

Erythrina Edulis as An Alternative Feed for Dual-Purpose Cattle System of High Andean Areas in South America.

- **Author(s):** Oscar G, Fuentes-Quisaguano, Guamán-Rivera Santiago A, Guerrero-Pincay Angela E, García-Bustillos Mario G, González-Marcillo Raúl L, and Aragón Vásquez Eduardo F
- **Abstract:** The *Erythrina edulis* (*E. edulis*) is a multipurpose legume plant with high nutritional value. In South America, it is widely used for feeding ruminants, and the sheath apparently could have greater chemical composition than leaves, but there is no referential data. With this aim, a study was carried out to compare the chemical composition and in situ dry matter (DM) and crude protein (CP) degradation kinetics of leaves (LV) and sheath (SV). To this end, samples (LV and SV, respectively) were incubated for 3, 6, 12, 24, 36, 48 and 72, h, and the fast and slowly degradable fraction and effective degradability (ED) of DM and CP, were calculated. Despite greater contents observed in LV for DM (31.4 vs. 12.2%) and CP (28.7 vs. 20.3%), their fiber contents (i.e., NDF, ADF and ADL) were greater than SV ($P = 0.007$ to 0.021). As a result, the ruminal DM and CP degradation at 72 h in SV was more than 80% and 70%, respectively, compared to LV (53%, on average; $P < 0.001$). In addition, the ED of DM in SV was higher than LV ($P < 0.001$), although no differences in ED of CP between leaves and sheath ($P > 0.05$), except in the outflow rate of 2%/h (52 vs. $66 \pm 2\%$; $P = 0.011$). Consequently, *E. edulis* is a valuable forage resource to include as a feed component in diets for ruminants at a low cost
- **Keywords:** diets for ruminants, chemical composition, multipurpose legume plant