

CHEMICAL SITE PREP

ONCE COST PROHIBITIVE FOR MANY LANDOWNERS, CONTROLLING VEGETATION WITH HERBICIDES IS NOW COMMONPLACE AND A KEY PART OF PRIVATE FOREST MANAGEMENT.

BY JON LUNSFORD





A loblolly seedling has more room to grow when chemical site prep has been done beforehand.

TREATMENT AND APPLICATION

Forestry herbicides remain in the environment for a short period of time. Sunlight, moisture and soil microbes begin to degrade the chemicals soon after they are applied. This is true even for the active forestry herbicides that remain in the soil and enter the plant through the roots.

Over time, the herbicide activity is lessened to the point that native plant communities begin to reoccupy the site within one to two growing seasons. This short period of time is generally all that the crop trees need to get ahead of the competition. In the absence of chemical site prep, future herbicide treatments may be necessary later in the rotation to address vigorous competition.

Forest site prep herbicides can be applied aerially or by ground. The most common ground application methods include skidder and tractor mounted sprayers. For smaller jobs, ATV or UTV mounted sprayers, and backpack sprayers may be adequate.

Aerial applications are most often done using helicopters that are able to take off and land on site. Helicopters are good at distributing herbicide to all of the vegetation that is in the treatment area, including the tall whips left behind after logging. Helicopter crews will need adequate room for a heliport location, preferably on, or near, the property where they will be spraying. Having good access to the tract for the crew and support truck is helpful but not essential. This is

ideal in situations where access is limited for ground equipment.

Skidders and tractors cover less ground than helicopters, but they are able to spray closer to the stand edges and in small irregular shaped areas. In some situations, they might be less hindered by wind and able to work when the helicopters cannot. However, skidders and tractors are limited by the height of the spray pattern and might not be able to reach the taller vegetation left after logging operations.

Skidders and tractors might not be feasible on sites with steep topography or heavy logging debris. Where applicable, skidders and tractors do an excellent job of covering the plants uniformly with herbicide, and are able to apply higher volumes of spray mixture per area.

Many herbicide vendors operate equipment that is capable of “precision applications” using GPS guidance and auto-calibrated systems. These technologies allow pilots and operators to visualize the areas that have been covered and to stay on path for each pass across the field. This helps provide uniform coverage of the area and minimize excessive overlap across the field. A secondary benefit is that these systems allow vendors to provide documentation of the spray job in the form of detailed spray reports and coverage maps.

As a landowner, it is important to know the capabilities of the vendor, and to understand what documentation they can provide after the job is complete.

A vendor who is familiar with forestry applications and who has experience in a given region can help landowners determine the best application method to use. The vendor will help match the application equipment to the site conditions, considering things such as tract size and shape, the slope of the terrain, sensitive areas, access conditions, and future forest management activities that are planned.

HERBICIDE VENDOR SELECTION AND DEVELOPING CHEMICAL TREATMENT PLANS

In most states, local vendors are available to help landowners develop a chemical treatment plan. There are many vendors in the forest industry that provide a “turnkey” chemical site prep service. Some state forestry offices maintain a qualified vendor list that includes representatives from chemical suppliers, applicators, and forestry service companies that are available to provide these treatments.

Landowners should consider the following information before selecting a chemical site prep application vendor. This list is not exhaustive, but it should provide a good starting point for selecting the right company.

- The vendor’s performance, history and reputation.
- The vendor’s safety, maintenance and insurance standards.
- The vendor’s ability to complete the work in a timely manner.

- The vendor's ability to provide documentation of the work.
- The cost

The temptation landowners should avoid is overlooking all other requirements for the sake of cost. Cost is an important factor in these decisions, but it should not be the primary factor. The price a vendor charges is reflective of the ability to provide a standard of performance that includes service, safety, maintenance, insurance, and documentation that is required for a successful operation.

Saving a few hundred dollars at the risk of poor performance — or worse, non-performance — will end up costing landowners much more in the long run. To help with the cost, there might be landowner cost share programs available at the state and federal level that provide a portion of the expense of these treatments. Landowners should check with their local USDA Natural Resource Conservation Service or State Forestry Departments for more information about these programs.

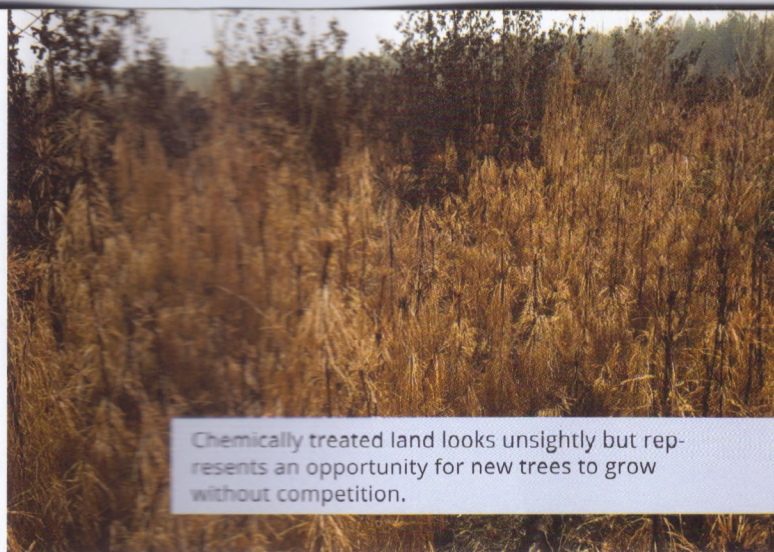
CHEMICAL TREATMENT PLANS

Once a vendor is selected, they can help the landowner develop a chemical treatment plan, which identifies the treatment objectives and provides a description for the scope of work that will be carried out.

This process need not be complicated. Sometimes a vendor's contract exhibit or a simple work order is enough to capture the scope of the work. At the very least, a chemical site prep treatment plan should include the following items:

- An accurate map of the area to be treated and a proper estimate of the acres, including annotations for sensitive areas that should be avoided. Sensitive areas may include neighboring lands, gardens and food plots, water bodies, etc., A Google KML or ESRI shapefile is also nice to have as these can be uploaded into the GPS system on board the application equipment.
- A description of the crop species and seedling type that will be regenerated. For example, hardwoods, loblolly pine, longleaf pine, natural regeneration, container, or bare root nursery stock. The herbicides selected will need to be labeled for applications in areas where the crop species are grown.
- The desired application method, ground or aerial, and the appropriate spray volume to mix.
- The chemical mixture that will be applied and a brief description of the target vegetation that this mixture is intended to control.
- A legal description of the property or the latitude and longitude coordinates of a point on the treatment site.

Landowners should work with their vendor to complete this treatment plan in advance of the herbicide application. Landowners, or the forest consultant, should supply information about past operations, upcoming planned activities, property access, and detailed maps of the treatment area.



Chemically treated land looks unsightly but represents an opportunity for new trees to grow without competition.

Chemical site prep is a management tool that provides long-term benefits through increased growth and survival of crop trees. In recent years, the cost of these treatments has decreased significantly, making it more attractive financially. But the cost of these treatments is just one aspect landowners need to consider. Other considerations include timing of the work, selecting a vendor, and developing a treatment plan. For additional information, landowners should contact herbicide vendors, forestry consultants or agencies in their states. ■

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