

Policy Brief

Policy guidelines for the incorporation of bamboo use in silvopastoral systems in Colombia.

- ▶ Growing bamboo can improve soil fertility, protect it from erosion and lower flood risk.
- ▶ Bamboo species provide important benefits which might become opportunities for their inclusion in livestock systems.
- ▶ Silvopastoral systems can be an opportunity to improve environmental and animal welfare.
- ▶ It is necessary to differentiate between geographic regions.



How can cattle systems be improved by bamboo forest? Nowadays, there is a lot of information on how to improve livestock production systems using environmental technologies, such as silvopastoral systems, which incorporate trees. However, bamboo species can play/take an important role in this system because of the different benefits they offer. Emphasizing the benefits of bamboo and presenting them through simple guidelines can be a good start to make bamboo species appreciable.

The use of different vegetal species in pastures has shown environmental, productive, and animal benefits; in this way, generating instruments to promote the incorporation of these species into livestock systems becomes a main tool for the producers, stakeholders, and cattle services sector¹.

Colombian livestock productions represent 1.4% of GDP (gross domestic product) and generate 500 thousands employments; productions systems are extensive, have less than one animal per hectare, and low technical supports, and many environmental problems². Most of these systems are developed by the basin of two main rivers: Magdalena and Cauca, where bamboo species are settled.

Current regulations for bamboo have been developed for management and harvest purposes but not for incorporating bamboo on livestock systems, for national regulations were made by regional corporations³. Colombia has 5 different regions according to their physical characteristics⁴, therefore it becomes necessary to create guidelines for each region considering the growth in livestock development and the investigation on bamboo in the area.

Guidelines and policy suggestions have been developed to incorporate bamboo species in the silvopastoral systems. These guidelines aim to promote the knowledge around bamboo and its ecosystem services in each region of the country and to incorporate them into livestock production.

The study revealed that the use of bamboo in livestock systems could be economically profitable. On the other hand, feeding the animals with some supplementary bamboo food could be an option but

1 (Palacios et al., 2019)

2 Ibid

3 (Congreso de la República de Colombia, 1993)

4 (Cabrera et al., 2010)

it did not have many economic benefits. In such a way, bamboo has an important role in livestock systems but not when it comes to animal nourishment; bamboo species could play an important role in environmental conditions of production, and they could be an economic resource opportunity through selling some pieces or using bamboo for livestock buildings shelter.

Therefore, there are some action points that could be implemented to incorporate bamboo on livestock systems:

- Promotion and compliance with agricultural, livestock, and environmental regulations related to sustainable livestock systems, forestry, and management of bamboo species.
- Coordination between territorial entities, environmental authorities, and representatives of the livestock sector for the financing of plans, programs, and projects on sustainable livestock and silvopastoral incorporating bamboo species.
- Identification of areas with bamboo and marketing potential products derived from bamboo and guadua as additional income for livestock production.
- Promotion of the development of markets based on sustainable cattle farming models.
- Productive environmental reconversion of livestock that includes bamboo and guadua species.
- Articulation and alignment of planning and sustainable management (social, environmental, and economic) of the Cattle Chain (Palacios et al., 2019, p. 95).
- Creation of property planning programs to reduce land-use conflicts, pasture management, and decrease pressure on forests.



Region	Key Action Point ⁵
Amazon	Improve knowledge about bamboo species.
Andean	Promote payments for ecosystem services conservation and reforestation.
Pacific	Silvopastoral systems with native bamboo species and handmade products made from bamboo for trading.
Caribbean	Promote research on bamboo fodder with bamboo native species for the dry season.
Orinoquia	Incorporate guadua on livestock buildings and identify other types of bamboo species.

⁵ Based on: (Palacios et al., 2019); (Camargo & Long, 2020); (Arango et al., 2016); (Muñoz, 2016); (Etter & Zuluaga, 2018); (Bustamante & Rojas, 2018); (Lombana et al., 2012); (FEDEGAN & FNG, 2014).

The inclusion of bamboo in livestock systems through policy guidelines is also contingent upon the ability of shareholders to link government, institutions, and producers. Additionally, a bigger diffusion and promotion of this kind of studies is necessary to guarantee higher and greater values of bamboo species based on the ecosystem services and livelihoods benefits they provide.



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