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# Propagation by stem cutting of *Euphorbia balsamifera (Aiton), a* galactogenic plant in Benin

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## ABSTRACT

*Objectives*: Cutting is a method of asexual vegetative plant propagation that allows new plants from a plant cuttings cut from the mother plant. The present study aims to test this plant reproduction method using cuttings of the stem of *Euphorbia balsamifera* for the domestication of the species as it induces milk production in cows.

*Methodology and results*: The experiment was carried out on the experimental site of the botanical garden of University of Abomey-Calavi in southern Benin. The *Euphorbia balsamifera*'s stem of 15 and 25 cm of length were planted in two different substrates: soil alone and mixture of soil + compost for rooting. The mixture of soil + compost was used in a ratio of 3/4 of soil and 1/4 of compost. The experimental design used was a split plot with four replications. The main factor was the stem length and sub factors were type of substrate. The results revealed that the substrate and stem cuttings length of plant material induced significant ($p < 0.01$ to $p < 0.001$ respectively) effect on the proportion (85%) of stem cuttings that were recovered. The stem cuttings with the length 25 cm planted in the soil alone reduced the duration of stem cuttings recovered (7.00±0.00 days).

*Conclusion and application of findings*: Stem cuttings (length 25 cm) transplanted in soil alone was the efficient way of regeneration of *Euphorbia balsamifera*. This finding is suggested to the agro-pastoralists to enhance milk production of cows. This study is the first step in the process of domestication of the species. However, propagation by stem of this galactogenic plant species could also be tested during different seasons of the year in order to determine the best plantation period in the field in a context of *in situ* and *ex situ* conservation.

**Keywords**: Budburst, cuttings, domestication, lactogenic plant, biodiversity conservation.