

Improved Efficacy of Sulfadimethoxine with Herbal Supplements to Inhibit the Growth of *Paramecium aurelia*

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Poultry producers have attempted to raise antibiotic free poultry to meet the ever growing concerns of consumers. As a result, coccidia has again become prevalent in poultry. Coccidia is treatable with antibiotics but a secondary concern is the continual increase in antibiotic resistance. This experiment tested the improved efficacy of Sulfadimethoxine when combined with either Green Tea or Sophora Flavescens to inhibit the growth of *Paramecium aurelia*. The viability of paramecium was tested using Sulfadimethoxine, herbal supplements, and using these substances in combination. It was concluded that individual dosages of Sulfadimethoxine and Green Tea which were still sustainable to growth of the paramecium, no longer showed sustained growth when combined. By supplementing poultry feed with Green Tea, the required dosage for the Sulfadimethoxine is lowered. Also concluded from this experiment is that Sophora Flavescens, in all tested concentrations, inhibited the growth of paramecium entirely. Therefore, Sophora Flavescens shows strong evidence of being a natural antibiotic treatment of coccidiosis that produces duplicate results as those of prescribed antibiotics.