

Consumer Preferences and Market Segmentation for Differentiated Beef with Less Environmental Impact

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Introduction

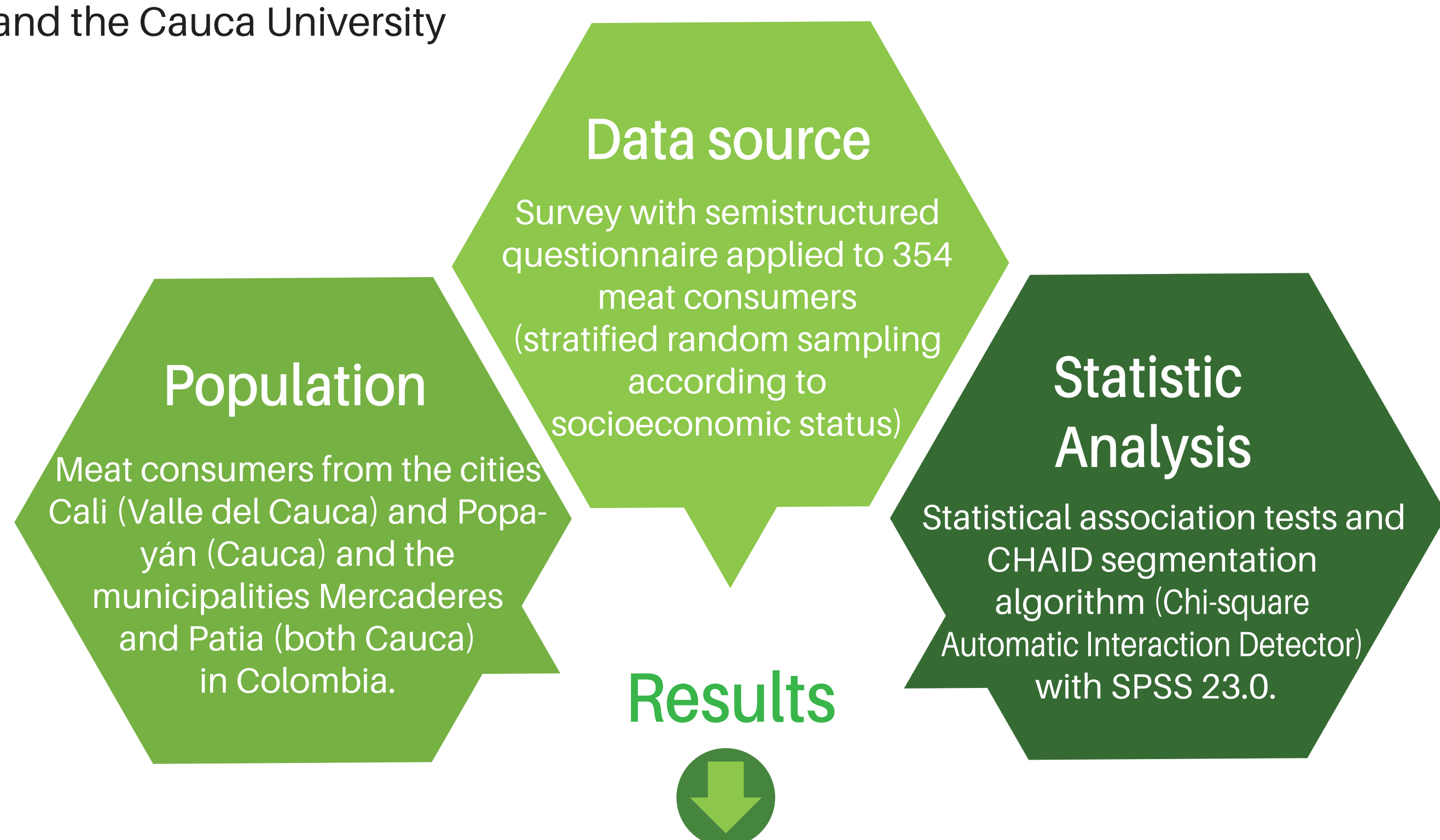
- In Colombia, beef production is characterized by its extensive management, with low levels of productivity, low soil use efficiency and a significant negative environmental impact
- Technologies such as improved pastures and silvo-pastoral systems are viable alternatives for a more sustainable production with a potential to mitigate and adapt to climate change by increasing productivity at the same time
- The implementation of these technologies however, implies a higher initial investment resulting to be a major adoption constraint
- Globally, demand is increasing for products differentiated by environmental characteristics as a result of consumer sensitization and higher environmental awareness
- The identification of a potential market for beef with less environmental impact can serve as a basis for the creation of incentives, supporting producers in the adoption of more environmentally friendly technologies

Objetives

- To identify the consumer segment(s) interested in beef with less environmental impact
- To determine the consumers' willingness to pay (WTP) for beef produced with less environmental impact

Materials & Methods

This study is part of the research program "Development and implementation of forage resources for sustainable bovine production systems in the Cauca department, Colombia" between the International Center for Tropical Agriculture (CIAT) and the Cauca University



- 70% of the surveyed consumers state to be willing to pay a price premium for beef with less environmental impact
- The potential consumers are on average willing to pay US\$ 0.31¹ price premium per pound (13.9%) at a purchase price of US\$ 3.32 per pound (confidence level 90%, standard error 4%)
- The variables "education level", "socioeconomic status", "age", "per capita income" and "level of knowledge of environmental impacts in beef production" are significant to determine the profile of potential consumers for beef produced with less environmental impact

Table 1 Correlation between willingness to pay and socio-demographic variables

	Price premium	
Age	-0.131*	*The correlation coefficient is significant at p<0,05; ** The correlation coefficient is significant at p<0,001; *** The correlation coefficient is significant at p<0,01
Education level	0.338***	
Socioeconomic status	0.224*	
Per capita income	0.161***	
Level of knowledge of environmental impacts	0.286***	

¹ Prices in USD - /USD/COP XRT: 08/22/2016

References

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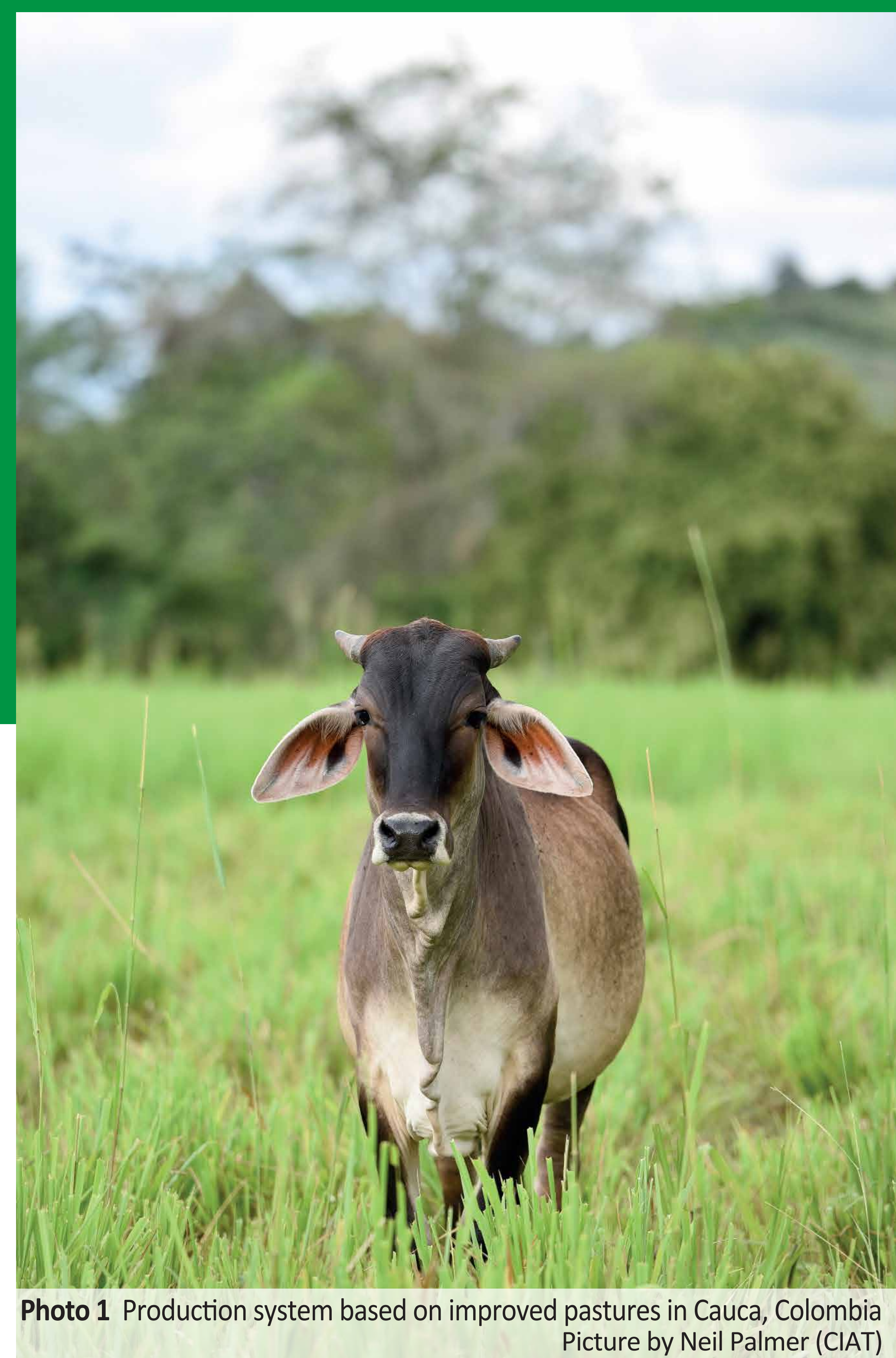
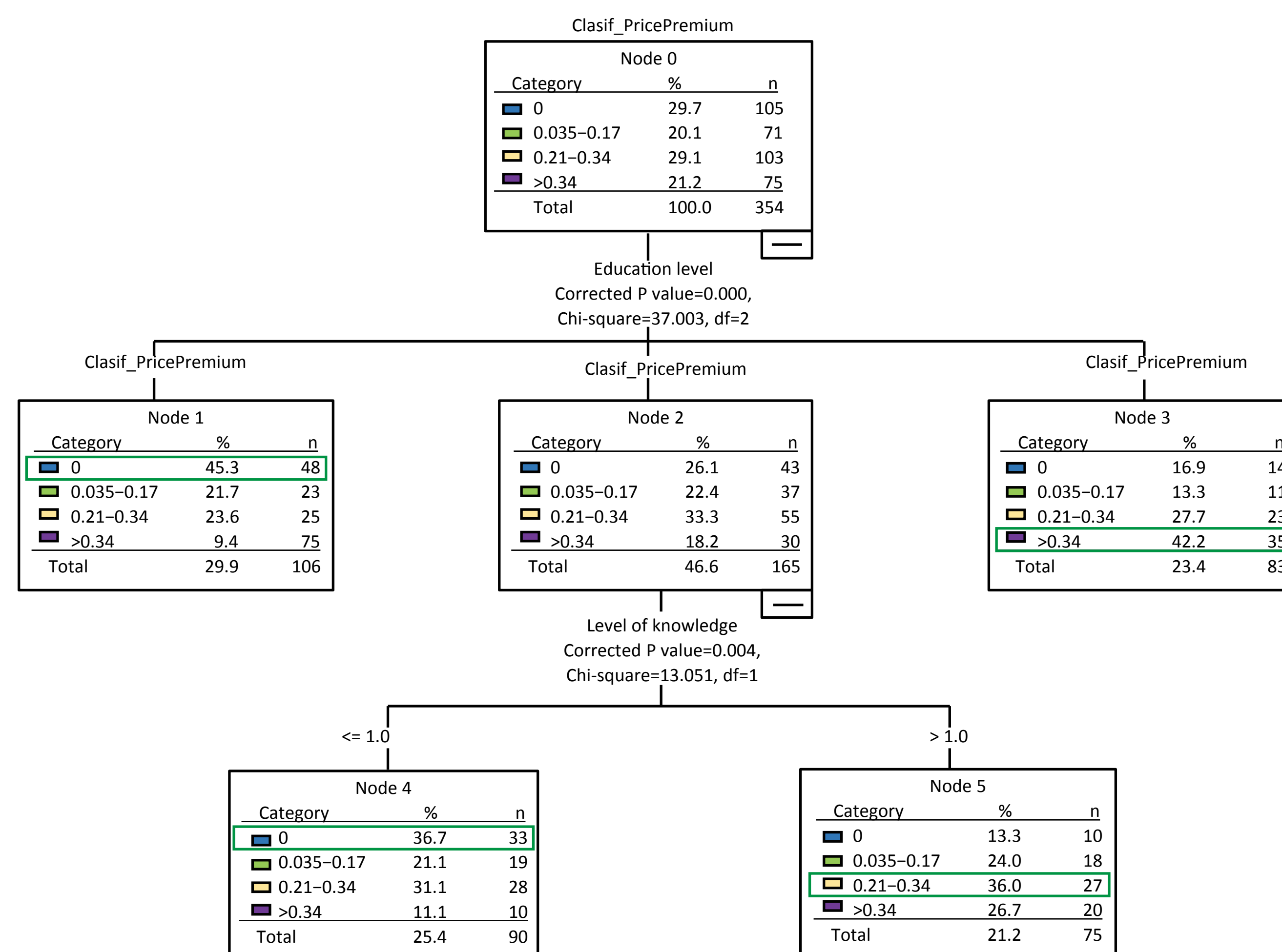


Photo 1 Production system based on improved pastures in Cauca, Colombia
 Picture by Neil Palmer (CIAT)

Figure 2 Post Hoc Segments for the WTP for beef with less environmental impact



- Segment 1: (N=106; 29.9%) Consumers with a maximum level of incomplete secondary studies - Price Premium willing to pay: US\$ 0 per pound (45.3%)
- Segment 2: (N=90; 25.4%) Consumers with completed secondary studies up to senior technician level, not knowing about the environmental impacts of beef production - Price Premium willing to pay: US\$ 0 per pound (36.7%)
- Segment 3: (N= 75; 21.2%) Consumers with completed secondary studies up to senior technicians level, knowing about the environmental impacts of beef production - Price Premium willing to pay: US\$ 0.21-0.35 per pound (36%)
- Segment 4: (N=83;23.4%) Consumers with education level superior to senior technician - Price Premium willing to pay: US\$ >0.35 per pound (42.2%)

Conclusions

- The results prove the existence of a potential market for beef produced with less environmental impact in the research area. Focusing on differentiated products might be an opportunity for the cattle sector
- The identification of the potential market serves as reference for decision makers for the formulation of policies that promote the adoption of superior forage technologies and can incentivize new investment sources

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