



# THE EFFECT OF USING KEFIR AS A PROBIOTIC ON THE CARCASS CHARACTERISTICS IN MALE ARABI LAMBS

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<p><b>Received:</b> 8<sup>th</sup> December 2023 <b>Accepted:</b> 7<sup>th</sup> January 2024 <b>Published:</b> 10<sup>th</sup> February 2024</p>	<p>Milk kefir has different physical, chemical and microbial properties, but many of the microbial species that make up kefir have probiotic functions, and it is considered a promising alternative in developing foods that contain probiotics and promote health. Sixteen Arabi male lambs weighted divided into four treatments (control, 25 ml, 50 ml and 75 ml of kefir). Body weight, carcass characteristics, and weights of the carcass cuts, including ribs, loin, thigh, tail, A physical dissection of the rib and neck, and their proportions were calculated. pieces, including fat, meat, and bone, and their percentages, was also conducted. In addition to the weight of the carcass waste. The study showed the role of kefir as a probiotic in enhancing body and carcass weight and carcass characteristics. There were significant differences (<math>P &lt; 0.05</math>) for the treatments compared to the control group in the percentage of adhesion and the weight of the hot body. The treatments also excelled significantly (<math>P &lt; 0.05</math>) in the weights of carcass pieces and their proportions. There were no significant differences in the weights of carcass waste and the weights of internal organs except heart weight in the treated groups compared with the control group.</p>

**Keywords:** Arabi lambs, carcass weight, Kefir, Probiotics

## INTRODUCTION

Food biotechnology and modern methods of nutrition have positive effects on the individual's health and nutritional balance. The use of beneficial bacteria that contain vital functions such as antioxidant processes, strengthening the immune system, and glycolysis in the intestine is of great importance to the individual's health (Alrosan *et al.*, 2023). Most of the bacteria used for foods containing probiotics are lactic acid bacteria, and there are several strains of yeast such as *Kluyveromyces lactis*, *Kluyveromyces marxianus*, *Pichia kluyveri*, *Pichia pastoris* and *Saccharomyces cerevisiae* (Guzel-Seydim *et al.*, 2021; Raíssa *et al.*, 2021). Given that kefir contains a group of microbial species, recent studies have developed the method associated with applying kefir to obtain new probiotic foods that have a role in promoting health (Alves *et al.*, 2021, Anna *et al.*, 2021, Onofrio *et al.*, 2016). In recent years, research has spread widely in various fields of knowledge in order to identify challenges, prospects, future trends and research implications, and to direct new studies and future research towards the importance of nutritional sciences (Kieran, 2021; Farnworth, 2005; Al Nassar, 2017).

The current study aims to demonstrate the effect of different proportions of kefir on the carcass characteristics of Arabi male lambs.

## MATERIALS AND METHODS

Sixteen heads of the Arabi lambs were used aged three months and weighted 22 kg. The study was conducted at the Agricultural Research Station in Shatrah, the Dhi-Qar Agriculture Directorate. The lambs were placed in partially closed cages of the same size, equipped with plastic feeders. They were fed a diet that included 3% of their body weight. Fodder was provided to all lambs continuously during the trial period to meet their nutrients needs. The lambs were also randomly distributed into four equal groups (4 lambs/group) after measuring their initial weight. The nutritional groups included control (no kefir supplement), or adding kefir 25, 50, 75 ml for the second, third and fourth group.

Mix a group of kefir grains with an amount of skim milk at a ratio of 1:100 by adding 10 grams of kefir grains to one liter of milk, then leave the mixture at room temperature (25 degrees Celsius), then filter the mixture after 24 hours remove the kefir grains using a plastic sieve for the purpose of using them again in the production of kefir milk.

The animals were inspected and followed in the field throughout the research period, which lasted 3 months. After that, all experimental animals were slaughtered simultaneously, and the area of the oculi muscle of the twelfth rib at