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## **MAINTENANCE OF TREE PLANTINGS THAT UTILIZE WEED BARRIER FABRIC**

Use of weed barrier fabric in tree plantings will greatly improve tree growth and survival, while reducing labor for weed control. However, there is some routine maintenance issues that the producer must be aware of. **You must routinely inspect and maintain your tree plantings to get the most benefits from this investment in the future.**

### **FABRIC INSPECTION**

1. Regularly (monthly or after severe windstorms) inspect the fabric to ensure that the edges are securely stapled or covered with soil. Additional staples can be purchased through the Brookings Co. Conservation District. If in doubt, a few extra staples could be cheap insurance.
2. Check the fabric cut around a few trees periodically to ensure that the fabric is not chafing against the bark (usually caused by fabric billowing in the wind). Bark damage can kill the tree. Secure the fabric by placing a staple 4-6 inches away from the seedling to prevent this.
3. Check the center portion of the fabric for accumulation of soil or other debris. If soil is present on top of the plastic, weeds can grow their roots down through the fabric.

### **TREE INSPECTION**

1. Dead seedlings can be removed by placing your feet on either side, and pulling upwards. This prevents the root ball from pulling the buried edges of the plastic out. Replacement orders should be completed with the Brookings Conservation District by mid-November
2. New seedlings can be re-planted directly through the existing slit by use of a narrow spade or a tree-planting bar (available for purchase through the BCD). Insert spade or bar through hole, push back and forth to open hole, insert seedling roots, and fill in hole. Insert staple 4-6 inches away from seedling.
3. Seedlings with large root balls may require you to cut the plastic slit wider.

### **WEED CONTROL BETWEEN ROWS**

Ideally, one would control the weeds between the rows of plastic until the trees canopy over. This may be possible with small equipment, and try to avoid mechanical damage to trees with large equipment. At a minimum you should be prepared to control weeds between the rows for 4-6 years, or perhaps more.

There are several options for controlling weeds growing between the rows of plastic. The list below provides these options in the order of most to least desirable.

1. **Chemical Control:** Application of a Roundup-type product (for both grass and broadleaves) or 2-4 D based product (for broadleaves) can be very effective. Multiple applications may be needed each year depending on weed pressure. Be sure to avoid contact with trees. An ATV with a spray bar works well for these narrow width applications.

A backpack sprayer can also be used. **For specific herbicide recommendations, contact your local farm chemical supplier and refer to the annual weed control bulletins published by South Dakota State University.**

Herbicides can effectively control both annual and perennial weeds. Some of the more troublesome weeds in tree plantings are Canada thistle and quackgrass. Both of these perennials have extensive roots systems that allow rapid spreading. The most effective method to control these weeds is to keep them mowed down until late July, early August. Fall rains should result in succulent new growth, which should be sprayed with a 3-4% solution of Roundup around the time of the first light frosts (late August, early September). At this time the weed is actively transporting nutrients into the root system to prepare for the winter, and the herbicide will be transported throughout the root system. **Do not till the ground after the herbicide application, as you want the root system intact to permit full exposure to the herbicide.**

**2. Mowing:** The strip between plastic rows can be mowed with a rotary mower, but be careful not to catch the fabric. A stalk chopper type mower could also be used, again with the precaution about not catching the fabric. It is probably better to mow more (rather than less) often, as it will be easier to see the fabric edges. Regular mowing over several years can ultimately deplete the root reserves of Canada thistle, but will not affect perennial grasses such as quackgrass and brome grass.

**3. Cultivating:** A narrow disk or roto-tiller can be used between rows. Here it will be necessary to stay at least two feet away from the plastic edge, to prevent loosening the soil holding the plastic in place. This un-tilled edge can be controlled by herbicides. Another disadvantage of cultivating is that it won't control perennial weeds, and can in fact increase their spread by chopping the roots into smaller pieces which will each grow into new plants.