DECLARATION

I declare that this mini dissertation hereby submitted to the University of Limpopo for the degree of Master of Science in Agriculture (Animal Production) has not been submitted by me for a degree at this or any other university, this is my own work in design and execution, and that all material contained herein has been duly acknowledged.

Name: Mohlapo Teboho Daniel

Signature…….. Date…….

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Above all, I am most sincerely thankful to the almighty God, for His strength, comfort and wisdom. Glory be to the Father, the Son and the Holy Spirit, Amen.

DEDICATION

This mini dissertation is dedicated to my grandmother, Emeliah Leetsana Mohale, who when I was without a mother became my ‘mother’, my uncle Simon Moteka Mohale and his wife for their support in educating me, my late mother Dipontsho Ester Mohlapo and my ever caring siblings, Solomon Molete Mohlapo, Patience Puseletso Mohlapo and Jacob Tumelo Mohlapo who made a brother out of me.

ABSTRACT

Two experiments were conducted to evaluate the effect of *Hoodia gordonii* meal supplementation at finisher stage on productivity and carcass characteristics of Ross 308 broiler chickens. Experiment 1 examined the effect of levels of *Hoodia gordonii* meal supplementation of grower diet fed to Ross 308 broiler chickens at the finisher stage (30 – 42 days of age) on productivity and carcass characteristics in a 12 day experimental period. The experiment was a completely randomized design with a 2 (two sexes of chickens) x 6 (levels of *Hoodia gordonii* meal [0, 100, 200, 300, 400 or 500 mg]) factorial arrangement of treatments in which three hundred and sixty broiler chickens at finisher stage were randomly allocated to twelve treatments with three replicates of ten birds each. Level of *Hoodia gordonii* meal supplementation had no effect ($P>0.05$) on diet intake, intake as percentage of live weight, growth rate, feed conversion ratio, live weight at 42 days of age and mortality of broiler chickens at finisher stage. All carcass characteristics were not affected ($P>0.05$) by the treatments except fat pads. Chickens given a daily dose of 300 mg of *Hoodia gordonii* meal had lower ($P<0.05$) fat pad weights than unsupplemented ones. Male broiler chickens had higher ($P<0.05$) feed intake and heavier drum sticks than female broiler chickens.

Experiment 2 examined the effect of *Hoodia gordonii* meal dose interval at finisher stage in a 2 (two sexes of chickens) x 3 (dosage intervals) factorial, complete randomized design that involved three hundred and sixty chickens that were randomly allocated to six treatments with six replicates of ten birds each. Broiler chickens were fed either a grower diet without *Hoodia gordonii* meal; grower diet with 300 mg of *Hoodia gordonii* meal/

bird supplemented everyday for 12 days; or grower diet with 300 mg of *Hoodia gordonii* meal/ bird supplemented twice, on 30^{th} and 36^{th} days of age. *Hoodia gordonii* meal dose interval had no effect ($P>0.05$) on dry matter feed intake, intake as percentage of live weight, growth rate, live weight at 42 days of age, feed conversion ratio, mortality and all carcass characteristics except fat pad of broiler chickens. Daily dosing with 300 mg of *Hoodia gordonii* meal/ bird reduced ($P<0.05$) fat pad weights of broiler chickens by 18 percentage points. Male broiler chickens had higher ($P<0.05$) feed intake, nitrogen digestibility, nitrogen retention and live weight than female broiler chickens.

It is concluded that chickens given a daily supplement of 300 mg of *Hoodia gordonii* meal had lower fat pad weights than unsupplemented ones. This could not be explained in terms of differences in feed intake, digestibility, or growth rate.

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