

Evaluation of South African Plants with Acaricide Activity against Ticks

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Abstract : Acaricides are commonly used to control ticks but are toxic, harmful to the environment and too expensive to resource-limited farmers. Traditionally, many communities in South Africa rely on a wide range of indigenous practices to keep their livestock healthy. One of these health care practices includes the use of medicinal plants and this offers an alternative to conventional medicine. An investigation was conducted at the CSIR in South Africa, and selected indigenous plants used in communities were scientifically evaluated for the management of ticks in animals. 17 plants were selected from 239 plants used traditionally in South Africa. Two different organic extracts were prepared from the 17 samples, resulting in 34 plant samples. These were tested for efficacy against two tick species, namely *Rhipicephalus microplus* and *Rhipicephalus turanicus*. The plant extracts were also screened against Vero cells and most were found to have low cytotoxicity. This study has shown that there is potential for the development of botanicals as natural acaricides against ticks that are non-toxic and environmentally benign.

Keywords : South Africa, ticks, plant extracts, *Rhipicephalus (Boophilus) microplus*

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