



HOW TO INSTALL PLASTIC MULCH

Resource requirements:

- four people -- a tractor operator, a mulch applicator rider and two people to pull trees through the plastic
- a sharp device for marking the location of the seedlings under the plastic
- 40-hp tractor with one set of hydraulics – the plastic mulch applicators are equipped with Pioneer brand hydraulic tips
- shovel, utility knives, gloves and work boots

Installing the plastic mulch:

Note: The plastic does not have to be installed immediately after planting the seedlings, but it should be installed before the seedlings start to grow and while the site is weed-free.

- Level out all ridges from the planting process prior to mulching. This will help the plastic lay flatter and tighter, and will extend the life of the plastic mulch. The applicator will not apply the mulch correctly if the soil is too wet or improperly prepared.
- Check for loose or worn bearings on the disc and grease the mulch applicator if necessary
- Proceed to the first tree row and, starting four metres (10 feet) back from the row, align the tractor and applicator to straddle the line of seedlings.
- After the applicator has been calibrated, load the roll of plastic mulch. With the applicator in the raised position, slide a roll of plastic mulch onto the cradle of rollers. A roll of plastic mulch weighs 34 kg (75 lbs), so be careful not to strain your back or pinch your fingers between the plastic roll and the applicator.
- The end of the plastic should be coming forward off the bottom of the roll. Unroll a length of plastic and lead it between the small front roller and small bottom roller. Continue to pull the plastic under the large bottom roller until it clears the applicator.
- Have someone stand on the end of the plastic until several feet of the mulch has been anchored, and the plastic is held in place by the soil on the edges. Be sure to bury the exposed end of the plastic.
- Set the applicator to the correct depth. The front discs cut the trenches that will hold the edges of the plastic, are controlled by the hydraulics. Keep the top half of the front discs exposed and the bottom half submerged in the soil. If the front discs are set too deep, the machine may wander, making it difficult to install the mulch.
- Ensure the two land wheels are adjusted properly in the furrow – they should be holding the plastic firmly in the trench but without so much pressure that they damage the mulch.



Installing plastic mulch.



Side view of cradle on plastic mulch applicator.



Good disc depth.

- The height of the rear discs is determined by lengthening or shortening the turnbuckles attached to the transport wheels. The rear discs have to be low enough to bring the majority of the soil back onto both edges of the plastic as evenly as possible. If they are not set correctly, the plastic will not install properly and exposed edges will have to be buried by hand.
- Begin installing the mulch two metres (6 feet) before the tree row to allow enough space to adjust the applicator's depth. When enough of the plastic has been anchored, cut off any excess, dig a trench and bury the end.
- The person riding the applicator is responsible for marking the location of each seedling as it passes under the applicator. A sharp marking device can be used to poke holes in the plastic.
- The people following the applicator are responsible for enlarging the hole by making a lengthwise cut in the plastic using the utility knife. The cut should be large enough to accommodate the seedling without rubbing against it.
- Pull the seedling through the plastic as quickly and gently as possible and keep off the plastic to prevent damage. Temperatures can become extremely high under the plastic on a hot, sunny day. It is recommended that installing mulch be done when daytime temperatures are lower or on cool, cloudy days.
- At the end of each row, install mulch for approximately one metre (3 feet) past the last tree seedling. Cut the plastic, raise the applicator and pull away. To start a new roll in the middle of a tree row, overlap the plastic ends and then trench in the edges by hand.
- Trench and cover the open end of the plastic immediately to ensure that wind is not able to get under it.
- When a row is finished, carefully run a truck or ATV tire along the ground at the edge of the secured plastic to help pack and stabilize the soil. Smooth tires are less likely to damage the plastic.



The seedling should be located in the middle of the cut.



Securing the edges of plastic mulch with soil.

Maintenance:

- Tree seedlings and plastic mulch need to be protected from livestock.
- Plastic mulch ensures that normal rainfall will provide enough water for tree growth. However, supplemental watering may be needed during extended dry periods.
- Seedlings that do not survive should be replaced the following spring to prevent gaps in the shelterbelt. The planting of replacement seedlings is done by hand.
- Regular inspection is necessary for early detection of insect or disease problems. During the inspections, ensure that the holes in the plastic are large enough to accommodate the growing trees.
- Large rips or holes in the plastic can be repaired by using staples to close the gap, stabilizing with rocks and covering with soil.

For more information, contact:

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