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Determination of the relationship between packet contraction and quality degradation of finger Millet: *Eleucina coracana* (Kurakkan) powder during Shelf Life period

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Since quality degradation and package shrinking of commercially packed food products is a common problem, a study was carried out using six kg of cleaned finger millet seeds (kurakkan) which was divided into two equal portions. One portion was subjected to heat treatment at 90^0C for 5 minutes. The two portions were then ground and each was divided into two equal portions again. Moisture content of each was made 10% and 14% by heating and re-hydration. 4 samples, generated out of these treatments were replicated thrice and stored under normal environmental conditions for 3 months. Random samples were drawn from each treatment monthly, to determine starch content in terms of starch iodine blue value and development of free fatty acids (FFA). Package shrinking was measured using Archimedes law of displacement.

Result revealed that the FFA level in raw millet powder (85%) at high moisture content after three months of shelf life was significantly higher than that of its counter treatment. Starch content measured in terms of iodine blue value of heat-treated / low moisture sample (0.169) was similar to the initial value of 0.174 even after 3 months of shelf life. High percentage of volume reduction (package shrinking) also occurred in raw millet powder at high moisture content, which was about 10.2% as against its counter treatment (5.5%). According to the results the best treatment was the heat treatment of 90^0C for 5 min and keeping the moisture content of millet seeds, preferably at 10% before packing.