

Do’s and Don’t with Fabric

Do- The site should be prepared the year before planting by removing competing vegetation using cultivation and/or herbicides.

Do– After the fabric has been laid and the trees have been planted, look over the job to make sure things were done properly and that all the steps have been taken for a successful planting. Look to see if the fabric is straight, flat, tight, and properly anchored. The fabric must be pushed down against the soil surface to prevent air pockets from occurring between the soil and the fabric. An air pocket will cause damaging heat underneath the fabric which could result in mortality of the seedlings. There should be no accumulated soil on the fabric.

Do– After about a month or two, inspect the tree planting site. Look for problems. For instance, make sure that the fabric is still secure and not rubbing on the seedlings. Seedling rubbing occurs when the X shaped cut in the fabric was not large enough or the fabric was not tight enough around the seedlings. Loose fabric occurs when it is not securely fastened to the soil. It can result in mortality if the tender bark is removed from the seedlings.

Do– Periodically (3-4 times a growing season) mow the grass in between the rows to reduce competition for the first 3-4 years. The reason mowing is recommended and not cultivation is because of potential of damage to the fabric or roots of the

seedlings during the procedure.

Do- Replace the trees and shrubs that have died to ensure no gaps will form. Gaps will decrease the effectiveness of the planting.

Do- Look over the cuts in the fabric to be sure the trees have adequate room to grow. The seedlings should be planted upright and the roots should be slightly below the soil surface. The reason the roots need to be near the surface is because they need oxygen. However, large air pockets between the roots and soil can cause mortality. Make sure the seedlings are properly heeled in to prevent these air pockets from occurring. On larger plantings do “spot checks” where you go around and cover general areas of the planting.

Don’t– The choice of using a weed barrier does not permit the “plant’em and forget’em” mentality. There is a level of maintenance that has to occur in order to achieve optimum growth and survival.

Don’t– It is very important not to forget about maintenance in the years after the planting has been established. Yes the trees are doing well and they have started to close in. Substantial growth has occurred. Wildlife has inhabited the area. They are providing wind protection. It is still necessary to inspect the planting at least annually.



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Plant trees and, if applicable, use a weed barrier to protect them. Whether you decide to use fabric or not, the investment you have made in your tree planting needs to be protected.



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**Fabric Use
in
Tree Plantings**

A User Guide for Landowners



**South Dakota
Department of Agriculture**
Division of Resource Conservation
and Forestry

Why Use Fabric

Trees and shrubs are planted in South Dakota for several purposes including wind protection for farmsteads and livestock. Trees are also used for wildlife habitat, stabilization of soil, snow retention, and many other conservation practices. It is difficult to



A nice single-row tree planting using fabric with excellent room for trees and tight fabric.

establish trees and woody plantings on the prairie because of strong winds, drastic temperature fluctuations, and limited rainfall. The most detrimental of these factors is the lack of moisture. It is critical that trees receive adequate moisture during times of drought. One way to improve soil moisture around trees is to lay fabric around the tree plantings.

Weed barrier fabric is a woven, polypropylene fabric that is often black in color. This material allows water to pass through it, but at the same time keeps competing vegetation from

robbing nutrients, sunlight, and moisture from the seedlings. Light cannot penetrate ; therefore, no vegetation can grow underneath. It conserves moisture by



A tree seedling that has outgrown the hole provide in the fabric. The fabric is also limiting the amount of suckering that can occur. This will limit the spread of some species.

reducing evaporation and increases soil temperature in the spring resulting in a longer growing season. The benefits of using fabric are similar to mulching the site.

When to Use Fabric

Weed barrier fabric is very expensive. It may increase the cost of tree planting by as much as three-fold. Therefore, it is wise to evaluate the high cost of fabric against the benefits it will provide. Fabric can improve survivability and growth of seedlings during drought cycles, in sandy soils, on upland sites, and on naturally arid sites. The use of fabric will also reduce the cost of replanting due to tree mortality. It will also create a more effective barrier in a

shorter timeframe.

The benefits of fabric should be weighed in terms of tree maintenance. It is critical to protect newly planted tree seedlings from competition for at least four years. Fabric will keep competing vegetation away from the trees. Without fabric, competition must be controlled by chemical and/or mechanical practices three or more times each growing season. The savings in manpower and equipment costs that are associated with seedling maintenance need to be considered when evaluating the benefits of fabric.

It is important to note that not all desired species necessarily benefit from fabric. Shrubs that spread by underground root shoots such as lilac and Hansen hedge rose will be prevented from doing so until their roots extend beyond the edges of the fabric.

Other Considerations

One problem that has become evident in recent years is the persistence of the fabric. Originally thought to decompose after about five years, fabric in tree plantings that are 10-20 years old is as good as the day it was laid down. As the stems of trees and shrubs grow in diameter, they can begin growing over the fabric. This can weaken the plants, making them susceptible to wind throw or insect and disease problems. Eventually, the trees and shrubs can be girdled, causing mortality. The solution is

to periodically cut the fabric back away from the plant stem so it has more room to



This picture shows how loose fabric and openings that are not done properly can lead to rubbing. That rubbing can damage the bark and may kill the seedling.

grow. A popular tool is made by fastening a box cutter to the end of a long stick such as a broom or shovel handle. Care should be taken not to harm the base of the plant when cutting the fabric.

Other problems can occur with the use of fabric, such as a rodent chewing or an insect/disease infestation below the level of the fabric. Recognizing the problem early and providing treatment can save the landowner from tree loss and replacement. The landowner should contact a forester with the Division of Resource Conservation and Forestry for proper identification of the problem and its treatment.