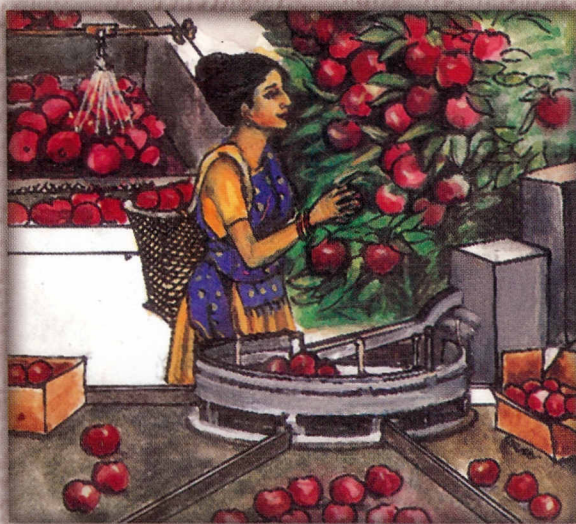




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Postharvest Management in Agriculture

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Postharvest Management in Agriculture **SAARC Bibliographical Database**

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cooking methods: soaking in tap water for 6, 12 and 18 h; sprouting for 40 and 60 h; ordinary cooking of unsoaked seeds and seeds soaked for 12 h; and autoclaving of unsoaked and soaked seeds. In vitro, starch digestibility (mg maltose released per g meal) and protein digestibility (%) of raw rice bean varied from 29.3 to 36.5, and 57.2 to 62.8, respectively. Both starch and protein digestibilities improved significantly on soaking, sprouting, cooking and autoclaving. There was a progressive and significant increase in starch and protein digestibility with successive increase in soaking and sprouting period.

478 KATARIA, A; CHAUHAN, BM; PUNIA, D. 1990. **Effect of domestic processing and cooking methods on the contents of carbohydrates of amphidiploids (black gram X mung bean).** *Food Chemistry*, 36: 1, 63-72; 14 ref.

The effects of soaking, ordinary and pressure cooking of soaked and unsoaked seeds and the effects of sprouting on sugar and starch contents of amphidiploid (black gram X mung bean) seeds were investigated. Soaking reduced the values of total soluble sugars, reducing sugars, non-reducing sugars and starch significantly. Cooking (both ordinary and pressure cooking) increased the concentrations of sugars of soaked as well as unsoaked seeds; starch contents, however, decreased. Germination decreased starch, thereby increasing the soluble sugars.

479 RAMAMOORTHY, K; PANDIAN, M; KALAVATHI, D. 1989. **Soaking-drying treatment for maintaining viability and vigour in lima bean (*Phaseolus lunatus* L) cv. LPS 1.** *Annals of Plant Physiology*, 3: 2, 122-125; 9 ref.

P. lunatus seeds stored for 4 months under ambient conditions were soaked in water for 15 or 30 min, dried to original moisture content and subjected to accelerated aging at 98% RH and $40 \pm 1^\circ\text{C}$ for 15 d. The treated seeds gave 71-73% germination. Germination was decreased to 68 and 50% in treated seeds which had been soaked for 1 and 2 h, respectively. Membrane integrity and dehydrogenase activity were not adversely affected in treated seeds which had been soaked for a shorter duration (15 and 30 min).

LENTILS

480 BAKR, MA. 1994. **Postharvest processing and quality of lentil in Bangladesh.** *Lentils in South Asia: proceedings of a Seminar.* (IARI, New Delhi: 1991: 11-15 Mar)/edited by W Erskine; MC Saxena. p. 195-205.

481 LAL, SS. 1993. **Stored pulses can be saved by proper management.** *Indian Farming*, 42: 12, 31-32.

482 VISHUNAVAT, K; SHUKLA, P. 1983. **Effect of different temperatures, humidities and period of storage upon prevalence of seed mycoflora of lentil.** *Indian Journal of Mycology and Plant Pathology*, 13: 1, 109-111; 8 ref.

The results are tabulated of the effects of 3 temps. ($6-8^\circ$, 25° and $38-16^\circ\text{C}$) and 4 RHs (75, 85 and 92% and in a desiccator without salt solutions) on *Aspergillus flavus*, *A. fumigatus*, *A. niger*, *A. sydowi*, *A. terreus*, *Fusarium oxysporum*, *Alternaria alternata*, *Curvularia lunata* [*Cochliobolus lunatus*], *Penicillium oxalicum* and *Rhizopus arrhizus* in stored lentils.

STARCH CROPS

Postharvest handling

483 AGRAWAL, MP; SRIVASTAVA, HM. 1987. **Effect of storage temperature on the post-harvest quality of sugarbeet.** *Indian Journal of Agricultural Sciences*, 57: 11, 825-828; 8 ref.

Experiments were conducted to determine weight loss and quality deterioration in sugarbeet stored in heaps at subtropical temp. between harvesting and processing. 4 harvesting dates and 6 storage durations (0, 24, 48, 72, 96 and 120 hours) were studied and weekly average max. air temp. and RH after each harvest date were recorded. Min. losses for harvested on 15 April was for 24 h storage and increased for longer storage periods. Losses was 6% for 15 April harvest and 9% for others (30 Apr, 15 and 30 May). Sucrose, Na, K, amino-N & total Na^{++} K^+ levels were measured.

484 GHULE, DB; SAWANT, AD; JADHAV, SJ. 1984. **Thin-layer chromatography of amino-acids in sugar cane and their changes during post-harvest storage and processing.** *Maharashtra Sugar*, 10: 1, 105, 107-109.

Harvested cane, stored for up to 120 h at room temperature and the juice was sampled every 24 h for analysis. Asparagine, glutamine, aspartic acid and glutamic acid were identified. The top portion of mature cane contained a greater total of amino acids than the bottom portion, whereas the converse was true for immature cane. Amino acid content fell during the first 24 hour, after which there was a gradual increase. Juices, syrups, massecuites and final molasses were also analysed.