Plant Exracts Affect In Vitro Rumen Microbial Fermentation. By Busquet et al., page 761. Plant extracts have been evaluated as natural alternative to modify rumen microbial fermentation. Different doses (from 3 to 3,000 mg/L of culture fluid) of 12 plant extracts and 6 secondary plant metabolites were incubated in vitro with diluted ruminal fluid for 24 h. High doses of all compounds resulted in detrimental effects on rumen microbial fermentation, but at lower doses, some plant extracts resulted in positive changes in rumen microbial fermentation. Careful selection and combination of these additives may allow the manipulation of rumen microbial fermentation.