



Citrus by-products generation, characteristics and improving their nutritional value

A. Mirzaei Aghsaghali¹ and N. Maheri Sis²

1. M.Sc. of Department of Animal Science

2. Instructor of Department of Animal Science

Ruminants are able to thrive on nutrients supplied by agricultural and feed waste or by-products. Citrus fruits are principally consumed by human as fresh fruit or processed juice, either fresh chilled or concentrated. In Iran, citrus fruit production exceeds 70000 tons yearly. After juice is extracted from the fruit, there remains a residue comprised of peel (flavedo and albedo), pulp (juice sac residue), rag (membranes and cores) and seeds. Citrus pulp consists of 60-65% peels, 30-35% segment pulp and 0-10% seeds. Although most citrus by-products has a low N content, low NDF and moderate nutrient density, processing can raise their nutritive value. The unfermented citrus pulp has relatively high levels of glucose and low levels of other nutrients. However, a large number of the citrus by-products are suitable for inclusion in ruminant diets because of the ability of ruminants to ferment high fiber feeds in the rumen and citrus by-products digestibility is similar among ruminant species.

Keywords: Citrus by-products, Nutritional value, Processing, digestibility, Ruminant.

¹ Corresponding author

Email: afsharmirzai@yahoo.com