



TEXAS A&M FOREST SERVICE

Reforestation: Herbaceous Weed Control After Planting

In the practice called herbaceous weed control, herbicides are used to control weed growth the first year or two after planting seedlings to increase survival and growth. Herbaceous weed control can be applied as a band spray, a broadcast spray or as a spot spray. Application is normally conducted between March and May with effectiveness greatly reduced after June 1.

Application of herbicide by reduces competition between the newly planted seedlings and established herbaceous weeds and grasses. Water and nutrients within the sprayed areas that would have been utilized by the herbaceous vegetation become available to the planted seedlings. While first year survival and growth still depend upon spring rains, summer weather and the quality of the planting operation, it is significantly improved through the use of this practice.



Band Spray (Banding):

Primarily conducted in fields, pastures and cutover sites with low amounts of debris, herbicides are generally applied in 3-4 foot wide bands. 4-foot bands or wider are preferred as encroachment of herbaceous material is delayed longer than with more narrow bands. A band of herbicide is sprayed over the top of planted pine seedlings using rubber-tired tractors, ATV's, or backpack sprayers. Rubber tired tractors are equipped with rear-mounted spray tanks and booms with adjustable nozzles capable of treating several rows simultaneously. ATV's with rear-mounted tanks are also commonly used but normally spray only one row at a time. Backpack sprayers are sometimes used when acreage, tract location, or other factors make the use of other equipment impractical. Spraying should be avoided when rainfall is expected within 6 hours of application.



Broadcast Spray (Aerial):

Broadcast applications of herbaceous weed control are typically made by helicopter with accompanying fuel and chemical support trucks. However, herbicides can also be broadcast with rubber-tire skidders and tractors. After selecting the proper chemicals for the property based on the dominant species present, the company representative will usually delineate the treatment area boundaries with a

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Global Positioning System (GPS) unit. A suitable location for helicopter landing, refueling, and refilling the chemical tanks is then located on or within a reasonable distance from the property. The treatment area is aerial sprayed over the top of planted pine seedlings.



Spot Spray:

Spot applications of herbaceous weed control are accomplished through the use of a backpack or ATV-mounted sprayer pressurized with air. Each chemical application “spot” should be a minimum of approximately 18-24” in diameter. Spot treatment is especially useful on smaller acreages, or where aerial or skidder operations are not feasible. This practice focuses on vegetation in the immediate area of young seedlings leaving untreated areas for soil stabilization, wildlife forage, cover, habitat, etc. Spot applications can be sprayed over the top of planted pine. Hardwood seedlings may also benefit from herbaceous weed control using the spot spray method; however, the spray should not contact the leaves of the planted hardwood and contact with the hardwood stem should be avoided. Days with very low to no wind should be used when spot spraying around hardwood seedlings.

Herbicide Precautions:

Herbicides are site specific as each herbicide is best suited for a particular purpose on a given site. Factors influencing the suitability of a herbicide are: type of vegetation to be controlled, species and age of the tree to be over-sprayed, soil type, time of year, proximity to a stream, sensitivity of surrounding areas to damage from herbicides, and cost. Generally avoid spraying when rainfall is expected within 6 hours. Do not spray when seedlings are under stress. Great care should be taken to avoid application on non-target areas and operations should cease when wind speed exceeds 10 miles per hour. Always follow the label directions for mixing, handling, application and disposal of chemicals and containers. It is a violation of Federal Law to use these products in a manner inconsistent with their labeling (see specimen labels for general information, directions for use, precautionary statements, mixing and application instructions, etc.). For the proper herbicide or mix for a site, consult with a pesticide applicator certified by the State of Texas. All practices performed should follow Texas Forestry Best Management Practices for Silvicultural Chemicals and have no adverse effect on threatened or endangered species or habitat. For more information, visit <http://tfsweb.tamu.edu/BMP>