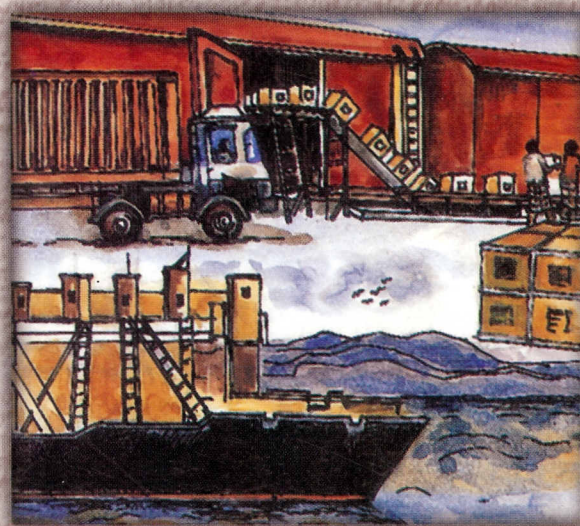
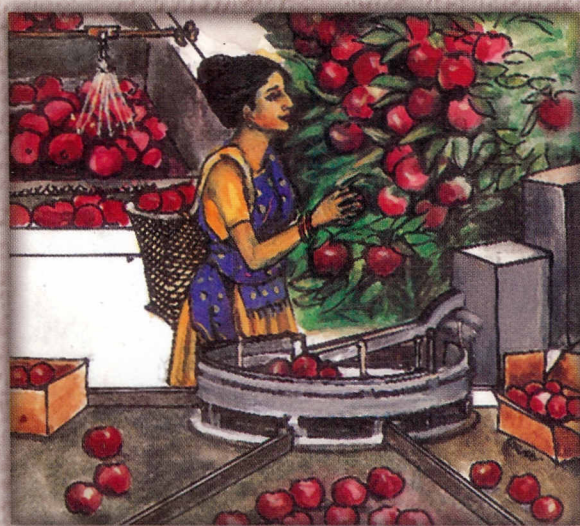




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Postharvest Management in Agriculture

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Postharvest Management in Agriculture **SAARC Bibliographical Database**

A S Chandel and R M Kamal



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spoilage but no rotting occurred at 15°C even when the RH varied from 30 to 90%.

545 SHARMA, MP; ROY, AN. 1984. Some new records of fungi causing turmeric rhizome rot. *Current Science, India*, 53: 16, 869-870; 6 ref.

Freshly harvested rhizomes from 2 centres in India carried rot symptoms, suggesting that infection initiated in the field leads to spoilage in storage. Rotted rhizomes yielded isolates of 10 fungi, all of which reproduced symptoms on healthy rhizomes inoculated by the knife injury method. *Aspergillus flavus*, *A. niger*, *Cladosporium cladosporioides* and *Macrophomina phaseolina* caused 100% infection and decayed 22-25% of rhizome tissues after 21 days of incubation. The other 6 isolates developed infections on 50-60% of rhizomes and spoiled 7-15% of the tissue during the same period. The 4 most virulent fungi were able to penetrate and establish infection through intact host tissues. With the exception of *A. flavus*, the pathogens reported here are newly recorded as causing rotting of turmeric rhizomes.

546 SHARMA, MP; ROY, AN. 1984. Storage rot in seed rhizome of turmeric (*Curcuma longa* L.) and its control. *Pesticides*, 18: 11, 26-28; 5 ref., 4 tab.

Storage of seed rhizomes has recently become a serious problem in Barua Sagar, Jhansi, UP. Periodical surveys over 3 yr revealed that *Aspergillus flavus* was associated with > 70% of rotted rhizomes. Sudden spurts in rotting were directly related to increases in RH during the rainy season. Rotting increased with high temp. (c. 35°C). *A. flavus* rot was effectively controlled with pre- and post-inoculation treatments of Bavistin [carben-dazim] and benomyl at 10 p.p.m., which is economically feasible.

SPICES

Storage and storage decay

547 CHANDER, H; KULKARNI, SG; BERRY, SK. 1991. Ability of the red flour beetle, *Tribolium castaneum* to feed and breed in whole and ground spices. *Indian Cocoa, Arecanut and Spices Journal*, 14: 3, 114-116; 14 ref.

Seven ground or whole spices were tested in the laboratory as media for rearing the stored products pest *Tribolium castaneum*. Development was completed only in powdered chillies [*Capsicum*], and in this food reproductive efficiency was as good as in a standard wheat flour medium.

548 DHANELAPPAGOL, MS; SHASHIDHARA, SD; KULKARNI, GN. 1988. Studies on drying character-

istics of chillies. *Journal of Agricultural Engineering*, 25: 3, 72-75; 4 ref.

A laboratory study was carried out to determine the drying characteristics of chillies, using fresh harvested chillies (Byadgi variety) at about 45% seed m.c. (d.b.). Results show that both the drying rate and the total drying time depend upon the initial m.c. of the seed, and the temp. and RH of drying air. The heat utilization factor increased with decrease in drying air temp. Drying rate increased with increase in air temp. and total drying time decreased with increase in air temp.

549 MEENA NAIR; PETER, KV. 1990. Organic, inorganic fertilizers and their combinations on yield and storage life of hot chilli. *Vegetable Science*, 17: 1, 7-10; 11 ref.

In 3 successive field experiments conducted from Mar. 1987 to Apr. 1988, the effects of farmyard manure (FYM) applied alone (30 t/ha) or in combination (20 or 15 t/ha) with fertilizer mixtures containing N (75, 125 or 175 kg/ha), P₂O₅ (40 kg/ha) and K (25 kg/ha) on yield and storage life of chilli (cv. KAU Cluster) were studied. Combination of fertilizers containing N at 125 or 175 kg/ha with FYM significantly increased the yield compared with the organic or inorganic fertilizers applied alone. Num. and wt. of unmarketable fruits recorded after 10 d of storage increased with increasing of FYM and fertilizers.

550 MISRA, N. 1983. New records on fungi from the bark of *Cinnamomum zeylanicum* Bl. in storage. *Science and Culture*, 49: 5, 133-135.

The fungi isolated from unsterilized and surface sterilized cinnamon bark during different seasons are tabulated. *Aspergillus* spp. predominated.

551 NARASHIMHAN, S; RAJALAKSHMI, D; CHAND, N. 1992. Quality of powdered black pepper (*Piper nigrum* L.) during storage. II. Principal components analyses of GC and sensory profiles. *Journal of food quality (USA)*, 15: 1, 67-83.

552 POTTER, RW; OLSEN, AR. 1987. Description of a mite, *Rhyoglyphus indicus*, new genus, new species (Acari: Acaridae) found in foods from the Oriental Region. *International Journal of Acarology*, 13: 4, 271-275; 7 ref.

R. indicus gen. et sp. nov., found in curry powder from India, tamarind candy and food sauces from the Philip-

pinces and chilli sauces from Taiwan and Thailand, imported to the USA, is described.

553 SANGAKKARA, UR. 1990. Relationship between storage and germinability of cardamom (*Elettaria cardamomum* Maton). *Journal of Agronomy and Crop Science*, 164: 1, 16-19; 9 ref.

Mature cardamom seeds were shown to contain a high percentage of water at harvest (75% on a DW basis) and germinability was around 62%, confirming the recalcitrant nature of the seeds. Germinability was lost at moisture contents <50%. A drying temperature of 40°C rapidly reduced seed moisture content and germinability, but some degree of germinability (28%) could be retained for 7 days by drying at 20°. Germinability (12%) was retained for 15 days in seeds stored in sealed polyethylene containers at 5°.

Processing

554 NARASIMHAN, S; CHAND, N; RAJALAKSHMI, D. 1992. Saffron: quality evaluation by sensory profile and gas chromatography. *Journal of food quality (USA)*, Central Food Technological Research Institute, Mysore, India. 15: 4, 303-314.

555 PRAKASH, V. 1990. Leafy spices. Boca Raton, Florida: CRC Press, Inc, 114p.

Information is presented on the geographical origin, botany and cultivation, plant composition, essential oil content and chemistry, extractives, specifications (for the dried leaves and/or essential oils, where known), harvesting and processing, and uses (in the food industry, medicine, pharmaceuticals, cosmetics and perfumery) of the following leafy spices: basil (*Ocimum basilicum*), bay (*Laurus nobilis*), bergamot (*Monarda* spp.), borage (*Borago officinalis*), burnet (*Sanguisorba minor*), camomile (*Anthemis nobilis* [*Chamaemelum nobile*] and *A. gayana*), chervil (*Anthriscus cerefolium*), chives (*Allium schoenoprasum*), coriander (*Coriandrum sativum*), costmary (*Chrysanthemumbalsamita* [*Tanacetum balsamita*]), curry leaf (*Murraya koenigii* and *M. paniculata*), marjoram (*Majorana hortensis* [*Origanum majorana*] and *Origanum onites*), mint (*Mentha* spp.), oregano (*Origanum vulgare*), parsley (*Petroselinum crispum*), rosemary (*Rosmarinus officinalis*), sage (*Salvia* spp.), savory (*Satureia* [*Satureja*] *hortensis* and *S. montana*), tarragon (*Artemisia dracunculus*), and thyme (*Thymus vulgaris*). A subject index is included.

556 VERGHESE, J. 1989. On the isolation of oleoresin black pepper by steam distillation-cum-solvent

extraction and tailoring of oleoresin. *Perfumer and Flavorist*, 14: 6, 33-36, 38; 18 ref.

The procedure is discussed for *Piper nigrum* oleoresin production, with analytical data.

OILS

557 BLAAK, G. 1991. Report on advisory mission related to integrated development of the essential oil industry in Bhutan. 15 p.

558 KURIAKOSE, KP; KURIAN, A. 1992. Storage studies on lemongrass oil. *Agricultural Research Journal of Kerala (India)*, 30: 2, 117-119.

559 MAHADEVAIAH, B; INDIRAMMA, AR; BALASUBRAHMANYAM, N. 1993. Packaging and storage studies on double-filtered groundnut oil. *Zeitschrift fuer Lebensmittel Untersuchung und Forschung (Germany)*, 196: 3, 252-254.

560 ONUERBU, BA; IHUANNE, HA. 1994. Effect of common salt on stored oil of palm (*Elaeis guineensis*). *Indian Journal of Agricultural Sciences*, 64: 9, 647-649.

561 SINGHAL, AK. 1985. Rapeseed-mustard price structure in Uttar Pradesh. *Indian Journal of Agricultural Economics*, 40: 3, 369-375.

The paper investigates questions of disparity between producer and the consumer prices of agricultural products and inefficiencies resulting in wide fluctuations in price, both spatial and temporal, based on Lakhimpur tehsil. Five major producing, assembling and distributing centres chosen for study were Kanpur, Agra, Aligarh, Hathras and Lakhimpur. The study relates to the period 1973-77. In the case of oilseeds like rapeseed and mustard, any profits from carrying stocks over the year are being collected mainly by the oil millers rather than by wholesale traders. Almost all the farmers interviewed in the selected villages sold their rapeseed mustard to petty traders and did not carry them to Lakhimpur market for sale. The prices in the five regulated markets generally moved together, suggesting a fair degree of market integration. Price rises in the lean season, compared to prices in the immediate post-harvest months, were not always higher than is warranted by carry-over costs.

562 SINHA, JC; ROY, SK. 1990. Change in the composition of the essential oils of the peels in during storage. *Indian Perfumer*, 34: 2, 137-143.