

Zoophilic and Exophilic Malaria Vector Control by Black Light Trap (BLT)

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An. sinensis, malaria vector in ROK, preferred to feed on large livestock include cows and pigs. Most cow sheds don't have any wall structure but have only vinyl or other simple roofs, so sleeping livestock are defenseless to feeding *An. sinensis* or other blood-sucking insects. For this reason, the uses of insecticide-impregnated bed-nets and indoor residual sprays, the most popular methods to diminish vector-human contact in malarious areas, are less effective in ROK. To suppress mosquito population density in ROK, we need a new vector control scheme unlike Southeast Asia and Africa. In this project, we will adjust the focus of vector control in the blood source areas like as cow sheds and pigsties. We tried to identify the establishment height of black light trap in the cow shed. The traps were settled at the different height from the ground and operated. Based on this result, we can get the conclusion that it was suitable for vector control to install uppermost that can manage black light trap. The Effective institutional interval of black light trap for the vector control is between 5 to 7M. To decide whether we can suppress mosquito population using the black light trap operating around the livestock farms, we will attempt to field trial in the Kangwha island area from May 1st week through the August 4th week (about 20 weeks). We selected one cow shed and two houses to check the control effect in the each villages, intervention and control. Comparing the seasonal prevalence in two villages, we got a significant results. From this study, we conclude black light trap operation in the cow sheds is one of the most effective methods to malaria vector in the developed country.