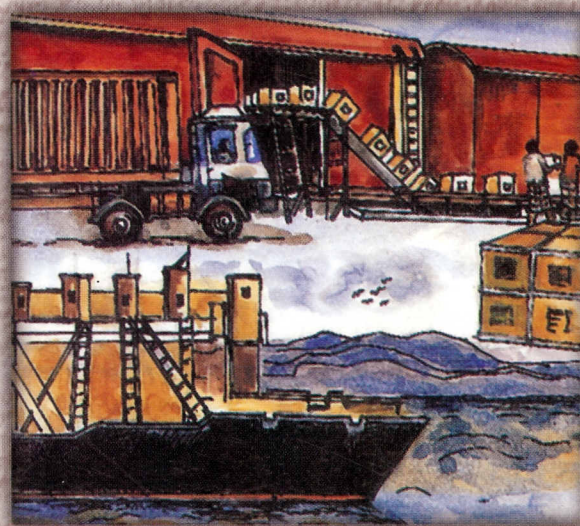
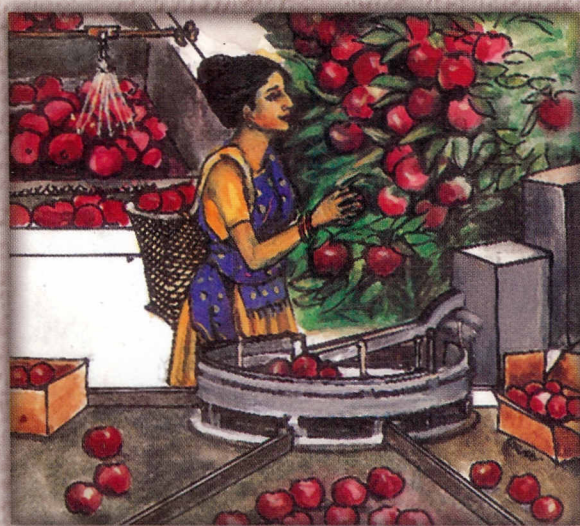




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Postharvest Management in Agriculture

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Postharvest Management in Agriculture **SAARC Bibliographical Database**

A S Chandel and R M Kamal



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CONTENTS

| | |
|------------------------|-----|
| <i>Preface</i> | i |
| <i>Introduction</i> | ii |
| POSTHARVEST EQUIPMENTS | 1 |
| PACKING MATERIALS | 14 |
| AGRICULTURAL PRODUCE | 25 |
| CEREAL GRAINS | 27 |
| WHEAT | 31 |
| SORGHUM | 35 |
| MAIZE | 36 |
| BARLEY | 38 |
| MILLETS | 38 |
| RICE | 39 |
| SOYBEANS | 60 |
| VIGNA | 62 |
| LENTILS | 66 |
| STARCH CROPS | 66 |
| CASSAVAS | 68 |
| TOBACCO | 70 |
| COFFEE AND TEA | 71 |
| GARLICS | 72 |
| GINGERS | 73 |
| TURMERIC | 75 |
| SPICES | 76 |
| OILS | 77 |
| FRUITS | 78 |
| APPLES | 83 |
| PEARS | 89 |
| APRICOTS | 90 |
| PEACHES | 91 |
| PLUMS | 92 |
| PRUNUS DOMESTICA | 94 |
| CHERRIES | 94 |
| LITCHI CHINENSIS | 94 |
| CITRUS | 95 |
| ORANGES | 97 |
| KINNOWS | 98 |
| LEMONS | 101 |

| | |
|---------------------|-----|
| GUAVAS | 102 |
| SAPOTA | 105 |
| MANGOES | 107 |
| NUTS | 115 |
| COCONUTS | 116 |
| DATES | 117 |
| POMEGRANATES | 118 |
| PAPAYAS | 118 |
| JACKFRUITS | 119 |
| AEGLE MARMELLOS | 120 |
| AMLA | 121 |
| BERRIES | 121 |
| BANANAS | 122 |
| PINEAPPLES | 126 |
| ZIZIPHUS MAURITIANA | 126 |
| GRAPES | 128 |
| VEGETABLES | 133 |
| CARROTS | 136 |
| POTATOES | 138 |
| ONIONS | 144 |
| CAULIFLOWERS | 151 |
| TOMATOES | 151 |
| BRINJALS | 156 |
| PEAS | 157 |
| GROUNDNUTS | 159 |
| MUSHROOMS | 162 |
| OTHER VEGETABLES | 163 |
| FLORICULTURE | 164 |
| DAIRY SCIENCE | 166 |
| FOOD TECHNOLOGY | 191 |
| JUICES | 205 |
| WINE AND BEVERAGES | 211 |
| SEED TECHNOLOGY | 213 |

Term Index

i

Author Index

xvi

1131 SINGH, J; DHANKAR, BS. 1991. Effect of nitrogen, potash and zinc on storage loss of onion bulbs. *Vegetable Science*, 18: 1, 16-23.

1132 SINGH, J; DHANKAR, BS. 1994. Effect of preharvest chemical treatment on storage loss of onion. *Advances in Hort. and For.*, Vol. 4/ edited by KL Chadha. New Delhi: Malhotra Pub.

1133 SINHA, P; SHARMA, RP; ROY, MK. 1994. Management of storage rot in onion through gamma-irradiation and chemicals. *Journal of Food Sc. and Tech. - Mysore*, 31: 4, 341-343.

Pre-harvest sprays of bavistin (50% carbendazim) at 100, 200 and 400 g a.i./ha were ineffective in the control of *Aspergillus niger* van Tieghem in onion. The combination of gamma irradiation (0.1 kGy) with bavistin dust (0.33g a.i./kg bulbs) was effective to an extent of about 79% in reducing storage losses due to sprouting and rottage. This combination treatment was better than dust treatment alone and highly cost effective. Bavistin, when used as pre-harvest spray, did not leave any residue in the tissues, whereas the compound was seen to move deep into the tissues, when used as post-harvest dust treatment. Higher concentrations of carbendazin residues (2.1-3.4 mg/kg bulb) were detected in the outer scales of the bulbs, as compared to that of inner scales (0.6-1.6 mg/kg), and the residue decreased slightly with passage of storage time.

CAULIFLOWERS

1134 DASGUPTA, S; DASGUPTA, J; MANDAL, RK. 1993. Cloning and sequencing of 5' flanking sequence from the gene encoding 2S storage protein, from two *Brassica* species. *Gene (Netherlands)*, 133: 2, 301-302.

1135 GOYAL, M; MATHEW, S. 1990. Physico-chemical characteristics of cauliflower dried under different drying conditions. *Indian Journal of Nutrition and Dietetics*, 27: 2, 39-46.

Cauliflower is available only during the winter season in most of India but can be made available throughout the year by drying. The effect of 3 methods of drying (open sun drying, shade drying, and by means of a solar drier), with or without blanching, on the quality of the dried product was investigated. All dried samples were analysed for proximate composition, ascorbic acid, water soluble sugar, tryptophan, iron, phosphorus, sodium, potassium and calcium. Results showed that blanching followed by solar drying produced the shortest

drying time, best organoleptic properties and the lowest nutrient losses.

1136 ROY, SK; KHURDIYA, DS. 1983. Standardizing the pretreatment for solar drying of cabbage. *Third Indian Convention of Food Scientists and Technologists*. Mysore: CFTRI.

1137 SINGH, KK; SHUKLA, BD. 1990. Drying, packaging and storage of cauliflower. *Proceedings of the International Agricultural Engineering Conference and Exhibition*. (Bangkok, Thailand : 1990: 3-6 December)/edited by VM Salokhe and SG Ilangantilebe. Bangkok: Asian Institute of Technology, p. 581-589; 4 ref.

A batch type mechanical dehydrator for cauliflower was developed and the results of trials are reported. Three types of packaging material, polypropylene (100 gauge), low density polyethylene (300 gauge) and a mixed component material, were used for the dehydrated cauliflower and m.c. at different temp. and RH during an 8 month storage period were measured. Results are discussed. The economics of small scale dehydration in rural areas of India and of employment generation are considered.

1138 VIJAY, S; ANAND, JC. 1984. Effect of mustard and its components on the fermentation of cauliflower. *Indian Food Pack.*, 34: 4, 41-46.

TOMATOES

Storage

1139 BALASUBRAMANIAN, T; SADASIVAM, S. 1983. Effect of temperature on biochemical components during storage of tomato fruits. *South Indian Horticulture*, 31: 2/3, 89-94; 14 ref.

Storage life at 27°C (70% of fruits still sound) was seven days for CO1 and 13 days for Marutham, an induced mutant of CO1. Storage life was extended by two weeks in CO1 and one week in Marutham by exposing the fruits to 33°C for four days prior to storage at 27°C. The lower pectinesterase activity of Marutham may have contributed to its longer storage life.

1140 DOIJODE, SD; RATURI, GB. 1990. Effect of hydration-dehydration on storability of tomato and radish seeds. *Indian Journal of Plant Physiology*, 33: 2, 172-174.

1141 GUPTA, OP; MEHTA, NEENA; PANDITA, ML. 1988. **Effect of ethrel on the storage behaviour of tomato fruits at various storage conditions.** *Haryana Journal of Horticultural Sciences*, 17: 3-4, 265-272; 7 ref.

Fruits of the cultivars HS-101 and HS-110 were either ripened naturally on the plants or were treated with 500 p.p.m. Ethrel [ethephon], and one part of the fruits was allowed to ripen before storage whereas the other part was stored immediately. All fruits were held in 5-kg wooden crates with paper as the cushioning material. The fruits were stored at room temperature or at 5 or 10°C for up to 32 days. Data are tabulated on weight loss, TSS, fruit acidity and ascorbic acid contents, and respiration rate. At room temperature, the fruits could be stored for up to 12 days only with less than 10% weight loss, compared with 20 d at 10° and 28 days at 5°. The respiration rate was higher in ethephon-treated fruits.

1142 HOODA, RS; SINGH, J; HOODA, VS; KHURANA, SC. 1994. **Effect of maturity stages, storage conditions and chemical treatments on storage quality of tomatoes (CV. SEL-18).** *International Journal of Tropical Agriculture*, 12: 1, 2, 46-51.

1143 HOODA, RS; SINGH, J; HOODA, VS; KHURANA, SC. 1994. **Physico-chemical changes in tomatoes during storage as influenced by various post harvest treatments.** *International Journal Trop. Agri.*, 12: 1, 39-45.

1144 HUSSAIN, MD; ISLAM, MT; ALAM, M. 1992. **Storage of tomato at village level.** *Bangladesh Jrl. of Training and Dev.*, 5: 7, 99-104.

1145 KUMAR, J; THAREJA, RK; BANERJEE, MK; ARORA, SK. 1988. **Effect of antisenescent regulators on the shelf life of tomato (*Lycopersicon esculentum* Mill.) cv. HS-101.** *Research and Development Reporter*, 5: 1-2, 51-54.

The fruits were dipped for 10 minutes in solutions of GA3 or BA, each at 10 and 25 ppm, and stored in wooden boxes at room temperature. Fruits treated with GA3 at 10 ppm or BA at 25 ppm showed minimum physiological weight loss and incidence of decay. These fruits were marketable even after 6 days of storage. The quality parameters such as TSS, acidity and ascorbic acid contents were not affected by the treatments.

1146 KUMAR, J; THAREJA, RK; KALLOO, G; BANERJEE, MK; ARORA, SK. 1988. **Effect of**

ethylene absorbent on shelf-life of tomato cv. Hisar Arun. *Haryana Agricultural University Journal of Research*, 18: 3, 224-227; 6 ref.

Tomatoes picked when pink in colour were packed in wooden boxes lined with newspaper previously soaked in 0, 500, 1000, 2000 or 3000 p.p.m. KMnO4 and stored at room temperature or in cold stores. Fruit weight and the incidence of decay (mainly due to *Cladosporium*, *Phoma* and *Geotrichum*) were monitored for 6 d. Losses due to decay were greater in cold storage than in storage at room temperature as a result of high humidity in the cold store. Weight loss after storage for 6 d was lowest in fruits in cold storage which were packed in untreated newspaper. None of the treatments had any significant effect on fruit quality in terms of TSS, acidity or ascorbic acid content.

1147 PATHAK, SR; MAHAJAN, PR. 1988. **Study on keeping quality of tomato cultivars.** *Lal Baugh*, 30: 1, 34-36.

Fruits of 8 cultivars were kept at room temperature until they decayed (11 to 19 days). Cultivars which kept best were H.S.110, Pusa Ruby, Sweet-72 and H.S.101. The cv. Punjab Tropic gave the poorest results.

1148 SANDOOJA, JK; SHARMA, RK; PANDITA, ML; BATRA, BR. 1987. **Storage studies of tomato in zero energy chamber in relation to stage of maturity and packing material used.** *Haryana Agricultural University Journal of Research*, 17: 3, 221-228; 8 ref.

The effects of temperature (room temperature vs. zero energy chamber (ZEC)) and packing material on storage life of fruits of the cv. HS-101 stored at different stages of maturity were studied. The temperature in ZEC was 10-15°C lower than the ambient temperature. Fruits picked at the green stage, packed in egg trays and stored in ZEC were in best marketable condition even 8 days after storage. There was least decay and quality parameters such as TSS, acidity and ascorbic acid content of the fruits were also best in this treatment.

1149 SANDOOJA, JK; SHARMA, RK; PANDITA, ML; BATRA, BR. 1987. **Studies on shelf-life of different maturity stages of tomato as affected by various chemicals.** *Haryana Agricultural University Journal of Res.*, 17: 1, 39-46; 7 ref.

The effects were studied of Ethrel [ethephon] (100 p.p.m.), kinetin (10 p.p.m.), GA3 (10 p.p.m.) and KMnO4 (1000 p.p.m.) on enhancing shelf-life of fruits picked at 3 maturity stages, i.e. red, pink and green. The fruits were dipped in these solutions with the exception of KMnO4 which was applied in the paper

lining used as a cushioning material in the boxes of fruit. Of the 4 solutions KMnO₄ proved the most effective. It decreased weight loss and decay during storage and maintained various quality parameters such as TSS, acidity and ascorbic acid content of the fruits. Fruits picked at the green mature stage, followed by those at the pink stage, were best for shelf-life.

1150 SIDDIQUI, S; PANDEY, UC; SINGH, J. 1989. **Changes in the physico-chemical characteristics of the mature tomato fruits with ripening.** *Haryana Journal Horticulture Science*, Haryana Agricultural University, Hisar-125004: 18: 3-4, 244-249.

1151 SINGH, JP; BHATNAGAR, DK; LAL, S. 1988. **Effect of different fungicides on microbial decay and keeping quality of tomato fruits during storage.** *Haryana Journal of Horticultural Sciences*, 17: 1-2, 69-73; 7 ref.

Green, mature HS-101 tomatoes were sprayed once or twice (10 d after the first spray) with 5 fungicides to reduce storage rot. A second spray reduced decay significantly more than a single spray. The most effective fungicides were Topsin M [thiophanate-methyl] and Dithane M-45 [mancozeb]. Fruit quality was not affected. Total soluble solids increased and acid content decreased in all fruits during storage. *Alternaria alternata* was identified as the major decay organism.

1152 SUBBURAMU, K; SINGARAVELU, M; NAZAR, A; IRULAPPAN, I. 1990. **Effect of stage of harvest in tomato cultivars in improving the shelf life and fruit quality.** *South Indian Horticulture*, 38: 4, 199-203; 5 ref.

Fruits of the cultivars PKM 1, Marutham, Pusa Ruby and Palyur 1, harvested at 4 maturity stages viz. (1) mature green, (2) breaker, (3) half-ripe and (4) red ripe were held under ambient conditions and assessed for weight loss, shelf life, TSS content, acidity, ascorbic acid content, lycopene and carotenoids contents, and colour on ripening. The data are tabulated. Although the shelf life was longer (11.0-12.5 days) in fruits picked at the mature green stage, their quality after storage was poor and fruits picked at the breaker stage were of better quality and had an acceptable shelf life (8.3-10.5 days). Cultivar PKM 1 had the best keeping quality, with the other cultivars being similar to one another.

1153 VIJAY, S. 1991. **Effect of addition of spice extract and flavouring compounds on the keeping quality of tomato juice stored in different containers.** *Indian Food Packer*, 45: 30, 17.

1154 VIJAY, S. 1990. **Steeping preservation of whole tomato and sweet lime.** *Indian Journal Agricultural Science*, 60: 12, 847.

Storage decay

1155 ALBEL SINGH; SINGH, Y. 1992. **Effect of vibrations during transportation on the quality of tomatoes.** *Agricultural Mechanization in Asia, Africa and Latin America*, 23: 2, 70-72; 5 ref.

A simple low-cost instrumentation system for a low frequency range was designed and developed for measuring vibrations during the transportation of tomatoes in India. One unit was fixed to the base of the wooden box carrying the tomatoes and another was placed on the tomatoes themselves. Analysis of the data obtained was carried out using a spectrum analyser and storage oscilloscope. A large variation of amplitude against frequency throughout the 20Hz-240Hz range was noted between tomatoes as well as between boxes. The road conditions were reflected by the amplitude or 'g' value, indicating the shock received by the tomatoes and hence their quality.

1156 KHANNA, KK; CHANDRA, S. 1989. **Further investigations on the control of storage rot of mango, guava and tomato fruits with homoeopathic drugs.** *Indian Phytopath.*, 42: 3, 436-440.

The efficacy of glycerol, castor oil, paraffin oil, soap and wheat flour as adjuvants and 3 homoeopathic drugs in controlling storage rots of mango (caused by *Pestalotia mangiferae*), guava (by *P. psidii*) and tomato (by *Fusarium roseum*) fruits, was investigated. Drug treatment reduced storage rots. Soap was the best adjuvant, improving the efficacy of all the drugs. The drugs did not cause any change in the quality and palatability of fruits. Treatment was fairly economical.

1157 PARTHASARATHY, VA; MEDHI, RP; GOHSH, SP. 1983. **Effects of certain post-harvest treatments on ripening and quality of tomato fruits.** *Progressive Horticulture*, 15: 1/2, 119-121.

In one experiment with mature green fruits of 4 cultivars Ethrel [ethephon] at 250 or 500 p.p.m. was applied as vapour (24 h in air-tight containers) or as a dip (2-4 minutes) treatments. In another experiment mature green fruits of 2 cultivars were treated with 2 fungicides or 6% Waxol (in each case with 500 p.p.m. ethephon) or hot water (55°C) and then with 500 p.p.m. ethephon. In the first experiment, ethephon at 500 p.p.m., applied by either method, hastened ripening by 4 days and reduced fruit weight loss by about 13%. At room temperature

moisture loss was highest in the round-shaped cv. La Bonita and lowest in the pear-shaped cv. Punjab Chhohara; the cultivars Roma and AC-2466-27 gave intermediate results. In the second experiment the hot water treatment hastened ripening best and improved fruit quality.

1158 PRASAD, BK; SINHA, TSP; NARAYAN, N. 1988. **Influence of temperature on the soft rot of tomato fruits due to *Sclerotium rolfsii***. *Indian Phytopathology*, 41: 2, 256-257; 5 ref.

Surface sterilized green and ripe tomato fruits were inoculated with *S. [Corticium] rolfsii sclerotia* grown for 30 d on PDA medium at $25 \pm 1^\circ\text{C}$. The fruits were incubated at 20, 25 and 30° over distilled water in sealed desiccators for 8 d. On all fruits a positive linear relationship between incubation time and rate of rotting was observed at all temp., but ripe fruits rotted more rapidly. The opt. temp. for rotting was $25\text{-}30^\circ$.

1159 RATH, GC; MISHRA, D; NANDI, RK; MOHANTY, SK; SAHOO, RC. 1990. **Fungal rots of tomato in Orissa markets**. *Orissa Journal of Agricultural Research*, 3: 1, 9-12; 13 ref.

Phytopathological analysis of 264 samples of rotten tomatoes collected from markets in 7 localities in Orissa during 1986-89 yielded 11 fungal species belonging to 9 genera. Of these, rots caused by *Chaetomium brasiliense* and *Monascus ruber* are new records for India. Unrestricted trade and inadequate facilities for postharvest handling of tomatoes are considered as reasons for spread of these pathogens.

1160 SAXENA, PURNIMA; SAXENA, SK. 1990. **Effect of treating tomatoes with leaf extract of *Argemone mexicana* on the development of fruit rot caused by *Aspergillus niger* in the presence of *Drosophila busckii***. *National Academy Science Letters*, 13: 9, 333-335; 5 ref.

The incidence of rot caused by *A. niger* in stored tomato fruits was low when the fruits were treated with the standard concn of *A. mexicana* extract, both in the presence or absence of the fruit fly. Rotting was greater when fruits were inoculated after treatment and also increased with an increase in dilution of the extract.

1161 SINGH, S; THAKUR, DP; SINGH, JP. 1983. **Post harvest decay of ripe tomato fruits caused by *Cladosporium oxysporum***. *Indian Phytopathology*, 36: 4, 723-724; 4 ref.

This fungus was observed for the first time causing storage rot of tomato; up to 10% of decayed fruits were

affected by *C. oxysporum* alone. Disease intensity was low at $10\text{-}20^\circ\text{C}$ but above 25° it progressed rapidly, with a maximum at 30° . All fruits inoculated at 50-100% RH became infected, with the maximum at 95%. Pre-infection treatments with Miltox (zineb + copper) and Difolatan (captafol) gave the pest control, preventing 75% of fruits from rotting. Post-infection treatment with Miltox was also effective, followed by captafol, captan, Benlate (benomyl) and Blitox-50 (copper oxychloride).

1162 SINHA, PURNIMA; SAXENA, SK. 1989. **Effect of treating tomatoes with leaf extracts of certain plants on the development of fruit rot caused by *Aspergillus niger* in presence of *Drosophila busckii***. *Journal of Phytopathological Research*, 2: 1, 97-101; 7 ref.

When healthy ripe tomato fruits were treated with ethanol extracts of *Lantana camara*, *Mentha arvensis* and *Ocimum sanctum* before inoculation with *A. niger* in the presence of *D. busckii* (infests tomato fruits and increases rotting during transit and storage) there was some protection against rot comp. with that on untreated fruits. Treatment after inoculation was less effective.

1163 SINHA, PS; SAXENA, SK. 1990. **Effect of latex of *Euphorbia hirta* on fruit rot of tomato caused by *Aspergillus niger* in the presence of *Drosophila busckii***. *Indian Phytopathology*, 43: 3, 462-464; 5 ref.

Pusa Ruby tomatoes were dipped in *E. hirta* latex and latex-water emulsions before and after inoculation with *A. niger* and exposure to *D. busckii*. Conc. latex was the most effective in controlling the disease. It is suggested that some of the inoculum is killed by the latex and some is ingested by the insect. Latex treatment prior to fungal inoculation or insect feeding was the most effective. It is concluded that *E. hirta* latex provides protection to fruits against *A. niger* and *D. busckii*. This could be due to the repellent effect of latex to the insect and its antifungal properties against *A. niger*.

1164 TRILOCHAN SINGH; ROY, MK; ROY, SK. 1989. **Storage loss of tomato fruits and its prevention by guazatine**. *Indian Phytopathology*, 42: 1, 168-170; 15 ref.

Pusa Ruby and Roma tomatoes grown in the field or bought in the market were dipped in 2-4% guazatine solutions and percentage losses of fruits at varying stages of maturity were recorded 14 and 24 d after storage at 20 and 30°C , respectively. Less Roma tomatoes were lost than Pusa Ruby. After 10 d storage at 30° or 16 d at 20° , 30-60% of the fruit from the

market was lost. This was much higher than the losses in field grown tomatoes. Treatment of fruits with 4% guazatine for 5 min extended the shelf-life by 2-6 d at 30 ± 3 or 20° .

Processing

1165 GOWDA, IND; RAMANJANEYA, KH; ANAND, N; SADASHIVA, AT; TIKOO, SK. 1994. Studies on the physico-chemical characteristics and processing quality of 2 IIHR tomato varieties in relation to commercial cultivars. *Journal of Food Science and Technology - Mysore*, 31: 2, 126-129.

'Arka Ashish' and 'Arka Ahuti', two tomato varieties developed at this Institute (IIHR) were compared with 6 commercial cultivars of different regions, in order to determine their physico-chemical characteristics and test their suitability for processing into puree. Both the varieties had better fruit weight than 'Pusa Ruby', 'Punjab Chuhara' and 'Lerica', in addition to the greater fruit firmness than all other varieties (except 'Lerica'). The juice yield was maximum in 'Arka Ashish', while it was comparable to 'Roopali' and 'Lerica' in case of 'Arka Ahuti'. The total soluble solids of IIHR varieties were better than 'Pusa Ruby' and 'Roma', while the acidity and ascorbic acid content were similar to other cultivars. Lycopene content was maximum in 'Arka Ashish' followed by 'Pusa Gaurav' and 'Arka Ahuti'. In viscosity, the IIHR varieties were better than 'Pusa Ruby', 'Roma' and 'Pusa Gaurav'. The puree prepared from 'Arka Ashish' and 'Arka Ahuti' possessed significantly higher amount of lycopene and better viscosity than all other varieties and performed better than all the rest in sensory evaluation. 'Lerica' and 'Pusa Gaurav' were the next best varieties.

1166 RAIJADHAV, SB; KALE, PN. 1987. Combining ability for processing characters in tomato. *Jrl. of Maharashtra Agril. Univ.*, 12: 3, 379-380.

Analysis of data from a line X tester analysis involving 10 lines and 4 testers for quality and yield characters revealed highly significant variances due to line X tester interactions for all traits, indicating a probable role of additive genetic effects. Non-additive components were most important for total soluble solids (TSS) content acidity and lycopene content, while additive effects were more important for fruit equatorial diameter. Kewalo and (tester) Pusa Ruby were good general combiners for TSS, lycopene content and yield. SCA effects were highest in PAU line X Pusa Ruby for TSS, Brech X Pusa Ruby for lycopene content, and Healani X Pusa

Early Dwarf for yield. Rossol X Pusa Early Dwarf and Patriot X Roma were recommended for good overall performance in processing qualities.

1167 ROY, SK; CHOUDHARY, B. 1972. Studies on physico-chemical characteristics of a few varieties of tomato *Lycopersicon esculentum* Mill in relation to processing. *J. Fd. Sci. Technol.*, 9: 3, 151.

1168 ROY, SK; KRISHNA, MH; TIWARI, RN; RAYCHOUDHURY, M; CHOUDHURY, B. 1970. Preliminary studies on evaluation of some tomato, *Lycopersicon esculentum* varieties for canning. *Ind. Food Pack.*, 24: 6, 11.

1169 SARADA, R; JOSEPH, R. 1993. Biochemical changes during anaerobic digestion of tomato processing waste. *Process Biochemistry.*, 28: 7, 461-466.

Studies on biochemical changes during anaerobic degradation of tomato processing waste (TPW) were carried out both in batch and semicontinuous modes of digestion. Around 65% of hemicellulose and 50% of cellulose components of TPW were degraded in both processes. Although 70% of protein was degraded in the batch process only 35% was degraded in the semicontinuous process. In contrast, lipid was degraded to a greater extent in the semicontinuous process than in the batch process. These data suggest that lipid degradation occurred through biohydrogenation and beta-oxidation mechanisms in both processes. The kinetics of degradation of carbohydrates, lipids and proteins and their further conversion to volatile fatty acids and methane in both processes are discussed.

1170 SARADA, R; JOSEPH, R. 1994. Studies on factors influence methane production from tomato processing waste. *Bioresource Technology*, 47: 1, 55-57.

The influence of hydraulic retention time (HRT), loading rate and temperature on the productivity ($v v^{-1} \text{ day}^{-1}$) and yields ($m^3 \text{ kg VS}^{-1}$) of total gas and methane during anaerobic digestion of tomato-processing waste (TPW) was studied. High yields of total gas ($0.7 m^3$) and methane ($0.42 m^3 \text{ kg}^{-1}$) were obtained at 24 days HRT and $4.5 \text{ kg } m^{-3}$ loading rate and 35° degrees C. Loading rates of 6.0 to $7.5 \text{ kg TS } m^{-3}$ and temperature of 25 and 30° degrees C were found to be critical for methanogenesis at 16 days HRT. Stable digestion was achieved up to 40° degrees C, but 45° degrees C was found to be unfavourable for methanogenesis.

1171 SINGH, T; ROY, SK; CHOUDHURY, B. 1986. **Studies on the ripening of tomato for processing.** *Sixth convention of food scientists and technologists.* 1986: 13-15 March). Hotel Oberoi towers, Bombay:

1172 THAKUR, NS; LAL, BB; JOSHI, VK. 1994. **Evaluation of different hybrids and commercial varieties of tomato grown in Himachal Pradesh for processing.** *Int. Hort. Cong.* (Kyoto, Japan).

1173 TIKOO, SK. 1987. **Breeding tomatoes for processing in India; present status and future prospects.** *Acta Horticulturae*, No. 200, 73-81.

This survey deals briefly with the varieties used for processing in India, varietal screening for processing quality, and breeding objectives (including improved total soluble solids content and disease resistance, use of F1 hybrids and F2 populations and the development of cultivars, carrying the jointless gene, suitable for once-over harvesting after ethrel treatment).

BRINJALS

Storage and storage decay

1174 GADAKH, SR; SUPE, VS; JOSHI, VR; LAWANDE, KE. 1990. **Studies on keeping quality of some promising cultivars of brinjal (*Solanum melongena* L.).** *South Indian Horticulture*, 38: 5, 276-278.

Fruits of 6 aubergine cultivars and 4 hybrids, harvested on 12 Jan., were packed in polyethylene bags and stored in ambient conditions (29.6°C and 69.6% RH) for up to 9 days. The control fruits were not packed in polyethylene. The fruits were assessed for weight loss and general appearance at the end of storage. The data are tabulated. On the 9th day, in the controls, fruit weight loss was highest in Manjari Gota (53.2%) and lowest in Poona Selection X Pragati (22.8%); the respective figures for these cultivars when fruits were packed were 15.2 and 8.8%. Under packed conditions the lowest weight loss (7.2%) and highest consumer acceptability at the end of storage were noted in cv. Ruchira.

1175 KUMAR, A; AULAKH, KS; GREWAL, RK. 1986. **Incidence of fungal fruit rots of brinjal in Punjab.** *Indian Phytopath.*, 39: 3, 482-485.

Of 13 fungi isolated from diseased aubergine fruits, *Aspergillus nidulans*, *Colletotrichum capsici*, *Fusarium semitectum* [*F. pallidoroseum*] and *Phomopsis vexans* were more prevalent in the field and *Cephalosporium acremonium* [*Acremonium strictum*, *Curvularia lunata* [*Cochliobolus lunatus*] and *Fusarium moniliforme*

[*Gibberella fujikuroi*] in markets while *Rhizopus stolonifer* occurred in both the field and markets. Descriptions are given of the symptoms and aetiology of various dry and soft rots. *A. nidulans*, *Chaetomium erraticum* and *Drechslera tetramera* are newly recorded as fruit rot pathogens of this crop in India.

1176 MEHTA, A; MEHTA, P. 1989. **Pathological studies on fruit rot of *Trichosanthes dioica* and *Solanum melongena* caused by *Fusarium* species.** *Indian Phytopathology*, 42: 1, 192-195.

F. oxysporum and *F. moniliforme* [*Gibberella fujikuroi*] were isolated from diseased *T. dioica* and aubergines collected from local markets and fields in Saugor, India. Healthy fruits were inoculated with 3-, 5-, 8-, 11- and 14-d-old cultures of *F. oxysporum* and *G. fujikuroi* and incubated at 8-45°C and 98% RH. *F. oxysporum* easily caused infection on healthy *T. dioica* without injury but *G. fujikuroi* could not infect healthy aubergines without injury. Infection through injuries caused by a sterilized knife or pricking with a sterilized needle was more successful than infection through the stalk end. Maximum rot was observed at 28° for both organisms. High temp. protected the host but also degraded nutritive value. Maximum rot development occurred when fruits were inoculated with 5- or 8-d-old spore/mycelial disc of inoculum.

1177 MISHRA, D; RATH, GC. 1986. **Changes in dry matter and mineral contents of brinjal fruits due to fusarial rots.** *Indian Phytopathology*, 39: 4, 584-585; 11 ref.

Postharvest decays of aubergines caused by *Fusarium moniliforme* [*Gibberella fujikuroi*], *F. equiseti*, *F. oxysporum* and *F. solani* resulted in increases in total N and decreases in dry matter, P, K and Ca.

1178 MISHRA, D; RATH, GC. 1986. **Factors affecting rotting of brinjal fruits caused by four species of *Fusarium*.** *Indian Journal of Mycology and Plant Pathology*, 16: 3, 277-279; 8 ref.

F. moniliforme [*Gibberella fujikuroi*], *F. equiseti*, *F. oxysporum* and *F. solani* caused severe losses in aubergines. When young fruits were exposed to 8-d-old isolates of the fungi under warm (30°C), humid (90% RH) storage conditions, heavy decay developed.

1179 SAHOO, RC; RATH, GC; MISHRA, D. 1989. **Rotting of brinjal and chilli in Orissa.** *Orissa Journal of Agril. Res.*, 2: 3-4, 208-209; 9 ref.

Rotting aubergine fruits from 4 different markets yielded isolates of *Aspergillus flavus*, *A. niger*, *Curvularia*