

Supplementary Table S1. Literature review of the abscission agents used for citrus harvesting.

Name, formulation	Mode of action	Observations	References (*)
Dikegulac (2,3:4,6-di-O-isopropylidene- α -L-xylo-2-hexulofuranosioic acid)	It produces an alteration of auxin balance It promotes lateral branching in plants by disrupting apical dominance (pinching agent)	It produces pitting It has low toxicity for mammals	Yuan <i>et al.</i> , 2001b; Burns, 2002; Pozo <i>et al.</i> , 2004
Prosulfuron, metsulfuron methyl and imazameth	It causes the inhibition of acetolactate synthase	It produces pitting, severe defoliation and twig dieback and young fruit losses in ‘Valencia’ oranges (<i>Citrus sinensis</i> (L.) Osb)	Whitney, 2003; Alf��rez <i>et al.</i> , 2006
Coronatine	It is a polyketide phytotoxin produced by several plant pathogenic <i>Pseudomonas</i> spp. It is immunolocalized to the chloroplast and induces proteinase inhibitor and chlorophyllase gene expression	It induces mature fruit abscission, had low leaf loss and does not cause immature fruit or flower loss but produces general physiologic stress and chlorosis	Burns, 2002; Burns <i>et al.</i> , 2003b
Methyl-jasmonate	It accelerates ethylene production	It produces unacceptable levels of defoliation It has a relatively weak loosening effects in ‘Valencia’ orange during the ‘less responsive period’ associated with early development of ‘Valencia’ fruitlets	Wheaton <i>et al.</i> , 1977; Hartmond <i>et al.</i> , 2000a,b; Burns <i>et al.</i> , 2003b
CMNP (5-chloro-3-methyl-4-nitro-1H-pyrazole)	It accelerates ethylene production	It is selective in loosen mature citrus fruit and produces low leaf loss and flower loss It is not phytotoxic It promotes color change in peel and produces skin spots It has effect on gas exchange of leaves and produces alteration of chlorophyll fluorescence	Hartmond <i>et al.</i> , 2000a,b; Burns <i>et al.</i> , 2003a; Yuan & Burns, 2004; Li <i>et al.</i> , 2008
Ethephon (2-chloroethylphosphonic acid)	Ethephon is a plant growth regulator with systemic properties. It penetrates into tissues and is translocated. It decomposes to ethylene which is the active metabolite vegetales.	High temperature and water stress at the time of application improve the efficiency of the product but increase defoliation and produce phytotoxicity. It is used in cotton and apple to advance and standardize maturation. Commercial application is permitted in nuts and cherries.	Yang, 1969; Warner & Leopold, 1969; Klein <i>et al.</i> , 1978; Bukovac, 1979; Martin <i>et al.</i> , 1981; Ramos, 1997; Pozo & Burns, 2000; Yuan & Burns, 2004; Burns, 2008; Li <i>et al.</i> , 2008