

عنوان مقاله:

Moisture Dependent Physical Properties of Canola Seeds

محل انتشار:

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خلاصه مقاله:

Physical properties of four common Iranian varieties of canola seeds (Hyola, Okapi, Orient and SLM) were evaluated as a function of their moisture contents. The average seed length and thousand seed mass varied linearly from ۱.۹۲۵ to ۲.۲۶۲ mm and from ۳.۰۶ to ۴.۸۴ g, respectively. The average diameter, geometric mean diameter, and sphericity varied non-linearly from ۱.۴۷۵ to ۱.۹۱۱ mm, ۱.۶۲۵ to ۲.۰۲ mm and from ۰.۸۲ to ۰.۹۳, re-spectively in a moisture content range of ۵.۲۷ to ۲۳.۶۹% wet basis (w.b.). Among the varieties, Hyola had the highest values for length, diameter, geometric mean diameter, sphericity and thousand seed mass at all moisture levels. Maximum and minimum values of bulk density were obtained for SLM (۷۳۸.۸ kg m^{-۳}) and Hyola (۶۶۶.۰۶ kg m^{-۳}). The filling and emptying angles of repose ranges were determined as ۲۵.۳۷-۲۸.۵۴° and ۲۵.۴۸-۲۸.۶۸°, respectively. At all moisture content levels, the static coefficient of friction was the greatest against rubber (۰.۳۷۲-۰.۴۶۰), followed by plywood (۰.۳۵۸-۰.۴۴۹), galvanized iron sheet (۰.۳۰۱-۰.۴۱۹) while fiberglass sheet (۰.۲۶۰-۰.۴۱۴) while the least for glass sheet (۰.۲۵۳-۰.۳۹۲). Among the four canola varieties, Orient and SLM showed respectively the least and the greatest static coefficients of friction at all moisture levels studied.

کلمات کلیدی:

Canola seed, Geometrical properties, Gravimetical properties, Frictional properties

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