ABSTRACT

The study was conducted in Karo Regency in June 2024. The district of Karo is home to five districts that are responsible for the production of red dragon fruit. The district is comprised of five administrative subdivisions, four of which are located at an elevated altitude and one at a relatively low elevation. The elevated subdivisions are Tigabinaga, Payung, Tigaderket, and Simpang Empat, while Laubaleng is situated at a lower altitude. On-site observations indicate that farmers in Karo County employ two distinct cultivation techniques for red dragonfruit: one that utilizes lighting and one that does not. These methods exhibit notable disparities in both costs and returns. It is therefore necessary to ascertain the comparative profitability of red dragon fruit farming with and without the use of lighting. The objective of this study is to ascertain the profitability and the differential profitability of dragon fruit farming with and without the use of lighting in Karo Regency. The sampling method employed in this study was random sampling, with a total of 74 respondents included in the sample. The data employed in this study were both primary and secondary in nature. The data analysis employed a two-sample free difference test (Mann-Whitney U test). The results of the study indicate that the significance value (0.000) is less than the alpha value (0.1), indicating a statistically significant difference between the mean profitability of the red dragon fruit farming operations with and without lighting. The results of the data analysis indicate that the average profitability of red dragon fruit farming with lighting is higher than that of red dragon fruit farming without lighting.

Keywords: Lighting, Comparative Analysis, Red Dragon Fruit, Non-Lighting.