

Prevalent Bovine Internal Parasites Using Different Techniques in Communal Farms around Mafikeng

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KEYWORDS Parasite. Fecal Samples. Zinc Sulphate. Sheather's Solution. Flotation

ABSTRACT Knowledge of the nematodes species present in a particular geographical location and their biology and epidemiology has important implications for the control of gastrointestinal parasites. The main objective of the study is to compare Zinc Sulphate, Sheather's solution, and sodium nitrate and concentrated salt solution flotation techniques in the identification of bovine internal parasites around the Mafikeng area. Simple random study of analysis of bovine fecal samples collected from Mafikeng area during the dry season was used, using egg per gram centrifugal flotation techniques of feces collected the same day. Direct smears using both iodine and saline were also performed to detect motile parasites stages. Of the two direct methods of detecting motile parasitic stages, iodine was more sensitive with only twenty percent negative results compared to forty percent using saline. Also, highest egg burden of 11-15 was found in ten percent of iodine samples compared to seven percent of saline samples. Comparison of flotation techniques showed that sodium nitrite had a negative score of twenty-two percent followed by zinc sulphate, Sheather's, and concentrated salt at fifteen percent, twelve percent and six percent, respectively. Highest egg burden of 1100-1599 was found in ten percent of samples using sodium nitrate compared to eight percent, five percent and three percent for Sheather's, zinc sulphate and saturated salt solution, respectively. From the results, the researchers can conclude that saturated salt solution and Sheather's solution are methods of choice for identifying bovine intestinal parasites, and they should be used in conjunction with direct methods using iodine especially for semi-solid to loose feces. For routine diagnostic work, the researchers recommend sodium nitrite although it had a higher negative value because it is cheap, easier to use and less messy than the other techniques. Also, it is the second best in detecting moderate to heavy infection with parasites only superseded by concentrated salt solution.