

Optimization of Process Parameters to Dry Different Hybrids and Varieties of Chillies in Barns

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ABSTRACT

Experiments were conducted to establish optimum parameters to dry different varieties and hybrids of chillies in unutilized tobacco barns. Drying time required to reduce moisture from about 233.3 to 12.1% (d.b) varied depending upon whether the chilli is hybrid (thick pericarp type, eg. Wonder Hot, Indam-5) or variety (medium to thin pericarp type, eg. LCA-334). The hybrids require about 48 to 50 hours to dry whereas the varieties require about 38 to 40 hours. The temperatures ranging initially at 50°C to a final value of about 55°C were found to be appropriate to dry chillies. The percentage discolored pods were found to be only 0.5 to 2.5% in barn dried produce in comparison to 10 to 15% in open yard sun drying. The open yard sun drying takes 16 to 21 days in comparison to barn drying method. It has been observed that time, temperature and ventilator operation regimes are important to get good quality uniform dried produce. The operation schedules of bottom and top ventilators were optimized for both chilli hybrids and varieties.

Key words : Barns, Chillies, Drying, Process Parameters.