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Field comparison of chitin synthesis inhibitor, novaluron 10% EC and temephos against *An. culicifacies* larvae in the stream bed pools

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Stream and river bed pools are some of the major breeding sites for larvae of malaria vectors in Sri Lanka. Temephos has been used to control these larvae in the stream/river bed pools. However, vectors have developed resistance against temephos in some parts of the country. Therefore, it is essential to select alternative larvicides which could be used to control mosquito vector larvae. Novaluron is a chitin synthesis inhibitor and single application of novaluron at the rate of 0.01 ppm to the gem pits inhibited the emergence of malaria vector mosquitoes up to 116 days. Therefore a field experiment was carried out to determine the efficacy and persistence of two concentrations of novaluron 10% EC and temephos 50% EC in stream bed pools and to select an effective and convenient method that could be used to control mosquito vector larvae in the river/stream bed pools.

Efficacy and persistence of novaluron at the rate of 0.01 and 0.1 ppm and temephos at the rate of 0.112 a.i. kg/h was evaluated against *An. culicifacies* using four stream bed pools for each treatment with four pools as controls. The mortality rate of each treatment was monitored using emergence bucket bioassays. A single application of 0.01 ppm and 0.1 ppm pf novaluron showed 100% mortality up to 98 days. After the initial treatment temephos treated pools had to be retreated at 8-14 day intervals. Therefore application of novaluron 10% EC could be used as an effective and convenient larval control method to control larvae of malaria vectors in the river/stream bed pools.

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