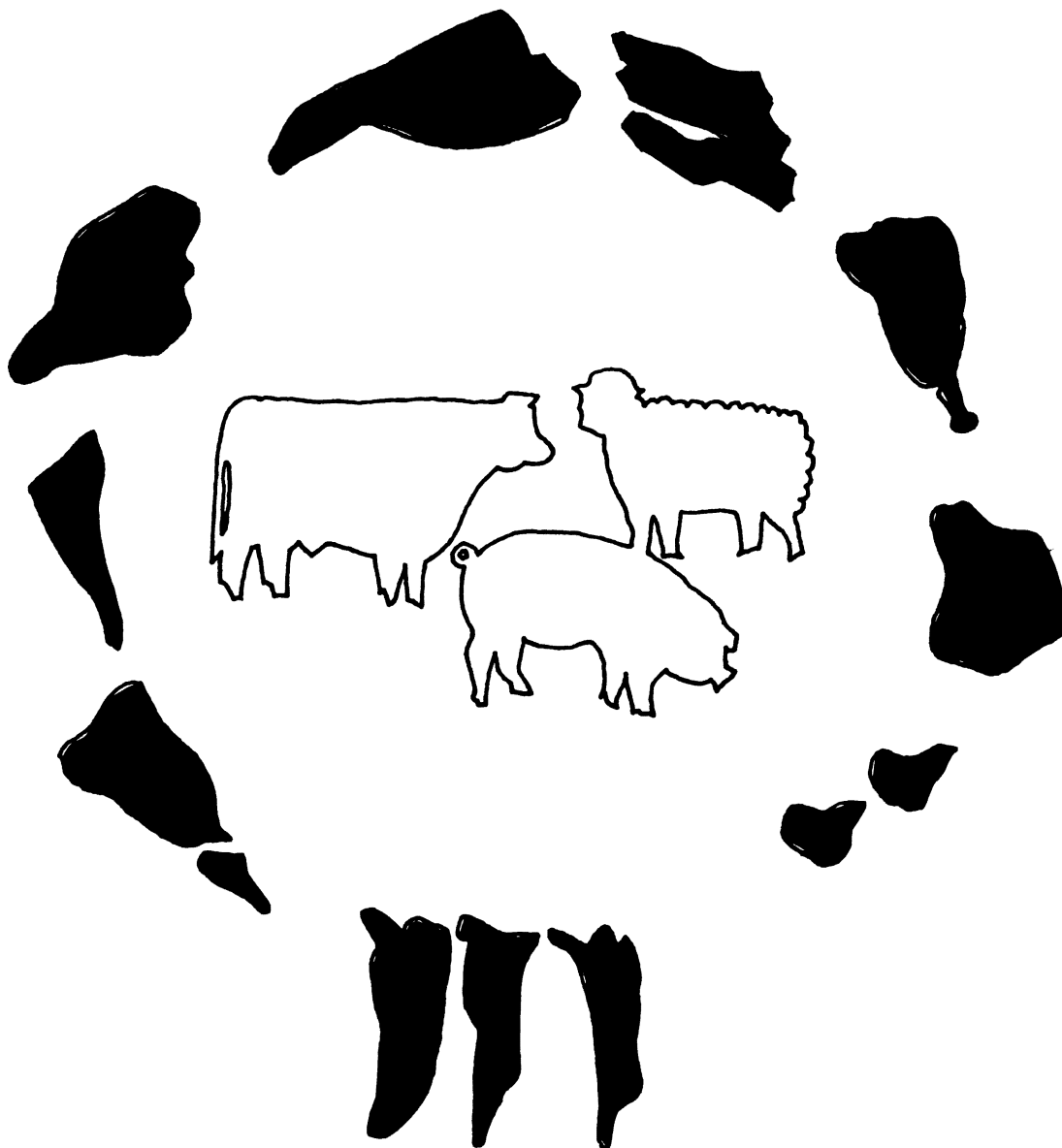


# Economic Feasibility Analysis Outlines For Livestock Marketing and Slaughter-Processing Firms



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U. S. Department of Agriculture.

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December, 1971

## PREFACE

Extension personnel are receiving numerous requests concerning the feasibility, or profitability, of establishing new livestock marketing and/or slaughter-processing firms. The Livestock Marketing Task Force of the Southern Extension Marketing Committee thought it would be helpful to outline the basic factors to be considered in a feasibility analysis. An extensive bibliography of past studies is given after each outline to demonstrate several different approaches as well as to provide some basic cost and operating coefficients.

The outlines are intended for use by Extension Marketing Specialists and Extension Agents who are called upon for assistance in making feasibility studies in various segments of the livestock and meat industry. Some clients will be able to use the outlines to complete these studies on their own. Others will need varying degrees of assistance.

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ECONOMIC FEASIBILITY ANALYSIS OUTLINES FOR  
LIVESTOCK MARKETING AND SLAUGHTER-PROCESSING FIRMS

David Holder and Kary Mathis\*

Introduction

The livestock and meat industry is part of a dynamic economy. As a result, there will continue to be a need for creative people who will adapt to changing conditions by making investments in various segments of the industry. This bulletin provides outlines for analyzing the economic feasibility of new investments in (1) livestock marketing enterprises, and (2) slaughter-processing enterprises.

Many changes have occurred in the livestock-meat industry since World War II. There has been a large increase in consumer demand for meat because of a 35% increase in population and a 50% increase in real disposable income per capita. In response, beef production has increased by 125%, pork by 25%, and broilers by 550%. At the same time, the production center for cattle feeding has shifted from the Cornbelt to the southern plains area of Texas, Colorado, Kansas, and Nebraska. Consumers, on the other hand, have become more concentrated in areas removed from production.

Market outlets and channels for live animals have also changed. Large producers and feeders have bypassed traditional outlets and have developed more direct, integrated, or coordinated marketing arrangements. Large numbers of slaughter livestock are moving directly from feeder to packer. Feeder animals also move directly from farm or ranch producers to feeding areas. As a result, terminal and auction markets have become relatively less important. They are handling a smaller share of animals marketed and many have closed.

From a slaughtering standpoint, it has been advantageous for packers to close old, obsolete plants located around terminal markets and in cities and to build plants in the areas of production. In general, the new facilities have been large, specialized (single-specie) plants. Cattle and hog slaughter have declined in Illinois (Chicago) and in the northeastern states. Cattle slaughter has increased in Texas, Iowa, Nebraska, and California. Hog slaughter has expanded in Iowa and in some southeastern states.

Changes will continue to take place in the livestock-meat industry. New livestock production systems, different marketing arrangements, new slaughter-processing techniques, and changes in transportation will evolve

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in the future. Consumer preferences will change, and new meat products and competitive foods will be developed. New requirements of a mass distribution system will be felt throughout the livestock-meat marketing system.

Future returns from investments cannot be forecast with certainty. Over time, technologies and other factors will change so that an investment which is feasible at one time will not be feasible at another and vice versa. At the same time, a given investment may be feasible in one region but not in another because of differing economic, social, and political conditions in the two regions.

Determining the feasibility of a new investment in a live animal marketing enterprise or a slaughter-processing plant consists primarily of evaluating the economic feasibility of the investment. Relevant physical and technical relationships must be considered as well. There are also questions of social and political feasibility which must be answered. For example, it may be physically and economically feasible to build a plant in a particular area, but it may be impossible to begin construction because of zoning or public opposition. One must be sure to recognize the role of these so-called "non-economic" aspects of feasibility rather than to assume they do not have any bearing on the analysis.

It is suggested that a feasibility study begin with the most critical aspect of a particular investment decision. That is, begin with the factor which is most likely to reject the project. If this aspect causes the project to be rejected, additional study may not be needed. In the southeastern United States, for example, procurement of an adequate supply of livestock is often the most critical factor if a livestock auction market or a large, specialized slaughter plant is being considered. On the other hand, if one is considering a small plant which will specialize in custom slaughter or which will provide custom meat cutting, demand is probably the most critical aspect. The investor must determine whether or not there are enough people likely to patronize the firm at a price level that will provide a satisfactory return on the investment.

After the most critical factor is analyzed, one should proceed to the next most critical one, and so on, until he is reasonably certain that the project is or is not feasible. The number of factors examined and the depth of the examination will depend on the availability of certain types of data and other pertinent information and on how much one is willing to pay to reduce uncertainty.

These outlines are guides for conducting feasibility studies for two types of livestock and meat marketing enterprises: (1) livestock auction markets or other live animal marketing outlets and (2) livestock slaughter-processing plants. The outlines provide a checklist of economic factors to be considered for each type of enterprise. Some factors may be an important part of one feasibility study and a relatively unimportant part of another. An attempt has been made to be inclusive, thereby making the individual analyst responsible for determining the important aspects of his particular feasibility problem, as well as for determining which "tools" to use in obtaining the desired information. Many suggestions are included in the bibliographies that follow each outline. However, caution should be exercised in using a particular approach to a different situation.

### Outline for Livestock Marketing Firms

This outline is a guide for analyzing the economic feasibility of a livestock auction market or other live animal marketing enterprise. It can be used in several ways: (1) To determine whether or not to invest in a new market enterprise; (2) To determine the type and location of a new market firm; (3) To improve facilities and operation of existing auction markets or marketing firms.

The outline divides the analysis into 2 stages: (1) Livestock Supply; (2) Establishment and Operation. Each stage has several sections. The 2 stages are established only to provide orderliness to the investigation, and should not be considered independent.

#### I. Livestock Supply

(Investment in a live animal marketing enterprise will not be profitable if a sufficient volume of livestock are not available in a particular area.)

##### A. Define the Relevant Market Area

1. What is a reasonable distance or radius around the proposed location within which sellers can be expected to bring livestock?
2. What is a reasonable distance buyers can be expected to travel to the proposed location?

##### B. Area Livestock Production

1. Trends and anticipated developments in livestock production, including trends in size and number of units, type of operation, changes to other species, any limiting or favorable factors.
2. Species produced (cattle and calves, hogs, sheep and lambs, horses, other).
3. For each species, list:
  - a. Number head, quality, and type--breeding herds or flocks, market animals
  - b. Size and type of producing unit--number livestock farms, number per farm, brief description of predominant types of operation
  - c. Seasonal production patterns

##### C. Area Livestock Market Structure

1. Trends in U. S. livestock marketing.
2. Trends and anticipated developments in area marketing channels, structure, and methods.
3. Number, location and volume of competing market outlets.  
(Number animals marketed through all outlets, by species, age, sex, class, size of lot, time of year, and ultimate disposition of livestock.)

4. If no competing outlets are in operation:
  - a. Were any operating previously?
  - b. If so, why did they discontinue operations?
  - c. Are these reasons still valid?
5. Estimate percent utilization of capacity, or operating efficiency of existing auctions and other market outlets. What are reasons for the efficiency or utilization levels found?
6. Types of services offered, degree of competence and level of technology of competing firms.

D. Anticipated Market Share

1. How much of the total supply is the new marketing firm likely to handle?
2. How is market share likely to change in the years ahead?

II. Establishment and Operation

(The types of services considered help determine investment and facilities required. Effects of different market operating practices on the ability of the enterprise to perform its marketing function completely and efficiently must be understood.)

A. Marketing Services Proposed

1. Conventional services
  - a. Auction sales--scheduled and special
  - b. Dealership
  - c. Feed
  - d. Merchandise
  - e. Restaurant
2. Additional services
  - a. Board or tour sales
  - b. Marketing agent for cooperative or producer group
  - c. Tel-o-auction
  - d. Customer accounts and records
  - e. Insurance, trucking, other facilitative services
  - f. Other

B. Facility Requirements

1. Site
  - a. Location, zoning or other restrictions, space for expansion, tax considerations, related firms or facilities nearby
  - b. Access to transportation--road, rail, air facilities; size, schedules, frequency, type equipment, time and distance to major market points
  - c. Utilities--availability, including waste and sewage disposal facilities; rates; restrictions or special conditions
2. Buildings and equipment
  - a. Existing buildings and equipment--inventory; available for sale, rent, or lease
  - b. New facilities and equipment required, including possibility of renting or leasing

- C. Personnel
  - 1. Is qualified management available locally? If not, can competent management be attracted?
  - 2. Are supervisory personnel available? Will training be needed?
  - 3. Is experienced labor available locally? If not, what training is needed?
  - 4. What wage level must be offered?
  - 5. Effect of wage and hour regulations.
  - 6. What unions are (will be) involved?
  
- D. Assembly and Transportation
  - 1. Transportation methods used by livestock producers or sellers for each type and species marketed, and associated costs.
  - 2. Transportation methods used by buyers in assembling purchased animals, and associated costs.
  - 3. Concentration or holding points and costs.
  - 4. Other factors--weather that may affect transportation; regulations; etc.
  
- E. Organization
  - 1. Legal structure of organization--cooperative, ordinary corporation, partnership, proprietorship, subchapter S-corporation.
  - 2. Ownership--stock, non-stock, revolving capital, etc.
  - 3. Contractual agreements--production contracts, marketing contract, sales agreements, etc.
  - 4. Regulatory agency requirements--Packers and Stockyards Administration regulations; bonding and registering, rates, scales and weighing, accounting and records; state and other agency requirements.
  
- F. Capital
  - 1. Capital requirements for the marketing facility.
    - a. Site acquisition, including utilities, roads, etc.
    - b. Buildings and equipment
  - 2. Operating capital requirements
    - a. Continuing expenses--labor, taxes, utilities, overhead, etc.
    - b. Customer payments, commissions, fees, etc.
    - c. Cash flow analysis and projection of requirements
  - 3. Financing--can the proposed firm be financed satisfactorily?
  - 4. Profit projections and repayment capacity.
    - a. Estimate of currently available livestock volume through proposed firm, with associated operating costs and returns, both total and per unit
    - b. Profit position over intermediate term (2 to 5 years), with anticipated immediate volume and projected expansion



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### Outline for Slaughter-Processing Firms

The feasibility analysis for a slaughter-processing facility is divided into 4 basic stages: (1) Livestock Procurement, (2) Slaughtering and Processing, (3) Sales and Distribution, and (4) Location. These stages are established only to provide orderliness in the investigation. They are not considered to be independent, nor are they listed in order of importance.

#### I. Livestock Procurement

(It is unprofitable to build a plant of some given size unless one can consistently obtain a sufficient number of livestock of the desired type and quality.)

- A. Production History--regional and national
  - 1. Number and size of farms
  - 2. Number and quality of animals available for slaughter annually
  - 3. Reasons for recent changes (if any) in annual production
- B. Future Production
  - 1. Expected changes from past production trends including consideration of changes in interregional competition
  - 2. Expected seasonality of production
- C. Livestock Available for Slaughter
  - 1. Nearby area
  - 2. Other areas
- D. Competition in Procurement of Livestock
  - 1. Number, location, and capacity of competing slaughter plants and other buyers of slaughter animals
  - 2. Number, location, and volume of existing markets in the area
  - 3. Expected changes in the future
  - 4. Expected share of livestock available
- E. Prices of Livestock in the Area Relative to Competing Areas
- F. Cost of Procurement
  - 1. Buyers' salaries, commissions, etc.
  - 2. Buying stations (including purchasing facilities at the plant)
  - 3. Transportation
  - 4. Holding facilities (in the country and at the plant)
  - 5. Other costs

## II. Slaughtering and Processing

(The plant must be able to meet all government regulations and still be operated efficiently. A new firm must have a higher level of in-plant efficiency than its competitors unless offsetting advantages can be gained in procurement, sales and distribution, and location.)

- A. Competitive Situation
  - 1. Regionally (locally)
    - a. Number and types of plants in operation
    - b. Estimated percent utilization of existing plants; reasons for utilization level
    - c. Level of technology in competing firms
    - d. If few competing firms, were there once some? Why did they discontinue operations? Are these reasons still valid?
  - 2. Interregionally
    - a. Recent interregional trends, reasons for them, and likelihood of their continuing in the future
- B. Facility Requirements--buildings and equipment
  - 1. Technological requirements--chain speed, number of shifts, multi-specie or specialized plants, type of equipment, etc.
  - 2. Inspection requirements--effect on slaughter, processing, storage, building materials, etc.
  - 3. Pollution control requirements (air, water, noise)
  - 4. Existing facilities available for rent or purchase, or new ones
  - 5. Cost of the above at selected kill rates--needed for budgeting purposes as well as to show economies of scale
- C. Labor Requirements
  - 1. Production workers
    - a. Number of workers by classification
    - b. Availability of local labor and hiring costs
    - c. Need for training and training costs
    - d. Wage level
    - e. Will a union be involved? If so, which one? What requirements must be met?
  - 2. Supervisory and management personnel
    - a. Number and classification
    - b. Availability and hiring costs
    - c. Training and training costs
    - d. Salary level

- D. Capital Requirements
  - 1. Amount needed for
    - a. Site acquisition and preparation
    - b. Facilities and equipment
    - c. Operating capital
  - 2. Sources--is sufficient capital available?
    - a. Stockholders
    - b. Banks (Bank for Cooperatives, commercial banks)
    - c. Bonds
    - d. Small Business Administration
    - e. Other
  
- E. Firm Organization
  - 1. Legal structure--partnership, proprietorship, corporation, cooperative
  - 2. Ownership--stock, non-stock, revolving capital, other
  - 3. Cost of organizing the firm
  
- F. Budget Analysis
  - 1. Projected income and expenses
  - 2. Cash flow

### III. Product Sales and Distribution

(Breaking into any market involves much uncertainty. In established markets, one must withstand attacks by competing firms. In relatively new markets, one must be able to stimulate sufficient buyer interest.)

- A. Type of Product and Package
  - 1. Carcass, primal cuts, portion cuts
  - 2. Graded or ungraded
  - 3. Fresh, frozen, canned, dried
  - 4. Branded or undifferentiated
  - 5. Other
  
- B. Competitive Situation--regional and interregional
  - 1. Annual (weekly, monthly) consumption in the area. Seasonality?
  - 2. Number, location, and capacity of competing sales firms.  
(Some may not be engaged in any slaughtering or processing.)  
Percent of capacity being utilized. Reasons for using less than full capacity.
  - 3. Potential for developing a new market and exploiting it.  
Perhaps with a new product, a new service, and/or a new distribution channel
  
- C. Market Outlets
  - 1. Wholesale, retail, institutional, export
  - 2. Another processor
  - 3. Demand evaluation
  
- D. Sales Plan
  - 1. Method and cost of breaking into the market
  - 2. Use of broker, own sales force, jobber, contract, other arrangements

- E. Product Handling
  - 1. Transportation
    - a. Distance to primary markets
    - b. Mode of transportation--truck, rail, air
    - c. Transportation rates
  - 2. Storage
    - a. Quantity of product to be stored per unit time
    - b. Facilities needed
    - c. Costs
  - 3. Types of containers and cost

#### IV. Location

(Within a given region there are a number of alternative locations. The following are some of the factors to consider when looking at the alternatives.)

- A. Competition for Livestock and for Meat Buyers
- B. Access to Transportation and Cost of Using Various Types
  - 1. To obtain livestock
  - 2. To distribute meat products
- C. Site Factors
  - 1. Zoning and other legal restrictions--current and anticipated
  - 2. Space for expansion
  - 3. Suitability of soil types
  - 4. Access to utilities and cost
  - 5. Taxes--current and anticipated
  - 6. Police and fire protection
  - 7. Pollution problems
- D. Nearness to Labor Supply
- E. Construction Costs Which May Vary with Alternative Locations

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