many of their
BASIC AND ORIGINAL FUNCTIONS. It is mostly the delegation of powers by the locals to the federated unit. This process leads to more stable membership relations because the governing or central unit grows out of the locals. It is perhaps not a coincidence that some of the larger and more stable cooperatives were formed in this manner, such as the Missouri Farmers' Association which originated from a few "egg circles" in the late twenties. Their "social" base is as strong as their "economic" base.

B. Centralization

This structure involves establishing local cooperatives from a regional or central office in contrast to the emergence of local units from the "grass-roots". Membership problems frequently arise because the management is usually very distant from the local units or branches and therefore less in contact with them. The basic nature of centralized associations contribute to this. Farmers are taken in directly in the central association and authority rests with the central headquarters.

Under a centralized set-up, membership relations are apt to be less strong than under a federated organization. They usually operate over wide areas and perform many more services. The "locals" under a centralized cooperative are not directly controlled by the farmers. Herein seems to be the major weakness of centralized associations. As members may live hundreds of miles from the central association, there
IS SOME DIFFICULTY IN MAINTAINING THAT CLOSE CONTACT WITH MEMBERS WHICH IS SO IMPORTANT TO COOPERATIVE SUCCESS. THE INFORMAL LOCAL UNITS OPERATED BY THE CENTRAL ORGANIZATION ARE NOT ALWAYS SATISFACTORY LIAISON AGENTS, AS THEY GENERALLY ARE IN FEDERATIONS. MEMBERS TEND TO TAKE LESS PRIDE AND INTEREST IN THE LOCAL ORGANIZATION WHICH THEY HAVE NOT DEVELOPED AND WHICH THEY DO NOT DIRECTLY CONTROL.

C. COOPERATIVE COUNCILS

ANOTHER TYPE OF MEMBERSHIP RELATIONS AT THE INTER-COOPERATIVE LEVEL CONSISTS OF COOPERATIVE COUNCILS WHICH ARE ORGANIZED AT THE COUNTY, AREA, STATE OR REGIONAL LEVEL TO FOSTER SOME ASPECT OF THE COOPERATIVE MOVEMENT. HOWEVER, THESE COUNCILS DIFFER FROM FEDERATION OR CENTRALIZATION TO THE EXTENT THAT FEW, IF ANY, ECONOMIC FUNCTIONS ARE PERFORMED THROUGH THE COUNCIL.

DVORACEK IN A MINNESOTA STUDY REPORTED QUITE EXTENSIVELY ON SUCH COUNCILS:

"A REPRESENTATIVE FROM EACH COOPERATIVE IS APPOINTED BY ITS BOARD OF DIRECTORS TO MAKE UP THE COUNTY-WIDE COOPERATIVE COUNCIL. WITHIN THIS COUNTY COUNCIL THERE ARE COMMITTEES MADE UP OF THE REPRESENTATIVES OF EACH TYPE OF COOPERATIVE SUCH AS CREAMERIES, ELEVATORS, AND LIVESTOCK SHIPPING ASSOCIATIONS. THE CHAIRMAN OF EACH OF THESE COMMODITY COMMITTEES BECOMES A MEMBER OF THE PERMANENT PLANNING COMMITTEE OF THE WHOLE COUNCIL. THIS PLANNING COMMITTEE IS RESPONSIBLE FOR WHAT IS TO BE DONE, INCLUDING THE PROGRAM OF THE MONTHLY MEETINGS. THE USUAL OFFICERS (PRESIDENT, VICE-PRESIDENT, AND SECRETARY-TREASURER) WITH TWO MEMBERS AT LARGE, MAKE UP THE EXECUTIVE COMMITTEE. THE COUNTY AGRICULTURAL AGENT WORKS IN AN ADVISORY CAPACITY WITH THE PROGRAM COMMITTEE AS WELL AS THE EXECUTIVE COMMITTEE. THE COUNTY COUNCIL IS NOT INCORPORATED SINCE IT HANDLES RELATIVELY SMALL AMOUNTS OF MONEY. IN MINNESOTA, THESE
COOPERATIVE COUNCILS HAVE ENGAGED IN THE FOLLOWING ACTIVITIES: (1) COUNTY-WIDE COOPERATIVE PICNICS AND EXHIBITS; (2) EDUCATIONAL MEETINGS INCLUDING TAXATION PROBLEMS, ACCOUNTING METHODS AND THE LIKE AND (3) RESEARCH PROJECTS CONDUCTED ON SPECIFIC MANAGEMENT PROBLEMS, EFFICIENCY STUDIES AND THE LIKE. THIS RESEARCH WORK WAS CONDUCTED JOINTLY WITH AGRICULTURAL EXPERIMENT STATIONS AND OTHER AGENCIES. 54

SUMMARY

THE PROBLEM OF MEMBERSHIP RELATIONS AT THE INTER-COOPERATIVE LEVEL IS CLOSELY ASSOCIATED WITH COMPETITION OR COOPERATION BETWEEN AND AMONG COOPERATIVES. KNAPP, IN ADDRESSING THE AMERICAN INSTITUTE OF COOPERATION, SAID:

"THE MOST COMMON OBSTACLE TO COOPERATION BETWEEN COOPERATIVES APPARENTLY LIES IN THE ATTITUDES OF MANAGERS AND MANAGERIAL GROUPS. COOPERATIVES DEVELOP A HIGH DEGREE OF ORGANIZATIONAL CONSCIOUSNESS. THEY BECOME SELF-CENTERED AND JEALOUS OF THE SUCCESS OF OTHER ORGANIZATIONS."55 IT WOULD APPEAR THAT MANAGEMENT RATHER THAN MEMBERS HOLD THE KEY TO BETTER INTER-COOPERATIVE RELATIONS.

INTEGRATION AT THE INTER-COOPERATIVE LEVEL IS BECOMING RELATIVELY MORE IMPORTANT AS LOCAL COOPERATIVES SEEK TO EXPAND THEIR ACTIVITIES. IN CHAPTER IV, IT WAS SHOWN THAT COMPLETE INTEGRATION THROUGH COOPERATIVES AFFILIATING WITH OTHER COOPERATIVES WAS AN IMPORTANT INTEGRATION PATTERN WHICH RANKED ABOUT THIRD IN THE SOUTHERN BROILER AREAS.

COOPERATIVES AS SOCIAL SYSTEMS

BY SUBSTITUTING COOPERATIVE ACTION FOR INDIVIDUAL,


COMPETITIVE STRUGGLE, A COOPERATIVE ORGANIZATION BECOMES A MOST IMPORTANT ENTITY WITHIN THE ECONOMIC SYSTEM. LIKEWISE, A COOPERATIVE ASSOCIATION POSSESSES ALL THE ATTRIBUTES OF A SOCIAL SYSTEM AND BECOMES IN REALITY A SOCIO-ECONOMIC UNIT IN WHICH THE DISCIPLINES OF SOCIOLOGY AND ECONOMICS ARE JOINTLY SIGNIFICANT. IN TURN, COOPERATIVES MAY BE VIEWED AGAINST AN EVEN LARGER BACKGROUND OF INTER-DISCIPLINARY SCIENCES SUCH AS POLITICAL SCIENCE AND PSYCHOLOGY.

To achieve maximum economic efficiency, it is imperative that social integration be successfully achieved so that members of the cooperative can function with few restrictions, whether social, economic or otherwise. Loomis and Beegle delineate several elements of a social system which are important in studying the functioning of a social unit. These elements are: (1) Roles, (2) Status, (3) Authority, (4) Rights, (5) Objectives, (6) Norms and (7) Territoriality.

One of the ten operating broiler cooperatives in Louisiana is selected for analysis regarding its functioning as a social system.

CASE A
MARThAVILLE, LOUISIANA
BROILER GROWERS' ASSOCIATION

DURING JANUARY 1951 AND EARLIER, DEALERS WERE CHARGING EXCESSIVE PRICES FOR FEED CAUSING SOME GROWERS TO EXPERIENCE

Large financial losses. It was apparent to everyone concerned that the broiler growers could no longer remain under the financial dominance of feed dealers nor could the growers continue to act individually else they would jeopardize the entire broiler enterprise in the community. The conditions were ripe for severance of connections with feed dealers and the formation of a cooperative which was accomplished in February 1951.

(1) **Roles**

Roles refer to the behavior which is expected of persons who fill given positions in specific groups. Three persons play the dominant role in the cooperative: (1) Seller agent, (2) Feed agent and (3) Board secretary. All the other members play approximately the same role, viz: that of participating members in the buying of feed, having a voice in meetings and in casting votes. The members seem to feel that no one should step "out-of-role" by setting policy for the cooperative or of acting for it in any capacity except by the several duly elected officers and appointed agents.

(2) **Status**

Status refers to the ranking given individuals based upon the consensus of members as to what traits and qualities are to be rated high and low. Actually, the three members cited above do not have as much status as is given to some other members. The officers were not chosen because of social status but because they appeared to be the best
trained and the most efficient leaders in the cooperative. The person or persons who originated the broiler enterprise in the area are given the highest status. It would seem that tenure in the broiler business plus the financial success achieved are the two most important elements in defining status.

However, as time progresses it is possible that some determinant may come into play other than tenure. Whether a grower has been in the business eight or ten years will not matter as much as in the earlier days of organization. Of course, such traits as intelligence, honesty, ambition, and integrity are all part of the status ranking system but, assuming that these are about equal, then tenure and financial achievement are foremost considerations.

(3) Authority

This element refers to the right and power of individuals to influence others. It also implies certain duties. Authority is vested mainly in the feed agent, seller agent and the Board secretary. The feed agent orders and delivers feed to the growers while the seller agent is in charge of marketing broilers. The Board secretary purchases chicks and supplies except feed, collects dues and keeps records. This division of authority is not specifically in legal writing. It has evolved as the cooperative developed and is based more so on the proficiency of the officials concerned. The co-op holds a monthly meeting in which the officials report to the co-op and the members in turn outline their views to the
officers. The Board of Directors is only a de facto body which is, for the most part, inactive. It merely fulfills the status concept of members by placing the seven oldest broiler growers on the board. Recently this has been changed and the board selection democratized. Any controversial subject is submitted to a majority vote and in this respect many issues are removed from the jurisdiction of the principal officers.

(4) Rights

This concept refers to the immunity from authority and duties or the required obedience to authority and the requirements associated with the individual's role. All the members have rights as prescribed by the constitution which includes discussion of topics and casting votes. Any grievance which the members might have are taken up at the weekly meeting. Besides attending meetings and casting votes, the members have relatively few prescribed duties. They do have to be prompt in placing their feed orders and paying for their feed. No member is shown any favoritism in this respect. The main officers are responsible to the members and they too enjoy no special privilege, in fact they may serve with little or no salary. The officers know they are rendering great service to the community and feel that the success of the broiler enterprise will aid the area materially.

(5) Ends and Objectives

These refer to changes or perhaps the maintenance of the status quo which members of the system expect to accomplish
through the operation of the system. The objectives are simple and clear. The broiler growers anticipate doing more collectively than they could do individually. The feed dealers were extracting an excessive margin on feed and since feed cost represents about 70 per cent of all broiler costs it was evident that this broiler area would not survive long under this high cost structure. By buying feed cooperatively they save about $1.00 per cwt. of feed or about 10 cents per bird produced over a 10-week period.

At first, the sole objective of the co-op was purchasing feed. However, since its formation the co-op has expanded its functions to include the marketing of broilers. Later, other activities were added. It is evident that the cooperative originated out of a crisis and continues to survive on the premise that feed dealers do not anticipate lowering their margin of profit. Many believe that the co-op would have failed had the feed dealers reduced prices thus eliminating the main objective of the cooperative association.

(6) Norms

Norms refer to rules which govern the application of means in the accomplishment of the ends or objectives.

There are two sets of norms to follow in the cooperative: prescribed and non-prescribed. The former are derived from the cooperative laws of Louisiana which enumerate what a co-op can or cannot do and also the duties of members relative to meetings, dividends, and the like. The non-prescribed norms are undefined and relative. In meetings,
FOR EXAMPLE, PARLIAMENTARY PROCEDURE IS DISPENSED WITH IN FAVOR OF TRADITIONAL COMMUNITY ACTION OR THE "WAY WE DO THINGS HERE." IT IS HERE THAT THE GEMEINSCHAFT (FAMILISTIC) INFLUENCE MEETS THE GESELLSCHAFT (CONTRACTUAL) ATTRIBUTES OF COOPERATIVISM. IN OTHER WORDS, THE FORMAL RULES ARE FOLLOWED ONLY WHEN NECESSARY AND INFORMALITY PREVAILS THE REMAINDER OF THE TIME. THIS INFORMALITY IS PERMEATED WITH THE TRADITIONAL BEHAVIOR OF HILL FARMERS WHO PREFER TO ACT AS INDIVIDUALS BUT CONSENT TO A COOPERATIVE ONLY BECAUSE THEIR VERY ECONOMIC SURVIVAL IS THREATENED.

(7) TERRITORIALITY

THE LOCUS AND SPACE REQUIREMENTS OF A SOCIAL SYSTEM ARE REFERRED TO AS TERRITORIALITY. THE BROILER ACTIVITY IS CENTERED IN THE TOWN OF MARTHAVILLE. HOWEVER, THE CO-OP HAS BEEN DRAWING MEMBERS FROM BELMONT, PLEASANT HILL, CONVERSE, AND MANY IN SABINE PARISH; FROM ROBELINE, PROVENCAL, GORUM, CAMPTI, AND NATCHEZ IN NATCHITOCHES PARISH. THE MORE MEMBERS IT DRAWS THE LOWER THE UNIT COST OF OPERATION AS VOLUME EXPANDS. HOWEVER, SOME COOPERATIVE MEMBERS FEEL THAT THESE NEWCOMERS MAY DISRUPT THE CLOSE FRIENDSHIP AND MUTUAL INTERESTS THAT HAVE EVOLVED AND SUBSTITUTE FOR IT A MORE IMPERSONAL ORGANISM WHICH MIGHT TEND TO ESCAPE THE CONTROL OF THE MEMBERS. THIS VIEW WAS JUSTIFIED BECAUSE THREE NEW COOPERATIVES WERE FORMED FROM THIS COOPERATIVE MEMBERSHIP.

COOPERATIVES AND GEMEINSCHAFT-GESELLSCHAFT STRUCTURES

FARMERS AND OTHERS HAVE COME TO REALIZE THAT THE FORMATION AND OPERATION OF COOPERATIVES INTRODUCE MANY
Features of business conduct and standards which are somewhat difficult for them to comprehend. In other words, a cooperative entity represents a rational and calculated attempt to achieve stated objectives and in this sense may be labeled as Gesellschaft, or that denoting contractual relations. When informal associations are formed out of an emotionally based desire or inclination we may label this as Gemeinschaft, or that denoting familialistic and non-contractual relations.

It is apparent that the modern concept of cooperative associations tend more toward Gesellschaft behavior where rational action is substituted for non-rational or emotional behavior, especially where integration is concerned. Cooperatives today are functionally specific rather than diffused due to legal and economic factors as well as to the growing complexity in management. The concept of limited responsibility is not only incorporated in the by-laws but also is an ordinary operating practice in the United States as opposed to the community of fate concept accepted and practiced by Danish cooperators. Integration of roles outside the system has also become more specific. Due to complex cooperative management and duties, performing roles outside the co-op that are inconsistent with co-op feeling is apt to cause criticism, such as the manager's son or close relative working for a business in direct competition with the cooperative.57

Despite a tendency toward Gesellschaft structures in

57 Ibid., pp. 18-25.
CO-OPS, THERE REMAIN MANY ELEMENTS OF A GEMEINSCHAFT NATURE WHICH CAN AND ARE BEING UTILIZED TO STRENGTHEN THE BUREAUCRATIC NATURE OF COOPERATIVES. THE EMPHASIS ON IMPROVING MEMBERSHIP RELATIONS GIVES EVIDENCE THAT GEMEINSCHAFT ELEMENTS ARE VITAL TO THE SURVIVAL OF COOPERATIVE ASSOCIATIONS. THIS PROVIDES THE MANAGEMENT AN OPPORTUNITY TO PRESERVE SOME OF THE FAMILISTIC FEATURES WHICH CONTRIBUTE TO MORE STABLE ORGANIZATIONS.

STUDIES IN COOPERATION HAVE SHOWN THAT SOME GEMEINSCHAFT ELEMENTS MUST BE RETAINED IF COOPERATIVES ARE TO SUCCEED AND ACHIEVE MAXIMUM EFFICIENCY. A RATHER SMALL GEOGRAPHIC AREA CONTAINING A HOMOGENEOUS MEMBERSHIP AND PERSONAL CONTACTS ARE ESSENTIAL GEMEINSCHAFT FEATURES WHICH ARE TOO OFTEN LOST IN COOPERATIVES OPERATING OVER WIDE AREAS. FOR LASTING SUCCESS, A COOPERATIVE MUST BE A SYNTHESIS OF FAMILISTIC GEMEINSCHAFT AND CONTRACTUAL GESELLSCHAFT. ACHIEVING THIS PRECARIOUS BALANCE IN PERSONAL RELATIONSHIPS AND BUSINESS EFFICIENCY WARRANTS CLOSER STUDY AND RESEARCH AMONG STUDENTS OF COOPERATION. LOOMIS AND BEEGLE CONCLUDE THAT THE ORDINARY PURCHASING AND MARKETING CO-OP IS MORE GESELLSCHAFT THAN GEMEINSCHAFT. IN REGARD TO PERSONAL RELATIONSHIPS, SUCH COOPERATIVES ARE MORE GEMEINSCHAFT THAN GESELLSCHAFT.

APPRAISAL

IF BROILER GROWERS ARE NON-INTEGRATED AND ATOMISTIC IN AN ECONOMIC SENSE, THERE IS IN REALITY NO "SOCIAL" PROBLEM.

58 I B I D . , P P . 644-645.
Orthodox economic theory suggests that no social problems can exist because no "group" can exist. If a number of competitors either on the buying or selling side or both form an association, the element of an atomistic and perfect market is lost. Since orthodox theory was wed to the idea of atomistic markets, orthodox economists neglected the social and economic significance of group action. But, if modern economic theory recognizes that group action is substitutable for individual action such as through cooperative integration, then a "problem" arises, viz: how to make the group function more effectively from an economic standpoint as well as from the standpoint of other disciplines such as sociology and psychology.

Integration theory supports the view that atomistic agricultural markets are an over-simplification and that markets are more "imperfect" than "perfect". Instead of changing the nature of markets from "imperfect" to "perfect" so that economic theory might be satisfied, it would be easier to change the theory and formulate a new definition of a "perfect" market by taking into account all the various academic disciplines and welding them into a unified and comprehensive theory of modern economic behavior.
CHAPTER VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The broiler industry expanded at a rapid rate in Louisiana and in other parts of the country with over one billion broilers produced in the United States in 1954. The cost of growing broilers has declined due to mass production techniques and improved technology in growing and marketing. During a given year, the output of broilers fluctuates according to the optimism or pessimism of growers concerning broiler prices. Broiler entrepreneurs have come to expect a "good" profit on one lot; a "fair" profit on another; a "break-even" lot and a "loss" on every fourth lot. Except for some seasonal variation, consumer demand for broiler meat is rather stable during the year. Since World War II, per capita and total broiler consumption has been rising.

The major premise of the study is that integration patterns in procuring inputs and disposing of output have developed in the broiler industry and that this integration is continuing. No formal theory had been developed to explain satisfactorily the development of economic integration in the broiler industry. A number of empirical studies touched upon the subject of firm integration but all of them suffered for lack of a theoretical structure.
This study furnished a theoretical framework for identifying and evaluating various integration patterns in the broiler industry regardless of its geographic location. Besides non-integration, two basic integrative patterns were delineated: (1) Quasi and (2) Complete integration. The former refers to integrative arrangements either horizontal, vertical or circular, where two or more firms develop working agreements and/or contracts but retain their separate identity and entrepreneurship. The latter, or complete integration, refers to firms which absorb or create other firms and/or functions in the economic process under a single entrepreneur. Both profit and non-profit corporations may follow these patterns.

From a theoretical standpoint, the advantages and disadvantages of integration are many and varied. It is recognized that integration may lead to lower production and marketing costs due to economies of scale. However, as larger scale operations are attained, the integrated firm or firms may increase their influence over price. Whether the net gain goes to society, to the firms or to both is not always clear.

An interesting aspect of integration is its relationship to competitive market structures. Non-integration is consistent with the theory of "perfect competition". On the other hand, quasi-integration is more consistent with imperfect or monopolistic competition. Complete integration whether profit or non-profit, represents more of a danger
Toward Monopoly (in selling) and Monopsony (in buying). It was concluded that while broiler growers may buy "inputs" and sell "outputs" in perfect competition among themselves, the buyers and sellers which they face are not perfectly competitive among themselves. This "imperfect" market structure may be carried into broiler growing as feed dealers and others integrate growers with them. The market structure at the grower level may then be shifted from "atomistic" to "aggregative". It was noted that integration at the broiler growing level does not cause a market structure to become "imperfect". Probably, the structure is already "imperfect"; therefore, the imperfection is one of degree rather than of substance. Also, various patterns of integration may co-exist in a given market such as quasi and complete integration. There exists a certain flexibility which permits firms to move in and out of certain integration patterns.

From a theoretical standpoint, competition may still be vigorous even between and among integrated structures, particularly the vertical types. The hypothesis is that if integration can result in lowering costs of production without unduly extending the firm's control over price, then society can benefit and productive sources can be economically utilized.

The next step in the study was to test the integration patterns theoretically delineated. Firms in the feed milling, chick hatchery and broiler processing segments of the industry were examined in relation to non-integration,
QUASI-INTEGRATION AND COMPLETE INTEGRATION, WHETHER PROFIT OR NON-PROFIT. IN ADDITION, FINANCE AGENCIES WERE EXAMINED FOR THEIR ROLE IN FOSTERING ECONOMIC INTEGRATION.

FIRM INTEGRATION EXISTS AT ALL STAGES IN THE GROWING AND MARKETING OF BROILERS. IN FEED MILLING AND DISTRIBUTION, ECONOMIC INTEGRATION CONSISTS MAINLY OF: (1) QUASI-INTEGRATION WHERE PROFIT-TYPE MILLS DISTRIBUTE THEIR FEED TO FRANCHISED DEALERS AND (2) COMPLETE INTEGRATION WHERE COOPERATIVE FEED MILLS DISTRIBUTE THEIR FEED TO ASSOCIATIONS OF BROILER GROWERS WHO OWN THE MILLS. IN THE LOUISIANA BROILER INDUSTRY, FEED DEALERS QUASI-INTEGRATE WITH FEED MILLS LOCATED OUT-OF-STATE. FEED COOPERATIVES INTEGRATE AND HAVE OWNERSHIP IN CO-OP FEED MILLS ALSO LOCATED OUTSIDE LOUISIANA. IT APPEARS THAT THE MAIN OPPORTUNITY IN THE LOUISIANA FEED MILLING INDUSTRY RESTS IN THE DEVELOPMENT OF LOCAL CONCENTRATE-GRAIN MIXING WHERE FEED COSTS CAN BE REDUCED, FINANCING BURDENS EASED AND WHERE FURTHER INTEGRATION IN POULTRY MARKETING CAN BE FOSTERED.

IN THE HATCHERY BUSINESS, INTEGRATION PATTERNS IN ACQUIRING HATCHING EGGS AND IN DISPOSING OF DAY-OLD CHICKS WERE FOUND TO BE HIGHLY DEVELOPED. HATCHERIES USE MAINLY QUASI-INTEGRATIVE ARRANGEMENTS WITH FLOCKOWNERS FOR THE PRODUCTION OF BROILER-TYPE HATCHING EGGS AND IN TURN, QUASI-INTEGRATE THEIR OUTPUT OF BROILER-TYPE CHICKS TO FEED DEALERS, COOPERATIVE ASSOCIATIONS AND BROILER GROWERS, IN THAT ORDER. NON-INTEGRATION IS NOT IMPORTANT IN BROILER CHICK OPERATIONS. COOPERATIVE CHICK HATCHERIES ARE PREVALENT IN SOME AREAS SUCH
As in Northwest Arkansas. Hatcheries operating on a small scale may manage their own egg flocks and grow-out their own chicks to broiler-age and thus follow complete vertical integration. In Louisiana, most of the broiler-type hatching egg flocks are quasi-integrated with large out-of-state hatcheries which in turn quasi-integrate their supply of chicks to feed dealers and broiler growers in Louisiana and elsewhere. Considerable cross-movement occurs in transporting eggs out of Louisiana; hatching them and then exporting some of the chicks to Louisiana.

Since processors are in proximity to distribution and consumption levels in the broiler marketing process, they constitute a key agency in integration because they are in a position to transmit the needs of the market back to feed dealers and growers who supply them with broilers. Processors may negotiate contracts with chain stores and other outlets for a certain volume of broilers per week which will then require the negotiation of agreements with growers and dealers for a specific volume of birds. Such agreements are of a quasi-integrative nature, being either backward or forward quasi-vertical integration. If processors are not satisfied with quasi-integration, they may decide to produce their own broilers or hire farmers to grow broilers for them as is common in Georgia, Alabama and in other broiler areas. Broiler growers, like those in Arkansas, may set-up their own processing plants. Processors operating on a rather small scale may be completely integrated.
FROM GROWING THE BIRDS, PROCESSING, AND SELLING THEM DIRECT TO CONSUMERS THROUGH THEIR OWN RETAIL UNITS.

IN LOUISIANA, Processors cannot accommodate adequately the Louisiana broiler output which moves, instead, on a quasi-integrated basis to plants located in East Texas. Poultry processing plants in Louisiana are relatively few in number, have only limited capacity and are lacking in some of the more modern methods of processing. In addition, their distributive mechanism is based on small-scale deliveries to individual customers, small grocery stores and eating establishments. Most Louisiana processors have been unable to quasi-integrate on a large scale with broiler growers and feed dealers because of limited processing capacity. Those plants with the necessary capacity have been unable to develop market outlets in the state because of previous contracts and agreements between domestic wholesale-retail firms and larger out-of-state processors.

Despite efforts to develop integration, there still remains one link in the broiler growing-marketing process which has to be integrated if processors are to have broilers on schedule; feed dealers are to meet their sales quota; and hatcheries are to set regularly eggs from their flocks. This key link is the broiler grower or entrepreneur. Financing is the main factor which serves to convince many broiler growers that integration is a necessity. The need for large sums of capital in a relatively short time plus price and disease risks give key agencies, like feed dealers and
PROCESSORS, A CHANCE TO OFFER CREDIT PLANS AND, AT THE SAME TIME, INCLUDE THE GROWER IN A MUCH LARGER INTEGRATION PATTERN.

As a result, four main patterns of integration have evolved in growing broilers with eight sub-patterns (Table 12). Of the sub-patterns discussed, only four are important enough to warrant closer analysis. These are: (A) Non-integration where the grower is independent of the feed dealer or other agency and finances his operation directly, (B) Quasi-integration where the grower contracts with the dealer and raises broilers on open account or share financing, (C) Complete integration through a cooperative entity where growers join or form cooperatives to handle feed and other items and (D) Complete integration through a feed dealer where the grower raises broilers for the dealer on a fee basis. It is estimated that in the principal broiler growing states of the South, patterns most frequently used by growers are D, B, C and A, in that order (Figure 6). These patterns cited here consist mainly of the integrated relationship between a grower and a dealer. It should be noted that integration usually extends much further.

It is recognized that many factors are involved in selecting a particular integration pattern in growing broilers. For example, the dominant consideration may be the grower's financial status and his ability to obtain credit. Another is the alternative enterprises that exist in a community or alternative off-farm employment. Therefore, each integration pattern is recommended in the light of possible economic
Figure 6. Diagram of Four Common Integration Patterns in the Broiler Enterprise.

A. NON-INTEGRATION

B. QUASI-INTEGRATION

C. COMPLETE INTEGRATION
   (NON-PROFIT)

D. COMPLETE INTEGRATION
   (DEALER OR PROFIT)
CONDITIONS THAT MAY SURROUND A GROWER. EACH OF THE FOUR MAIN PATTERNS OF INTEGRATION ARE TAKEN IN THE ORDER OF THEIR PRESENT IMPORTANCE IN THE SOUTHERN STATES.

COMPLETE INTEGRATION THROUGH A DEALER FIRM SHOULD BE RECOMMENDED TO GROWERS WHEN THEIR CREDIT POSITION IS WEAK, WHEN THEIR MANAGEMENT CAPABILITIES ARE LOW AND WHEN BROILER PRICES APPEAR TO BE IN A DEPRESSED PERIOD (TABLE 20). THIS PATTERN SHOULD ALSO BE RECOMMENDED IF THE GROWER IS NEW IN THE BUSINESS AND KNOWS LITTLE OR NOTHING ABOUT BROILER GROWING AND IF HIS BROILER HOUSE AND EQUIPMENT IS HEAVILY MORTGAGED. IT SHOULD BE USED WHENEVER THE GROWER HAS RELATIVELY WEAK BARGAINING POWER RELATIVE TO DEALERS AND WHEN ALTERNATIVE OPPORTUNITIES ARE FEW. IF THE DEALER FINDS THAT THE QUALITY OF BROILERS BEING PRODUCED IS POOR AND THAT GROWERS ARE NOT DOING THEIR BEST, HE SHOULD INSERT SOME INCENTIVE PROGRAM, SUCH AS FEED CONVERSION RATIOS, AS A BASIS FOR PAYING A GUARANTEED WAGE. IT SHOULD BE NOTED THAT THE MACRO-ECONOMIC IMPLICATIONS OF THIS RECOMMENDATION HAVE NOT BEEN GENERALLY APPRAISED. IT IS ANTICIPATED THAT COMPLETE INTEGRATION THROUGH FEED DEALERS WOULD STABILIZE OUTPUT AND PRICES WHILE MINIMIZING RISKS FOR THE GROWER. IT IS TRUE THAT GROWERS WILL NOT MAKE LARGE PROFITS BUT IT IS A QUESTION OF CHOOSING BETWEEN LARGE INCOMES AND LARGE LOSSES VS. SMALLER BUT MORE STABLE INCOMES. ANOTHER MACRO-ECONOMIC IMPLICATION IN THIS TYPE OF INTEGRATION IS THE OVER-EXPANSION IN BROILER OUTPUT WHICH RESULTS IF THIS PATTERN IS CARRIED TO EXTREMES WITH ITS LACK OF GROWER INCENTIVES AND THE RESULTING POOR QUALITY
<table>
<thead>
<tr>
<th>Table 20. Recommended Integration Pattern for Broiler Growers Under Various Management Levels.</th>
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<tr>
<td><strong>A. Growers Management</strong>&lt;sup&gt;1/&lt;/sup&gt;</td>
</tr>
<tr>
<td>Good</td>
</tr>
<tr>
<td>Fair</td>
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<tr>
<td>Poor</td>
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<tr>
<td><strong>B. Growers Capital</strong>&lt;sup&gt;2/&lt;/sup&gt;</td>
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<td>&quot;Excess&quot; capital</td>
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<tr>
<td>&quot;Adequate&quot; capital</td>
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<td>&quot;Deficient&quot; in capital</td>
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<tr>
<td><strong>C. Expected Broiler Prices</strong>&lt;sup&gt;3/&lt;/sup&gt;</td>
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<tr>
<td>High</td>
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<td>Average</td>
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<tr>
<td>Low</td>
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</table>

1/ Management is considered "good" when feed conversion ratios are not over 3.0; mortality not over 5 per cent; and costs of production under 22 cents per pound. Fair and poor management would exceed these.

2/ "Excess" capital refers to growers who can sustain losses on several broods and continue in business; "adequate" refers to those capable of sustaining losses on one or two broods and "deficient" growers cannot take any loss.

3/ "High" refers to 25 cents and over, "average" refers to 22-25 cents and "low", below 22 cents per pound.

4/ Share, salary, feed conversion and fee plans may be used here to implement dealer-grower integration.
OF BROILERS PRODUCED.

QUASI-INTEGRATION BETWEEN A DEALER AND GROWER THROUGH THE USE OF CREDIT PLANS SHOULD BE RECOMMENDED WHENEVER THE GROWER IS FAIRLY CAPABLE OF MANAGING HIS ENTERPRISE AND CAN PROFITABLY USE THE COUNSEL OF HIS FEED DEALER AND OTHERS. THE GROWER'S CREDIT POSITION MUST BE SUFFICIENTLY STRONG TO WITHSTAND LOSSES ON ONE OR TWO LOTS OF BROILERS PER YEAR SINCE THE DEALER ABSORBS NONE OF THE GROWER'S LOSSES ALTHOUGH HE WILL USUALLY EXTEND THE LOAN. THIS PATTERN SHOULD BE RECOMMENDED ONLY WHEN BROILER PRICES ARE AT OR ABOVE 22-CENTS PER POUND OR ARE EXPECTED TO BE AT A PROFITABLE LEVEL AT TIME OF SALE (TABLE 20). IF IT IS KNOWN THAT THE DEALER IS CHARGING EXCESSIVE PRICES FOR INPUTS, QUASI-INTEGRATION SHOULD NOT BE RECOMMENDED. IF THE DEALER IS KNOWN TO UNLOAD ITEMS ON GROWERS UNNECESSARILY THIS PLAN SHOULD NOT BE RECOMMENDED. IF SUCH CONDITIONS EXIST AND THE GROWER DESIRES TO QUASI-INTEGRATE, HE AND THE DEALER MAY NEGOTIATE A MODIFIED QUASI-INTEGRATION PLAN OR ONE WHERE THE DEALER ABSORBS LOSSES IN RETURN FOR A SMALL SHARE OF THE PROFITS. QUASI-INTEGRATION SHOULD BE RECOMMENDED IF THE GROWER LIVES IN AN ISOLATED AREA AND WOULD ENCOUNTER DIFFICULTY IN PROCURING HIS INPUTS AND IN MARKETING HIS BROILERS. IF LOSSES ON SEVERAL LOTS OF BROILERS HAVE OCCURRED, THE GROWER SHOULD BE ADVISED TO SHIFT FROM QUASI-INTEGRATION TO COMPLETE INTEGRATION WITH A DEALER. IN THE PAST, SOME GROWERS BECAME SO HEAVILY INDEBTED TO DEALERS UNDER QUASI-INTEGRATION THAT THERE EXISTED LITTLE OR NO
possibility of recovering the losses. This created much ill-will among dealers, growers, bankers and others and should be avoided.

Complete integration through a non-profit entity should be recommended when at least ten or more broiler growers in a community can successfully work together in providing for themselves the necessary input factors such as feed, chicks and supplies. All of them should be capable of adequately managing a broiler enterprise and possess sufficient financial reserves or be in a position to obtain credit directly from a bank or PCA. In addition, the cooperative association should provide a substantial lowering of their growing costs in order to minimize losses in low price periods (Table 20). Integration through a cooperative should not be recommended if co-ops have failed in the community or if the members are unwilling to adequately finance and operate the association. However, different stages of cooperative organization may be recommended depending on local circumstances and other considerations (see Table 17). In some of the older broiler areas such as in Georgia and Virginia, growers may have the opportunity to integrate on a guaranteed income plan with a cooperative association instead of with a feed dealer.

Cooperative associations have played a large part in Louisiana's broiler development but only at the growing level. Cooperative leaders now need to visualize the economic opportunities which lie beyond the growing of broilers; such
as in cooperative feed milling, hatcheries, processing and financing. Students of cooperative marketing should devote a greater portion of their efforts toward improving membership relations and aid cooperative associations to develop their economic and social activities harmoniously. A coordinated research effort by the various disciplines would contribute to a better understanding of the cooperative problem. Orthodox methods in research on cooperation are over-worked. New approaches are required.

Non-integration should be recommended to broiler growers if their management is good and if they possess enough financial resources to absorb losses during low price periods, from disease or other causes. In periods when broiler prices appear to be very favorable, non-integration should be considered (Table 20). If growers can finance their own operation or borrow directly from credit agencies, they may be in good position to reduce their growing costs and net substantial returns. Non-integration in acquiring inputs should be recommended particularly if growers are processing and selling their own broilers and if their enterprise is on a small-scale (1,500 broilers per lot or less).

However, this study would indicate that non-integration is not a feasible pattern to adopt in growing broilers on a large-scale due to the large amount of capital necessary and risks assumed; the perishability of broiler output; the technological factors which require close coordination among
ALL SEGMENTS IN THE INDUSTRY AND THE COMPETITION WHICH COMES FROM THE MORE INTEGRATED STRUCTURES.

Kohls and Wiley contribute further to this idea in the following manner:

"In the long run, total costs, including costs of raw product growing, processing and marketing, in an industry where integration has taken place, are likely to be lower than where no integration has taken place. This is likely to be so because the integrated operation effects a pooling of talents. This could also be true for the areas of broiler production where the integration may pool the efficiencies of the growers, feed-supplier-financier and processors. The individual grower's risk position may be reduced and management levels may be raised. Total industry capital costs might be reduced where the dealer is the financier since he would have more intimate knowledge of the credit problems of the industry and would be in a position to pool risks. Marketing and processing costs might be reduced because of a closer coordination of supply movement and other factors. This would be especially true if the integrated area, with its potentiality of a greater reserve of capital, could carry the burden of low prices in times of over-supply better than an area of independent growers with limited abilities to absorb such low prices for an appreciable time.

Areas with an integrated industry also are likely to be more stable than non-integrated areas. This would tend to be the case when arrangements between dealers (as marketing agents) and processors causes both to become more interested in a continuing level of supply. In addition, feed used in broiler production is largely a manufactured product, and dealers are the distributors for nationally or regionally marketed products. The self interest of feed manufacturing firms would also favor stability in the level of production and such firms may take steps to assist their dealers in times of distress.

It has already been pointed out that there was no indication of the various contractual or guarantee arrangements reducing the rate of technological progress. There are no significant differences between the two areas in feed conversion and mortality and other management factors. Conceivably, to the extent that the dealers in the integrated type area enforce requirements of progressiveness and make progress
POSSIBLE THROUGH MANAGEMENT ASSISTANCE OFFERED, GROWERS WOULD EVENTUALLY BE AS MUCH OR MORE PROGRESSIVE THAN INDEPENDENT GROWERS. IF UNCERTAINTY SHOULD BE LESSENED FOR GROWERS AND DEALERS IN THE INTEGRATED OPERATION, THERE WOULD BE GREATER WILLINGNESS TO INTRODUCE CAPITAL AND LABOR-SAVING TECHNIQUES, BECAUSE OF THE LIKELIHOOD OF LONG RUN GAIN COMING FROM THEIR EMPLOYMENT. 59

CONSIDERING THE SOUTHERN BROILER AREA AS A WHOLE, NON-INTEGRATED BROILER PRODUCTION IS NOT OF GREAT SIGNIFICANCE SINCE FINANCING AND MARKETING SCHEMES PREDOMINATE IN ALL LARGE AND MOST OF THE SMALL BROILER GROWING AREAS. THE MANY AND VARIED REASONS WHY INTEGRATED PRODUCTION HAS COME TO THE FORE HAVE ALREADY BEEN EXAMINED IN VARIOUS PARTS OF THIS STUDY. IT SEEMS UNLIKELY THAT TRENDS WILL BE REVERSED AND THAT NON-INTEGRATED PRODUCTION WILL GAIN A LARGER SHARE OF THE BROILER OUTPUT. INSTEAD, IT IS LIKELY THAT INTEGRATED PRODUCTION WILL BE CARRIED FURTHER, VIZ: QUASI-INTEGRATION WILL SUCCEED NON-INTEGRATION AND COMPLETE INTEGRATION MAY SUCCEED QUASI-INTEGRATION.

Thus far, the greater portion of broiler expansion in Georgia, Del-Mar-Va and other areas has come from within the integrated structures, particularly the non-cooperative, completely integrated group such as feed dealers venturing into broiler growing. Their increase in output has been such as to have serious effect on growers and others remaining non-integrated. Under such competitive pressure, these

Non-integrated growers are compelled to reconsider their position. They face the alternatives of falling into line with these credit arrangements, adopting complete integration through cooperatives or of devising some unique arrangement by which they can maintain their non-integrated status. It is recognized that growers cannot move from one integration pattern to another in a frictionless manner. There is always a tendency for integration patterns to crystallize and resist changes and modifications.

The idea that the entire broiler industry can be integrated may be far-fetched because of the varied nature of the industry comprising retail outlets, distributors, processors, feed mills, hatcheries, growers and others. This does not mean that any particular segment cannot or is not well integrated nor does it mean that one cross-section and/or geographic area cannot be integrated. What it does mean, however, is an integration of varying segments of the industry in competition with various other integrated structures. Some of these integrated structures are co-operative while most are non-co-operative. Those that are non-cooperative rely on complete integration as well as quasi-vertical and horizontal integration. The trend, in general, points to more, not less integration.

The possibility that economic integration, in general, may create a monopoly in the broiler industry is not likely because of the large number of firms both integrated and non-integrated; lack of output control; and the ease with
WHICH NEW FIRMS CAN ENTER THE INDUSTRY AT ANY LEVEL, VIZ:
growing, distributing, and processing. More important
than this is the substitution which exists for broiler
meat such as other chicken meat, turkey, beef, veal, pork,
fish, lamb as well as other meat products and sources of
protein. In addition, research by both public and private
agencies leads to a dissemination of new ideas and technology
so that most firms have access to these innovations.

Hirsch, in his monumental study of economic integration in agricultural marketing, concluded in this vein:

"The objective should not be to expand integration indiscriminately or ad absurdum. Instead, we advocate an expansion in degree and only in cases where it appears to be desirable" and "integration must always be considered in the light of potential monopolization. If such a threat exists, judicious and not haphazard action is required." \(^60\)

\(^60\) Hirsch, op. cit., p. 265 and 267.
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APPENDIX TABLES
Table 1. Per Capita Consumption of Broilers and Chickens in the United States, 1934-1951.

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Source: The Poultry and Egg Situation, AMS, USDA.
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### Table 3. (Continued)

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**EAST TEXAS:**

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<td>NI</td>
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</tbody>
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---

1/ **Size groups classified as:** I (5,000-50,000); II (50-100,000); III (100,000-250,000); and IV (250,000 bird units and over).

2/ **S refers to a "single" plant operation; M refers to two or more plants or a "multiple" unit operation.**

3/ **Vertical integration as to inputs (live poultry) and output (dressed-drawn poultry) may be NI (non-integrated); QI (quasi-integrated) and Cl (complete proprietary integration). No cooperative processing plants exist in Louisiana.**

4/ **"Major" refers to principal input-output channel while "minor" refers to secondary channels.**

*Only one channel being utilized.*
VITA

Ewell Paul Roy was born in Hessmer, Louisiana, on March 25, 1929. He was reared on a 40-acre farm in the mixed-farming area of Central Louisiana. While in high school, he served as State President of the Louisiana Future Farmers of America and received the "American Farmer" degree from the national F.F.A. organization in 1946.

After graduation from the Hessmer High School in 1945, he enrolled at Louisiana State University, majoring in agricultural economics. In 1949, he received the Bachelor of Science degree and accepted employment as part-time instructor in the Pointe Coupee Parish Institutional On-Farm Program at Livonia, Louisiana. This enabled him to enroll in the Louisiana State University Graduate School where he obtained the Master of Science degree in May 1950 in agricultural economics. From October 1949 to May 1950 he served also as a Teaching Assistant in the L.S.U. Department of Economics.

On July 1, 1950 he accepted a Research Associate position with the Department of Agricultural Economics at Louisiana State University where he has remained, except for a summer term of graduate work at the University of Minnesota. His research work from 1950 to 1955 was entirely in poultry economics.
On July 16, 1955, he will assume the duties of Project Leader and Coordinator of Poultry Marketing Research in Ten Southern States under the SM-15 Technical Poultry Research Committee.

He was married to Ina Guillory of Hessmer, Louisiana, on February 16, 1947. They have one son, Dean Paul, six years old.
EXAMINATION AND THESIS REPORT

Candidate: Mr. Ewell P. Roy

Major Field: Agricultural Economics

Title of Thesis: Economic Integration in the Broiler Industry

Approved:

[Signature]
Major Professor and Chairman

[Signature]
Dean of the Graduate School

EXAMINING COMMITTEE:

[Signature]

[Signature]

[Signature]

[Signature]

Date of Examination:

Friday, July 8, 1955