

## **New Windbreak Plan Devised for Inner Orchard**

**Harold E. Wahlberg**

It can be done now. The diagonal grille system of planting windbreaks has been devised to overcome the objection to planting a break in the middle of the orchard. Many growers have hesitated in the past to put another line of windbreak protection in the middle of their ten acre block because a solid line would interfere with their soil management operations, such as cultivation, irrigation, and fruit hauling. Now comes the new grille system that allows uninterrupted movement of cultivators, furrowers and trucks through the orchard, thus allowing the handling of the ten acres as a solid unit rather than two separate five acre blocks.

### **DIAGONAL GRILLE**

Typical demonstrations of the diagonal grille system were shown at the F. H. Collins orchard and the C. E. Squires orchard near Villa Park on the recent windbreak tour conducted by the Agricultural Extension Service in Orange County. The grille plan may also be likened to the oblique squad formation in the marching line, thus *///*. One row of trees is removed to accommodate the grille planting. In the average orchard a space of 48 feet is thus provided. Short diagonal rows, accommodating say five or six seedling plants at four feet apart in the row are established at an angle that will make these rows perpendicular to the direction of the prevailing winds. The perpendicular distance, then, between the diagonal windbreak rows can be varied from ten feet to twenty-four, according to the orchard working plan adopted.

In the Collins orchard, furrowing and cultivation is carried through openings in the same centers above and below the grille windbreak. Here the opening in the grille is about ten or twelve feet, ample to allow tractor tools and trucks to pass through.

In the Squires orchard, the planting is arranged to offset the ground operations from one tableaux below the grille to the next tableaux above the grille. In other words, the furrowing and cultivation operations angle through the grille. The space allowed in this pattern is about 24 feet between the tree line on one grille and the tree line on the next grille. As the Eucalyptus grow older, of course, the tops will almost arch over.

### **BETTER PROTECTION**

The grille system will provide the more uniform wind protection that many growers have desired, taut who have hesitated to cut their orchard operations in two blocks.

Windbreak protection in the exposed districts of Orange County is becoming more important as a factor influencing farm income as citrus prices continue at the present

low levels. This statement was backed up with packing house data, by the Farm Advisor in the field tour attended by a large group of interested growers from all parts of the county. It was pointed out that the smaller sizes and the lower grades did not return the cost of production. The periodical desert winds are largely responsible for small sizes in some districts and definitely lower the grades by wind whipping and scarring.

Comparative figures were presented showing that protected orchards delivered more fruit per acre and better quality than did the unprotected orchards in the same areas. Six orchard stops were made during the field tour to observe and study various phases of windbreak management. A splendid combination planting of Eucalyptus and Arizona cypress was shown at the F. W. Schildmeyer place on Grand Avenue near Santa Ana. How Eucalyptus compacta, the bushy Eucalyptus, can be used as a filler to replace the Monterey cypress removed because of bark beetle infestation, was shown at the Mueller Ranch on 17th Street.

## **ROOT CUTTING**

A root cutting demonstration was staged by Richards Bros, at the Healey ranch, Tustin. The circular saw tooth root cutter can cut roots at various depths to five feet underground. Periodical root cutting, regular fertilization and adequate irrigation are essential to proper windbreak management, according to the Farm Advisor.

The longest construction of lattice windbreaks in Southern California— over a mile long—was shown at the Breslin ranch near Panorama Heights. The sections varied from 28 to 42 feet in height.

The importance of proper planting distances was also emphasized in order to make room for necessary root cutting and ample space for root anchorage and overhanging limbs. The pruning of mature Eucalyptus windbreaks to remove the extremely overhanging limbs was recommended. Such pruning should usually begin when the trees are five or six years old. If neglected too long, the removal of such limbs will create large openings and will take time to fill in.