PRELIMINARY INVESTIGATIONS ON THE ALLELOPATHIC TENDENCY OF *MIKANIA MICRANTHA*, A COMMON WEED IN YOUNG RUBBER (*HEVEA BRASILIENSIS*) PLANTATIONS

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Mile-a-minute weed (*Mikania micrantha* H.B.K), a fast growing herbaceous climber, is a noxious weed in agricultural and non-agricultural areas of Kerala, India. The allelopathic effects of *M. micrantha* when used as fresh mulch, incorporated in soil and as water extracts of the weed (0, 1, 2 and 4 percent) were studied using test crops (cowpea, rubber and rice). *M. micrantha* had negative allelopathy on rubber (*Hevea brasiliensis*) seedlings, causing reduction in height and weight of seedlings. On the contrary, it had positive allelopathy on growth of rice and neutral effect on growth of cowpea. The study indicated that the infestation of *M. micrantha* in rubber plantation or in nursery may have deleterious effect on growth of *H. brasiliensis*. It also showed that this weed can be utilized as green leaf manure for rice without any adverse effect on the crop.

Key words: Allelopathy, Cowpea, *Hevea brasiliensis*, *Mikania micrantha*, Rice.

Mikania micrantha (Family - Asteraceae) an introduced alien weed found in Kerala, India, is a vigorous creeping and climbing plant native to Tropical South and Central America. It was first reported from Kerala in 1968 from a rubber plantation in Kottayam district (Nair, 1968). Now it is a serious weed in agricultural and non-agricultural areas of Kerala. Because of its quick growth and fast spreading nature, it is called "mile-a-minute weed" and "climbing hempvine". Earlier *M. micrantha* was tried as a cover crop for rubber in Malaysia and Indonesia, but later it was realized that it has some deleterious effect on the growth and yield of rubber (Weng, 1964). It was also reported that extract of *M. micrantha* contain allelochemicals, which depress the growth of rubber, tomato and cover crops inhibit the *in-vitro* growth of fungi and depress nitrification in soil (Weng 1964). Studies on the allelopathic effect of *M. micrantha* on *Asystasia intrusa, Chrysopogon aciculates and Paspalam conjugatum* reported a negative effect on the germination and growth of these weed species (Ismail and Mah, 1993). Positive effect of *M. micrantha* on the growth and yield of crops have also been reported. Suharte and Santoso (1986) used *M. micrantha* leaves as green manure. Saha (1985) reported an increased yield of rice by using this green manure. As *M. micrantha* is now a major weed of agricultural and non-agricultural areas in Kerala, studies on its allelopathic effect (Rice, 1979) on major crops like rubber, cowpea and rice were carried out.

A pot culture experiment was

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