STANDARDIZATION OF THRESHING AND DRYING METHODS IN HYBRID RICE (*Oryza sativa* L.) SEED PRODUCTION

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ABSTRACT

Studies were conducted to standardize threshing and drying methods of two rice hybrids viz., ADTRH 1 and CORH 2 during 2001-2003. Three threshing methods viz., hand threshing (beaten against the wood), mechanical threshing (commercial multicrop thresher at 600 rpm speed) and tractor treading (tractor was moved over the thick layer of the harvested plants) and six drying methods sun, shade, alternate, intermittent, solar and heated air drying were experimented. Observations on threshing efficiency, seed germination, vigour index, field emergence, electrical conductivity of seed leachate and seed storability were recorded

. The results revealed that the threshing efficiency was significantly higher in mechanical thresher followed by tractor treading. The vigour and viability of fresh and stored seeds also indicated that hand and mechanical threshing were better than tractor treading. However, hand threshing may not be economical since it is laborious, more time consuming and low in threshing. Hybrids also differed with quality and retention of filled seeds after threshing. Among the traditional drying methods, alternate, intermittent and shade drying performed better than sun drying whereas between artificial drying methods, heated air drier excelled the solar drier. Seeds dried in alternate and heated air drying methods recorded higher values for all the vigour parameters over other methods. It could be concluded that mechanical threshing is a feasible method to obtain good quality seeds with maximum threshing efficiency and heated air drying at 40 °C is more appropriate for large scale seed production hybrid rice. In the absence of artificial driers, alternate drying method may be adopted.

Key words*:* Hybrid rice, threshing, drying, storage, seed quality