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Postharvest Management in Agriculture

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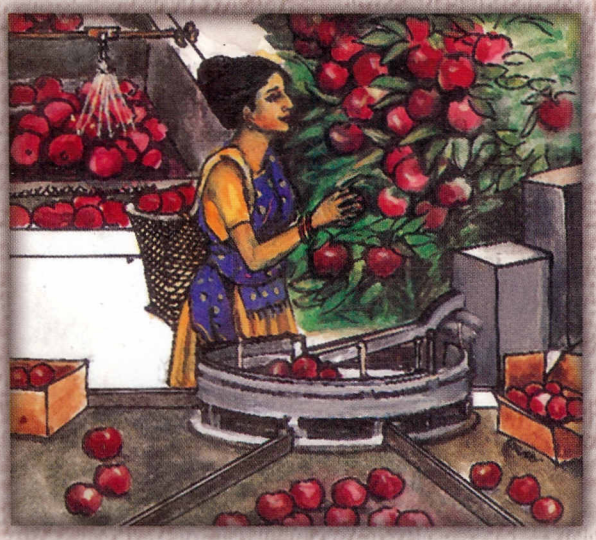

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CONTENTS

Processing

1224 VIJAY, S; BHAGWAN J; BEHAL, N. 1991. **Low cost technology for processing mushrooms.** *Indian Food Packer*, 45: 6, 22-26.

1225 VIJAY, S; ANAND, JC. 1978. **Processing of mushroom.** *Ind. Mushroom Sci.*, I: 225.

OTHER VEGETABLES

1226 BHARGAVA, KK; GUPTA, HCL. 1991. **Removal of phorate residues from bhindi fruits.** *Andhra Agri. Journal (India)*, 38: 4, 392-393.

1227 BIHARI LAL; DOLLY GOEL; LAL, B; GOEL, D. 1989. **A new rot of *Abelmoschus esculentus*.** *Indian Phytopathology*, 42: 3, 482.

Curvularia oryzae was isolated from fruits of *A. esculentus* collected in markets in Allahabad, Uttar Pradesh, India. Symptoms were observed and pathogenicity was confirmed.

1228 DEORE, BP; BHARUD, RW. 1989. **Physico-chemical status of spinach (*Beta vulgaris L.*) as influenced by preharvest spray of growth substances and storage methods.** *Annals of Plant Physiology*, 3: 2, 163-171; 9 ref.

GA at 20 p.p.m., ascorbic acid at 0.5%, IAA at 20 p.p.m., urea at 0.25%, a water spray and no treatment (control) were applied to spinach beets in the field. After harvest the leaves were stored for 24, 48 or 72 h in closed bamboo baskets, perforated plastic bags, under a wet cloth or in open bamboo baskets. Data are tabulated on the % moisture loss, and mean ascorbic acid, chlorophyll and total acids contents. The smallest moisture losses from the leaves at 24, 48 and 72 h (9, 18.8 and 29.7%, respectively) were recorded in batches treated with GA and stored under a wet cloth; the corresponding losses for the control leaves stored in open baskets were 20.15, 30.1 and 50.45%

1229 KUMAR, J; ARORA, SK; MEHRA, R. 1988. **Effect of antisenescent regulators on shelf life of ridge gourd (*Luffa acutangula L. Roxb.*).** *Crop Research Hisar*, 1: 1, 124-127; 5 ref.

Tender fruits of the cv. HRG-14 were harvested, dipped in GA3 (10 and 50 mg/litre) or BA (10 and 50 mg/litre) and stored at 0.5°C for up to 9 days. At the end of storage the least physiological weight loss, lowest decay and the best fruit quality were obtained with BA at 50 mg/litre.

1230 PRASAD, MM; ROY, AK; KRISHNA, A. 1988. **Biochemical changes in muskmelon fruits by fruit-rot fungi.** *Indian Phytopathology*, 41: 4, 641-643; 10 ref.

Melons were inoculated with *Fusarium semitectum* [*F. pallidoroseum*] *or Curvularia lunata* [*Cochliobolus lunatus*] and incubated at 25 ± 1°C for 6 d. Total and non-reducing sugars increased in healthy fruits up to 4 d and then declined; reducing sugar concn gradually declined from day 1. Inoculated fruits showed a considerable loss in total, reducing and non-reducing sugars, especially fruits inoculated with *F. pallidoroseum*. Protein concn decreased in all fruits but decreased more rapidly in fruits inoculated with *F. pallidoroseum*. Phenol content initially increased in all incubated fruits and then declined. It is concluded that higher rotting rates result in greater degradation in total sugar, reducing sugar, non-reducing sugar, protein and phenol.

1231 RATH, GC; MISHRA, D; NAYAK, NC. 1990. **A note on fungi causing rotting of cucurbits in Orissa markets.** *Orissa Journal of Agricultural Research*, 3: 2, 161-162; 7 ref.

During 1988-89, >300 rotten samples of 7 cucurbits (*Coccinia indica* [*C. grandis*], *Luffa acutangula*, *Trichosanthes anguina* [*T. cucumerina*], cucumber, *Cucurbita maxima*, *Benincasa hispida* and *Momordica dioica*) were collected from markets throughout Orissa in India. The results revealed that 171 of the samples were rotted by fungi and 145 samples were rotted by non-fungal agents. The fungi were identified as *Aspergillus flavus*, *A. niger*, *Fusarium oxysporum*, *F. solani*, *Geotrichum candidum*, *Phytophthora sp.*, *Rhizoctonia solani*, *Rhizopus arrhizus* and *Rhizopus stolonifer*. Of these fungi all except *R. stolonifer* are new to Orissa.

1232 ULLASA, BA. 1984. **Two post-harvest diseases of water-melon caused by *Phytophthora nicotianae* and *Fusarium oxysporum*.** *FAO Plant Protection Bulletin*, 32: 4, 145.

Descriptions are given of the previously unrecorded fruit rots caused by these fungi, pathogenicity of which was confirmed experimentally.

1233 UPADHYAYA, GIRJESH; ROY, AN. 1987. **Efficacy of certain chemicals in the control of species of *Fusarium* in stored ashgourd.** *Pesticides*, 21: 5, 25-

27; 8 ref.

F. solani and *F. moniliforme* [*Gibberella fujikuroi*] cause rotting and losses in ashgourd [*Benincasa hispida*] during storage and transit. Radial growth of both pathogens in culture was checked by quinoline, Phaltan [folpet], Bavistin [carbendazim] and Tillax among the fungicides tested. The fumigants chlorobenzene and formaldehyde were also effective.

1234 UPADHYAYA, GIRJESH. 1991. **Some new rots of snap gourd in storage**. *Advances in Plant Sciences*, 4: 1, 194-195.

In the rainy season c. 15% of fruits of snap gourd (*Cucumis melo var. momordica*) were rotted in Rajasthan, India. Fungi isolated from surface sterilized fruits were identified as *Aspergillus niger*, *A. flavus*, *Fusarium oxysporum*, *F. solani*, *F. moniliforme* [*Gibberella fujikuroi*], *Curvularia lunata* [*Cochliobolus lunatus*] and *Drechslera halodes* [*Setosphaeria rostrata*]. Of these, *F. solani*, *G. fujikuroi* and *S. rostrata* were pathogenic. This is the first report of pathogenic fungi on snap gourds.

1235 VASUDEVAN, K; JOS, JS; PADMAJA, G. 1989. **Gamma ray induced mutants in *Colocasia* with improved storability**. *Mutation Breeding Newsletter*, No. 34, 5.

Variability in tuber storability was noticed among induced mutants of *C. esculenta*. Tubers of CM17 in particular retained their quality even after 180 days storage. Tabulated data on yield and quality characteristics are presented for CM17 and CM1 plus standards C9 and Rasmi. CM17 tubers were low in phenol and sugar content but high in DM and starch content, making them suitable for the production of taro chips.

FLORICULTURE

1236 BAJAJ, YPS. 1993. **A suggested method for in vitro long-term storage at 4°C of *Chrysanthemum* and *Petunia* germplasm**. *Plant Tissue Culture, Bangladesh*, 3: 1, 57-58.

1237 BALAKRISHNA, HV; REDDY, TV; RAI, BGM. 1989. **Post-harvest physiology of cut tuberoses as influenced by some metal salts**. *Mysore Journal of Agricultural Sciences*, 23: 3, 344-348; 17 ref.

A study was carried out during 1986 on flowering spikes of tuberose (*Polianthes tuberosa*) cv. Doubles. Spikes were harvested when one or two of the lower florets were open, cut to 55 cm in length and all but 2 or 3 leaves were removed. After recording FW, each spike was placed in a 500 ml bottle containing 300 ml of distilled water (control), or chloride or sulphate salts of Al, Ca and Mg (0.5, 1.0 or 1.5 mM), or cobalt sulphate (1.0, 1.5 or 2.0 mM). Results were similar for the chloride and sulphate salts. All the salts increased the cumulative water uptake and reduced the water loss to water uptake ratio compared with the control. Water balance (water uptake - transpirational loss) was positive up to the ninth day with all salts except Mg. FW increased initially then decreased, with the highest FW being maintained with Co salts throughout the period of vase life. Vase life was increased by all treatments compared with the control (7 days), the longest vase life being observed in 1.0 mM Al (10.63 days) followed by 2.0 mM Co (10.40 days).

1238 GOWDA, JVN. 1986. **Post-harvest life of China aster as influenced by chemical preservatives**. *Current Research, University of Agricultural Sciences, Bangalore*, 15: 12, 138-139; 5 ref.

In trials with the [*Callistephus chinensis*] cv. Ostrich Plume, the flowers were held in 8 different solutions at ambient temperatures of 25.4°C (during monsoon) or 22.2° (during dry season). Vase life was longest (13.17-14.63 days) in both seasons with 0.4% aluminium sulphate + 2% sucrose. Control vase life was 5.1-5.5 days. This treatment proved useful to prolong vase life.

1239 GREWAL, NS; GILL, APS; DHIMAN, JS. 1989. **Effect of different pre-storage treatments of carnation cuttings on their storage rot**. *Journal of Research, Punjab Agricultural University*, 26: 1, 51-56; 11 ref.

Scania carnation cuttings were treated with 0.3% captan, prior to storage and this protected them from storage rot, caused mainly by *Alternaria alternata*. Cuttings showing rot symptoms also had spores of *A. tenuissema* [*A. tenuissima*], *Botrytis*, *Mycosphaerella*, *Septoria* and *Stemphyllium spp*. Fungal inoculum accompanies cuttings from mother stocks to cold storage. Sanitary measures to prepare and store the cuttings are discussed.

1240 JANA, BK; BOSE, TK. 1987. **Effect of fungicides on bulb storage and subsequent growth and flowering of *Hippeastrum hybridum Hort***. *Indian Agriculturist*, 31: 2, 87-92; 8 ref.

Alternaria longipes and *Rhizopus sp.* caused rotting of *H. hybridum* bulbs during storage and the leaf spot disease caused by *Alternaria sp.* adversely affected growth and flowering. Benlate (benomyl), Dithane M 45 [mancozeb], zineb and ziram were evaluated for control