

## **Pollination**

Adequate pollination in the pecan orchard is a vitally important but often overlooked aspect of pecan production. Research indicates that as much as a 30% loss in fruit set may occur when trees are more than 150 ft from a pollinator. Blocks should be no greater than two to three rows in order to prevent substantial pollination related problems.

Pollinators can be blocked in rows or pollinator varieties with similar nut and kernel characteristics to main varieties can be positioned within main variety rows. Placing a pollinator at every 4<sup>th</sup> tree within every 4<sup>th</sup> row will provide adequate pollination and will not cause the crop to bring lower “blended” prices.

Orchards should contain at least two pollinator varieties in order to ensure that the entire pollination window for the main variety is covered. Historically, it was believed that a combination of most Type I trees with most Type II trees would achieve reasonably good pollination for both types. It is now known that pecan pollination is much more complex than this two class system. Shifts in flower maturity windows occur within a single variety as trees age. Flower maturity tends to occur earlier in older trees. In addition, the duration of these maturity windows shorten as the trees age, thus cross-pollination problems occur most often in young orchards.

A variety of environmental factors may also affect pollination. Uneven bud break due to abnormally warm or cool springs will lead to uneven pollen shed and disruption of flower maturity. Moist, cool conditions can delay pollen dispersal and extend pistil receptivity. Warm springs accelerate catkin development relative to that of female flowers, and reduce the duration of pollen dispersal and flower receptivity.