

ABS4170: Improvement of edible crotalaria spp through artificial pollination

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Abstract. Slender leaf (*Crotalaria ochroleuca* and *Crotalaria brevidens*) are indigenous leafy

vegetables commonly cultivated in Kenya with high nutritive value and medicinal benefits. Despite

the benefits of the vegetable it is grown and consumed only in some parts of the world and has been

neglected in terms of research. Artificial pollination of any crop forms the basis of improvement

however, there is limited information on the breeding of *Crotalaria*. The study aimed to cross two

distinct species of *Crotalaria* using artificial pollination. Two landraces from two counties in Kenya

were crossed in a completely randomized design set up within the greenhouse. A six-day-old flower

bud of *C. ochroleuca* of, the female parent was emasculated. A fully opened flower of *C. brevidens*

was used as a pollen source. The pollen was rubbed on the stigma of the female parent and inserted

back into the keel petal. Data were collected on the total number of mature pods and seeds then

subjected to analysis of variance. The artificial pollination cross of *C. ochroleuca* and *C. brevidens*

showed a success rate of 75%. The time of crossing did not have significant effect on the success rate,

pod and seed production. The rubbing method was the best method of artificial interspecific

pollination of *Crotalaria*. Successful interspecies pollination is a foundation for the improvement of

edible *Crotalaria* through hybridization.

Keywords: *Crotalaria*, crop improvement, artificial pollination, rubbing method