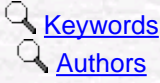


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Seed Quality, and Fatty Acid and Sugar Contents of Pepper Seeds (*Capsicum annuum* L.) in Relation to Seed Development and Drying Temperatures

İbrahim DEMİR¹, Aziz TEKİN², Z. Aytanga ÖKMEN³, Gamze OKÇU¹, Burcu B. KENANOĞLU¹

¹Department of Horticulture, Faculty of Agriculture, University of Ankara, 06110 Ankara - TURKEY

²Department of Food Engineering, Faculty of Engineering, University of Ankara, 06110 Ankara - TURKEY

³Department of Food Engineering, Faculty of Engineering, Middle East Technical University, Ankara - TURKEY

Abstract: This study was carried out in order to determine the effects of drying temperature (25, 35, and 45 °C) and the developmental stage (55, 65, 75, and 85 days after anthesis (DAA)) on germination, vigor, and the sugar (sucrose, glucose, fructose) and fatty acid contents of pepper seeds (*Capsicum annuum* L.) over 2 consecutive years. In seeds harvested at 75 DAA and after, seed viability and vigor were not influenced by drying at temperatures up to 45 °C. Linoleic acid (18:2) was the main fatty acid in pepper seeds, comprising 75-80% of total fatty acids. It was followed by oleic (18:1) and palmitic (16:0) as roughly 10%-12% and stearic (18:0) as 3%. The results indicated that drying seeds at different temperatures does not change fatty acid composition. Approximately 30% of the pepper seeds are constituted of sucrose, and this did not change with maturity level between 55 and 85 DAA, nor did it change at different drying temperatures. However, the levels of fructose and glucose gradually decreased as the developmental stage advanced and both were lower than 4% of total sugar at the final harvest. Seeds dried at 45 °C had lower amounts of sugar compared to those dried at 25 and 35 °C. Seed quality and fatty acid and sucrose composition do not change as long as the seeds are harvested within 75 DAA.

Key Words: Pepper, seed drying, seed development

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