

Cryptolepis sanguinolenta - A Medicinal Plant Used in the Treatment of Malaria, Cultivate It or Lose It

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Abstract : Medicinal plants serve as a reservoir of active ingredients for the treatment of common ailments such as cancer, malaria and diabetes. With the recent wave of health consciousness and reliance on plant based medicines, the demand for medicinal plants has increased considerably. This surge in medicinal plant use has raised great concern amongst key players (herbalist, collectors, conservationist and researchers) along the value chain about the sustainability of the raw material. The over reliance on wild crafting as a means to obtain the raw material spells doom for several of Africa's native medicinal plant species. In this study domestication protocols for the cultivation of *Cryptolepis sanguinolenta* (CS), a medicinal plant used in the treatment of malaria were developed. Initial surveys were conducted, using questionnaires comprising of open and close ended questions, to gather information that would inform the domestication and cultivation of the species. A field study was then conducted to determine the plant's cropping cycle and the effect of staking and plant age on the active ingredient (cryptolepine) concentration in its roots. Results of the survey confirmed the demand for the raw material and threw more light on the harvesting methods and intensity of CS collection from the wild. Cryptolepine concentration was found to be highest (~1.84 mg/100 mg of root material) at 289 days after planting (DAP) which coincided with the peak of root dry weight (52.8 g), signifying the best time for root harvest. Staking was found to be important for seed production. The first 105 DAP were characterized by low yields of root dry weight (13.5 g), followed by a period of rapid growth in which the root dry weight increased almost linearly until 289 DAP. Although dry matter partitioned to the vines increased towards the end of the experimental period (60%), dry matter partitioned to the roots remained fairly constant (30%) throughout the experimental period. Cryptolepine was found to increase as the plant aged and the practice of staking CS promoted pod formation. A suitable cropping cycle for the cultivation of CS was also developed.

Keywords : domestication, staking, conservation, wild harvesting

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