



The beef chain in Costa Rica: Identifying critical issues for promoting its modernization, efficiency, and competitiveness

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Introduction
In Costa Rica, livestock represents the most important economic activity within the agricultural sector, accounting for 31% of the sector's gross domestic product (GDP) and 11% of the national GDP (CORFOGA 2005a). It is a strategic activity in that it supplies food staples for the population. Its linkages with other sectors of the economy give rise to multiplier effects in terms of employment, income generation, foreign exchange, and general economic growth.

- Objectives of the study**
- Generate strategic information that would help establish priorities and implement lines of action for those in public and private sectors who are in charge of promoting technological change and competitiveness of the nation's livestock agro-enterprise
 - Describe the economic agents of the chain and their commercial and legal relationships;
 - Identify the articulations between links, technological levels, efficiency indicators, installed capacity (scale), and degrees of occupation;
 - Characterize and estimate costing and pricing structures and the generation of value in different parts of the chain;
 - Identify those costs that are critical, and can be modified through technological interventions, policy, or other activity; and
 - Determine the biological and economic risk factors throughout the chain.

- Methods**
- A combination of primary and secondary information was collected to describe, characterize, and analyze the different segments that form the beef chain of Costa Rica
 - Surveys were carried out in May 2006 in different segments:
 - (1) **auction houses,**
 - (2) **slaughterhouses,**
 - (3) **butcher shops, and**
 - (4) **supermarkets.**
 - The aim of these surveys was to describe behavior, determine relationships, estimate costs, and identify problems

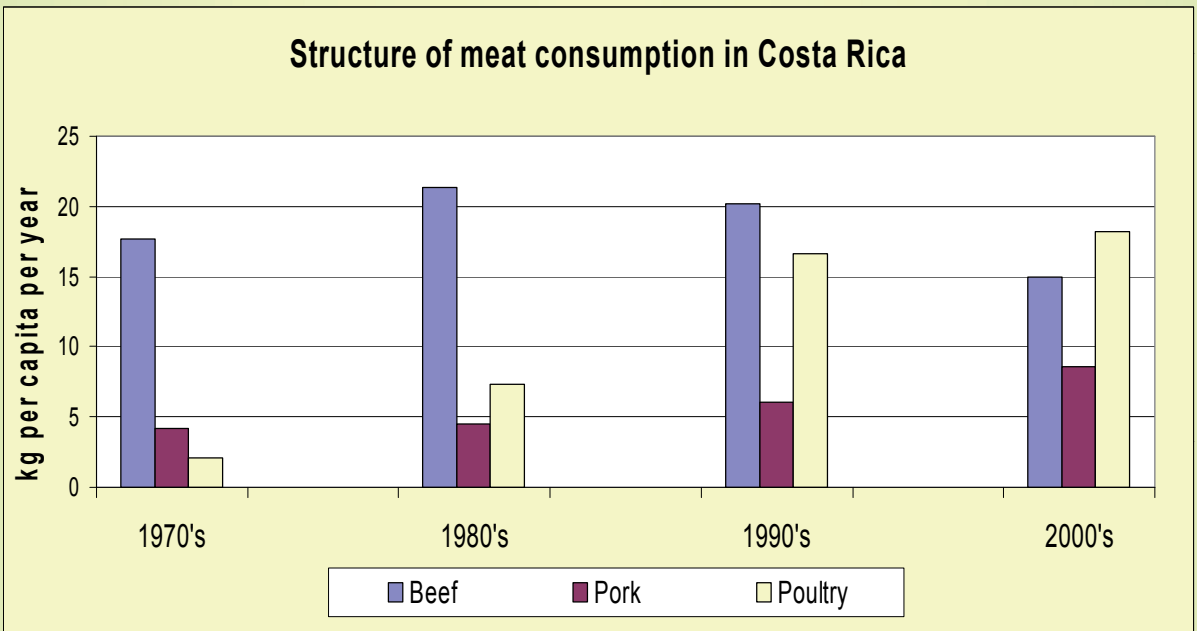
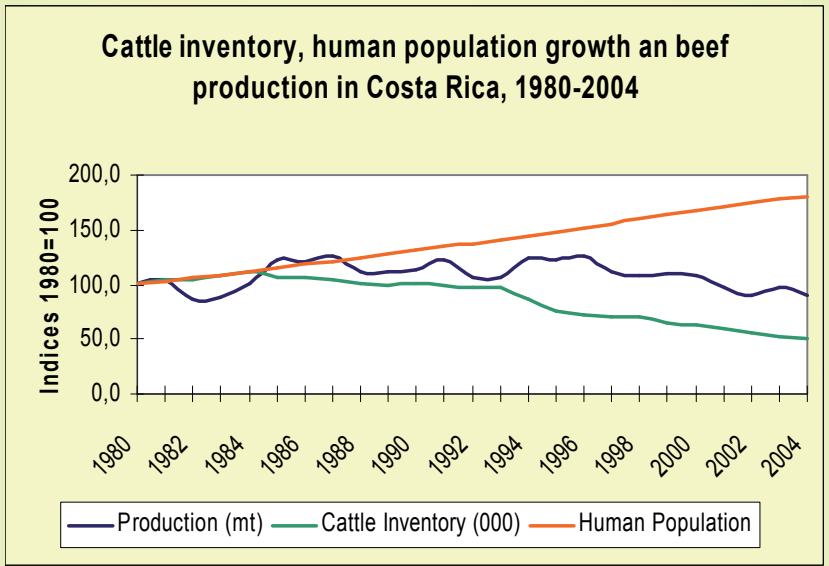
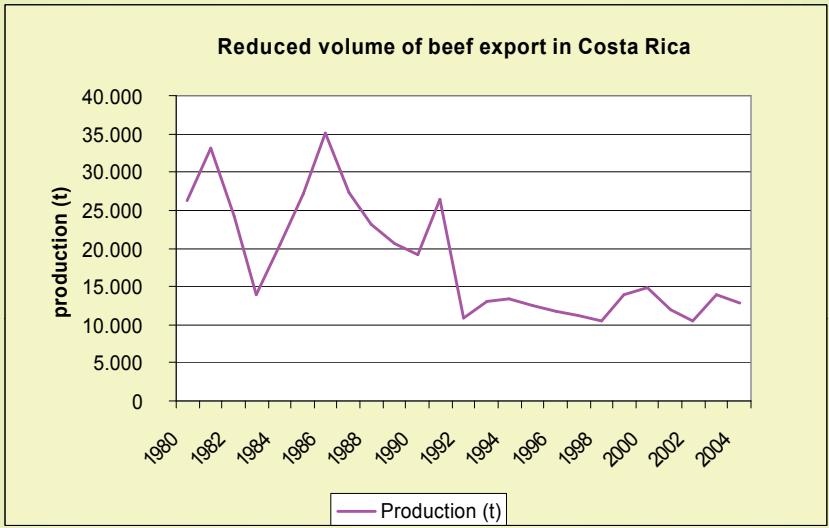
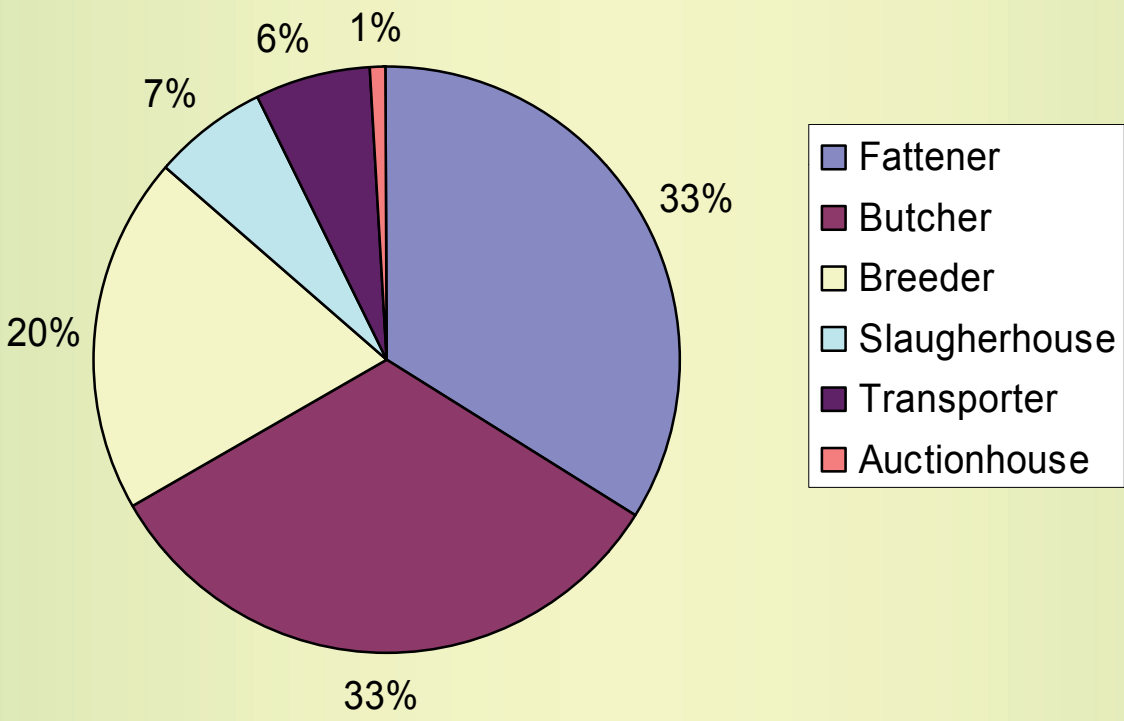
- Problems in primary production of beef chain**
- Availability of forage in quantity and quality is insufficient.
 - Adoption of new forage species is slow and too insignificant to improve the national averages of productivity.
 - Low productivity results in high unit costs of production and high economic risk.
 - Highly variable income becomes associated with high mortality indices, low birth rates, and low culling rates.
 - The first link-breeding, the basis of production-presents lower gross margins per unit production factor, suggesting that it may be the least profitable system of the entire meat chain.
 - Declining rates of production (-0.1% per year for 1980–2004) and of the cattle inventory (-2.5% per year in the same period).

- Problems in marketing and processing livestock**
- The capacity of installations at auction houses, slaughterhouses, and processing plants is underutilized. The end result is inefficient use of capital and labor resources and absence of economies of scale that become manifest as high unit costs.

- Problems with distribution and consumption**
- Beef has been displaced by chicken, which totals 44% of total meat consumption, versus beef at 36%.
 - Loss of competitiveness of domestic beef production is reflected in the drastic reduction of the country's total exports.



Value generated in the chain as the percentage of the final value of the young steer



- Results**
- The distribution of value throughout the beef chain is totally inequitable and incongruent with the level of individual risk confronted by the actors who form the value chain.
 - The inequity observed in the distribution of added value reflects a clear dominant position in the market of some actors of the chain, which enables them to capture a very high fraction of the profits
 - The highest proportion of the total added value concentrates on the final link of the chain
 - The butcher or supermarket obtains, on the basis of one animal in the same unit of time, 164 times more value than the breeder located in the first part of the chain
 - Breeder has to confront risks not covered by insurance policies, whereas retailers may mitigate risks through insurance policies for their raw materials, equipment, and infrastructure

Added value per day of permanence

Chain Link	Value
Breeder	\$ 0,28
Transporter	\$ 21,00
Fattener	\$ 0,24
Slaughter-house	\$ 9,14
Butcher	\$ 45,85

- Recommendations**
- **Learning from the experience of successful chains such as that of poultry**
 - **Improving income and cash flow**
 - **Promoting organizations of livestock producers**
 - **Large-scale promotion and establishment of improved forage species with emphasis for dry seasons**
 - **Designing and applying a carcass classification system**
 - **Promoting domestic consumption and exports**

Proposed strategies fore each chain link

Chain Link	Strategies
Breeder/ Fattener	Incorporate the fattening system into the breeding system and, where a market exists, include milk production to improve profitability.
Auction House	Integrate them so that fixed operational costs are shared and administrative and operational personnel rotated among several auction houses.
Slaughter-house	For rural slaughterhouses: Seek additional income from the sale of byproducts such as hides, blood, and bones.
Butcher/ Super-markets	Contract farming, which enable segments located in the upper part of the chain to finance primary production through credits, input supplies, and technical assistance.