

# Colombian cattle producers' preferences for improved forage technologies: Chances for forage breeding and selection

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## Introduction

- » Colombia's cattle sector is struggling with low productivity and the effects of climate change (e.g. prolonged dry and rainy seasons).
- » Improving animal feeding is among the most important options for combatting this situation.
- » There exist many improved forage species fitting this purpose but adoption levels are low. Among other factors, it might be that these materials do not match with the demand of the producers.
- » Research and development of new materials based on the actual demand for certain pasture characteristics (demand-led breeding) makes it possible to design "fit-for-purpose" strategies for producers and other stakeholders.

## Objectives

- » To identify the demands and preferences of cattle and dairy producers for new forage technologies in two principal Colombian cattle regions.
- » To evaluate how the producers' preferences relate to their sociodemographic characteristics and the context in which they conduct their activities.

## Methodology

- » **Study area:** This study was conducted in 9 departments of Colombia, in the regions of Orinoquía (3) and Caribbean (6).

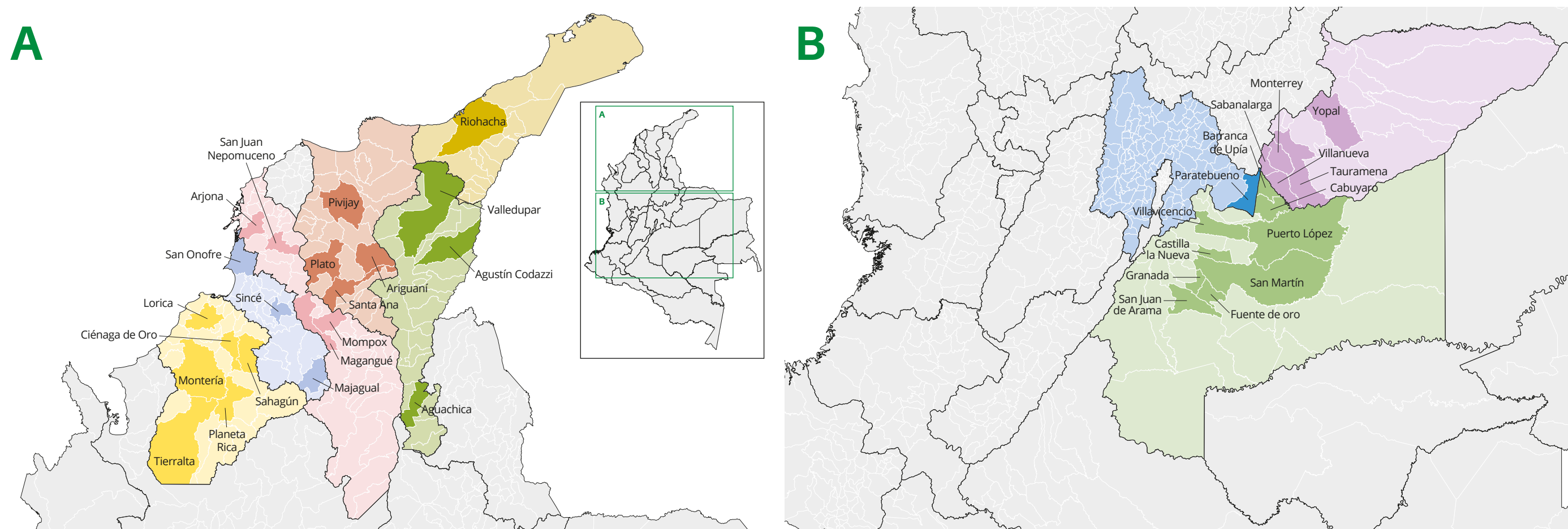


Figure 1: Municipalities and departments surveyed in A) Caribbean and B) Orinoquía regions.

- » **Data source:** Survey with 502 cattle and dairy producers applying a random sampling method in 2017.
- » **Analysis of preferences for the Caribbean Region:** The producers pointed out the three most preferred forage characteristics (n=390).
- » **Analysis of preferences for the Orinoquía Region:** The producers ordered their preferences with acceptance intervals (n=112).

## Results

- » 79% of the producers use their land for bovine meat production, while only 13% are dedicated to milk production. The rest counts with a double-purpose production system.
- » The most widely used pastures are *Brachiaria decumbens* (30%), *B. humidicola* cv. Llanero (29.1%) and *B. humidicola* cv. Dulce (12.7%).
- » Producers show little interest in adopting new pastures. They seem to be satisfied with the materials they currently use and associate them with "a high carrying capacity", "good adaptation to water-logging conditions" and "high forage yields".

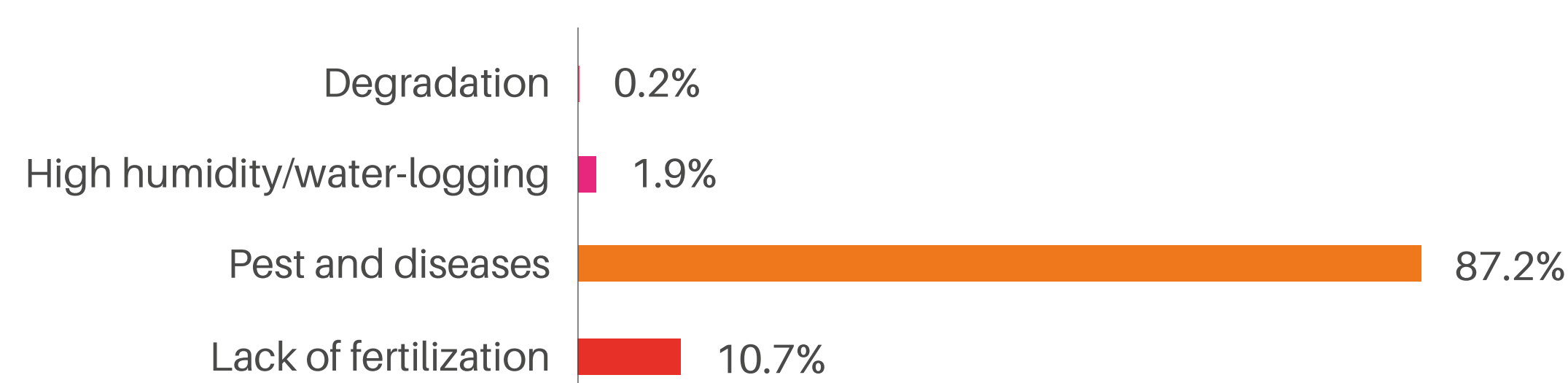


Figure 2: Problems perceived with currently used pastures (Orinoquía region).

## References

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- » Drought tolerance is an important characteristic for new pastures in both regions. However, producers in the Caribbean region perceive this attribute with more importance - a result from the prolonged droughts they are increasingly facing. Water-logging tolerance, on the other hand, was considered stronger in the Orinoquía region, but also drought tolerance is important there - a result from the adverse climatic conditions.
- » The evaluated sociodemographic variables (gender, income level, educational level, role within the farm) did not have significant effects on the producers' preferences for pastures.
- » Cultural practices and the natural conditions of the territories were decisive for the preferences in the Orinoquía region: in the lowlands, preferences are more oriented towards forage yield than in the highlands. This can be explained as harvesting in the lowlands is done mechanically and the pastures are conserved as silage, while in the highlands pastures are grazed given the large extensions of the farms.

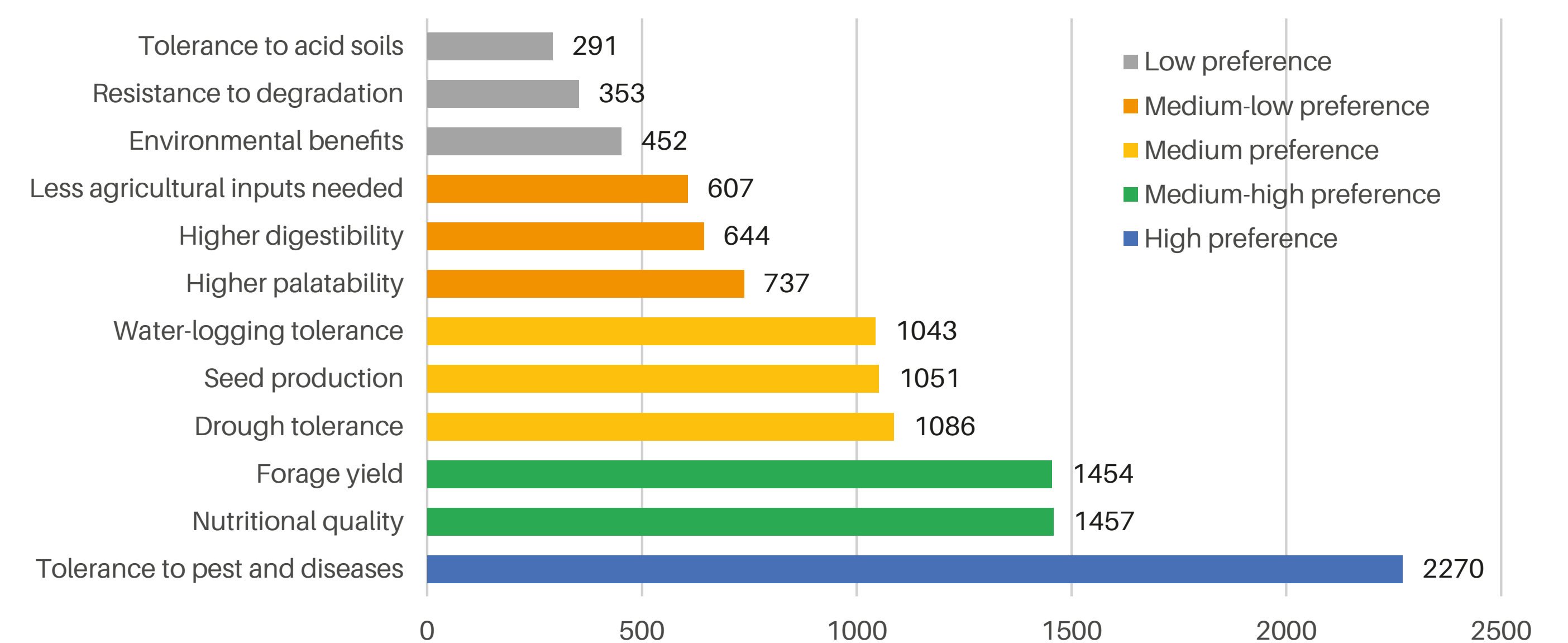


Figure 3: Preferences of the Orinoquía region.

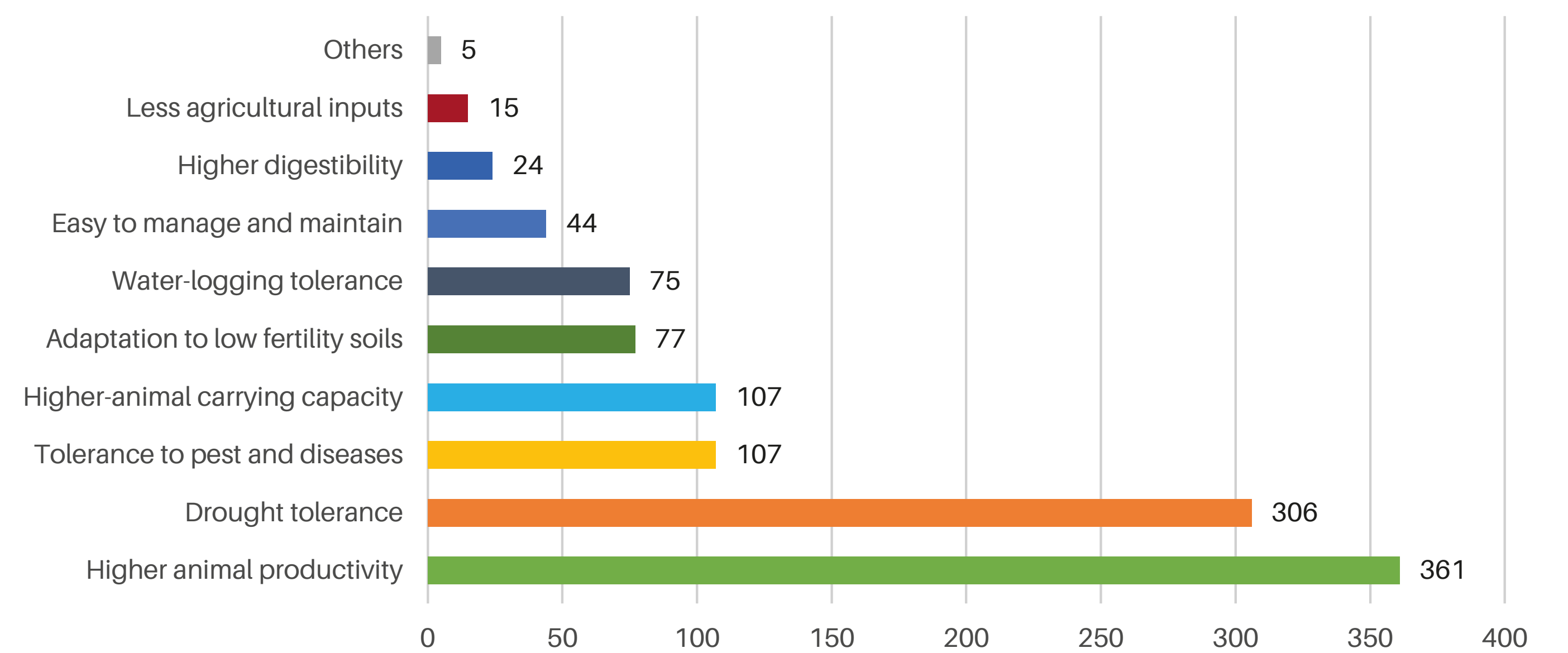


Figure 4: Preferences of the Caribbean region.

## Conclusions and recommendations

- » Drought and water-logging tolerance are among the main preferences of the producers. This shows how the changing climate is affecting the livestock activity in Colombia.
- » Tolerance to pests and diseases is a key issue for the producers, especially in the Orinoquía region, and new materials should be able to respond to this issue.
- » The overall willingness of the producers to plant new materials seems to be low. Developing new materials that respond to their preferences, especially to the climatic conditions, pests and diseases, and yield can contribute to changing their mindset.
- » There exist differences in producer preferences among the two evaluated regions resulting from the climatic and territorial conditions in which they operate.
- » In order to improve the interest of producers for new forage materials, it is also important to generate campaigns focused on influencing producers. The surveyed producers stated that the adoption of their pastures is mainly due to observations they made in surrounding farms.

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