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## **PHOSPHORUS, CALCIUM AND MAGNESIUM CONTENTS OF PASTURE AND THEIR EFFECT ON BODY CONDITION SCORES AND BODY MASS OF COMMUNAL CATTLE DEPENDING ON NATURAL PASTURE OF MOGOSANE VILLAGE, OF THE NORTH-WEST PROVINCE, SOUTH AFRICA**

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**T**his survey was conducted to determine the effect of phosphorus (P), calcium (Ca) and magnesium (Mg) contents in pasture with body weight and body condition scores on cattle, depending on natural grazing. The work was done in 2006 in Mogosane Village in the Molopo District of North West Province, South Africa and it was conducted from March 2006 to March 2007 to include the summer, autumn, winter and spring seasons, with the annual rainfall between 379.39 to 384.38 mm. A total number of 25 growing mixed breed cattle aged between six months to two years were selected randomly from a herd feeding exclusively on communal grazing. Animals were depending on natural pasture, with no supplements given. Records of body mass and condition score were recorded. Pasture samples were collected once a month and were digested and analyzed to

determine the contents of P, Ca and Mg minerals. All the minerals concentrations in the pasture increased with rainfall in January '07 and March '07 and during this period high values of BCS (3.90) and BW (444.05 kg) were recorded. The decrease in pasture P, Ca and Mg concentrations with the rainfall was seen in May '06 and July '06 and it was during this period where low average values of BCS (2.96) and BW (360.14 kg) were recorded. P content the animals consumed from the pasture had a positive influence on the BCS and BW measured in this survey. Mineral levels of the animals used in this survey were influenced by the mineral status of the pasture they were grazing. Therefore, grazing cattle, especially communal ones, need mineral supplementation for growth performance and optimal production.

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