Abstract:

Turkey is the motherland of fig and has a large production potential because of the suitable climate. It is at the first rank according to the production with 260000 tones by the statistical data of 1999. While 30% of the production is consumed as fresh at domestic market, 70% of it is consumed as dried in domestic and foreign markets. The dried fig export is about 40000 tones in 1999 and value of 70 million US dollars. Drying process is no doubt important in order to obtain good quality product suitable to the worlds standards and to increase export potential. Therefore, the most suitable drying conditions should be determined.

In this study, a laboratory dryer in Hohenheim University, Institute of Agricultural Engineering in the Tropics and Subtropics, was used. The dryer consists of cooling and heating system, moistening system, airflow control system, measurement sensors, drying chamber, weighing system and PC program control. The drying air temperatures of 40, 50, 60, 70 and 80°C, relative humidity of 15, 30 and 45% and velocity of 0.1, 0.5 and 1.0m/s were used to determine the effects of drying air temperature, relative humidity and velocity on the drying characteristics, drying time and also sensory characteristics of fig. The drying behavior of fig was also examined.

According to the results, the samples were dried earlier at higher drying air temperatures but resulted in poor quality. High quality products were obtained at drying temperature of 50°C. In addition to this, lower drying air relative humidity and air velocity of 0.5m/s is suitable for shortening the drying time.