

NOBLE NEWS & VIEWS



PECANS

Cleaning Up Pecan Orchards Hit by Ice Storms



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Pecan growers in southwest, central and north-central Oklahoma as well as northwest Texas are facing yet another challenge. Growers looking to start harvest soon are faced with the task of cleaning up ice damage in orchards hit by an early ice storm.

On Oct. 26, 2020, a strong winter storm pushed through these areas. Temperatures dropped to record lows in some areas. Several areas had the lowest temperatures ever recorded for the entire month of October.

This storm resulted in the earliest ice storm in Oklahoma's history. Areas that had

the most ice accumulation also received between 2-5 inches of rain.

Normally, ice storms occur during the winter after trees have become dormant and leaves have fallen off the trees. This storm occurred while most trees still carried a full leaf load. Additionally, there was less disease pressure from the drier-than-normal summer and fall, which added to the leaf load.

Since it was still too early to harvest, an additional obstacle some growers encountered was a good crop of pecans that added weight to the trees, resulting in more damage.

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**LATE-SEASON ICE STORM CAUSES
DEVASTATING RESULTS TO PECAN HARVEST**

IS CLEANUP WORTH THE COST?

Oklahoma growers may remember the ice storms in 2000 and 2001 and the two from 2007. These storms hit parts of the state and devastated pecan trees in the impacted areas. The one thing that growers learned going through previous disasters is that pecan trees are resilient and will eventually return to production.

Growers may question if the cost of cleaning up orchards is worth it. If the trees were worth managing before the storm, then I would say that cleaning up is worth it. Cleanup will be very labor intensive and will cost a fair amount of money per acre, depending on the amount of damage.

Following the ice storms in 2007, cleanup costs were reported for two orchards in Skiatook and Collinsville, Oklahoma. The cost, adjusted to 2020 values, would range from \$250 to \$506 per acre. In both of these orchards, the owners supervised the labor and had the resources to obtain sufficient equipment needed to facilitate the cleanup. Reports from the same ice storm for growers who had to hire custom crews to cleanup orchards ranged from \$604 to \$967 per acre.

OPPORTUNITIES FOR A BETTER ORCHARD

For some orchards, especially older planted orchards and native groves, this will give a grower the chance to thin out crowded trees. It can also help rejuvenate the trees. The downside is that the thinning patterns may not be what you planned and production may be decreased for a few years.

In the case of natives where large branches are removed from the tree, several new branches will emerge. This will increase the total fruiting wood, resulting in potentially larger yields in the future.

HOW TO START CLEANING THE ORCHARD

Cleaning up the orchard starts with clearing the downed limbs from the orchard floor.

After the limbs are removed, a grower needs to evaluate each individual tree to develop a plan for that tree. Each tree will have a different strategy for cleanup. Pecan trees can sustain significant loss to their canopy and survive. Shoots will regrow proportionally to the degree of canopy removed. The compensatory growth that results from the canopy loss can be extremely vigorous. The key to future production is to limit this growth to ensure a strong shoot.

PRUNE WITH CAUTION

The only pruning that should be done at the start of or during winter is the removal of split or broken limbs. This will allow harvest to proceed. All other cuts should be made later.

Cuts made in the winter will dry out, but dieback can be minimized by making the final pruning just before the tree begins to grow in spring. Damaged limbs will wall-off the injury, and several sprouts will develop as these branches return to production.



In spring, the sprouts should be thinned out. This allows growers to select the sprouts they want to develop into shoots. The most vigorous shoots will eventually shade out the less vigorous shoots.

Limbs that are broken but remain attached to the tree should be removed at a lateral branch or the trunk. The collar of the limb should be left intact for cuts made at the trunk. Limbs that have pulled away from the trunk should be removed from the bottom of the bark split.

NUTRIENT CONSIDERATIONS FOR DAMAGED TREES

Once the orchard is clear, it is imperative to think about future growth on the trees. Balancing nitrogen fertilization is important. If too much nitrogen is applied, the shoot will be more vigorous, resulting in long, weak growth. If these shoots produce a large crop after the third or fourth year, the shoots will not be able to support the weight of the nuts and leaves and may break.

Knowing how much nitrogen to apply will depend on the orchard site, soil type, ground cover type and orchard management. Use your leaf sample results from the past year and amount of canopy loss to determine how much fertilizer you should apply prior to budbreak.

If tree nutrient levels were good the previous year and you had severe damage, I would recommend cutting the application rate by at least 40-60%.

Evaluate the growth of the trees during the spring. If trees are not growing well, then another nitrogen application should be applied in early summer. If the shoots produce too much growth, do not apply additional nitrogen until the fall.

The other important thing to keep in mind is that these vigorous shoots will be growing longer into the year than normal tree growth. Therefore, new leaves will develop throughout the spring and summer.

In areas where zinc deficiency is observed, additional zinc application should be made. Begin zinc application at budbreak and apply every two weeks through the end of June to ensure that the leaves are not zinc deficient. This will help strengthen the shoots and allow the tree to store more carbohydrates.

PROPER MANAGEMENT SUPPORTS FUTURE GROWTH

Just remember, pecan trees are resilient and can return to normal production following an ice event. The recovery times will be directly related to the amount of canopy lost. However, it will typically take three to five years to return to previous production amounts. Proper tree management will facilitate the development of strong growth that will support future production.

Do not be discouraged if you have damage; take it one step at a time. Develop a plan of action for the entire orchard. Remember, each tree will require a different strategy to return to production. 🐾