FORESTRY HERBICIDES

landowners updated about these valuable aids to controlling undesirable vegetation

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If you own or manage pine timberlands in the South, you know only too well that unwanted vegetation can be stubborn when you are trying to reforest, convert a stand, or improve pine growth by reducing competition. Are you aware, however, that many forestry herbicides are proving effective in eliminating this undesirable vegetation, both before and after pine establishment? You can sometimes even apply the chemicals yourself, although in many other cases only a licensed applicator should use them.

Either way, herbicides can be a vital tool in your management plans. In this article we will update you on products currently registered and used for various forest management treatments and will also mention developments likely to occur in research on these herbicides.

Current Status

Site Preparation. Herbicides now appear to be the most promising treatment for site preparation. These chemicals have the least impact on site quality, since valuable topsoil is not disturbed and organic matter is left in place to decompose and provide slow-release nutrients to the new stand.

Registered pelleted herbicides currently are limited to formulations of picloram and hexazinone. The latter is discussed below. Picloram is available as the 10 percent pellet which is generally broadcast at the rate of 20 to 85 pounds per acre. It controls a wide variety of plant species but is particularly noted for its activity against kudzu. Pines are susceptible and care must be exercised in planting seedlings in areas which have been treated with maximum doses.

Registered liquid formulations that are effective for site preparation are listed in Table 1. Most products listed have been around for some time. The newest site preparation chemicals on the market are fosamine, glyphosate, hexazinone and...
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less effective against
higher rates of treatment than late summer
spray
is best applied as a foliar spray in spring at 1
Generally. hexazinone pellets are applied
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Trichlopyr
blackgum. maple, hickory, and
poorly drained wet soils and should not be
promising technique, and much less of a
direct sprayer. Best results are obtained
when applied after pines have completed
first growth flush and hardwoods are
full leaf and growing vigorously.

Many techniques for individual stem
treatments have been developed over the
years. the most common being injection
with a herbicide. Individual stem treat-
ment with a pelleted herbicide is also a
promising technique, and much less of a
chore than injection. Soil-active herbicides
are most effective on well-drained, sand
and loamy soils. They are less effective on poorly
drained wet soils and should not be
applied where there is often standing
water. They are also less effective on heavy
clay soils and soils with high organic matter
content. It is possible to at least partially
compensate for lower effectiveness on a
particular soil by increasing the treatment
rate up to the limit imposed by the label.

A heavy infestation of herbaceous
weeds is a different problem. But chemi-
cals that effectively control most weeds
and grasses without harm to pine seedlings
are being tested and some are already
available. Hexazinone, applied as Velpar L
at label rates, controls many herbaceous
weeds including goldenrod, pokeweberry,
and ragweed. It also controls blackberry
to some extent switchcane and wild
grape. Oust is a patented herbaceous
weed control agent which can be safely
applied over tops of one-year-old pine
seedlings at rates up to 2 pounds active
ingredient per acre. Oust exhibits both
pre- and post-emergence activity and is
typically applied at rates up to 2 pounds
active ingredient per acre. As a post-
emergent herbicide. Oust gives excellent
control of goldenrod. dogfennel. black-
berry. pokeweberry. and ragweed. It also
gives good control of Japanese honeysuc-
kelp but does not appear to affect other
weeds such as trumpet creeper and Virginia
creeper. I hericic formulations effective
against other individual problem species
are also being developed.

**Liquid herbicide formulations registered for site preparation in the South.**

<table>
<thead>
<tr>
<th>Trade Name</th>
<th>Chemical</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acme Super Brush Killer</td>
<td>Trimec (2,4-D + 2,4-DF + Diacamba)</td>
<td>PBI Gordon</td>
</tr>
<tr>
<td>Bonvel 4ws</td>
<td>Dicamba</td>
<td>Velicolo</td>
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<tr>
<td>Bonvel 520 and 720</td>
<td>2,4-D + Dicamba</td>
<td>DOW</td>
</tr>
<tr>
<td>DMA 4</td>
<td>2,4-D</td>
<td>Dow</td>
</tr>
<tr>
<td>Esteron 99</td>
<td>Hexazinone amine and ester</td>
<td>DuPont</td>
</tr>
<tr>
<td>Gorton 3A and 4E</td>
<td>Glyphosate</td>
<td>Monsanto</td>
</tr>
<tr>
<td>Krahnite</td>
<td>Picloram + 2,4-D</td>
<td>Dow</td>
</tr>
<tr>
<td>Roundup</td>
<td>MSMA</td>
<td>Union Corbide</td>
</tr>
<tr>
<td>Tordon 10t mixture</td>
<td>Hexazinone</td>
<td>DuPont</td>
</tr>
<tr>
<td>Transvert</td>
<td>2,4-D amine</td>
<td>Union Corbide</td>
</tr>
<tr>
<td>Velpar L</td>
<td>2,4-D + 2,4-DF</td>
<td>Union Corbide</td>
</tr>
<tr>
<td>Weedar 64</td>
<td>2,4-D</td>
<td>Union Corbide</td>
</tr>
<tr>
<td>Weedarone 170</td>
<td>2,4-DF</td>
<td>Union Corbide</td>
</tr>
</tbody>
</table>

Note: This registration for site preparation at Texas A&M South Carolina, Alabama, Mississippi and Georgia. Owners with this registration may use the label in the state of residence.