An operational-scale trial of etofenprox 20 WP (OMS-3002) for malaria control was conducted in Tanjung Bunga District, East Flores, East Nusa Tenggara in 1993. The Insecticide was applied as indoor residual spraying at a target dosage of 0.20 g active ingredient/m2, three cycles every six months. Results of the trial showed that malaria vector densities (Anopheles barbirostris, An. subpictus, An. sundaicus and An. flavirostris) was declined 93.00% after the third cycles of the spray. There was indication that parity rate of the vector can be suppressed for about 2 months. Spraying and treated of malaria cases can reduced of Plasodium falciparum malaria prevalence from 20.86% before trial to 3.39% (reduction 84, 20%) after trial. In control area prevalence of P. falciparum malaria was 8.56% before trial and 18.19% after trial. During the trial there was no negative side effect of etofenprox to spraymen, inhabitant and domestic animal.