

Vast stands of natives could increase U.S. production

By Larry A. Stein

Stein is a professor and Extension Horticulturist, Texas A&M University, Uvalde, TX.

Record native pecan prices in 2011 have created a great deal of interest in the potential management of native pecan stands in Texas. Despite the good off-year pecan crop in Texas, the native crop was fair to good at best. However, the good prices lead to healthy returns for most folks who manage and/or harvest native pecans.

Because of the ups and downs in production and price for native pecans, they are only minimally managed in most groves in the state of Texas. Often the only activities that a native grove witnesses are the grazing of livestock and wildlife; others only have activity when they have a crop and folks come in to harvest the crop. So, a bit of tree management could vastly increase yields and reduce the years of no production.

The best guess for the number of acres of native pecan trees in Texas is anywhere from 600,000 to one million acres which leaves a wide margin for error; but it is safe to say that there are many, many native pecan trees in Texas. They are right at home along the numerous streams and rivers; hence they are established on some of the finest pecan soils in the world.

If the demand for pecans continues to increase, one of the simplest ways to increase production would be to manage the vast native stands of trees scattered across Texas and other states. The management of native pecans is a sequential process that has a simple beginning, but really no end. The steps are as follows: first, all foreign timber must be removed followed by removal of the weak and/or spindly pecan trees; and then high rates of nitrogen fertilizer are applied along with foliar zinc sprays, which are followed by a pest and varmint management program. Then as the superior pecan trees are identified, more pecan trees are removed. So the process is an ongoing one that requires patience and persistence. Many start the process only to give up after a year or two. One will only be successful if they allow at least five years to pass before rendering judgment on the renovation process.

The first and foremost step to native grove renovation is to remove all the trees that are not pecan. Many times this is a challenge because there are massive live oaks and elm trees in these bottoms that most can't bear to cut down. But in reality, if you are after pecan production, they should go — after all they are occupying quality space and soil areas that could be filled with pecan. The hard part is figuring out how to best remove these trees. A bulldozer could be used, but only if the operator can clearly distinguish tree species. However, in many cases the bulldozer will greatly damage the grove floor. Hence, many elect to remove the trees with a chain saw.

Chain saws work well, but only when they have a sharp chain and nothing dulls chains quicker than rocks, wire and dirt. Operators also have to be able to determine which ways trees will fall and saw them so as to cause minimal damage to the pecan trees. The best procedure is to remove the stump flush with the ground so they will not hinder other processes. There is no question that sawing the stump flush with the soil line is the hardest part of the operation especially when the trees are large. However, in this way the stump will not hinder mowing or harvest operations. Also the stump will die on its own and will not have to be treated so as to kill the stump. Grazing and mowing will eliminate the stump sprouts over time. Weak and spindly pecan trees can also be removed at this same time as they have very little production potential. However, the goal is to leave all the well structured pecan trees so as to evaluate the nut quality of these trees and their production potential.

Sawing the trees off is one challenge of tree removal, but the next one is equally as challenging: what do you do with the wood? Unfortunately, there is a limited market for the wood and hence most is piled and burned. Due to the time required and hazards of burning the wood in place, it is often pulled to nearby open field or open area in the grove for burning at a later date. Still the amount of room required to handle this timber can be huge.

Typically the removal of the foreign timber and weaker pecan trees will stimulate new growth on the remaining pecan trees; however we also recommend heavy nitrogen applications to help this process. A good rule of thumb would be to apply 100 pounds of actual nitrogen or 300 pounds of ammonium sulfate. Other nitrogen fertilizers could be used as well. Since ammonium sulfate is only

20 percent nitrogen, we have to apply 300 pounds to get 100 pounds of actual nitrogen. I would recommend putting 150 pounds of ammonium sulfate out at bud break and then put another 150 pounds in May. Try to apply this fertilizer ahead of a predicted rain event.

Once the pecan trees begin to make good growth, the trees would benefit from foliar zinc sprays. Many pecan tree roots enjoy a symbiotic relationship with mycorrhizal fungi which helps the pecan tree roots take up zinc from the soil. This is how the native pecan forests were able to grow so large and vast without foliar zinc sprays. Still having said all that, native pecan trees benefit as much as improved pecans from foliar zinc applications. A minimum of two applications are recommended — one at bud break and one two weeks later. However, make no mistake about it, early on in the renovation process the trees would benefit from more zinc sprays.

The next part of the improvement process is to begin a pest management and varmint control program. As a general rule of thumb, native pecan trees will make a crop about every five years regardless of what you do. However, if you want to shorten this interval, then pest management sprays are going to be in order. The most critical sprays are the pecan nut casebearer and weevil sprays. Both can reduce your crop to virtually nothing. Hence, you will either have to hire this work done or purchase a sprayer. There are but a few custom spray applicators, mainly due to liability issues, so more than likely you will need to purchase a sprayer and have at least a 100 hp tractor to power the sprayer.

At the same time you need to be thinking about varmint control; deer, wild hogs, turkey, raccoons, squirrels, crows, blue jays and opossums will all get their share and, in a short crop year, they get more than their fair share. When numerous native pecan bottoms have pecan crops, varmint pressure is spread out and not as intense; but if you have the only grove with a crop, you can't imagine the number of varmints who will come calling. You either have to be prepared to fight or surrender gracefully. If you are not paying attention, they will have most of the crop before you know it. Armadillos will also wreak havoc on the grove with their holes and tunnels. Not only do they make the ground uneven so that the nuts cannot be picked up, but numerous nuts are also lost in these pits as well so don't overlook these critters in your varmint control program.

Once the trees are cropped for a few years, you will get an idea of which trees are the most productive and have the best nut quality. Those trees that fail to bear or have nuts of inferior quality should be removed. Often times it may take three to five years to get some trees to put on their initial crop, so you have to be patient. However, if some trees fail to bear after five years, you need to take these trees out in spite of how pretty they are. Realize also that it is important to leave trees that can be harvested. It does little good to have great trees with fabulous nuts that simply fall in the river or cannot be harvested. Hillsides can be challenging to harvest, so make sure you do your homework well.

So, indeed there are numerous native pecan stands in the natural range of pecan which could be managed. Some would require more care than others and some have more potential than others. Also realize that this is very hard work and if it was easy anyone could do it. Both patience and persistence will be required if one is to be successful.