Thesis Title	Study of parameters affecting drying kinetics and quality of corns
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Abstract

The formal objective of this research was to investigate the factor affecting to drying rate of high moisture corn at high temperature with fluidization technique and to develop a mathematical model for predicting drying rate. It was found from the experiments that the drying rate was affected by the inlet hot air temperature and the specific air flow rate. Among three semi-empirical drying equations Wang-singh, Page and Lewis, it was found that Page's equation could predict better than the others.

The latter, it was to investigate the quality of corn that systematically processes to decrease corn moisture content were used. The process started with fast drying by fluidization technique at inlet hot air temperature 150-170°C followed by tempering about 40 minutes and ambient air ventilation respectively.

Corn qualities as determined from aflatoxin content, percentages of breakage and stress crack, and color changes. Experimental results showed that the aflatoxin content in dried corn wasn't change, breakage and cracking of dried corn was depended on final moisture content after drying but it wasn't relied on the inlet hot air temperature and tempering time range and finally, color of dried corn was leant on tempering time range however it was independent on final moisture content as well as inlet air temperature.

Keywords : Aflatoxin / Ambient air ventilation / Corn drying / Corn quality / Drying mathematical model / Fluidization / Tempering