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ABSTRACT

Designed to aid in learning the main ideas of the agribusiness concept, this document answers the following questions, treating each answer in a separate explanatory section: (1) What is the meaning of the terms "agriculture" and "agribusiness"? (2) What is the relationship of agriculture and agribusiness? (3) What is involved in tracing an agricultural product from origin to consumption? (4) What were the major contributors to the development of agribusiness? (5) How did the development of agribusiness occur? and (6) What are the essential components of agribusiness activity? Diagrams are included to supplement the text. A bibliography is appended. (SH)

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UNDERSTANDING THE AGRIBUSINESS CONCEPT

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Preface

Understanding the meaning of agribusiness is often difficult for students and workers. This publication is to assist students in understanding the meaning and development of agribusiness in the United States. It must be remembered that a study of agribusiness cannot be separated from a study of economics, history, and industrial development. Much of the history of the United States is clearly related to developments that contributed to the emergence of agribusiness.

Millions of workers are employed in agriculture and agribusiness. Students using this publication will likely become concerned about how they can get into agribusiness careers. If so, they should remember that these careers can be very satisfactory and rewarding. Additional information about the different careers should be obtained before making a decision. It is also a good idea to explore the possible careers through summer and part-time jobs related to the area of interest. Information can also be gathered from agricultural teachers and workers which may be very helpful.

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To the student . . .

Objectives of this Publication

The objectives for this publication are listed below. These are designed to aid in learning the main ideas presented. Upon completion of this publication, you will be able to:

1. define the terms "agriculture" and "agribusiness."
2. explain how agribusiness is related to agriculture.
3. trace one of the following products from origin to consumption:
 - a. peanuts and peanut products.
 - b. dairy products.
 - c. pimiento peppers.
4. name and explain the major contributors to the development of agribusiness.
5. explain the development of agribusiness.
6. name and explain the essential components of agribusiness activity.

Introduction

Agribusiness is a blend of agriculture and business. It is said to be the biggest business in the United States and the world, for that matter. Do you know how agribusiness came into being? Do you know its scope? It is difficult to fully define agribusiness because it is so broad and big. This publication is to assist in understanding the agribusiness concept. In order to do so, the following questions are listed:

1. What is the meaning of the terms "agriculture" and "agribusiness"?
2. What is the relationship of agriculture and agribusiness?
3. What is involved in tracing an agricultural product from origin to consumption?
4. What were the major contributors to the development of agribusiness?
5. How did the development of agribusiness occur?
6. What are the essential components of agribusiness activity?

What is the meaning of the terms "agriculture" and "agribusiness"?

Agriculture is often said to include all of the services and activities involved in producing plants and animals, and their products, and in getting them to the consumer. This includes agribusiness as well as production agriculture, or farming. The notion that agriculture is only farming is erroneous for the farmer of today could not come close to the current level of production without the support of agribusiness.

Agribusiness may be defined as the business and manufacturing activities involved in (1) supplying the inputs needed for farming and (2) marketing the products grown on farms. It includes the provision of all the goods and services required to produce farm commodities and get them to the consumer. This definition implies an interdependence, or blend, between agriculture and related business. "Inputs" includes items used by farmers, such as fertilizer, insurance, seed, power and fuel, feed, and financing. Marketing includes the functions in converting farm commodities into desired forms. For example, vegetable crops are often processed, meat animals are slaughtered and made up into the desired cuts or products, and milk is processed before reaching the consumer. Some of the functions involved in marketing include grading, storing, processing, packaging, transporting, pricing, and merchandising.

Figure 1.

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known as a feed grain and is nonfood. Tobacco is clearly not a food product even though it is used by humans.

Sometimes the term agribusiness is used to include other areas which have not been traditionally thought of as agricultural in nature. Forestry, ornamental horticulture, and natural resources are often included with agribusiness. These involve areas common to agricultural knowledge, such as the plant, animal, and soil sciences.

What is the relationship of agriculture and agribusiness?

Agriculture and agribusiness are inseparable in the United States. Agribusiness is a part of agriculture and supportive of production agriculture. It would be very inefficient for the farmer to produce the seed, chemicals, feed, equipment, animal medicines, and the other needed items. Many of the inputs and practices used by modern farmers would not be available if they were not produced by agribusiness. After farm commodities are produced, agribusiness assembles, processes, and distributes the food and nonfood products to the consumer.

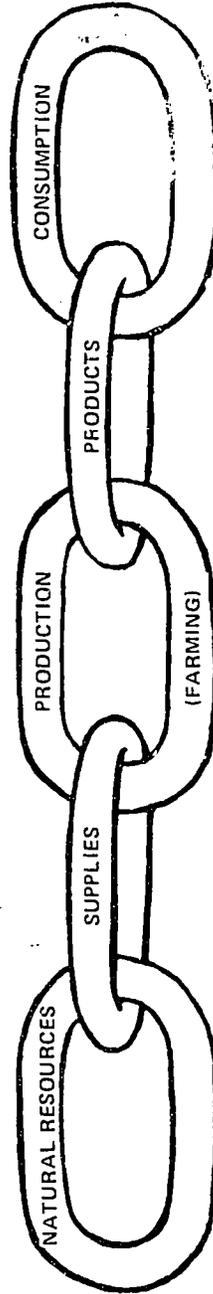
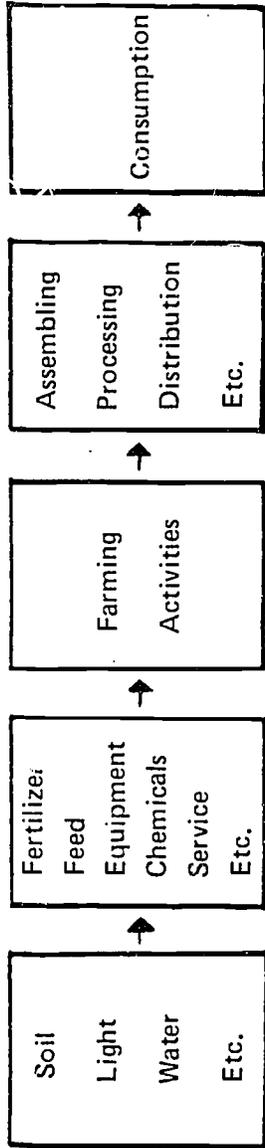
The supportive relationship of agribusiness to the farmer, and other segments of agriculture, has been compared to the space program. Many people are involved in getting a space ship into space. Such a ship usually carries only a few people, often no more than three. The crew on earth which was responsible for the flight is very large-possibly numbering into the thousands. The same tends to be true of the modern farmer. One farmer depends on the work of many other people to supply the inputs he needs and market the commodities he produces.

Figure 2 is used to illustrate the inseparable relationship which exists between agriculture and agribusiness.

What is involved in tracing an agricultural product from origin to consumption?

The relationship of agriculture, agribusiness, and other sectors of the economy can be more adequately understood by tracing a farm commodity from origin to consumption. Several examples are listed below. The role of agribusiness and related activities, such as research and development work is stressed in these examples. The full details of all that is involved is not given as this would require considerable space.

Peanuts and Peanut Products. The average person eating a peanut butter and jelly sandwich would have great difficulty in comprehending what is involved in getting peanut butter to him. When questioned, many people would simply say that it came from the farm. In a sense this would be partially correct, but much more is involved. Inputs come from many sources off the farm. A modern peanut farmer is very dependent upon agribusiness. Most peanut farmers plant the seed of improved varieties. The varieties were developed by agricultural scientists working on research farms or experiment stations. The seeds were probably carefully produced and handled by an agribusiness (seed company). Fertilizer was probably used to increase yield. The fertilizer was most likely obtained from a nearby distributor or farm supply company. The distributor probably obtained it from a fertilizer



CHAIN OF MODERN AGRICULTURE

(Each link depends on the other. If any link fails, modern agriculture fails.)

Figure 2

manufacturer. Chemicals made by an agribusiness chemical company were used to control weeds and insects. Equipment to prepare the soil, plant the seed, apply chemicals, and till the crop was made by an equipment manufacturer and distributed by a local dealer. The dealer also supplied the parts and repair services needed to keep the equipment operating. Harvesting peanuts is a laborious task but here again agricultural scientists and agribusiness have developed mechanical harvesters. The harvested peanuts might have been dried and stored on the farm or by a central warehouse facility. The peanuts were hauled to a market or processor on trucks or trains. The processor could have manufactured the peanuts into many different products and prepared them for consumption and distribution to retail markets. These are all parts of the agribusiness concept and getting peanut butter into a sandwich. (Figure 3 presents a diagram which depicts the activities involved in getting peanuts from origin to consumption.)

Dairy Products. The ice cream in a strawberry sundae does not just happen along. It is the result of detailed planning and cooperation among agribusinesses, dairy farmers, and related scientists, technicians, dairy plant workers, truck drivers, and other workers. The production of ice cream and other dairy products is much like that of peanut butter in terms of agribusiness relationships. Ice cream is made from milk and milk originates on a dairy farm. Dairy farming requires considerable milking supplies, and other items.



SAMPLE DIAGRAM

TRACING PEANUTS AND PEANUT PRODUCTS FROM ORIGIN TO CONSUMPTION

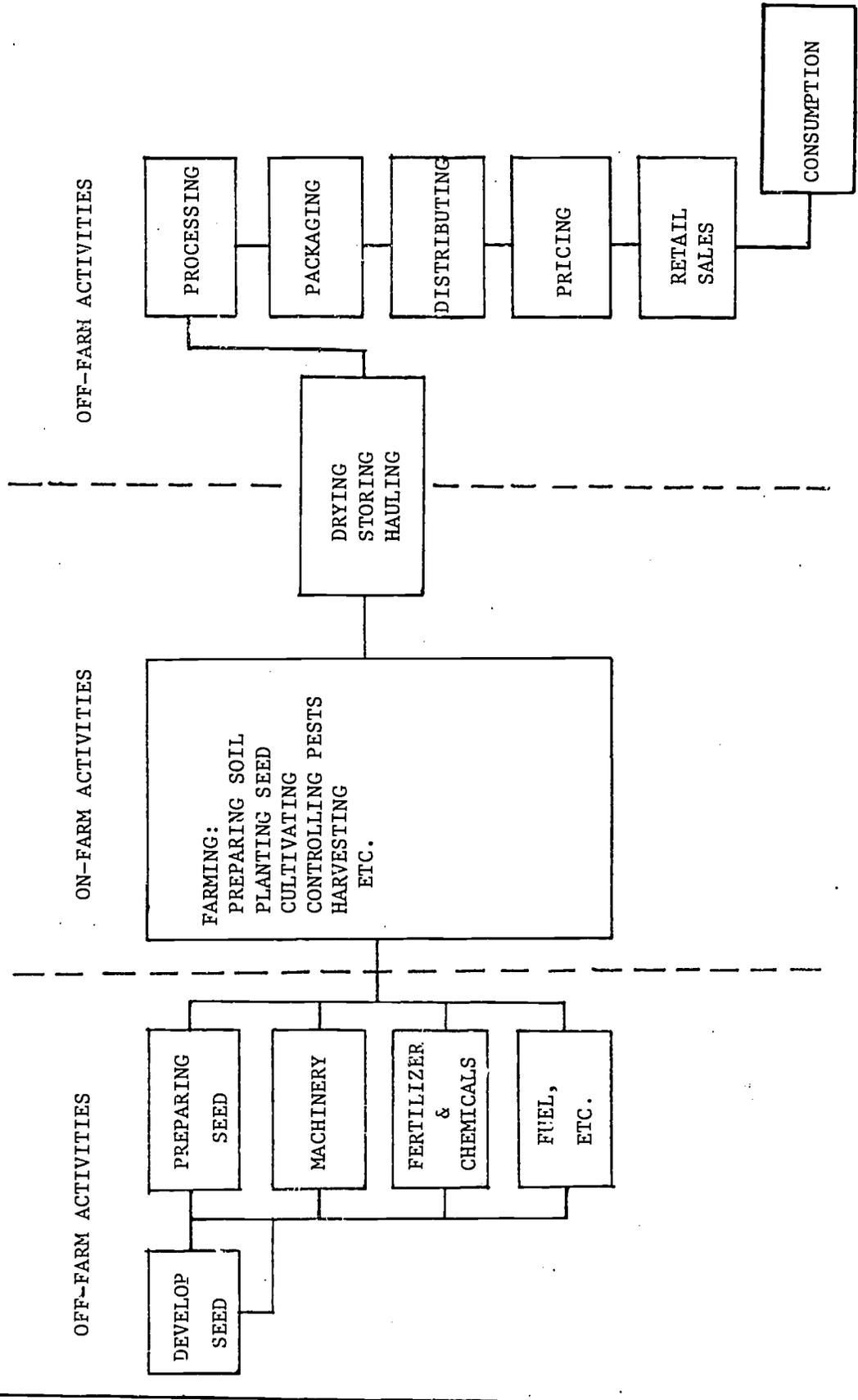


Figure 3



The milking equipment is manufactured by a dairy equipment company. A productive dairy herd must be kept healthy and this requires animal medicines. Feed is required for the cows and may be grown on the farm or obtained from agribusiness feed mills. Agricultural scientists are involved in many ways trying to develop improved equipment, medicine, and feed. Truckers are required to deliver feed to the farm and haul the milk to a processing plant and, later, the finished dairy products to a retail outlet. Since ice cream and other dairy products are prepared in a processing plant, agribusiness continues to be involved. Processed dairy products are packaged, labeled, hauled to retail stores, and displayed for sale. (Figure 4 traces dairy products to the consumer.)

Pimiento Peppers. Using pimiento peppers to show the importance of agribusiness may appear to place too much emphasis on a minor crop. Yet, more than one quarter of a million dollars were derived from peppers in Virginia in a recent year. Most consumers come into contact with pimiento peppers indirectly, such as in pimiento-cheese sandwiches or stuffed olives. The average consumer probably gives very little thought to what is involved in making the product available.

The pimiento pepper story does not necessarily begin with the pepper farmer. Seeds are needed by farmers to plant the pepper crop. This means that pimiento pepper seed farmers must raise the seed, processors must prepare and package the seed, and seed dealers must make the seed available to farmers. Before seed can be grown, plant breeders must develop the variety of pepper. To get seed to the farmer also requires many other activities, including transportation, record keeping, and sales activities.

SAMPLE DIAGRAM

TRACING DAIRY PRODUCTS TO THE CONSUMER

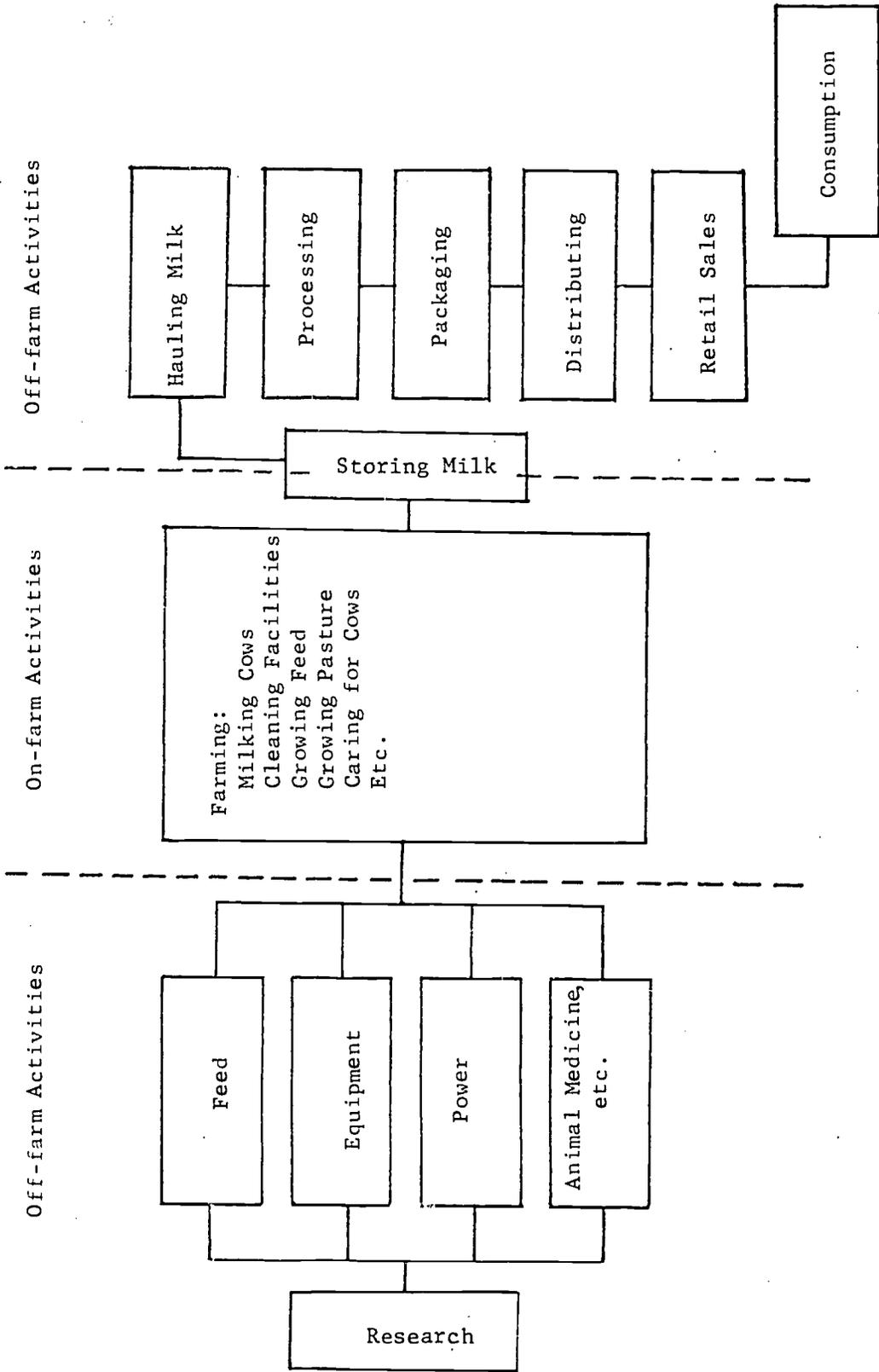


Figure 4

SAMPLE DIAGRAM

TRACING PIMIENTO PEPPERS FROM ORIGIN TO CONSUMPTION

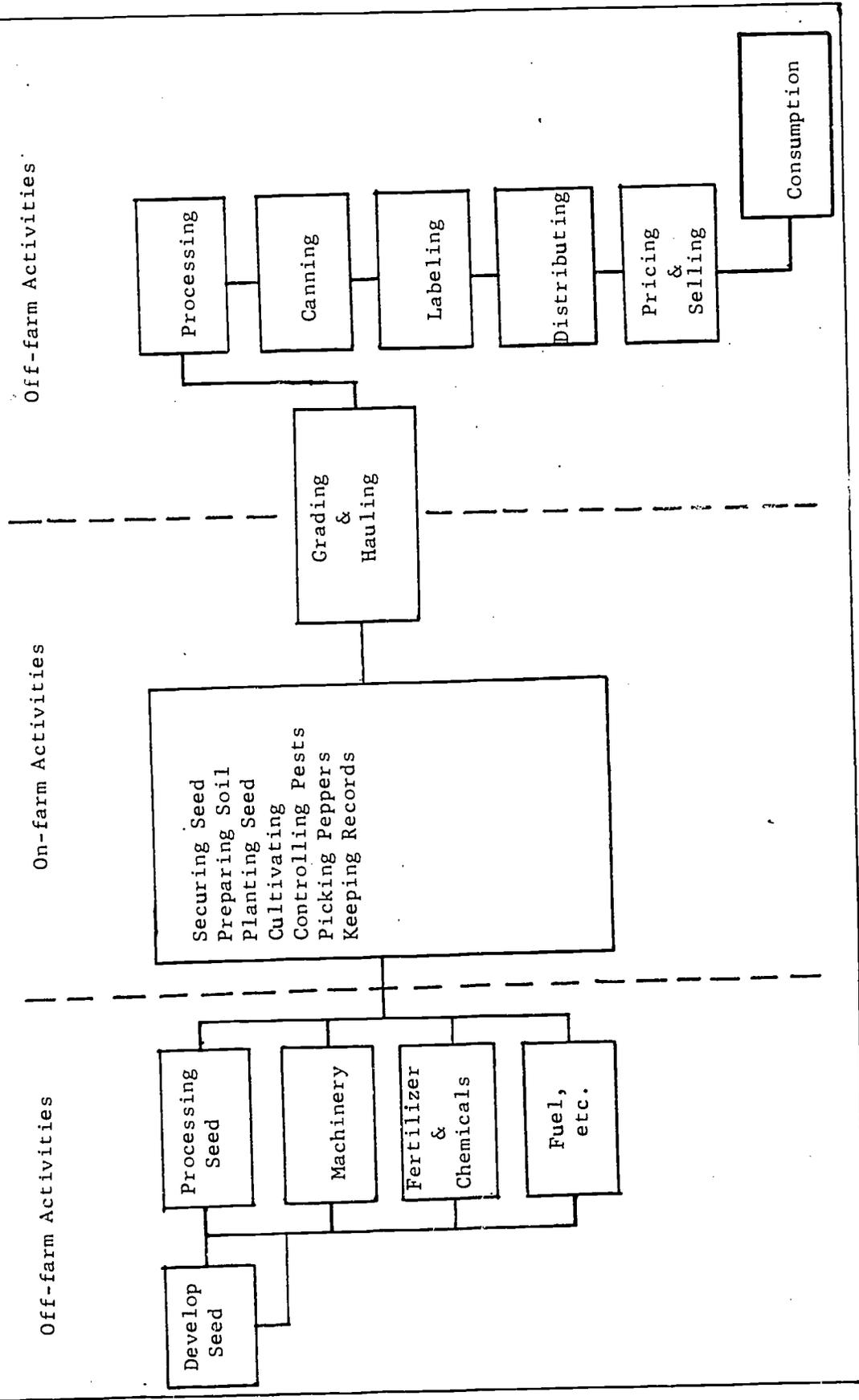


Figure 5

Once a pimiento pepper farmer has seed, he is ready to begin the pepper crop. Equipment is used to prepare the soil, plant the seed, and apply fertilizer and chemicals. Each of these inputs has a long story. For example, the equipment must be manufactured, maintained, and transported to the farm. Fuel is required to operate the engines. Fertilizer and chemicals must be manufactured, transported, and sold. At the proper time the matured peppers are harvested and hauled to a collection point. Here grading and preparation for shipping to the processing plant occurs. Upon arrival at the processing plant the peppers are further graded and cleaned in preparation for processing. The procedures in processing involve (1) removing the skin by burning with a flame until black and washing off with a jet of water, (2) removing the core with an automatic coring machine or by hand, (3) placing in jars or cans (this may be done by hand or mechanically), (4) sealing the jars or cans, (5) heating the sealed cans or jars in retorts to the proper temperature, and (6) labeling and placing in shipping crates. From here the canned peppers may go to distribution centers, wholesalers, or food brokers and on to retail supermarkets for sale to the consumer. (Figure 5 traces pimiento peppers to the consumer.)

What were the major contributors to the development of agribusiness?

Certain events and conditions contributed to the development (evolution) of agribusiness in the United States. These occurred parallel to changes in agriculture and other sectors of the economy. The term

"agricultural revolution" is often used to describe the changes which have occurred in agriculture. It is impossible to single out any one event or condition which contributed the most to these developments. Many things have been involved, often in highly complex relationships. Some of the main contributors are listed and discussed below.

Quantity and Use of Natural Resources. A productive agriculture requires soil and climatic conditions which are suitable to the growth of crops. The United States has a wide range of soil and climate. This makes it possible to grow many different crops in large acreages. Much of the early agricultural development was due to exploitation by European countries interested in gaining power and establishing colonies. This seemingly selfish activity stimulated agricultural development and the use of natural resources. Fertile soil and the accompanying resources are of little benefit to a nation unless they are developed and used.

Rapid Industrial Development. The rapid development of industry in the United States stimulated changes in agriculture and agribusiness. However, the industrial development did not occur apart from changes in agriculture. Changes in both industry and agriculture occurred together and each contributed to changes in the other. Industrial development has made it possible for equipment, chemicals, and other inputs needed for production agriculture to be available. Yet, without the resources of a productive agriculture these industrial developments could not have been made nor would they have been needed.

Development of Transportation and Communication Systems. All of agriculture is very dependent on transportation and communication.

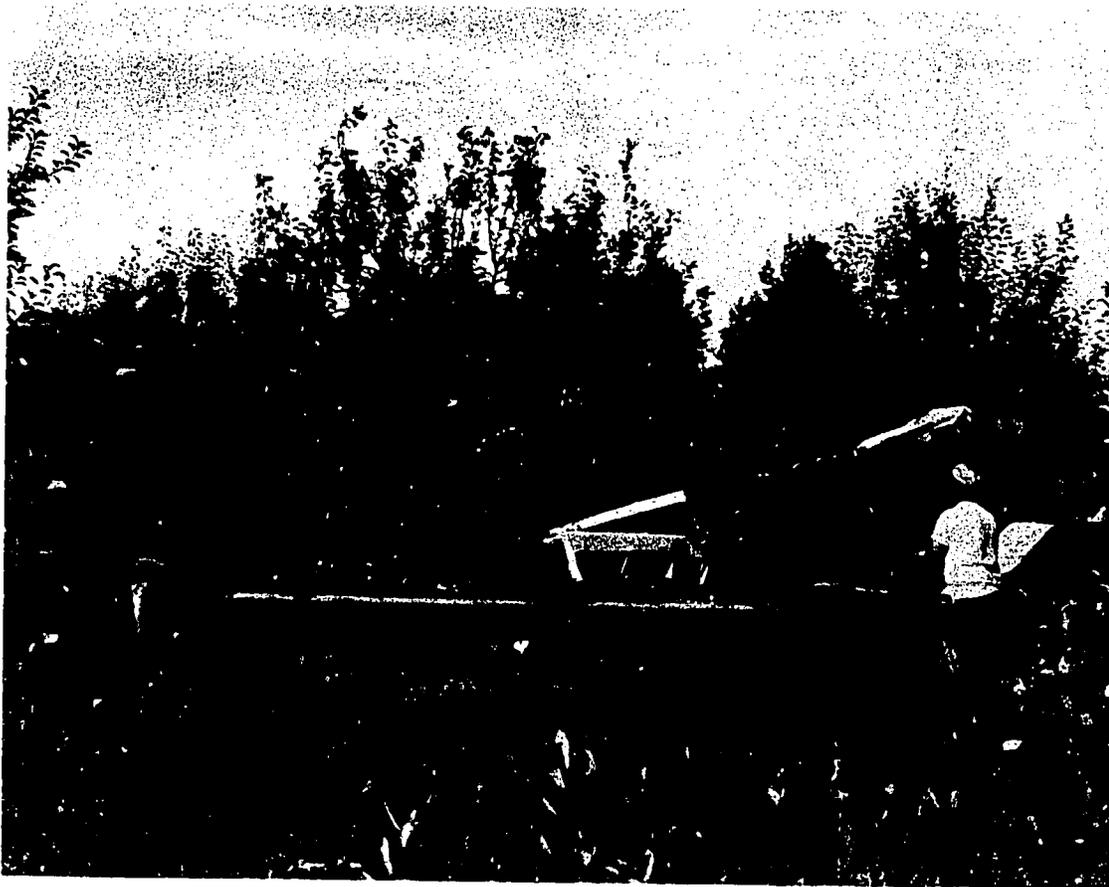


Figure 6. Modern Agriculture Requires Equipment. (The above photograph shows a mechanical apple harvester in operation.)

Together with the free exchange market, these two systems make it possible for products to be produced for specific markets and transported to these markets. The communications system permits the exchange of information about crop conditions and prices for crops as well as the actual sale of commodities. The transportation system makes it possible for crops to be produced many miles from the consumer. Likewise, inputs needed for crop production can be produced many miles from the farm.

Regional Specialization. Land in some parts of the country is better suited for certain uses than in other parts of the country. The use made of land is determined by economic considerations, that is, the land is used for the purpose which will result in the largest net returns. Climate and other natural phenomena dictate which crops can be cultured. Economics and the land use in an area determine whether it will be profitable to use the land for crops, a residential subdivision, industrial development, or other purposes. Regional specialization could not exist to any appreciable extent without transportation and communications systems. An example of regional specialization is the citrus industry. Citrus products are primarily produced in Florida, the Rio Grande Valley Area, and California. These locations are able to specialize because of certain advantages over other locations. Yet, citrus products are available throughout the United States because of transportation and communication.

Mechanization. The replacement of animal power with mechanical power has resulted in several changes. With machinery, it is possible for one person to care for larger farms than with animals. This has meant a decline in the number of draft animals and the feed required to maintain them. The output per man-hour worked on farms has increased considerably since 1950. This means that the hours of labor required to produce crops has greatly declined. As this has occurred, the number of persons supplied per far worker has increased. Agribusiness furnishes the mechanical inputs required for this to occur.

Research and Education. Programs of research and education have been instrumental in many changes in agriculture. New crops, machinery,

chemicals, and cultural practices are developed through research. Programs of education provide instruction so that the findings of research may be put into practice.

Early farmers in the United States met and overcame many obstacles. Land has to be cleared of great forests. Soil which has never been plowed had to be plowed. Scientific knowledge about agriculture was lacking. Even if it had existed, there would have been little way of getting it to the farmers because there was no system of agricultural education. Many farmers recognized the need for studying agricultural practices, determining which were best, and getting the information about which were best back to them. Several key events in the development of an agricultural research and education system are as follows:

1862 - President Lincoln signed a law setting up an agriculture department

1862 - Morrill Act provided for the establishment of colleges to teach agricultural arts

1887 - Hatch Act was passed providing for a system of agricultural experiment stations

1889 - Agriculture department achieved cabinet status

1914 - Smith-Lever Act provided for establishment of an extension division in association with colleges established under the Morrill Act to conduct instruction in agricultural and home economics subjects

1917 - Smith-Hughes Act provided for programs of instruction in production agriculture in the public schools.

1963 - Vocational Education Act provided for expanding instruction in public schools to include areas of agriculture other than farming, i.e., agribusiness

Work Ethic of the People. The attitudes that people have toward work are important. In the United States, there is a strong positive attitude toward work and doing well in the work. This motivation

results in people being efficient in their jobs and having a sense of satisfaction from a job that is well done. The ability to overcome setbacks is also a part of this ethic.

How did the development of agribusiness occur?

Agribusiness developed as the United States developed. It is almost impossible to differentiate between changes in agriculture and changes in other sectors of the economy. In the early history of the country agriculture was almost entirely farming and was the way of life. Nearly everyone farmed and lived on farms. In 1790, 90 percent of the people made their living by farming. Most of the food and clothing was produced at home. Only a few necessary items which could not be produced at home were purchased. The farms were largely self-sufficient, that is, most farms produced only for the needs of the persons living on them.

In the early 1800's agriculture was centered almost entirely on the farm. The farmer only occasionally used the skills or goods of people off the farm. These were often specialized, such as the skills of a blacksmith or cabinetmaker. The farmer soon began to realize that because of his skill a blacksmith, for example, could produce better horse shoes, tools, etc., than the farmer himself could make. Thus the farmer started obtaining his horse shoes and tools from the person who could make them best. Often, the farmer would exchange harvested crops and occasionally money for the labor.

As the farmer began to rely on specialists off the farm for labor

and supplies, the development of agribusiness was underway. Functions traditionally performed on the farm were transferred to off-farm locations. Farm activities became decentralized and segmented. This, however, did not occur suddenly but occurred gradually as progress was made in communications, transportation, and other technological developments.

Large increases in agricultural output took place in the late 1800's and early 1900's. New developments were made in many areas that contributed to specialization and decentralization of farm activities. Mechanical power replaced animal power. Output per worker went up. Inland transportation greatly improved, first with railroads and then with trucks. Specialization became greater. Industrial development increased. The effect of all of this was to reduce the number of operations performed on the farm. Today, agriculture is highly specialized, segmented, and decentralized. There are agribusiness specialists in feeds, insecticides, machinery, processing, marketing, and all other areas which are a part of agriculture.

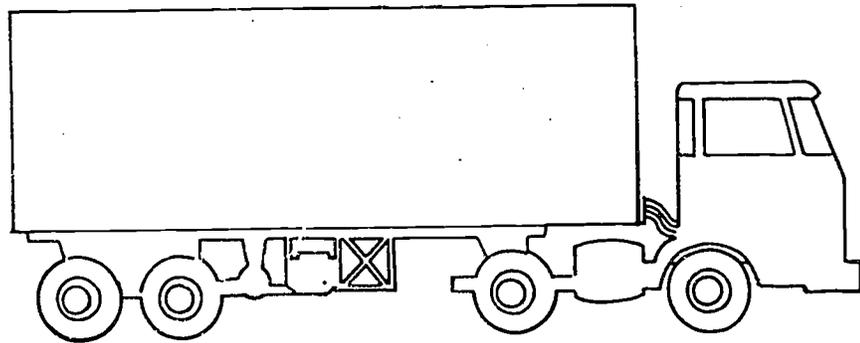
What are the essential components of agribusiness activity?

Agribusiness does not exist in isolation from other business, industrial, and agricultural activities. Several components, which cut across many other areas, are essential to the conduct of agribusiness activities. Some of these are the systems of transportation, communication and free marketing and the phenomenon of specialization. All of these must function together harmoniously if the current agribusiness

complex is to be maintained.

Transportation. As one of the important systems in agribusiness activity, transportation involves hauling the inputs needed by farmers to the farm and hauling farm products to the consumer. This is probably an oversim-

plification since transportation is very large and diverse.

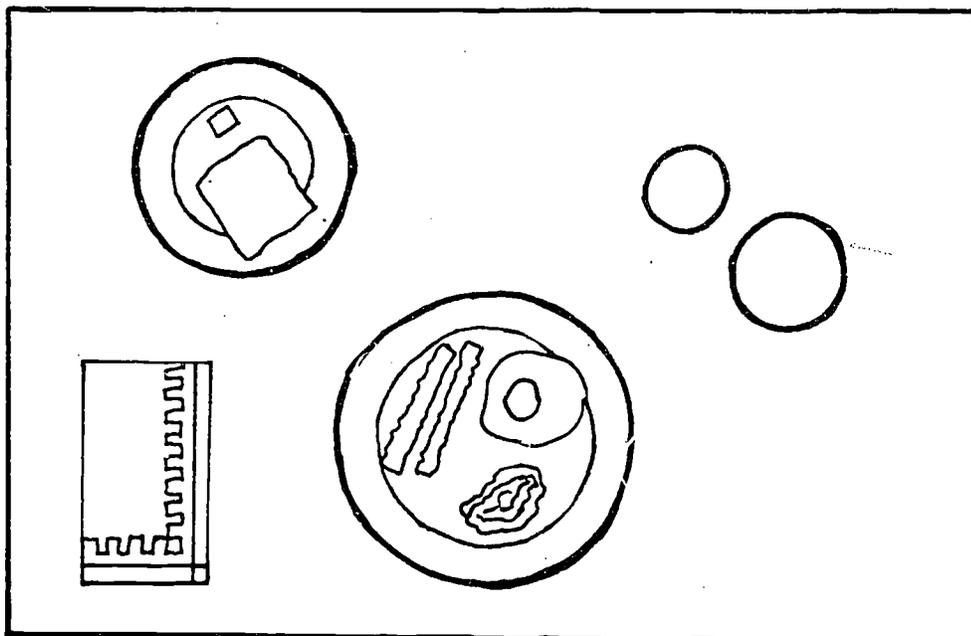


Agricultural commodities

may be transported thousands of miles by air, truck, boat, or other means, before reaching the consumer. Many of these commodities are perishable and, therefore, must be transported so as to maintain quality. Examples of measures to maintain quality include refrigerated trucks and special packaging procedures to avoid damage to fragile commodities.

The network of the transportation system connects almost every city, town, and community in the United States to bring quality products. This network requires many people to keep it operating. Likewise, the farmer depends on it to haul the inputs he needs as well as the commodities he produces. The consumer depends on it to keep ample supplies of food, clothing, and other products available in retail stores. The illustration, "The Breakfast You Had Today," depicts the importance of transportation in getting some common items to the consumer.

Communication. The communications system is an essential aspect



THE BREAKFAST YOU HAD TODAY . . .

Toast	From <u>wheat</u> grown in Kansas, milled in Missouri, and baked in Virginia
Butter	From <u>milk</u> produced in Virginia
Bacon	From hogs grown in Virginia and corn raised in Ohio
Egg	Produced in Virginia and cooked in oil made in Illinois from corn grown in Iowa
Hash brown potatoes	From <u>potatoes</u> grown in Maine
Orange juice	From <u>oranges</u> grown in Florida
Milk	Produced in Virginia

of agribusiness activity. The extent of communications involved in agribusiness is almost impossible to comprehend. Modern systems of communication permit buyers and sellers to exchange commodities without actual face to face contact. Farmers are able to keep up with market prices and sell or buy at the most advantageous time. Buyers and farmers, alike, are able to keep up with conditions which affect crops, such as rainfall, pests, and diseases.

The communications system is composed of various media of communication. These include radio, television, telephone, teletype, newspaper, and special market newsletters. Radio, television, and newspapers are widely distributed and carry regular reports of agribusiness news. The instant media of telephone and teletype permit the exchange of information, including the actual sale of goods.

Free Market. A free market is a market in which buyers and sellers have the privilege of trading without restrictions on prices and quantities and neither is compelled to buy or sell. The principle of the free market stimulated the development of agribusiness considerably. Under it, ideally farmers were able to negotiate with the suppliers of the inputs needed for farming. Likewise, farmers were able to negotiate with the buyers of farm commodities. Agribusiness does not have an unlimited free market. Various regulations have been implemented by governmental agencies to somewhat restrict the free market. These regulations were designed to protect the buyer as well as the seller. The free market stimulates increased production when prices are high and profitable and has a reverse effect when prices are low and unprofitable.

Specialization. The concentration of effort on one commodity or activity is known as specialization. It is an important feature of agriculture today. Some farms produce only one crop. Certain agribusinesses may supply only one item, such as a specific pesticide, or process only one product, such as pimiento peppers. This means that specialization has occurred. Agricultural industries are often highly specialized, perhaps more so than farmers. Many industrial workers perform only one small but important task in the manufacture of goods.

Geographical areas of the country may specialize in certain commodities. This is because these areas are best adapted to uses for certain crops or manufacturing activities. The best use for any area is determined by a number of factors, including suitability of climate for certain uses and industrial and residential uses as a function of maximizing economic returns. Specialization is possible only when good systems of communication and transportation exist under a marketing system that is relatively free. Since specialists often produce only one product and never more than a few, they depend upon other specialists to produce the products they need but do not produce. Through the systems of communication and transportation the products of specialists are exchanged and each has his needs met. Both farmers, agribusiness workers, and industrial workers obtain money for their work activities. This money is used to purchase goods and services made available by other specialized workers.

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