



STARCH CHARACTERISTICS OF BEAN (*PHASEOLUS VULGARIS* L.) GROWN IN DIFFERENT LOCALITIES

ABSTRACT

Bean variety and environmental conditions (locality) might have an effect on functional properties of the starch. The digestibility and physicochemical characteristics of starch isolated from Black 8025 and Pinto Durango beans grown in two different localities with different water regimes were evaluated. Amylose content showed significant differences between localities. Pasting properties of bean starches obtained under rain fed conditions were higher than starches from beans grown in irrigation conditions. Bean starches from both localities presented a high degree of polymerization (DP) of starch chains. Starch from bean varieties grown in Celaya (irrigated) exhibited high resistant starch content and low glycemic index value compared to starch from bean varieties grown in Ocampo (rain fed). This study demonstrated that the variety of bean, locality and rain fed or irrigated conditions, affected the internal structure of bean starch and therefore some of their physicochemical and digestibility properties.

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Autores: Maribel Ovando Martínez*, Perla Osorio Díaz, Luis Arturo Bello Pérez, Kristin Whitney, Senay Simsek.

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