



WASHINGTON STATE UNIVERSITY
EXTENSION

Pear Plant Growth Regulator Programs

Pears - bearing

Symptom/Behaviour	Chemical	Rate per Acre	REI	PHI	Notes
To prevent preharvest fruit drop (Anjou, Bartlett, Bosc)	NAA Fruitone L	8 - 32 fl oz	48 h	2 d	
	NAA K-Salt Fruit Fix 800	0.5-1 fl oz	48 h	2 d	
	NAA PoMaxa Plant Growth Regulator	See Label	48 h	2 d	
	AVG ReTain	0.73 lb	12 h	7 d	Apply ReTain 1-2 weeks before start of normal harvest. Follow label instructions.
	NAA Refine 24.2L	See Label	48 h	2 d	NAA becomes effective as a stop drop 3-4 days after application and typically reduces drop for 2 weeks.
	NAA Refine 6.25L	See Label	48 h	2 d	
<p>Notes: NAA (K-Salt Fruit Fix 800, Fruitone, PoMaxa, Refine) is effective in preventing preharvest drop of pears. NAA does not actually re-tighten the pedicel (fruit stem) after application, but retards the development of the abscission layer between the pedicel and the spur. Application timing of NAA products to prevent preharvest drop of pears is critical. Generally, NAA should be applied 6 to 7 days prior to harvest, but no closer than 2 days before harvest. NAA becomes effective 3 to 4 days following application, and has an effective period of about 2 weeks. Short-stemmed varieties may respond erratically.</p>					
<p>Notes: AVG or aminoethoxyvinylglycine (ReTain) is an inhibitor of ethylene biosynthesis in fruit tissues and can be used to adjust harvest timing and control fruit drop. It is registered for use on both apples and pears. Inhibition of ethylene biosynthesis delays maturation and permits fruit to remain on the trees longer for greater size without adverse effects on storage life. The preharvest interval (PHI) for ReTain has been set at 7 days before harvest. ReTain should be applied to pears once at 7-16 days before the start of normal harvest of untreated fruit. The recommended application rate for ReTain is 50 grams active ingredient per acre (one 0.73-lb. pouch per acre). If weather conditions are not favorable for ReTain application, it is suggested that the product be applied slightly earlier to avoid problems with PHI. Apply together with a registered organosilicone surfactant. Tank-mixes of ReTain with NAA or ethephon are discouraged because these products may counteract the ethylene inhibition produced by ReTain. For optimum response, apply ReTain during periods of slow drying conditions to enhance uptake. ReTain should be applied in a sufficient amount of water to ensure thorough wetting of the fruit, but not to runoff. Pear orchards with denser canopies may require at least 200 gal/acre of water to ensure adequate coverage. Adjust water volumes based on tree size, spacing and canopy density. Do not use overhead irrigation or cooling systems for at least 8 hours following a ReTain application. To minimize foaming of spray mixture, fill spray tank with half the amount of water needed for the final spray volume, add ReTain (in its soluble packaging) and continue to fill tank. Add the surfactant just prior to filling the tank. Minimize agitation of the mixture. Use approved surfactants at a concentration of between 0.05% and 0.1% v/v (0.4-0.8 pint/100 gallons maximum). Compatibility and performance data with anti-foaming agents are not available; such products are not recommended for use with ReTain.</p>					

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