# Optimizing the incorporation rate of fresh leaves *of Ficus sycomorus* as a dietary supplement for sheep fed low-quality forages: effects on digestibility and zootechnical performance

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**Keywords:** Browse fodder, sheep, low-quality forages, digestibility, average daily gain

**Submitted 01/08/2026, Published online on 31st October 2026 in the *Journal of Animal and Plant Sciences (J. Anim. Plant Sci.) ISSN 2071 – 7024***

## 1 ABSTRACT

**The objective of this study was to determine the optimal incorporation rate of fresh leaves of *Ficus sycomorus* (sycamore fig) as a dietary supplement for low-quality forages. 20 adult Djallonké rams distributed into five groups receiving diets containing 0% (T0), 15% (T15), 30% (T30), 70% (T70), or 100% (T100) of *F. sycomorus* leaves for 74 days. The basal rations, consisting of *Pennisetum pedicellatum* (Deenanath grass) hay and *F. sycomorus* leaves, were supplemented with 100 g of cotton seed cake. The study assessed the chemical composition, the voluntary intake, the apparent digestibility and the weight evolution of the five diets. The results showed that the fresh leaves of F. sycomorus were richer in crude protein (109.5 g CP/kg DM) than the basic hay (43.6 g CP/kg DM), but the leaves of *F. sycomorus* also contained more crude ash (153 g CA/ kg DM). The incorporation of *F. sycomorus* leaves into the diets significantly improved nutrient digestibility ($p < 0.05$). The diet containing 70% of *F. sycomorus* showed the highest average daily gain (83 g/day/ kg $BW^{0.75}$) and the low feed conversion ratio (9 kg DM/kg gain), compared to 18 g/day/ kg $BW^{0.75}$and 35 g kg DM/kg gain respectively for the control. Beyond 70%, no significant improvement was observed. It is recommended the use of fresh *F. sycomorus* leaves at a maximum rate of 70% of total dry matter to optimize sheep fattening in the Sahelian zone. However, the 30% rate could also be interesting in case of low availability of *F. sycomorus* leaves.**