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Moringa oleifera crop residues as a source of bioethanol

Miguel Godino Garcia¹ and Deanna L Mulvihill²¹UPM, Spain²TLI Foundation, USA

Moringa (*Moringa oleifera*) is a high-productivity, fast-growing multipurpose plant adapted to dry tropical conditions. In Europe it is susceptible to grow in temperate Mediterranean areas with few frosts. As biomass, the composition of its nutrients makes it very interesting for its consumption, in green or dry, by both animals and people. Its fruits are triangular pods that provide oilseeds, with more than 30% of edible oil in its composition. Moringa pod husk are considered as a waste that, being rich in cellulose, is a source of raw material for the production of bioethanol. The management of the moringa tree crown, necessary for a good and easy harvest, provides a little lignified wood susceptible of being transformed in this biofuel. The massive production of moringa oil in tropical areas can represent an opportunity to value these residues and, with them, help combat the so-called Climatic Change together with the change of land uses and the reforestation of lands currently dedicated to extensive livestock. To explore the feasibility of using these residues for biofuels production, it's necessary to know: the potential production of the residues obtained in a crop of moringa oil, the results of compositional analysis of stems and pods of moringa and the results obtained in the production of bioalcohol.



Figure1: *Moringa pods husk*

Biography

Miguel Godino Garcia is a professor at the School of Forestry Engineers of the Universidad Politécnica de Madrid. He has been involved in cooperation projects in Colombia for 8 years, promoting the integral development of moringa cultivation and its different uses, focusing on the production of moringa oil. In collaboration with the University of Tolima, it is being promoted the creation of a university network with different Colombian universities opened to other universities.

miguel.godino@upm.es

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