Forest Vegetation Management

Dr. Jimmie Yeiser demonstrates a type of herbicide applicator.

Dr. Jimmie Yeiser of Stephen F. Austin State University's Forest Research Institute delivered an encompassing forest vegetation management presentation at the March 10, 2012 Tyler County Forest Landowner Association meeting. Yaupon and other plants compete with tree crops, depriving the trees of nourishment, moisture and sometimes light. Dr. Yeiser discussed the appropriate herbicidal applications to consider.

Herbicides may be applied using either area or individual stem methods. The area methods focus on applying herbicides to the leaves, stems, and roots of the unwanted plants within the treated area. The individual stem methods focus applying herbicides only to the individual unwanted plants.

Area methods can be applied aerially by helicopter or on the ground by skidders. The herbicide may be broadcast over the entire area or in continuous bands/strips within the area. These methods are good for large acreages with tall, dense trees and are relatively inexpensive.

There are a number of tools and approaches available for applying herbicides to individual stems. The individual stem methods are good for sensitive and low maintenance areas, as well as for small acreages with short, sparce trees. These methods are relatively expensive.

Controlling tree farm weeds and undergrowth increases crop growth and uniformity. When applying herbicides, the prescription should be documented.

1. Have a clearly defined objective based on your crop's species.
2. Choose a prescription type.
    a. Pre-planting site preparation
    b. Herbaceous release for weeds
    c. Woody release for bushes and unwanted trees
3. Define the site location and terrain and the specific species targeted for control.
4. Document the treatment and application procedures, including specific herbicide, rate, timing, and application method.

5. Consider the variables influencing the extent of the control of the prescription; e.g., weather, stand structure and debris.
6. Based on the above, analyze whether the probable results will justify the expenditure.
7. Always consider the impact on people, wildlife, water, grazing and aesthetics.

For more details, access Individual vs Area Herbicide Treatments on the TCFLOA website.

Post-meeting, Dr. Yeiser provided the following information in response to questions posed.

How can bamboo be controlled? Thoroughly wet all leaves with one of the following herbicides mixed in water with a surfactant. From September to October, apply multiple applications (to regrowth) of Arsenal AC as 1% solution; a glyphosate herbicide as a 2% solution or a combination of the two herbicides.

How can kudzu be controlled? Thoroughly wet all leaves with one of the following herbicides mixed in water with a surfactant. From July to October, apply multiple applications (to regrowth). For successive years, apply Tordon 101 as a 3% solution or Tordon K as a 2% solution; July to September, apply Escort at 3-4oz per acre in water; Transline as a .5% solution in water. For all climbing vines, spray as high as possible.

How can privets be controlled? Thoroughly wet all leaves with one of the following herbicides in water with a surfactant (August to December) a glyphosate herbicide as a 3% solution or Arsenal as a 1% solution. For stems too tall to reach the top, apply 20% solution of Garlon 4/Remedy in basal oil, diesel fuel, or kerosene to the basal 12-16" of stems.

How can Chinese tallowtrees be controlled? For large trees, make stem injections using Arsenal AC, Garlon 3A or pathfinder II in dillutions and cut spacing specified on the herbicide (anytime except March and April). For saplings, apply Garlon 4/Remedy as a 20% solution in a basal oil, diesel fuel, or kerosene to young bark. For seedlings or saplings, thoroughly wet all leaves with one of the following herbicides in water with a surfactant (July to October): Arsenal AC 1% solution, Krenite S as a 30% solution, or Garlon 4/Remedy as a 2% solution.

How can leaf-cutting ants be controlled? Response from Dr. Yeiser's colleague, Dr. Don Grosman: There are only two products currently registered for control of leaf-cutting ants: Amdro Ant Block and PTM. Amdro Ant Block (hydromethylnon in a corn grit carrier) is available for ~$15 per 1.5 lb container. (This will treat 1-2 colonies.) PTM (fipronil) is available for ~$60 per 21 oz container. (This can treat 4+ colonies.)
Amdro is easy to apply but only ~30% effective with a single application, whereas, PTM is more labor intensive to apply, but is ~90% effective with a single application. Also, 1 qt-size squirt bottle could be used in lieu of buying the PTM Spot Injector ($140) or Injection Probe ($245). There are a number of products that contain contact poisons (such as permethrin, carbaryl, acephate, etc.) that can be sprayed onto plants being defoliated by the ants. Thorough coverage is important. This treatment will keep the ants at bay for a few weeks (maybe months), but ultimately the treatment will wear off and the ants will return. The best course of action is to eliminate the colony with the PTM or Amdro treatment.

Dr. Yeiser's presentation was preceded by Texas Forestry Association Executive Vice President Ron Hufford's overview of the Texas Forestry Association's values and accomplishments. The emergence of maintaining a sustainable forest is becoming a tree farming business requirement. Texas Forestry Best Management Practices (BMP) manuals were distributed to attendees.