A summary of physiological processes or disorders in fruits, vegetables and ornamental products that are delayed or decreased, increased, or unaffected by application of 1-methylcyclopropene (1-MCP).

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This summary is based on publications from refereed journals and conference proceedings, but not abstracts.
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See also these literature reviews:

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Valero, D., Martínez-Romero, D., Valverde, J.M., Guillén, F., S. Castillo, S., Serrano, M. (2004) Could the 1-MCP treatment effectiveness in plum be affected by packaging? Postharvest Biology and Technology 34:295-303.

FRUITS

	Decreased or delayed	Increased	Unaffected	References
Climacteric:				
Apple [*Malus sylvestris* (L) Mill. var. *domestica* (Borkh.) Mansf.]	Ethylene production, respiration, softening, loss of titratable acidity, color change, superficial scald, soft scald, volatile alcohol and ester formation, alcohol acyl-transferase activity, coreflush, browncore, internal browning, core browning, greasiness, senescent breakdown, decay, water loss, α-farnesene production, 3-hydroxy-3-methylglutaryl-CoA activity, polyphenol oxidase activity, lower antioxidant enzyme (POD, GR, APX, SOD) activities, onset of ethylene production and softening after storage when applied with CO_2, protein kinase, ACC synthase activity, ACC oxidase peak, small effect on rate of decline of photochemical efficiency, α-farnesene synthase (AFSI) gene expression	Soluble solids, carbon dioxide injury, irradiation-induced respiratory increase and internal injury, alcohol, aldehyde, and β-damascenone volatiles, sensory preference, heat-induced inhibition of ripening, heat induced superficial injury, decay incidence and severity, bitter pit, carbon dioxide injury, lipid soluble antioxidant activity, water soluble antioxidant capacity, bitter rot and blue mold decays, ACC accumulation, sensory acceptability	Soluble solids, starch index, carbon dioxide injury, loss of titratable acidity, irradiation-induced softening and titratable acidity loss, expression of 3-hydroxy-3-methylglutaryl-CoA reductase cDNA (HMG1) transcripts, lypoxygenase activity, aldehyde volatiles	Argenta et al., 2001; Baritelle et al., 2001; Crouch, 2003; Dauny and Joyce, 2002; Dauny et al., 2003; DeEll et al., 2002, 2003; Defilippi et al., 2004, 2005; DeLong et al., 2004; Fan and Mattheis, 1999a,b; Fan et al., 1999a,b; Fan et al., 2001; Gao and Zhang, 2001; Han et al., 2003; Hohn et al., 2004. Janisiewicz et al., 2003; Jayanty et al., 2004; Jiang and Joyce, 2002; Kondo et al., 2005; Leverentz et al., 2003; Li et al., 2003b; Lu and Toivonen, 2003; Lurie et al., 2002a, b, 2005; MacLean et al., 2003; Mattheis et al., 2005; Mir et al., 2001; Moran and McManus, 2005; Pechous et al., 2005; Pechous and Whitaker, 2002; Pechous et al., 2005; Pre-Aymard et al., 2003, 2005; Rupasinghe et al., 2000, 2001; Saftner et al., 2003; Shaham et al., 2003; Sun et al., 2003; Tan et al., 2004; Watkins et al., 2000; Zanella, 2001, 2003a,b

FRUITS (continued)

	Decreased or delayed	Increased	Unaffected	References
Climacteric (continued):				
Apricot (*Prunus armeniaca* L.)	Ethylene production, respiration, softening, decay, loss of titratable acidity, color change, production of volatile alcohols, esters, and lactones, pectinmethylesterase and glycosidase activity (depending on cultivar)	Days to ripen, terpenols	Color, acidity, soluble solids, pectinmethylesterase and glycosidase activity (depending on cultivar)	Botondi et al., 2003; Chahine et al., 1999; Dong et al., 2002; Fan et al., 2000a
Avocado (*Persea americana* Mill.)	Ethylene production, respiration, softening, color change, weight loss, chilling injury (mesocarp discoloration), endo-1,4-β-glucanase and polygalacturonase activities, polyphenol oxidase activity, ripening, gene expression, physiological disorders associated with long-term storage	Decay, body rots, stem-end rots	Weight loss	Adkins et al., 2005; Dauny et al., 2003; Feng et al., 2000, 2004; Hofman et al., 2001; Jeong and Huber, 2004; Jeong et al., 2002, 2003; Kluge et al., 2002; Lalel et al., 2003; Owino et al., 2002; Pesis et al., 2002; Woolf et al., 2005
Banana (*Musa* L.)	Ethylene production, respiration rate, chlorophyll loss, color change, softening, 'green life', production of alcohols and related esters; softening of heat-treated fruit, ACC content and ACC oxidase activity, loss of titratable acidity, starch content and increase of soluble solids at low temperature, increase of ethylene-induced cell wall hydrolase activities (pectin methyl esterase, polygalacturonase, cellulose, pectate lyase), expansion gene expression	Shelf life, uneven and blotchy color development, ethylene production, ratio between alcohols and related esters, enhancement of O_2 softening, crown rot, chilling injury	Ripening at later stages of application.	Bagnato et al., 2003;Botrel et al., 2002; Golding et al., 1998, 1999; Harris et al., 2000; Jiang and Joyce, 2003; Jiang et al., 1999a,b; Jiang et al., 2001a; Jiang et al., 2004a, b; Kleiber et al., 2003; Lohani et al., 2004; Macnish et al., 2000b; Mainardi et al., 2003; Pathak et al., 2003; Pelayo et al., 2003; Roh et al., 2000; Roh et al., 2001; Sisler and Serek, 1997; Sisler et al., 1996, 1999, 2001, 2003; Trivedi and North, 2004; Wu et al., 2001

FRUITS (continued)

	Decreased or delayed	Increased	Unaffected	References
Climacteric (continued):				
Blueberry, highbush (*Vaccinium corymbosum* L.)			Shelf life	DeLong et al., 2003
Chinese bayberry (*Myrica rubra* Siebold and Zuccarni)	Ethylene production, respiration rate, electrolyte leakage, softening		Soluble solids, titratable acidity, anthocyanin content	Mao et al., 2004a
Chinese jujube (*Zizyphus jujube* M.)	Ethylene production, respiration rate, softening, ascorbic acid loss, ethanol accumulation			Jiang et al., 2004c
Custard apple (*Annona squamosa* L.)	Softening		Soluble solids	Benassi et al., 2003
Figs (*Ficus carica* L.)		Weight loss	Soluble solids	D'Aquino et al., 2003
Guava (*Psidium guajava* L.)	Color change, softening, respiration rate	Shelf life, weight loss	Soluble solids, ascorbic acid	Bassetto et al., 2005

FRUITS (continued)

	Decreased or delayed	Increased	Unaffected	References
Climacteric (continued):				
Kiwifruit (*Actinidia deliciosa* (A. Chev) C.F. Liang et A.R. Ferguson var. *deliciosa*	Ethylene production, softening (20°C), respiration, color change, increases in glycosidase (β-galactosidase, α-arabinofuranosidase, β-xylosidase) activity	Superoxide dismutase and peroxidase activities.	Ethylene production, softening (0°C), soluble solids, titratable acidity	Amodio, 2003; Bouquete et al., 2004; Colelli and Ding et al., 2003; Fan and Zhang, 2001; Kim et al., 2001; Neves et al., 2003
Lychee (*Litchi chinensis*)			Ethylene production, respiration rate, polyphenol oxidase and peroxidase activities, chemical composition.	Pang et al, 2001
Mamey sapote (*Pouteria sapote* (Jacq.) H.E. Moore & Stearn)	Ethylene production, respiration rate, delayed peak of ethylene production	Color development	Soluble solids	Ergun et al., 2005
Mango (*Mangifera indica* L.)	Softening, color change, ethylene production, respiration, aroma volatiles	Days to ripen, decay	Weight loss, body rots, soluble solids, titratable acidity	Hofman et al., 2001; Jiang and Joyce, 2000, Lalel et al., 2003
Melon (*Cucumis melo* L.)	Ethylene production, respiration rate, chilling injury, ACC oxidase transcripts, acetyl transfer activity, softening, stalk abscission layer, electrolyte leakage		Weight loss, titratable acidity, pH, soluble solids, total soluble sugar content, external appearance	Bower et al., 2002; Ergun et al., 2005; Flores et al., 2002; Lima et al., 2004; Yahyaoui et al., 2002.

FRUITS (continued)

	Decreased or delayed	Increased	Unaffected	References
Climacteric (continued):				
Mountain papaya (*Vasconcellea pubescens*)	Ethylene production, softening, color change		pH, titratable acidity, soluble solids	Moya-Leon et al., 2004
Nectarine (*Prunus persica* Lindl.)	Ethylene production, ripening, softening, loss of acidity	Flesh woolliness and reddening, lower expressible juice	Respiration	Dong et al., 2001a; Liguori et al., 2004
Papaya (*Carica papaya* L.)	Ethylene production, respiration, degreening, softening, electrolyte leakage	Days to ripen, soluble solids, stem and body black rots, anthracnose, external blemishes	Soluble solids	Hofman et al., 2001; Jacomino et al., 2002; Ergun and Huber, 2004
Peach (*Prunus persica* L. Batsch)	Ethylene production, respiration, softening, loss of titratable acidity, ACC synthase and ACC oxidase activity, rot (*Monilinia* sp.) in mature green fruit, ethylene receptor (ERSI) gene expression	Flesh browning at 5^{o}C, shelf life	Rot (*Monilinia* sp.) in ripe fruit, loss of acidity in low-acid cultivars, ETRI transcription	Fan et al., 2002; Girardi et al., 2003; Kluge and Jacomino, 2002; Liguori et al., 2004; Mathooko et al., 2001; Rasori et al., 2002
Pear (*Pyrus communis* L.)	Ethylene production, respiration, water loss, softening, polygalacturonase transcripts, superficial scald development, α-farnesene production, color change, increases in glycosidase (α-galactosidase, β-galactosidase, α-arabinofuranosidase, β-xylosidase, β-glucosidase) activity, sensitivity to handling damage, senescent breakdown, watery and core breakdown	Ethylene production of freshly harvested fruit	Endo-1,4-β-glucanase transcripts, color change, volatile production, soluble solids, titratable acidity	Argenta et al., 2003; Baritelle et al., 2001; Calvo and Sozzi, 2004; de Wild et al., 1999, 2003a; Ekman et al., 2004; Hiwasa et al., 2003; Kubo et al, 2003; Larrigaudiere et al., 2004; Lelievre et al., 1997; Mwaniki et al., 2005; Moggia et al., 2001; Trinchero et al., 2004

FRUITS (continued)

	Decreased or delayed	Increased	Unaffected	References
Climacteric (continued):				
Pear (*Pyrus pyrifolia* Nakai)	Softening, expression of defense-related genes, hydrogen peroxide concentration and ionic leakage, ethylene accumulation	SOD, POX, APX, and CAT activity	Softening, storage	Itai at al., 2000; Szczerbanik , 2005; Wang 2003
Persimmon (*Diospyros khaki* L.)	Ethylene production, softening, loss of astringeny, color change, ethanol and acetaldehyde accumulation, softening and increased , α-L-arabinofuranosidase activity after CO_2 treatment, calyx abscission, polygalacturonase actvitity		Black spot (*Alternaria alternata*), weight loss, soluble solids, ethylene production and respiration rate	Ben-Arie et al., 2001; Feng et al., 2000; Harima et al., 2003; Kim et al., 2001; Kurahashi et al., 2005; Nakano et al., 2001a,b; Niikawa et al., 2005; Salvador et al., 2004; Xu et al., 2004
Plum (*Prunus salicina* L.; *Prunus* x *domestica* L.)	Ethylene production, respiration, softening, color change, loss of titratable acidity, aroma development, flesh browning, decay, ethanol and acetaldehyde concentration, weight loss, bruising	Flesh browning	Color change, weight loss, sugar loss, soluble solids, acidity	Argenta et al., 2003; Abdi et al., 1998; Dong et al., 2001b, 2002; Lippert and Blanke, 2004; Martinez-Romero et al., 2003; Menniti et al., 2004; Salvador et al., 2003; Skog et al., 2001a; Valero et al., 2003, 2004
Tomato (*Lycopersicon esculentum* Mill)	Ethylene production, respiration, lycopene accumulation, loss of titratable acidity, lower brix/acid ratio, ACC synthase and ACC oxidase activity, softening, transcripts for phytoene synthase 1, expansin 1 and ACC oxidase, polygalacturonase activity, chlorophyll loss, hue angle change, LeARF1, α-L-arabinofuranosidase gene, fruit abscission, endo-1,4-β-glucanase transcripts	Less synchronization of ripening at 25°C, c.f. 15 and 20°C, shifts in locule color, aroma, and firmness relative to external color	Soluble solids, weight loss, titratable acidity, LeXLY1 and LeXLY2 β-D-xylosidase genes	Beno-Moualem et al., 2004; Colelli et al., 2003; de Wild et al., 2005; Feng et al., 2004; Itai et al., 2003; Krammes et al., 2003; Mir et al., 2004; Mostofi et al., 2003; Nakatsuka et al., 1997, 1998; Opiyo and Ying, 2005; Saltveit, 2005; Sisler and Serek, 1997; Sisler et al., 1996, 1999; Sun et al., 2003; Wills and Ku, 2002; Yokotani et al., 2004

FRUITS (continued)

	Decreased or delayed	Increased	Unaffected	References
Non-climacteric:				
Cherry (*Prunus avium* L.)		Transient ethylene stimulation.	Respiration rate, fruit color, firmness, stem browning	Gong et al., 2002
Clementine mandarin (*Citrus reticulata* L.)	Color change, softening, soluble solids	Acidity		Laamim et al., 2005
Cucumber (*Cucumis sativus* L.)	Ethylene-induced degreening		Color change in absence of ethylene	Nilsson, 2005
Grape (*Vitis vinifera* L.)	Alcohol dehydrogenase activity, anthocyanin accumulation (transient; on-vine treatment)	Acidity		Chervin et al., 2004; Tesniere et al., 2004
Grapefuit (*Citrus paradisi* Macf.)	Degreening	Ethylene production	Decay, degreening	Mullins et al., 2000; Porat et al., 2001
Lime (*Citrus latifolia* Tanaka)	Loss of green color, chilling injury, ethanol and acetaldehyde accumulation		Chilling injury, acetaldehyde, ethanol, ethyl acetate accumulation	Kluge et al., 2003a, b; Jomori et al., 2003a, b
Orange (*Citrus sinensis* L. Osbeck)	Degreening, mold rot incidence, ethylene-induced esterase gene expression	Chilling injury, volatile off-flavors, stem-end rot incidence	Weight loss, softening	Porat et al., 1999; Zhong et al., 2001

FRUITS (continued)

	Decreased or delayed	Increased	Unaffected	References
Non-climacteric: (continued)				
Pepper (*Capsicum frutescens* L.)	Ethylene production, softening, color loss		Alternative oxidase activity	Huang et al., 2003; Tian et al., 2004
Pineapple (*Ananas comosus* L.)	Chilling injury (internal browning), decline in ascorbic acid and soluble solids content, yellowing, decline in ethylene production			Selvarajah et al., 2001
Strawberry (*Fragaria* x *ananassa* Duch.)	Ethylene production, softening, color change, decay, increase in phenolics content, phenylalanine ammonia-lyase (PAL) activity, loss of calyx tissue quality	Decay, ethylene production	Respiration rate, decay, fruit acceptability	Bower et al., 2003; Jiang et al., 2001b; Ku et al., 1999; Tian et al., 2000
Watermelon (*Citrullus lanatus*)	Ethylene-induced water soaking and enzymes involved in phospholipids catabolism, electrolyte leakage, extractable juice			Mao et al., 2004b

VEGETABLES

	Decreased or delayed	Increased	Unaffected	References
Arabadopsis thaliana (L.) Heynh.	Ethylene-induced senescence, chlorophyll and carotenoid content of younger leaves		Chlorophyll and carotenoid content of older leaves	Alexieva et al., 2004
Broccoli (*Brassica oleracea* L.)	Respiration, yellowing, decay, loss of ascorbic acid and protein contents, dimethyl trisulfide, reduction of catalase, peroxidase, and chlorophyllone activities	Shelf life, injury if 1-MCP >12 $\mu L.L^{-1}$	Rots	Able et al., 2002; Ku and Wills, 1999; Fan and Mattheis, 2000a; Forney et al., 2003; Gong and Mattheis, 2003; Wang and Win, 2002
Carrot (*Daucus carota* L.)	Isocoumarin accumulation, phytoalexin production, ethylene-induced acidity loss and respiration increase			Fan and Mattheis, 2000b; Fan et al., 2000b
Chinese cabbage (*Brassica campestris* L. spp. *pekinensis* (Lour) Olsson)		Ethylene production and respiration rate (prior to cold storage)	Quality, weight loss, trimming loss	Porter et al., 2004
Chinese mustard (*Brassica juncea* var. *foliosa*)	Yellowing in presence or absence of exogenous ethylene	Shelf life		Able et al., 2003
Choysum (*Brassica rapa* var. *parachinensis*)	Yellowing in presence or absence of exogenous ethylene	Shelf life		Able et al., 2003
Chrysanthemum, Garland (*Chrysanthemum coronarium*)	Yellowing in presence or absence of exogenous ethylene	Shelf life		Able et al., 2003

VEGETABLES (continued)

	Decreased or delayed	Increased	Unaffected	References
Coriander (*Coriandrum sativum* L.)	Senescence, chlorophyll and protein loss, amino acid accumulation, ion leakage.	Respiration rate, ethylene production.	Respiration rate (first 5 days after treatment).	Jiang et al., 2002
Lettuce (*Lactuca sativa* L.)	Ethylene-induced russet spotting, phenolic compounds	Storage life		Fan and Mattheis, 2000b; Manleitner et al., 2001; Saltveit, 2004; Wills et al., 2002
Mibuna (*Brassica rapa* var. *nipposinica*)		Shelf life		Able et al., 2003
Mizuna (*Brassica rapa* var. *nipposinica*)		Shelf life		Able et al., 2003
Pak choy (*Brassica rapa*)		Shelf life in presence of exogenous ethylene	Shelf life in absence of exogenous ethylene, rots	Able et al., 2002
Parsley (*Petroselinum crispum* Mill.)	Senescence	Senescence and ethylene production at low MCP concentrations		Ella et al., 2003
Potato (*Solanum tuberosum*)	Fry color darkening		Wound-induced suberin, polyphenolic accumulation, NAA-mediated sprout growth inhibition, weight loss	Lulai and Suttle, 2004; Prange et al., 2001, 2005; Suttle, 2003
Tatsoi (*Brassica rapa* var. *rosularis*)	Yellowing in presence or absence of exogenous ethylene	Shelf life		Able et al., 2003

FRESH CUT PRODUCE

	Decreased or delayed	Increased	Unaffected	References
Apple [*Malus sylvestris* (L) Mill. var. *domestica* (Borkh.) Mansf.]	Ethylene production, respiration, softening, color change, aroma compounds, acidity, texture changes	Decay development	Total sugars, acids, browning, aroma compounds	Beaulieu and Baldwin, 2002; Jiang and Joyce, 2002; Perera et al., 2003; Bai et al., 2004; Calderon-Lopez et al., 2005
Broccoli (*Brassica oleracea* L.)	Ethylene-induced degreening, chlorophyllase and peroxidase activities		Lipooxygenase activity	Gong and Mattheis, 2003
Kiwifruit (*Actinidia deliciosa* (A. Chev) C.F. Liang et A.R. Ferguson var. *deliciosa*	Ethylene production, respiration, softening			Colelli and Amodio, 2003
Lettuce (*Lactuca sativa* L.)	Ethylene production, respiration, loss of firmness and crispness, russet spotting development, loss of ascorbic acid, yellowing, wound-induced phenolics		Crispness	Saltveit, 2004; Tay and Perera, 2004; Wills et al., 2002
Pineapple (*Ananas comosus* L.)	Respiration, browning, loss of visual quality, loss of lightness (L*), loss of ascorbic acid	Electrolyte leakage		Budu and Joyce, 2003
Tomato (*Lycopersicon esculentum* Mill)	Loss of firmness of slices from treated fruit; watersoaking of treated slices	Ethylene production of slices from treated fruit	Firmness and electrolyte leakage of treated slices	Jeong et al., 2004
Watermelon (*Citrullus lanatus* (Thunb.) Mansfeld)	Water soaking, electrolyte leakage, extractable juice, ethylene-induced increases in phospholipids degradation and associated enzymes			Mao et al., 2004c

ORNAMENTAL PRODUCTS

	Decreased or delayed	Increased	Unaffected	References
Cut Flowers:				
Alstroemeria, *Matthiola incana, Consolida ambiguaa, Dianthus caryophyllus, Penstemon hartwegii, Antirrhinum majus*		Vase life in the presence of ethylene		Serek et al., 1995; Sisler and Serek, 1997; Skog et al., 2001b
Antirrhinum majus, Delphinium elatum, Gypsophilia paniculata		Vaselife in the presence or absence of ethylene		Skog et al., 2001b
Australian native cut flowers	Flower abscission, wilting or closing in the presence of ethylene (for, *Grevillea* 'Kay Williams' and 'Misty Pink', *Leptospermum petersonii*, *Telopea* 'Shady Lady', and *Verticordia nitens*		Species unaffected by MCP, even if challenged with ethylene: *Cassinia adunca, Eriostemon scaber, Leptospermum scoparium, Ozomamnus diomifolius, Platysace lanceolata, Thryptomene calycina, Zieria cytisoides*	Macnish et al., 2000a

ORNAMENTAL PRODUCTS (continued)

	Decreased or delayed	Increased	Unaffected	References
Cut Flowers (continued):				
Beehive ginger (*Zingiber spectabilis*)	Shelf life			Almeida et al., 2003
Boronia heterophylla	Loss of fresh weight in presence of ethylene	Vase life in the presence of ethylene	Vase life in the absence of ethylene	Macnish et al, 1999
Campanula medium L.		Vase life (with sucrose pulse)		Bosma and Dole, 2002
Carnation		Vase life		Hassan and Gerzson, 2002
Cattleya alliances	Ethylene production, ACC oxidase activity	Vase life		Yamane et al., 2004
Chrysanthemum (*Chrysanthe-mum morifolium, Dendranthema morifolium*)		Vase life		Hassan and Gerzson, 2002
Chamelaucium uncinatum	Flower abscission, and closing in the presence of ethylene	Vase life in the presence of ethylene		Macnish et al., 2002
Daffodil (*Narcissus pseudonarcissus* L.)	Ethylene-induced watersoaking of perianth and senescence-associated transcripts			Hunter et al., 2004

ORNAMENTAL PRODUCTS (continued)

	Decreased or delayed	Increased	Unaffected	References
Cut Flowers (continued):				
Matthiola incana	Loss of fresh weight during vase life	Vase life in presence or absence of ethylene		Celikel and Reid, 2002
Geraldton Waxflower (*Chamelaucium uncinatum*)	Bud and flower abscission in the presence of ethylene		Bud and flower abscission in the absence of ethylene	Macnish et al., 2004; Serek et al., 1995
Grevillea 'Sylvia'		10 nlL-1 MCP at 20C increased vase life in presence of ethylene; inflors regained ethylene sensitivity n 2-3 days. The same MCP concn. Given at 2C was not effective.		Macnish et al., 2002
Ixora	Chilling-induced leaf abscission in the presence or absence of ethylene, or in high light applied immediately after chilling.			Michaeli et al., 1999; Michaeli et al., 2001
Lupinus havardii	Fresh weight loss, flower senescence, ethephon-induced flower abscission	Opening of young flower buds		Picchioni et al., 2002, Sankhla et al., 2001
Metrosideros collina 'Tahiti'	Stamen abscission in the presence of ethylene. Sensitivity to ethylene was regained in 1-2 days. STS was much more effective.	Ethylene production		Sun et al., 2000
Orchid (*Cymbidium*)	Pedicel browning, petal wilting, and senescence due to mechanical damage to pollinia	Flower longevity, with or without exogenous ethylene		Heyes and Johnson, 1998

ORNAMENTAL PRODUCTS (continued)

	Decreased or delayed	Increased	Unaffected	References
Cut Flowers (continued):				
Orchid (*Phalaenopsis)*	Flower wilting (especially after pollination); sensitivity to basal ethylene levels; and post-pollination auto-catalytic ethylene production			Porat et al., 1995
Pot Plants:				
Begonia x elatior	Leaf and bud abscission in the presence of ethylene	Display life in the presence of ethylene air	Display life in the absence of ethylene	Serek et al., 1994; Skog et al., 2001b
Begonia x tuberhybrida	Leaf and bud abscission in the presence of ethylene			Serek et al., 1994
Calceolaria x herbeohybrids		Display life in the presence of ethylene		Skog et al., 2001b
Campanula carpatica	Wilting	Flower longevity and display life in the presence of ethylene	Display life in the absence of ethylene	Serek and Sisler, 2001; Sisler et al., 1996, 1999
Catharanthus roseus		Display life in the presence of ethylene		Skog et al., 2001b
Dendranthema grandiflora	Reduced rooting of freshly harvested, or stored cuttings			Serek et al., 1998

ORNAMENTAL PRODUCTS (continued)

	Decreased or delayed	Increased	Unaffected	References
Pot Plants (continued):				
Easter lily (*Lilium longiflorum)*			Plant display life	Skog et al., 2001b
Epipremnum pinnatum	Chl loss during short-term, dark, warm storage or unrooted cuttings; leaf abscission during rooting		Rooting ability compared to controls	Muller at al., 1997
Euphorbia pulcherrima		Display life in the presence of ethylene	Display life (cultivar dependent)	Skog et al., 2001b
Flowering tobacco		Display life in the presence or absence of ethylene		Skog et al., 2001b
Geranium (*Pelargonium* x *hortorum*)	Petal abscission in both ethylene-free or ethylene-contaminated air, (cultivar differences) chl loss during 3 days of dark, 20^{o}C storage of unrooted cuttings	Display life in the presence of ethylene; rooting of warm, dark-stored cuttings		Jones et al., 2001, Serek et al., 1998; Skog et al., 2001b
Hibiscus	Reduced rooting of freshly harvested or stored cuttings, leaf yellowing	Very slight increase in flower longevity when held continuously in MCP in the absence of ethylene	Flower longevity from transient MCP exposure and subsequently held in air	Reid et al., 2002; Serek et al., 1998
Impatiens		Display life in the presence or absence of ethylene		Skog et al., 2001b

ORNAMENTAL PRODUCTS (continued)

	Decreased or delayed	Increased	Unaffected	References
Pot Plants (continued):				
Kalanchoe	Petal inrolling in the presence of ethylene, wilting	Display life in an ethylene atmosphere	Vase life in an ethylene-free atmosphere	Kebenei et al., 2003b; Serek and Reid, 2000; Serek et al., 1994, Sisler et al., 1999; Skog et al., 2001b
New Guinea impatiens		Display life in the presence or absence of ethylene		Skog et al., 2001b
Oriental hybrid lilies (*Lilium*)	Ethylene-induced bud and leaf abscission and leaf chlorosis, bud blasting	Quality after cold storage	Bud abscission and leaf chlorosis in the absence of ethylene, quality before cold storage	Celikel et al., 2002; Han and Miller, 2003
Pelargonium x domesticum	Leaf yellowing, ethylene-induced leaf senescence	Display life in the presence of ethylene		Cameron and Reid, 2001; Kadner and Druege, 2004; Serek et al., 1998; Skog et al., 2001b
Petunia	Electrolyte leakage in presence of ethylene	Display life in the presence of ethylene; corolla longevity, fresh weight, total and membrane protein, lipid fluidity, all in the presence of ethylene.		Serek et al., 1995; Skog et al., 2001b
Rosa hybrida	Leaf and bud abscission	Display life, but only after mechanical stress (simulated shipping); display life in both ethylene-contaminated and ethylene-free air	Display life in the absence of mechanical stress;	Muller et al., 2000; Serek et al., 1994; Skog et al., 2001b

ORNAMENTAL PRODUCTS (continued)

	Decreased or delayed	Increased	Unaffected	References
Pot Plants (continued):				
Sweet Pea (*Lathyrus odoratus* L.)		Display life in presence of ethylene		Kebenei et al., 2003
Schlumbergera truncata	Ethylene-mediated flower bud abscission	Flower longevity and display life in the presence of ethylene		Serek and Sisler, 2001
Streptocarpella x hybrida		Display life in the presence or absence of ethylene		Skog et al., 2001b
Wax begonia		Display life in the presence or absence of ethylene		Skog et al., 2001b
Bulb Crops:				
Tulip	Ethylene-induced gummosis (polysaccharide secretion), weight loss and internal floral abortion			de Wild et al., 2002

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