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## Introduction

- Coffee plantations in Brazilian mountain regions in general have been cultivated for decades, with wider spacing and tall plants, so require renovation.
- In addition, the increased demand for labor and the shortage of local workers have been partially associated with the high unit cost of production in mountain regions.
- At the same time, the climate in those regions is favorable for plant development, high yield and, above all, good coffee quality.
- Mountain coffees predominate in significant regions for the Brazilian coffee agribusiness.
- Therefore, a reasoned assessment of the sustainability of mountain coffees is important for the future of this activity and for local and regional development.

## Methods

- First, **coffee farms** were **classified** into two major production systems – “**mountain coffees**” and “**other coffees**”.
- Then, 1,182 structured questionnaires were applied, in the main Brazilian coffee regions, to quantify the effectiveness of those farms management.
- The questionnaires surveyed 64 elements related to making productive decisions, each one with a specific score.
- The collected and systematized information established a management efficiency ranking in the coffee regions (**scale from 1 to 9 for the degree of management**), whose indicators were analyzed using Principal Component Analysis (PCA).

## Conclusion/Perspectives

The **management gap** between “**mountain coffees**” and “**other coffees**” can be compensated through **innovations** that can result in returns of scale with similar intensities for small and large coffee growers, such as **digital agriculture 4.0**. Additionally, the study identified a **great opportunity for mutualistic or public policy actions** aimed at strengthening mountain coffee growing.

## References:

Bliska Júnior, A.; Bliska, F. M. M. 2022 Transforming the Farmer into a Rural Entrepreneur as a Path to Sustainability. *Agronomy-Basel*, v. 12, p. 898-914.

**Table 1. Degree of management in Brazilian coffee growing according to the production system.**

Production Systems	Nº of samples	Average of the management degree*
“ <b>Mountain coffees</b> ”	600	<b>6,37</b>
“ <b>Other coffees</b> ”	582	<b>6,74</b>
<b>Total Brazilian coffees</b>	<b>1182</b>	6,55

\* Scale from 1 to 9 for the management degree  
Source: Elaborated from basic data of the research, 2021

## Results/Discussion

- “**Other coffees**”: management evolution was strongly linked to the maximization of labor and process productivity, resulting in better product quality, greater competitiveness and greater resilience to price cycles typical of commodity coffee, mainly in the regions of Alta Mogiana (state of São Paulo) and Cerrado (state of Minas Gerais).
- “**Mountain coffees**”: management indicators point to investments mainly in strategies that favor product differentiation and satisfaction of customers' expectations.
- Cooperatives, other collective organizations and technical assistance have provided a substantial increase in the level of management both in “mountain cafes” and in “other cafes”.

