Management and Strategic planning of agribusiness systems: the case of livestock in Goiás – Brazil

Tássia Gerbasi
USP / FEARP / MARKESTRAT - tgerbasi@markestrat.org

PhD Marcos Fava Neves
USP / FEARP / MARKESTRAT – favaneves@gmail.com

Mairun Junqueira Alves Pinto
USP / FEA / MARKESTRAT –

Rafael Bordonal Kalaki
USP / FEARP / MARKESTRAT
AGENDA:

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- Method Used
- Literature Review
- Results
  - PEST
  - Porter's Five Forces
  - SWOT
  - Objectives
  - Strategy Vector Plans
- Conclusions and Managerial Implications
- Major References
The state of Goiás:

- 9.5% of all production of Brazilian **bovine meat**
- 5.5% of Brazilian **chicken meat**
- 5% of Brazilian **pork**
- Large availability of **grains and high technology**
Objectives

Main objective:
Adapt a method of strategic planning and management of supply chains for a state level with the involvement of class organizations.

The specific objectives are:

• to apply the new method in chains of bovine meat and leather, pork and poultry in the state of Goiás – Brazil;

• proposing strategic projects focused on improving the competitiveness of these agribusiness systems in Brazil and abroad
Literature Review

• There are different approaches that can be used for the chain study, but two traditional approaches are found in the literature, the one developed by Goldberg (1968) and the one proposed by Morvan (1985).


• Proposed by Neves (2005), GESis method consists of five steps that are detailed in the methodology of this work. It is worth mentioning that the proposed method has been applied to several agribusiness systems such as in AGS of orange (2004), wheat (2005) and Milk (2007), and more recently in AGSs of sugarcane (2009) cotton (2011) and bovine meat (2011), being improved with each application.
Method Used

Application of the adapted GESis (Neves, 2005):

**Figure 1.** The GESis method for strategic planning and management of food and bioenergy chains.
Method Used

Application of the adapted GESis – Step 4 (Neves, 2005):

Figure 2. Project scope: fourteen steps for strategic planning of agribusiness systems of grains and sugarcane in the state of Goiás
Source: Adapted from Neves (2005).
## Results:

### PEST

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Political-legal</th>
<th>Economic-natural</th>
<th>Socio-cultural</th>
<th>Technological</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Economic openness through international negotiations;</td>
<td>- Improved distribution of world income providing increased consumption of meat, leather, pork and chicken;</td>
<td>- Growth in world population and urbanization, leading to increased consumption;</td>
<td>- New technologies for waste reduction;</td>
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<tr>
<td></td>
<td>- Traceability system in implementation;</td>
<td>- Global economic integration;</td>
<td>- Growth in the education level;</td>
<td>- Growth of investment in R &amp; D, both public and private;</td>
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<tr>
<td></td>
<td>- Presence of certification standards</td>
<td>- Growth of markets that value high volumes and low prices;</td>
<td>- Inclusion of women in the labor market.</td>
<td>- Technologies that reduce environmental impacts.</td>
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<td></td>
<td></td>
<td>- Large supply of grain in Midwest region which may impact the cost of production;</td>
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<tr>
<td>Threats</td>
<td>- Juridical uncertainties due to environmental legislation;</td>
<td>- Negative impact of emissions of greenhouse gases by livestock;</td>
<td>- Increase in the number of vegetarians</td>
<td>- Incompatibility between human factor and technological advances leading to inefficiency in the management process;</td>
</tr>
<tr>
<td></td>
<td>- Tariff barriers and non-tariff barriers in international markets;</td>
<td>- Cycle appreciation of the national currency, damaging the competitiveness of Brazilian products;</td>
<td>- Concentration of large scale industries in the South.</td>
<td>-- Need for high technical and managerial control during the production process;</td>
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<tr>
<td></td>
<td>- Public policies to support the livestock are not sufficient for the size of the sector.</td>
<td></td>
<td>- Increased consumer demand for food safety;</td>
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</table>
Results:

Porter's Five Forces

Swine and Poultry
Countries or states that do not compete with the meat but have been showing some competitive advantage

Bovine meat and Leather
- Meat caprine and ovine
- New proteins as soy protein

Threat of new entrants

Swine and Poultry
Input suppliers mostly deal with large industries.

Bovine meat and Leather
- High competitiveness trend and bargaining power of suppliers of inputs.
- Livestock producers with little bargaining power due to spraying and pack of a centralizer organ.

Power of suppliers

Competitors

Swine and Poultry
Mato Grosso, Goiás, Austrália

Bovine meat and Leather
Market differentiation and higher production of US and UE

Threat of substitutes

Swine and Poultry, Bovine meat and Leather

Other animal protein and vegetal proteins.

Bovine meat and Leather
- Retail concentration
- International market: high bargaining power
- Industry: many integrated producers

Power of buyers

Swine and Poultry
- Retail: concentration;
- International market: high bargaining power;
- Industry: many integrated producers

Bovine meat and Leather
- Retail concentration of the commercialization channels by increasing its bargaining power.
- International market high bargaining power on the part of international buyers who are relatively undiversified.
## Results: SWOT

### Bovine meat and Bovine Leather

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Production in pasture, characterized as highly sustainable;</td>
<td>- Lack of vertical integration between chain links;</td>
</tr>
<tr>
<td>- Greater availability of grains for food supplementation;</td>
<td>- Problems of logistics due to the condition of roads and few alternatives;</td>
</tr>
<tr>
<td>- Brazilian territorial extension;</td>
<td>- Lack of efforts and initiatives in marketing, especially in communication;</td>
</tr>
<tr>
<td>- Good health status;</td>
<td>- Concentration of slaughtering industry;</td>
</tr>
<tr>
<td>- Traceability system already structured;</td>
<td>- Extensive areas of degraded pastures.</td>
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</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Recovery of degraded pastures for horizontal growth of production;</td>
<td>- High prices and low standardization;</td>
</tr>
<tr>
<td>- Expansion of feedlots to improve productivity;</td>
<td>- Pressure from environmental issues (greenhouse gas emissions);</td>
</tr>
<tr>
<td>- Creating or strengthening of associations / cooperatives;</td>
<td>- Increased production costs and activities with greater profitability may decrease the number</td>
</tr>
<tr>
<td>- Technological development in the areas of genetics and nutrition;</td>
<td>of farmers;</td>
</tr>
<tr>
<td>- Projects pioneered by agribusiness for mapping &quot;water footprint.&quot;</td>
<td>- Not overcoming the logistical problems.</td>
</tr>
</tbody>
</table>

### Poultry and Swine

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Stable climate, vast territory, with good water availability, high grain production and low</td>
<td>- Stiffness of integration contract;</td>
</tr>
<tr>
<td>production costs;</td>
<td>- Logistics problems mainly due to the condition of roads;</td>
</tr>
<tr>
<td>- High level of technological production;</td>
<td>- Little bargaining power of producers;</td>
</tr>
<tr>
<td>- Need for relatively small areas for production;</td>
<td>- Lack of a consolidated image of chains of poultry and pork;</td>
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<tr>
<td>- Strategic location of Goiás.</td>
<td>- High cost of manpower.</td>
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</tbody>
</table>

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<th>Opportunities</th>
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</tr>
</thead>
<tbody>
<tr>
<td>- Increase in class C contributing to the strengthening of the internal market;</td>
<td>- Technological Obsolescence in some points of the chain;</td>
</tr>
<tr>
<td>- Increase pluriactivity of rural property;</td>
<td>- Non-tariff barriers preventing the opening of new markets;</td>
</tr>
<tr>
<td>- Possibility of activity growth through developing regions;</td>
<td>- Unfavorable exchange for export;</td>
</tr>
<tr>
<td>- Demand for new products, differentiated and higher added value.</td>
<td>- Increase in price of inputs.</td>
</tr>
</tbody>
</table>
## Objective and goals

**CHAINS OF BOVINE MEAT AND LEATHER**
- Increase by 27% the production of bovine meat in the state;
- Increase by 5% the average slaughter weight of the state (productivity);
- Increase by 85% the number of animal feedlot;
- Achieve a 50% growth of the total of bovine meat exported by the state;
- Increase by 50% the total of leather benefited in the state;
- Performing internally tanning of finishing of 50% of the leather produced in the state.

**CHAINS OF SWINE AND POULTRY**
- Increase production of chicken meat by 3.5% per year;
- Increase production of pork by 2.5% per year;
- Increase exports of poultry at 4% per year;
- Increase pork exports at 3.5% per year;
- Diversify the international markets for pork;
- Access the most demanding markets of pork;
- Maintain the status "free" from diseases of compulsory notification of International Office of Epizootics.
### Dimensions and strategic projects

<table>
<thead>
<tr>
<th>Strategic Vectors</th>
<th>Strategic Actions</th>
</tr>
</thead>
</table>
| 1. Production, products, research and innovation       | ▪ Increase the practice of feedlots;  
▪ Attract new industries to the state;  
▪ Promote the approximation of the field with universities and research institutions. |
| 2. Communication                                       | ▪ Strengthen the image of meat in Goiás in consumer markets;  
▪ Create actions to maximize the quality of the leather of Goiás;  
▪ Promote meeting events between producers. |
| 3. Distribution, logistics and exports                 | ▪ Improve conditions and do constant maintenance of roads;  
▪ Create centers of storage and collective distribution of food;  
▪ Develop a center of freights;  
▪ Develop new markets. |
| 4. Training/Human Resources                            | ▪ Provide training courses;  
▪ Regulate all the work of the chains;  
▪ Encourage digital inclusion of producers. |
| 5. Coordination and adaptation to the institutional environment | ▪ Define a management group responsible for coordinating a system of governance of the chains;  
▪ Assist in the preparation of investment projects aiming greater technical adequacy standards. |
| 6. Sustainability                                      | ▪ Map the natural resources of the state;  
▪ Recover degraded pastures;  
▪ Invest in treating swine waste and poultry. |
| 7. Micro and small enterprises                         | ▪ Create cooperatives for small producers;  
▪ Encourage joint purchases;  
▪ Encourage credit cooperatives. |
Conclusions:

Modification in the method (GESis)

- Were made the insertion of Porter's Five Forces and Porter’s Diamond model analysis

- The fourth step of the method was focused on defining the strategic objectives to be achieved in 2020

- New vectors of projects were proposed sustainability, micro and small enterprises, and strengthening the weak or nonexistent links.

Article’s goal

- The article presented the results from the application of the method to the beef, leather, pork and poultry production chain, reaching its goal.

- This material serves as a stimulus to decision making in the public and private sectors.

- The work brought tools and subsidies for strategic decision made by organizations belonging to chains and their agents.
Major References

• ZYLBERNSZTAJN, D. Estruturas de governança e coordenação do agribusiness: uma aplicação da nova economia das instituições. 238p. Tese (Livre-Docência) – Departamento de Administração, Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo, 1995
Thank You

favaneves@gmail.com