PRUNING SERR WALNUTS - AN ATTEMPT TO REDUCE CATKIN LOAD AND PFA

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ABSTRACT:
Severe dormant pruning can dramatically reduce the Catkin load but after one year of observations (a low PFA year), there is no indication it dramatically reduced PFA. This effort will be continued one more season.

OBJECTIVES:
In a low producing Serr orchard with no known pollinizer trees near or in the orchard, prune a block of trees "down wind" from the rest of the orchard to remove as many catkins per tree as possible. Evaluate PFA and see if there is a gradient in reduced PFA away from non pruned trees.

PROCEDURE:
Severely dormant prune approximately two acres of trees, removing all old wood containing catkins, in one "downwind" corner of a solid Serr block.
Throughout the bloom period tag blossoms and evaluate the presence of PFA on trees at various distances away from the remainder of the Serr (non-pruned) block. Compare PFA with 4 trees in the non-pruned block. Determine if there is any gradient with distance from pollen source (non-pruned block).
Count shed catkins in pruned and non-pruned block to document the reduction of catkins in pruned block.

RESULTS:
Serr crops had a good crop this year and percent PFA was low, only 40 percent in the non-pruned block.
Results showed no indication of a reduction in PFA with distance away or towards the non-pruned trees. However the overall PFA in the pruned block was 9% lower than in the non-pruned block. Table 1. Of course yield was considerably less in the pruned block. Catkin counts clearly indicated pruning reduced the catkin load. There was an 84% reduction in the number of catkins found in the pruned block, Table 1. The count of shed catkins on non-pruned trees was considerably less than the catkin load reported from other work.
CONCLUSIONS:

At this time we can only conclude that pruning is a useful, (but expensive at $8/tree) method of reducing catkins. However, this did not result in reduction in PFA in 1991. This trial will be continued one more year in hopes more PFA occurs on Serr walnuts in 1992.

TABLE 1 PFA and Catkin load on pruned and non-pruned Serr walnut trees.

<table>
<thead>
<tr>
<th>Non-Pruned Area</th>
<th>Pruned Area</th>
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<tr>
<td>%PFA 40%</td>
<td>Distance from non-pruned area Ave.</td>
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<tr>
<td>Catkin Load 2662</td>
<td>60' 120' 180' 240' 300' 360' 31.4</td>
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<tr>
<td></td>
<td>25.4 26.1 41.0 40. 20.1 35.2 31.4</td>
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<td></td>
<td>527 176 604 436</td>
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