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## **Effect of rainfall and temperature on liver and rumen fluke infestations of bovines in Sri Lanka**

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### **ABSTRACT**

Fecal fluke egg output of bovines from three selected farms at Ma Eliya (site A), Ma Eliya (site B) and Delathure (site C) in Ja-Ela area of Gampaha district in Sri Lanka was examined for six months period from July to December 2006. The mean egg output of the animals of site A, B and C were 255, 84 and 95 eggs/g of feces respectively. Statistical analysis showed that mean fecal fluke egg output was significantly different between sites ( $df= 2$ ,  $f= 126.05$ ,  $p=0.000$ ) and also between months ( $df= 5$ ,  $f= 7.31$ ,  $p=0.000$ ). Regression analysis revealed that the fecal fluke egg output had a positive relation with rainfall ( $r^2=0.6178$ ) and a negative relation with temperature ( $r^2= 0.6486$ ). The female cattle had a higher fecal fluke egg output ( $x =202.76$ ) than the male cattle ( $x =116.97$ ) but egg output did not significantly differ. Also there was an increasing trend of mean fecal fluke egg count with the increment in the age of cattle ( $r^2= 0.6057$ ). Rumens and livers of slaughtered cattle and buffaloes from the study area were examined for fluke infections. Specimens were identified by making histological sections. One species of liver fluke, *Explanatum explanatum* and four rumen flukes, *Paramphistomum* spp., *Gastrothylax crumenifer*, *Carmyerius* spp., and *Fischoederius elongates* were identified. Two other flukes belonging to the family Gastrothylacidae were also found from the rumen of buffalo. *Explanatum explanatum* was found to be a great cause of condemnation of livers at slaughterhouses in Sri Lanka.

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**Keywords:** liver and rumen flukes, bovines, influence of climate, Sri Lanka.

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