Over-the-tree-row
cultivators

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The hand hoe, long an unappreciated necessity to good tree cultivation, may be on its way out, replaced by tractor drawn machines and chemicals.

For many years, the duck foot cultivators, tandem discs, and harrows have kept the area between the rows clean. In-the-row cultivators such as the Grape and Shelterbelt Hoe; the Hill Cultivator; the Friday Hoe; the Green Hoe, and the Olson Roady have recently been introduced to make cultivating the tree row easier.

A whole new series of cultivators is now available for over-the-row cultivation. All these cultivators have two things in common--flexible cultivation teeth or prongs and they are drawn right over the rows of newly planted trees.

![Dump Type Hay Rake](image)

**Dump Type Hay Rake**

This is perhaps the most commonly found hay rake on North Dakota farms. To make it into a first class cultivator, some changes must be made. (1) Replace the large wheels with a smaller size like those from a gang plow. (2) Adjust the tension lever settings to correspond with need of the smaller wheels. This machine appears to do a better job at higher speeds, at about 6 miles per hour.
SIDE DELIVERY RAKE

This machine needs no special adjustments or alterations to do a good cultivation job. Pull machine at 2 miles per hour. If the reel is powered by the power take off, then run reel at slow speed.

SPRING TOOTH DRAG HARRROW

For use as a tree cultivator, this harrow works best if the frame is raised to a height of 10 or 11 inches above the runners. This can be done by replacing the present control shoes with a taller set.

To prevent injury, by scraping, of the tree trunks, wrap the cross-members of the frame with burlap. Pull the harrow at 3 miles per hour.
FLEXIBLE FINGER WEEDER

These row crop cultivators commonly found in the Red River Valley are excellent as a tree row cultivator. No special adjustments are needed, although the frame should be wrapped with burlap to prevent injury to the tree trunks. The weeder should be pulled at from 4 to 6 miles per hour.

HARROW WEEDER

For tree cultivation, it would be best to have the machine equipped with 16" tines. Ten inches will do a good job, but the cross members of the frame may skin the bark of the trees, unless wrapped with burlap. Pull machine at about 4 miles per hour.
GENERAL REMARKS

All over-the-row cultivators will do a good job of taking out the weeds if used properly.

1. Cultivate often and before the weeds are more than one to two inches high.

2. Use normal field speeds of 4 to 6 miles per hour.

3. Adjust the machine for the best cultivation job.

These machines can be used on all species of trees the first year and up to four years on the slower growing varieties.

When the trees are too big for machine cultivation, you may want to try a herbicide in a narrow band down the tree row.

For more information on chemical weed control in trees, write to Extension Forester, NDSU, Fargo, North Dakota.

Good cultivation pays off in
- Faster growth
- Healthier trees
- Better survival
- Nicer looking planting
For a faster job combine two or more machines in one operation.

A duck-foot cultivator with center shovels removed, to clear the row of trees, is followed up with a harrow weeder. Be selecting the right machines, you can cultivate, in one operation, the area in the row as well as between the rows.