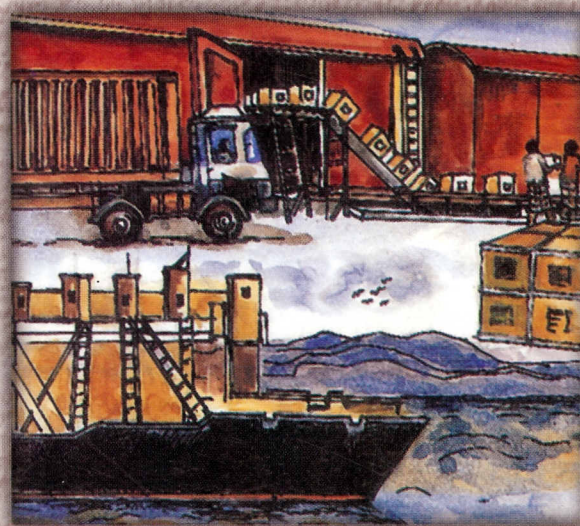
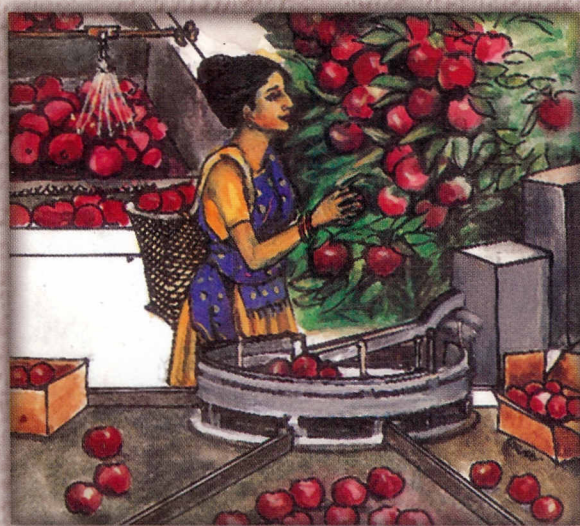




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# Postharvest Management in Agriculture

## SAARC Bibliographical Database



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# **Postharvest Management in Agriculture** **SAARC Bibliographical Database**

*A S Chandel and R M Kamal*



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**SAARC Agricultural Information Centre (SAIC)**

SAARC Agricultural Information Centre (SAIC)  
BARC Complex, Farmgate, Dhaka 1215, Bangladesh

**Published : 1995**

**Cover design : Mafruha Begum**

**Price :** US\$ 5.00 for SAARC countries  
US\$ 8.00 for other countries

Chandel, A S and Kamal, R M

Postharvest Management in Agriculture: SAARC bibliographical database.

Dhaka: SAARC Agricultural Information Centre, 1995.

ii, 231, xxxv p.

1. Postharvest technology, bibliography. 2. SAARC Agricultural Information Centre. i. Jt. Author.  
ii. Title.

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**Published by :** Director, SAARC Agricultural Information Centre (SAIC)

**Printed at :** Panir Printers, 9 Nilkhet, Dhaka 1205

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and decay losses and the best quality indices (fruits marketable for up to 56 days) were obtained with a mixture of calcium nitrate and Bavistin. Marketability in the control extended for up to 28 days.

**756 MANN, SS; SINGH, K; MOHAN, C. 1988. Effect of fungicides and wax emulsion on storage of Kinnow mandarin at ambient storage conditions. Haryana Journal of Horticultural Sciences, 17: 1-2, 14-19; 9 ref.**

Postharvest treatment with the fungicides captan, Bavistin [carbendazim] or Aureofungin or with wax emulsion reduced weight loss and increased the palatability rating of the fruits. The palatability rating was maximum in fruits treated with wax emulsion and the effect increased with increasing concentration (6-12%). TSS and acidity of the fruits increased until 45 days of storage and decreased thereafter. Treatment with fungicides or wax emulsion did not significantly affect TSS and acidity percentages. The treatments reduced the occurrence of fruit rots [unspecified] during storage.

**757 MISHRA, BP. 1989. A note on control of blue mould of Kinnow fruits caused by *Penicillium italicum*, through diphenyl wrappers. Haryana Journal of Horticultural Sciences, 18: 1-2, 65-66; 5 ref.**

Diphenyl wraps (320 mg/30 ml acetone, 40 mg/wrap) gave complete control of blue mould in this mandarin hybrid as a pre-inoculation treatment and 89% control post-inoculation. The efficacy was greatly reduced by lowering the dosage.

**758 SANDHU, SS; RANDHAWA, JS; DHILLON, BS. 1989. Effect of different forms of calcium, diphenylamine and Bavistin on the shelf life of Kinnow fruits. Indian Journal of Horticulture, 46: 3, 327-332; 10 ref.**

Kinnow oranges [mandarins] of uniform size and colour harvested on 21 Jan. received 7 different dip treatments before being packed in perforated polyethylene bags and stored at 0 to 3.3°C and 85-90% RH for 2 months. Fruits dipped for 1 minute in 250 p.p.m. Bavistin [carbendazim] showed the least weight loss and storage decay after 60 days.

**759 SINGHROT, RS; SINGH, JP; SHARMA, RK; SANDOOJA, JK. 1987. Use of diphenyl fumigant in wax coating with different cushionings to increase the storage life of Kinnow fruits. Haryana Journal of Horticultural Sciences, 16: 1 & 2, 31-39; 7 ref.**

Kinnow mandarins were stored for up to 90 days at room temperature in wooden boxes with paper linings

and/or individual wrapping as cushioning materials. The cushioning material was either untreated or dipped in diphenyl solution dissolved in acetone. Half the fruits were dipped in Waxol 0-12. Minimum physiological weight loss was observed in Waxol-coated fruits packed with a lining of diphenyl-treated paper. Percentage decay loss was also least with Waxol + diphenyl. Of the cushioning materials, paper lining was better than individual wrapping. Among quality parameters the TSS and ascorbic acid contents were increased in fruits dipped in Waxol + a lining of diphenyl-treated paper, thereby enhancing the shelf life.

**760 ULLASA, BA; RAWAL, RD. 1988. Occurrence of stem-end rot of Kinnow mandarin (*Citrus reticulata*) and its control through post-harvest treatment with fungicides. Indian Journal of Agricultural Sciences, 58: 4, 324-326; 6 ref.**

The incidence of stem-end rot, incited by *Colletotrichum gloeosporioides* [*Glomerella cingulata*] reached 60% during storage, particularly in fruits harvested during the monsoon. Of 9 treatments tested, best control was achieved with 5 min dips in 1000 p.p.m. Baycor [bitertanol] or Benlate [benomyl].

## LEMONS

**761 BABU, KJ; LAXMINARAYANA, P; REDDY, SM. 1983. Evaluation of different volatile compounds in the control of fruit rot of lemon. Pesticides, 17: 12, 35, 38; 10 ref.**

Of 22 compounds tested against rots caused by *Colletotrichum gloeosporioides* [*G. cingulata*] and *A. niger*, 17 completely checked infection.

**762 SHARMA, RK; RAN SINGH; KUMAR, J; SHARMA, SS. 1989. Shelf life of Baramasi lemon as affected by some chemicals. Research and Development Reporter, 6: 1, 78-82; 6 ref.**

Fully ripe Baramasi lemons were harvested and stored at room temperature after dipping in a saturated sugar solution; sugar + 3% mustard oil; Waxol 0-12; 200 p.p.m. GA3; 200 p.p.m. GA3 + 0.1% captan; or 12% mustard oil emulsion. Waxol 0-12 was the most effective treatment; it reduced physiological weight loss and decay loss significantly. Quality parameters such as TSS, acidity and juice percentage showed no direct correlation with shelf life.

**763 SHARMA, S; MISHRA, BP; SHARMA, RK. 1986. Effect of some antifungal compounds to combat the post-harvest *Aspergillus* rot of Baramasi**

*lemon*. *Progressive Horticulture*, 18: 1/2, 71-72; 4 ref. Treated and non-treated fruits were packed in perforated polyethylene bags and stored for 23 days at room temperature ( $25 \pm 4^\circ\text{C}$ ). After 28 days, control of *A. niger* was best (83.7%) in fruits treated with Waxol-0-12 + captan at 0.1%, and next best (80.5%) with captan at 0.1% alone.

## GUAVAS

### Storage and storage decay

**764** ATTERI, BR; ROY, SK. 1988. Assessment of losses of guava and orange at retail cutlet level. *2nd International Food Convention (IFCON-88)*. (Mysore: 1988: 18-23 Feb.).

**765** CHAKRABARTI, N. 1983. A note on post-harvest rot of guava caused by *Fusarium solani*. *Indian Phytopathology*, 36: 3, 556; 4 ref.

Severe losses were caused by this disease in markets in Burdwan and its neighbourhood.

**766** DHOOT, LR; DESAI, UT; RANE, DA. 1984. Studies on the shelf-life of guava fruits with polythene packaging and chemical treatments. *Journal of Maharashtra Agricultural Universities*, 9: 2, 185-188; 8 ref.

Mature fruits of the cv. Sardar (L-49) were dipped for 5 min in solutions of NAA or BA alone or with  $\text{KMnO}_4$  (in all 23 treatments). Some fruits were packed in 150 gauge polyethylene bags with vents. All fruits were held for up to 12 days. Fruits treated with NAA at 150 p.p.m. and packed in bags had the best shelf-life.

**767** DUTTA, P; BANIK, AK; RAYCHAUDHURY, R; DHUA, RS. 1991. Influence of ethylene absorbents on shelf life of guava fruits. *Indian Journal of Horticulture*, 48: 3, 213-216; 13 ref.

Mature green fruits of cv. L-49 were harvested just prior to the colour-break stage. The fruits were packed in 200 gauge, low-density polyethylene bags containing Celite- $\text{KMnO}_4$  and silicagel- $\text{KMnO}_4$  as the ethylene absorbents, or without ethylene absorbents. The bags were stored under ambient conditions ( $29-32^\circ\text{C}$  and 82-85% RH). Fruit quality was assessed at 3-day intervals for up to 15 days. The lowest physiological weight loss (5.50%) and percentage ripening (50%) and highest percentage marketable fruits (70%) after 15 days of storage were obtained using Celite- $\text{KMnO}_4$  as an ethylene absorbent. The quality of fruits stored with

ethylene absorbents was comparable to those stored without ethylene absorbents.

**768** GORAKH SINGH. 1988. Effect of calcium nitrate and plant growth regulators on the storage of Allahabad Safeda guava. *Indian Journal of Horticulture*, 45: 1-2, 45-50; 10 ref.

Fifteen days before harvest the trees were sprayed with 1 or 2%  $\text{Ca}(\text{NO}_3)_2$ , 50 or 100 p.p.m. NAA or 20 or 40 p.p.m. GA3 in different combinations. After picking, the fruits were packed in 200 gauge low-density polyethylene bags and stored at ambient temperature. The least weight loss, the best reduction of respiration and incidence of fruit rot, and the optimum market quality for more than 6 days were obtained with 1%  $\text{Ca}(\text{NO}_3)_2$  + 100 p.p.m. NAA. Untreated control fruits remained in marketable condition for 3 days only.

**769** KARTAR SINGH; CHAUHAN, KS. 1982. Effect of certain post-harvest treatments on storage life of cv. L-49 of guava. *Haryana Journal of Horticultural Sciences*, 11: 3/4, 163-167; 6 ref.

Cooled and non-cooled fruits were dipped in Waxol or treated with  $\text{KMnO}_4$  via impregnated vermiculite blocks and held for up to 8 days at room temperature ( $27^\circ\text{C}$ ). Fruits cooled and dipped in Waxol had the least weight loss and highest TSS and ascorbic acid contents. Treatment with  $\text{KMnO}_4$  also gave good results compared with the non-treated control, especially with regard to ascorbic acid content.

**770** KARTAR SINGH; CHAUHAN, KS. 1983. Effect of post-harvest application of Waxol-0-12 and  $\text{KMnO}_4$  on guava fruits. *Punjab Horticultural Journal*, 23: 1/2, 38-42; 8 ref.

Fruits of the cv. L-49, harvested at the colour break stage, were dipped in Waxol-0-12 for 5 min or packed in 3-kg wooden boxes with a 5 X 5 cm vermiculite block impregnated with  $\text{KMnO}_4$  as an ethylene absorbent. The fruits were stored at 4, 7 or  $10^\circ\text{C}$  and 85-90% RH for up to 24 days. The activities of pectinase and cellulase were lowest in fruits treated with Waxol-0-12 and stored at  $4^\circ$ .

**771** KRISHNAIAH, J; SATYAPRASAD, CH; SINGH, TG; THIRUPATHAIAH, V. 1985. Post-harvest protection of guava fruits using Decco food-grade fruit coatings. *Indian Botanical Reporter*, 4: 2, 151-153; 16 ref., 1 tab.

The application of *Decco coatings* controlled post harvest diseases when used at 0.04 ml/100 g fruits. Spoilage fungi included *Aspergillus*, *Botryodiplodia*,