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Commercial opportunities behind genetic and climatic characterization with management culture approaches of *Heliconia* species in central-occident region of Colombia

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Heliconia genus has a growing commercial importance in the international flowers trade, which has increased the planted areas in countries in Central and South America, bringing a broader offer and demand of the product (Quirós, 2012). In addition, the Colombian flower-producer sector has an important effect in terms of job creation (SUPERSOCIEDADES, 2016). The importance of *Heliconia* species in the cut flower trade is rising due to its phenotypic features (morphologic changes and color variations in flowers and inflorescences) which creates the necessity to explore the identification of different cultivars over this genera (Sheela et al. 2006). Within this paper 47 cultivars comprising four species and one interspecific hybrid of *Heliconia* species with great commercial potential were subjected to genetic characterization together with a climatologic description of the collection places. The first, based in the systematical collection of data derived from 7 weather stations controlled by Cenicafé and IDEAM located in the area of study and the latter, through the amplification of SSR obtained from the previous development of a genomic library for *Heliconia stricta* cv. Iris red. From 18 initial tested primers, there were identified 13 informative SSR from which the most polymorphic were HES69, HES 63, HES 57, HES 67 and HES 55 with a discrimination power and polymorphic information content (PIC) ranging among 0.620 and 0.970 in every studied specie. To conclude, from the genomic SSR library developed for *H. stricta* cv. Iris Red, 13 loci SSR are required in order to distinguish single *Heliconia* species. In addition, climatic evaluation demonstrated that the central-west region of Colombia possess the optimum conditions oriented to the production of *Heliconia* species with commercial purposes.

Biography

Liliana Isaza Valencia possess wide experience into the field of plant tissue culture and *in vitro* culture of strategic plant species with economic and agricultural importance, including species of *Heliconia* and *Rubus* genus. In addition, she had performed research related to characterization of genetic diversity of the mentioned plant species.

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