

Title Development of a Maize Breakage Test Method using a Commercial Food Processor
Author S. D. Noble, R. B. Brown and V. J. Davidson
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Abstract

A test method using a modified commercial food processor to determine the breakage susceptibility of maize was developed. The processor blade was replaced with an aluminium impeller designed to fracture the kernels. The 50 g samples of intact maize kernels were treated in the processor for 30 s, and then were screened over a 7.5 mm round-hole sieve to determine the amount of breakage (fines). Breakage increased from 15 to more than 80% in one sample of maize dried from 22% moisture (wet basis) to 12% under ambient conditions. Breakage coefficient of variation ranged from less than 4% for the samples tested below 16% moisture, up to 12–15% for the high moisture samples. Three lots of maize dried to the same final moisture under different drying conditions showed significant variation in breakage, demonstrating the ability of the method to discriminate between drying treatments.