



Medicinal plants effectiveness against helminths of cattle

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ABSTRACT

Objective: A study was carried out to determine the antihelminthic properties of three medicinal plants namely *Gongronema latifolium* (Utazi), *Piper guineense* (Uziza) and *Ocimum gratissimum* (Scent leaf) on cattle faeces obtained from two (2) abattoirs in Owerri Zone of Imo State, Nigeria.

Methodology and Results: Representative faeces samples were treated with ethanolic extracts of the medicinal plants stored in concentrations of 25%, 50%, 75%, and the system maintained at time schedules of 2h, 4h, and 8h. Control tests were also set up consisting of no extracts. Results obtained show that all the helminthes were susceptible but differed on times taken to achieve maximum mortality (measured by distortion/paralysis of helminths). At 25% concentration, the highest and lowest mortality rates of 80% against Trophozoites of *Giardia lamblia* was by *P. guineense* at the time of 4hr, and 50% (each of ova of *Taenia saginata* & trophozoites of *G. lamblia*) by *G. latifolium* after optimum time of exposure respectively. There was however no significant difference in the mortality rates observed at this concentration level of the different extracts ($P < 0.05 = 10.260$). At 50% concentration, *O. gratissimum* recorded 100% mortality after optimum time of exposure against each of ova of *Taenia saginata* & trophozoites of *G. lamblia*, while *Faciola gigantic*, *Ascaris lumbricoides* and *Schistosoma spp* received 70% mortality by both *G. latifolium* and *O. gratissimum*. There was a significant difference in the mortality rates at this concentration level of the different extracts ($P < 0.05 = 11.444$). Finally, at 75% concentration, *P. guineense* effected 100% mortality after the shortest time of exposure (4hr) on *Ascaris*, *Faciola* and *Giardia*. There was no significant difference in the mortality rates at 75% concentration of the different extracts ($P < 0.05 = 5.443$). Similarly, results of the study carried out to determine the phytochemical properties of the medicinal plants revealed that out of the six properties tested for, only terpenoids was absent in *O. gratissimum*, but it contained other components. *P. guineense* and *G. latifolium* had all the six phytochemicals present.

Conclusion and application of results: This method of helminthiasis control/eradication is cheap and easy to practice and could be adopted to replace conventional use of anti-helminthic drugs because of recent development of resistance of the helminthes to these drugs. The formulation of the plant extract regimen could be carried out without much technical know-how and the use of highly sophisticated equipments. Consequently, rural dwellers could access this nascent method of eradication of helminthiasis with little training/orientation.

Key Words: Antihelminthic, Phytochemical, *Gongronema latifolium*, *Piper guineense*, *Ocimum gratissimum*, Cattle, Owerri.

