Livestock production in many tropical environments is negatively affected by low feed availability and quality (Sahoo and Karim, 2011). Shortage of feed is evidenced during the prolonged dry season in arid and semi-arid areas. Camel, a unique animal species of desert ecosystem, is adapted to sustain on a variety of feeds and fodders like grasses, tree leaves, crop residues and agro-industrial byproducts (Nagpal et al, 2003; Sahoo and Sawal, 2021). In general, an increase in the productivity of ruminants can be achieved by improving environmental factors like management, nutrition and health care. Several indigenous browse species growing in fallow lands are commonly used by smallholder farmers as a roughage source for ruminants. Quantitative information on biomass production and chemical composition of forages from tree/browse species of arid and semi-arid regions of India has been documented (Sharma and Sahoo, 2017). Pala (Zizyphus mauritiana) and Khejri (Prosopis cineraria) trees are native to desert ecosystem and form natural feeds of camel but feed intake is often limited due to presence of some anti-nutritional factors such as tannins, saponins, alkaloids, oxalates and flavonoids (Abo-Donia and Nagpal, 2015). The Pala leaves are readily eaten by camels (Poonia et al, 2022) and contain 12.5-16.9% CP, 13.9-17.1% CF, 1.5-2.7% EE, 10.2-11.7% ash and 55.3-56.7% NFE (Abdu et al, 2007). Similarly, Khejri leaves are also nutrient rich and preferred by livestock of arid and semi-arid climatic regions (Sharma and Sahoo, 2017). However, little information exists on livestock performance on combination of roughages involving crop residues and available tree/browse plants of the region. There is deficit water availability in the arid climatic region, which may have variable adverse effect on livestock performance. But, camel seems to sustain production even during prolonged period of water scarcity (Sahoo, 2020). It is thus hypothesised that replacement of conventional dry roughages with tannin containing tree leaves in the diet of lactating camel may have a modulatory effect on nutrient digestibility feed and water intake.