Tropentag, September 14-16, 2022, hybrid conference

"Can agroecological farming feed the world?
Farmers' and academia's views"

Agronomic evaluation of 25 accesion of *Clitoria ternatea* in time of maximum and minimum rainfall in Colombia CIAT HQ

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Abstract

It is currently estimated that the area used for grazing cattle feed in the world is around 3,200 million hectares, this includes fattening, dairy and dual-purpose cattle. Most of this area is in extensive grazing systems under native pastures that, although of good nutritional quality, have a limited supply of forage, especially in few critical areas. This has caused cattle ranching to become a seasonal activity in the tropics, since in periods of low rainfall, ranchers struggle so that their animals do not lose weight and, in the worst case, because they do not die. Therefore, this leads to an inefficient use of the area used for livestock, obtaining a very low stocking rate per hectare. In Colombia there are around 33.8 million hectares under grazing with a livestock inventory of around 29.3 million head of cattle and a stocking rate of 0.86 $^{\text{animals}}/_{\text{ha}}$; being necessary to introduce new forage materials adapted to the conditions of the American tropics in order to increase the forage supply available for animals in critical times and that, in turn, it is of excellent nutritional quality. In this work, the agronomic and productive parameters of a collection of 25 accessions of *Clitoria ternatea* that included a control, *Clitoria ternatea* CIAT 20692, are analyzed. The materials were evaluated at the headquarters of CIAT Colombia and the evaluation phase comprised the periods of October 2020 to December 2021 in two seasons, maximum and minimum precipitation and three regrowth ages per season (35, 42 and 49 days post-cut). It was found that the best age to harvest was 49 days and the best accession in terms of forage production was CIAT 17768 with a production of 7.61 ton DM/ha/cut, followed by CIAT9336 with 6.74 and CIAT712 with 6.73 respectively. For its part, the control, CIAT 20692 produced 5.36 ton DM/ha/cut.

Keywords: Extensive grazing, forage production, nutritional quality

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