

Title Effects on quality and shelf life of drying hazelnuts in an electrical coffer system
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Abstract

This research was carried out at the Hazelnut Research Institute. The ‘Tombul’ hazelnut type, our standard hazelnut which grows densely in the Black Sea region and has an important place in our country’s economy, was used as material. After harvesting, the hazelnut moisture content was 25-30%, which was necessary to decrease just to 6% in the kernel. The results of drying with artificial methods and storage for one year showed changes in yield. Drying was done at 30°C, 35°C and 40°C in hot weather using a drying machine. Drying hazelnuts in natural conditions was used as the control. The drying machine was designed with a horizontal roller working at 60 revolutions/hour. During the drying process, moisture content and electrical consumption were determined. One hour after removal from the yield the moisture ratio was 0.26%, 0.35% and 0.30% at 30°C, 35°C and 40°C, while electrical consumption was 2.39 kW/hour, 3.33 kW/hour and 4.02 kW/hour. Moisture samples were taken from the yield for three different periods in one year. In the samples from the yield the amounts of oil content, free oil acidity and hazelnut ashes were determined. No aflatoxin B1 was found in the samples. Total aflatoxin (B1+B2+G1+G2) was found to be more than 0.4 ppb, a higher value than in the controls.