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Características nutritivas de los hollejos húmedos de naranja (Citrus sinensis cv. Valencia) mantenidos en estibas

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Abstract

Proximate analysis and chemical characterization were done of humid orange peel (Citrus sinensis cv. Valencia) by-product immediately after industrial processing and during storage in piles for 12 d. Samples of the stored peel were taken on d 1, 4, 6, 8, 10 and 12 of storage from three layers within the piles: 5-15 cm; 15-30 cm and >30 cm. Results were analyzed with a completely randomized design, using a 3 x 6 factorial arrangement for temperature, pH and dry matter, and a 3 x 2 factorial for crude protein, calcium, phosphorus and ash. Analyzed factors were layer of pile, and sampling day. Interaction was found (P<0.01) between layer and day for dry matter, pH and temperature. The 30+ cm layer had the lowest dry matter values. Temperature was highest in the 5-15 cm layer, indicating fermentation to be most active in this layer. Values for pH initially decreased in the stratum 15-30 cm and 30+ cm layers, and then remained below 3.5. Overall, pH did not surpass 3.73. There was interaction (P<0.01) between layer and day for calcium and ash content; the latter indicating mineral loss over time. No interaction existed for crude protein and phosphorus, meaning there were no differences within layer and day. Humid orange peel by-product stored in piles did not exhibit variations in proximate composition or chemical composition that could affect it use as a livestock feed.

Keywords

Orange peel, By-products, Nutritional value, Livestock feed.