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WATER SPROUTS and root suckers can be major problems in tree fruits. Sprouts from the trunk and main scaffold branches shade the interior portions of the tree, weaken fruiting spurs, reduce fruit quality, and harbor insects and diseases.

Suckers rising from the roots can weaken tree growth. They serve as a cover for mice and as a point of entry for diseases such as fireblight, which can kill the roots. Suckers can absorb certain herbicides and transport them down to the roots, where they cause serious root injury.

Water sprouts and root suckers can be controlled by the application of naphthalene acetic acid (NAA). This is the same growth regulator used for chemical thinning and for controlling preharvest fruit drop. However, the use, concentration, and timing are very different when controlling undesired water sprouts and root suckers.

A special formulation of NAA is registered for this use. It is available as Tre-Hold Sprout Inhibitor.

Controlling Water Sprouts

Water sprouts can develop near heavy cuts where large branches or limbs have been removed. They commonly develop on the upper side of main scaffold branches where trees have been opened for better light penetration.

While water sprouts are often undesired, they serve a vital function. They protect the bark of limbs from the direct rays of the sun. Excessive heat can cause serious injury and even kill the bark. To control sprouting, use either a 0.5% or 1.0% solution of NAA. This concentration of NAA is 1,000 times higher than used to thin fruit or prevent preharvest fruit drop. Apply during the dormant season, as soon after removing old water sprouts or making heavy cuts as weather permits. Applications are only effective if made before buds break in the spring.

A solution of 0.5% NAA should control most sprouting. The 1.0% solution of NAA may be desired where a buildup of excess sucker exists. Application should provide control for 2 to 3 years.

Apply the NAA as a paint. Spray drift at this high concentration of NAA can cause excessive fruit thinning. Paint around the base of major cuts, over the top of exposed limbs, and on areas where sprouts have been removed. Ensure thorough coverage.

To reduce the hazard of sunburn injury to exposed or unprotected bark, incorporate the NAA in a 25% solution of white, interior grade, water-based latex paint. Do not dilute paint more than 1 qt per gal of mixture. Do not use oil-based exterior grade latex paints, since they can cause injury.

Formula: A mixture of 0.5% NAA paint can be made by using 5 fluid oz of Tre-Hold Sprout Inhibitor with 1 qt of white interior water-based latex paint in sufficient water to make 1 gal of diluted paint mixture. To make a 1.0% NAA paint, use 10 fluid oz of Tre-Hold Sprout Inhibitor.
Reducing the concentration of white interior water based latex paint below 25% (1 qt/gal of mixture) is hazardous because of the reduced protection from sunburn.

**Application:** Brush the NAA paint mixture on during the dormant season, before budbreak in the spring. To prevent the development of water sprouts adjacent to heavy cuts, paint the bark around the cut, and down the limb or trunk for several inches. Where water sprouts have already developed, remove the sprouts and then paint the base of the cut sprouts. In addition, paint the branches and the tops of the limbs where sunburn is likely to occur.

**Caution:** Avoid treating weak or winter-injured trees with this NAA paint mixture. Risk increases for injury where NAA reduces sucker growth. Sunburn also may increase.

**Root Suckers**

Root suckers, especially in pear, are more difficult to control than water sprouts. They originate from roots below the soil surface, and their source cannot be treated directly.

Control is achieved when NAA translocates downward through developing suckers. Old root suckers must be pruned back to the ground line. When the new suckers have grown to a height of 6 to 10 inches and are still developing rapidly, thoroughly wet them with a spray of NAA. To avoid fruit thinning from spray drift, use low pressure only, 10 to 20 psi. On bearing trees, delay application until about 4 weeks after blossom time.

Adequate control on apple should be obtained using a 0.5% solution of NAA. A 1.0% solution is suggested for pears. Repeat applications may be required in successive years to achieve full control.

**Formula:** For a 0.5% and a 1.0% NAA solution, mix 5 to 10 fluid oz of Tre-Hold Sprout inhibitor with sufficient water to make 1 gal of spray.

**Application:** Prune back all established root suckers. When new sucker growth reaches 6 to 10 inches thoroughly spray all suckers with either the 0.5% or the 1.0% solution.

To assure thorough contact of all developing root suckers, keep the area free of weed growth.

Use pesticides with care. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.


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