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## *Prabhat Kumar Malviya*

*Central Arid Zone Research Institute, India*

### **Shelf-life enhancement of pearl millet flour**

Rapid development of rancidity and bitterness in the flour has been a major problem in the acceptability and utilization of pearl millet flour. The pearling of pearl millet grains brings changes in its chemical composition. During the pearling operation nutrients present in the grain are distributed due to the reason that certain nutrients are concentrated into certain part of grain. The pearl millet grains are processed by friction and abrasion operation in a simple pearler to peel and strip various layers of bran from grains. In pearl millet the quality of flour require to be improved for its better acceptability and longer shelf life. Due to high fat content its storability is poor, particularly of its flour. Pearling of the pearl millet grain can improve its palatability as well. A pearler is developed which could pearl small quantity of sample. The mill rotors consist of two 98 mm diameter and 13 mm thick carborundum grinding wheels driven by 1.0 hp electric motor. Each wheel is separated by 5 mm where clearance of 2.5 mm is maintained between two wheels and pearling chamber. The grain is fed through the top and passes through rotating wheels. The pearled grain is collected at the bottom. Pearling of pearl millet has been done as a means of producing low fat pearled grains and also to obtain different fractions (pearled grains, partially pearled grains, partially pearled grains-fines, grit and fine bran) for analysis for its chemical constituents. The data indicated that grit fraction has 4.3% ash contents (minerals), 18.90% crude protein and 17.0% ether extract (lipid) indicating as good source of dietary energy. Further, the flour derived from pearled pearl millet grain was having more shelf life compared to the flour made from un-pearled pearl millet grain.

### **Biography**

Prabhat Kumar Malviya is a Principal Scientist at Central Arid Zone Research Institute, India. He was working in the field of Agricultural Engineering (Seed processing, drying and storage) at National Seed Corporation Ltd for over 9 years. He also worked as Principal Investigator of Ministry of Science Technology (DST) funded project "Processing and Preservation of Arid Zone Fruits."

[prabhataid@hotmail.com](mailto:prabhataid@hotmail.com)

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