WEED AND GRASS CONTROL IN FOREST NURSERIES AS RELATED TO THE SOIL AND ENVIRONMENT

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Weeds present a severe and costly problem to nursery people, and I'm sure there are herbicides available that can give satisfactory control of most of your problems. As was previously mentioned, it does cost a lot of money and time to get products cleared.

The weed problem, it seems, is large enough for the nurseryman but in most cases, is not large enough for a Company, like DuPont, to spend a great amount of time and money making a mass recommendation and then having an expensive crop with a small acreage end up dead because we did not test every soil type, rainfall areas, all temperature conditions, depth of planting, and possible inter-reactions between the various chemicals that could or would be used The simple fact is--What is the return on the invested money and time? If the crop is cotton, corn, etc., we are talking about several million acres. However, if we are working with nurseries, then only a few thousand acres. I think you understand my point. I think by now all of you are able to see industries' problem on recommending products for weed and grass control in seedling nurseries. It's not that we don't want to be helpful, but at the same time, neither do we want to be liable for a possible oversight in our testing procedures. Well, so much for the reasons why companies have not on a mass basis recommended their products for the control of weeds in your tree nurseries.

Now, for the next few minutes, I would like to discuss what affects a chemical (herbicide) once it is used. These factors are as follow:

I. Types of vegetation

- (a) Annuals
- (b) Bi-annuals
- (c) Perannuals
- (d) Broadleafed weed and/or narrowleaf weed (grass)
- (e) Vine, briar, or bramble
- (f) Brush

II. Soil

- (a) Sandy)
- (b) Clay) Mineral
- (c) High organic content
- (d) Porosity

III. The chemical itself

(a) Contact
(b) Translocated
(c) Pre-emergence
(d) Post-emergence
(e) Incorporated into the soil or sprayed onto soil surface
(f) Residual
(g) Light sensitive
(h) Soluability

IV. Environmental

(a) Temperature
(b) Moisture

V. How the chemical is applied

(a) Over or under applied
(b) Uniformly applied

VI. The crop itself

I think you can readily see by now that there are many factors that affects a chemical's effectiveness. As an example, an annual grass growing on a mineral soil in a pine nursery would be easier to control than a perannual under the same conditions. The reasons for the difference are that the perannual can reproduce itself by rootstock, vegetative joints, and seed; whereas, the annual has little or no stored food in its roots, the perannual (Johnson or Bermuda grasses) does have stored foods and keeps trying to come back unless a translocated chemical along with a residual herbicide is used.

Dalapon is a translocated herbicide, while "Karmex" duiron weed killer is of the residual type. It generally takes both products in combination to actually control such grasses as Johnson or Bermuda.

Research at the College or University level is certainly needed to help find suitable and safe herbicides. However, each nurseryman should try some of the many herbicides to see if they offer any aid in controlling the weed problems.