ABSTRACT

Mona Ahamed El-Sayed Farag. Effect of Different Concentrate Levels in the Ration on Meat Production From Claves. Unpublished Ph.D. Thesis. Department of Animal Production, Faculty of Agriculture, Ain Shams University, 2009.

Twenty four growing Egyptian buffalo male calves with an average of 8 months old and 179 kg LBW were used in this study. The study was carried out as two experiments. In the 1st experiment (growing stage), calves were divided into three similar groups (eight animals for each) according to their BW and age. Each animal group was randomly fed on one of the following experimental rations (on the DM basis) : R1: 60% concentrate feed mixture (CFM) plus 40% corn silage (CS); R2: 40% CFM plus 60% CS, The third group was comsidered as the control ration (R3) where calves were fed on 55% CFM plus 45% roughage (15% rice straw plus30% berseem hay). The R3 was the traditional Station ration. In the end of the first experiment, the calves achieved 330 kg average live BW during 180 to 210 days. In the 2nd experiment (fattening stage), calves of the first rations (R1) were divided into two similar sub groups (four animals each) and fed one of the following rations: G1: 70% CFM plus 30% CS; G2: 50% CFM plus 50% CS Also, calves of the second group (R2); were divided into two similar sub groups (four animals for each) to fed one of the following rations G3: 70% CFM plus 30% CS; G4: 50% CFM plus 50% CS. While calves of the control group (on the Station ration;R3): fed on 64.5% CFM plus 35.5% (16.64% rice straw plus18.86% berseem hay). The different tested rations were formulated to cover the maintenance and production requirements according to El-Ashry allowances, (1980). The second feeding experiment extended up to 120 - 150 days. Based on the results obtained in this study, The different levels of CFM and corn silage in the ration could be successfully used for feeding buffalo calves, during their growing phase, on relatively high proportion level (40% CFM with 60% corn silage) to set up a

restricted lower density of nutrients for the ration that should be specified for this experiment. It therefore, corresponding an effective compensatory growth during there-alimentation on a finishing ration which usually including high percentage of concentrates as incase of G1 and G3 in this study (70% CFM plus 30% corn silage).

Also, results indicated that calves in group G3 which fed the high (70%) CFM- low (30%) corn silage during the 2th experiment had the best performance regarding the average daily gain, feed and economic efficiencies and carcass characteristics.

The study is clearly state that the use of a restricted feeding strategy through the first experiment (growing phase) of calves has the potential to improve fattening performance and carcass composition without increasing feed cost.

Key Words: Concentrate feed mixture, Corn silage, Buffalo calve, Digestibility, Rumen parameters, carcass characters, Economic efficiency

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الملخص العربى……

LIST OF ABBREVIATIONS

ADG	Average daily gain
A/G ratio	Albumin/ globulin ratio
B	Bone
BCS	Body condition score
CF	Crude fiber
CFM	Concentrate feed mixture
CP	Crude protein
CS	Corn silage
DCP	Digestible crude protein
DM	**Dry mater**
DMI	Ddry matter intake
EE	Ether extract
F	Fat
g	Gram
h/d	Head/ day
Kg	Kilogram
L	Lean
LBW	Llive body weight
L.E.	Egyptian pound
NFE	Nitrogen free extract
NH_3-N	Ammonia nitrogen
OM	Organic matter
S.E.	Standard error
TDN	Total digestible nutrients
TVFA's	Total volatile fatty acids