The Effect of Adding Curcumin on The Body Weights and Weight Gains of Preweaning Calves

Manal A. Ahmed1 Hanaa A. Jabar Al-Galbi1 Mohamed S. Majeed2

Animal Production Department, College of Agriculture, University of Basrah,
.2Animal Production Department, College of Agriculture, University of Maysan
manal.ahmed@uobasrah.edu.iq ORCID M.A.A., https://orcid.org/0000-0002-8314-6675
hanaa.jabar@uobasrah.edu.iq

Abstract

: This study aims to determine whether adding curcumin to the diet of calves before weaning has positive effects on their performance. Twelve suckling calves available in the animal field /College of Agriculture/University of Basrah were used in this study. Calves are a cross of Holsteins and local cows weighted 37.6 kg. The study lasted 90 days included 15 days for adaptation. The calves' weight estimated every 30 days. After two weeks of birth, the calves were split into two equal groups based on their equal average weight In addition to suckling, the first group, is the control group was given 200 g of concentrated diet and free access to hay, or roughage feed. The second group , is (the treatment group) received the same diet and nursing as the first group but additionally received 200 mg.head.day -1 of curcumin. The results showed that adding of curcumin to the diet of calves led to a significant improvement)P<0.05) in the mean live body weight during the first, second and third months of the study. The weight at the third month reached 74.8 and 95.2 kg for both the control and treatment groups, respectively. Over the course of three months, the control group and the curcumin-treated group experienced average daily weight gains of 409 and 640 g.day-1,respectively.

Key Words: calves, curcumin, growth performance.

Introduction

Interest has increased recently in the field of livestock and poultry diet which include organic components (herbs and spices) without harming either consumer or animals (4,8).Herbs may improve an animal's appetite and make feed more palatable (15).According to (7) it increased in the release of digestive enzymes, which enhances ruminant digestion and nutrient absorption (28) .Herbs are regarded a great way to enhance the quality of animal products and the physiological health, even when the addition to animal feed does not exceed 0.2 to 2% of the dry matter of the diet(5).Which is affected by many genetic and non-genetic factors(2,3). Curcuma is one of those herbs, containing 70–77% curcumin (24). Polypheno diphenylmethane, curcumin's biologically active component, is responsible for the curcumin aromatic and pigment characteristics (10,26). A combination of the hydroxyl groups in the aromatic ring and the

ISSN 2072-3857