

## From Orchard to Pecan Pie

<sup>1</sup>There are certain pecan tree varieties with high-quality nuts that often have weak roots. Varieties with strong roots have poor-quality nuts. To get high-quality nuts on strong roots, pecan farmers insert a scion from a high-quality nut variety into a strong rootstock variety. This procedure is called grafting. Once the graft heals, the grafted seedlings will be planted in an orchard. **There are many careers for those who can correctly graft pecans.**

<sup>2</sup>It takes 7 years for the pecan trees to grow and start producing nuts. During those 7 years, farmers must continually water and take care of the trees. This means that farmers must invest a lot of money before any money comes back to their farm.

<sup>3</sup>Once an orchard is established, farmers must keep them in good condition. Just like humans need nutrients and minerals to live, so do pecan trees. Farmers spray the trees to keep away bugs and disease. If the trees are lacking in any nutrients, farmers will spray those nutrients onto the leaves so the tree can absorb them at once.

<sup>4</sup>Pecan trees require 4-5-acre feet of water per year, which means on one acre there would be 4-5 feet of water during the growing season. Farmers are constantly having to negotiate or work with other land owners to be able to use the water. Many farmers release water from ditches to flood the pecan orchards. This practice is called flood irrigation.

<sup>5</sup>All plants must be pollinated to produce seeds that can grow more plants. Pollination is when insects, birds, bats, and the wind take pollen between flowering plants so that the plants can make seeds, or reproduce. For pecan trees to produce seeds they must pollinate using wind. Pecan trees do better when cross-pollinated, meaning having multiple trees to pollinate each other. Though they can self-pollinate (they have both male and female flowers on the same tree), they won't produce as many nuts as needed without cross-pollination.

<sup>6</sup>Pecan trees begin to pollinate in May and the nuts grow for 90 days. There are two different methods used by farmers when harvesting pecans. Some farmers wait until the temperature drops below 32°F to begin the harvest. The freeze opens the husks surrounding the pecan. Pecans have outer shells called husks. Once the husks open, the pecans are ready for harvest. Harvest usually starts around October or November and can last through January.

<sup>7</sup>Other farmers will start their harvest earlier, before all of the husks are open. This allows them to sell their pecans early and get a high price for the first harvest. They will then harvest a second time once all of the pecan husks are open. There are positives and negatives to both practices. Farmers that wait until all of the husks are open save on the cost of harvesting twice, but they get a lower price for their pecans. Farmers that begin harvesting early lose money by harvesting twice, but they get a higher price for their first harvest because their pecans are the first on the market.

<sup>8</sup>To harvest, farmers first use a shaker to shake the pecans out of the trees. They then they use a sweeper to sweep the pecans, leaves, and sticks into a windrow, a long line of material heaped into a row. Once the windrow is complete, a harvester picks up the pecans while spitting out the leaves and sticks. The collected pecans are sent to a facility where they are cleaned, shelled, and packaged ready for you to eat!

\*What is an acre foot of water? An acre foot of water is enough water to cover an acre of land about the size of a football field one-foot-deep (Not every acre will be a perfect square). Farmers will put a couple of inches of water per acre each time they water and at the end of the season each inch will add up to 4 or 5 feet. **If there are 12" in a acre per year? Looking at the football Length is 360 ft and the Width is 160**

160 FT

360 FT

foot how many inches will the farmers water on one field below can you calculate the perimeter if the ft?