Where Applicable:

Single stem injection is primarily used to reduce the competition of unwanted trees within managed stands. This practice is often used in combination with other herbicide applications or with prescribed burning to clean up areas not suitably addressed by the prior practice. Applying herbicides through injections can be used to improve the health and vigor of pre-existing stands or to remove unwanted trees within pure stands such as pine plantations. Stem injections should not be applied to trees or saplings less than two inches dbh (diameter 4.5 feet above ground) or in areas with more than 200 undesirable stems per acre. This practice is usually applied where broadcast application cannot be done, or where more selective control may be desired.

Description:

There are three ways to inject trees with herbicides; (1) injection at the base of the stem with a tube-injector, (2) injection higher up on the stem with a hypo-hatchet, and (3) the hack-n-squirt method (also done at breast height) in which the injection is made with a hatchet and the herbicide is sprayed into the cut with a squirt bottle.

Single stem injection is usually applied during the late summer and early fall (Late-August through Mid-October) when trees are actively translocating food and water reserves to the root systems. Common herbicides used for this practice include; Chopper, Arsenal, Accord, Garlon 3A, Tordon 101R, and Tordon RTU. Herbicide applications should be thorough and consistent in order to obtain control of vegetation on the site. A proper cut is essential in the application of this practice. The cut should be made in the form of a cup that can hold the herbicide until it can be taken in by the tree. Edges of the cup should not be torn, allowing the herbicide to leak onto the bark. The cup should also be deep enough to allow the herbicide to penetrate through the bark into the woody part of the tree. 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.).

Benefits:

This practice is extremely beneficial to pre-existing and pure stands by eliminating unwanted, low quality, and poorly formed trees. Through the removal of these trees, the desired tree species can obtain more soil nutrients and water and also be provided more growing space. This practice often increases the growth rate and quality of the overall stand. Creating dead snags provides wildlife habitat (nest cavities, forage areas, predator perches, etc.) for certain animal species and may increase forage production by increasing sunlight to the forest floor.

Other Recommendations:

Inconsistent results may occur when the herbicides are injected into trees under severe drought conditions. Also heavy rains during or shortly after injection may wash the herbicide out of the cut thus reducing the herbicide's effectiveness. It is also recommended that you have a contract with the herbicide vendor and a guarantee on the chemicals used should the application be ineffective in controlling the targeted species. All Texas Forestry Best Management Practices for silvicultural chemicals should be followed.

Cost:

The cost of this practice will vary ($60-70/acre) depending on the type of chemical used, vendor availability, chemical costs, whether the application is applied by a vendor or the landowner, the number of stems per acre, etc.