

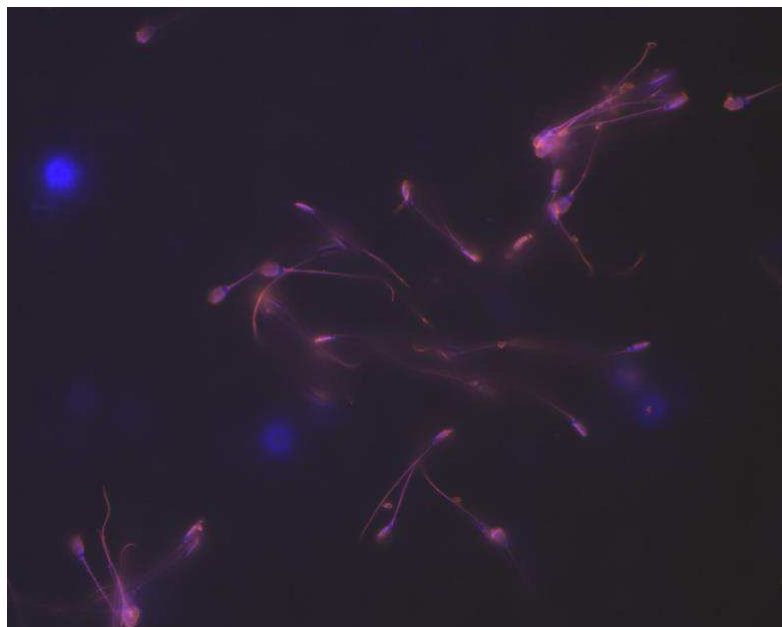
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One Health

L'Animal et l'Homme, une même santé



21. Chemical composition, digestibility and metabolizable energy of some legume's cultivation

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In Northern Morocco, forest rangelands are the main feed resource for grazing goats. These rangelands are characterized by annual and seasonal variation, causing the low herds' productivity. Thus, it is necessary to improve goat herd feeding by alternative feed resources incorporation. Legume cultivations are widely practiced in Northern Morocco. After primary products harvest, these cultivations generate important quantities of by-products (straw and hay) that could take place in ruminant diet. To introduce them, it is crucial to characterize their nutritional value. Thus, this work aims to determine the chemical composition, digestibility, and energy of four legumes practiced in Northern Morocco. Six samples of bean, faba bean, lentil and chickpea were collected from several places in Tangier and Larache, during summer after harvest. The studied composition parameters were dry matter, ash, ether extract, fibers (NDF, ADF and Lignin), condensed tannins, dry and organic matter digestibility and metabolizable energy. Results showed that dry matter, ether extract, ADF and Lignin were similar in all studied by-products. However, ash, NDF, condensed tannins, digestibility and metabolizable energy were variable ($P < 0.05$). Highest values of ash, digestibility and metabolizable energy were recorded in beans by-products. However, high contents of NDF and condensed tannins were observed in faba bean and chickpea by-products, respectively. In conclusion, the legumes by-products present an alternative feed to diversify ruminant's diet and bean by-product seems to be more nutritive among the studied by-products.

22. Potential use of some vegetables by-products as an alternative feed resource

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Nowadays, the substitution of conventional resources by agricultural by-products widely available could be used in the ruminant diet. In northern Morocco, vegetable farms are widely present and generate large quantities of by-products. However, it is necessary to know their nutritional quality to be incorporated into animal diet. This work aims to evaluate the chemical composition and metabolizable energy of two vegetables by-products mostly available in the study area. Three samples of onion and watermelon were collected from different places in Tangier and Larache, during summer after harvest, and dry matter, ash, ether extract, fibers (NDF, ADF and Lignin), condensed tannins, dry and organic matter digestibility, and metabolizable energy parameters were determined. According to the results, ether extract, fibers, and condensed tannins were similar in both of by-products. However, watermelon contained high water, ash, and metabolizable energy, and was more digestible compared to onion ($P < 0.05$). In conclusion, the vegetable by-products present an alternative feed to diversify ruminant's diet and watermelon by-product seems to be more nutritive among the studied by-products.