



Case Study II – A Citrus Grove North of Avon Park

This 60-acre Sunburst and Murcott grove was planted in 1985 along with a slash pine-red cedar perimeter windbreak ([Fig. 1](#)). The owner was concerned about cold protection and reducing wind scar.

The cedar trees were planted first about 3 to 4 feet apart in a single row about 30 feet from the sides and ends of adjacent citrus tree rows planted at the same time. One year later, slash pines were interset among the cedars ([Fig. 2](#)). The windbreak trees were irrigated only the initial couple of years. Normal grove herbicides were used to treat weeds for the first few years. The windbreak trees were unaffected unless directly contacted by the herbicide. Afterwards, the build-up of pine needles appeared to prevent weed development ([Fig. 3](#)).

The windbreak trees are topped about every 3 years at 21 feet and hedged on the inside of the grove as needed. The owner indicated that the cedars appeared to be more sensitive to the grove herbicides than the pine trees.

The owner also has a small block of citrus elsewhere in Polk County in which he planted red cedar trees along the north side for cold protection. His lesson from the Avon Park grove and the 2004 – 2005 hurricanes was that cedar trees were quite windfirm if properly spaced. Therefore, he planted the cedar trees 4 feet apart initially, but thinned them later to 8 feet. The wider spacing was observed to allow for better root development and consequently better ability to withstand strong wind. The wider spacing also apparently helped prevent infections of the [cedar-apple rust](#) a fungus disease that can affect red cedar.



Fig. 1. Looking north along the western edge of the grove.



Fig. 2. A single-row mixture of topped slash pine and red cedar trees planted in 1985.



Fig. 3. Pine mulch in the windbreak row.

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