Evaluation of morphological and agronomic characteristics and essential oil production of two accesses of *Lippia alba* (Mill.) N. E. Brown (Verbenaceae), at different plant ages

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Lippia alba (Mill.) NE Br. (Verbenaceae) is a plant species widely used in folk medicine, with recognized phytotherapeutic properties related to its essential oil (1). Traditionally, there are several uses for this plant, such as, analgesic, anti-inflammatory, antipyretic, antispasmodic, treatment of gastrointestinal disorders and respiratory diseases, and treatment of syphilis and gonorrhea (2,3,4). Essential oil varies qualitatively and quantitatively, according to the genetic material and environmental conditions of growth changing continuously with local and season (5). The present work aimed to evaluate the morphological and agronomic characteristics, and essential oil production of two *L. alba* accesses according to plant age. In this context, *L. alba* accesses were cultivated in the experimental field of the UFRB, at Cruz das Almas – Bahia, using randomized block in a 2x3 factorial design, with three replicates, A factor - *L. alba* accesses (L001 and L002) -, and B factor - plant age at 30, 60 and 90 days after transplanting-. The sampling periods presented the following climatic variations: (1) September 2014: pluviometric index (IP): 88.2 mm; maximum temperature (Tmax): 28 °C; minimum temperature (Tmin): 18 °C; (2) October 2014: IP: 28.2 mm; Tmax: 30 °C; Tmin: 19 °C; (3) November 2014: IP: 31.5 mm; Tmax: 31 °C; Tmin: 20 °C. Different quantitative and qualitative morphological characteristics, agronomic behavior and essential oil production were evaluated for each age and accesses. The L001 access demonstrated possesses prostrate stem with brown coloring, limbo adaxial surface bright green, rough leaves and purple petals clear, whereas the L002 access possess erect stem with color ranging from brown to purplish, limbo adaxial surface green, soft leaves and clear purple petals. For agronomic characterization, differences were also observed between accesses. L002 access stands out during all the evaluation period, for the parameters fresh (326.9 g $plant^{-1}$) and dry (109.3 g $plant^{-1}$) weigh of leaves; leaf area (318.3 cm^2 $plant^{-1}$), leaf dry matter yield (4373 kg ha^{-1}), leaf area ratio (1.153 cm^2 g^{-1}), specific leaf area (2.92 cm^2 g^{-1}), mass leaf ratio (0.40), with higher averages at 30 days; on the other hand, the L001 access stands out in the content and oil yield, throughout the studied period, being the best results obtained at 60 days (1.45% and 19.4 L ha^{-1}, respectively), while for the L002 access the greatest results for this parameters were obtained at 90 days (0.40 and 5.33 L ha^{-1}, respectively) values not statistically different between the evaluated periods.

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