Where Applicable:

Although no longer commonly practiced, application of herbicide by ground based heavy equipment (skidders or crawler tractors) may be used in circumstances where aerial application is not possible or practical. Examples of where ground application may be necessary include tracts too small or too hazardous to attract an aerial herbicide applicator, where scattered remaining hardwoods for wildlife or aesthetic purposes remain and cannot be sprayed around by air, as well as areas where drift of herbicide must be kept to an absolute minimum.

Description:

There are two basic types of spray equipment that may be mounted on ground-based equipment. These are mist sprayers and boom sprayers. Mist sprayers are designed to apply concentrated herbicide in a fine mist that is atomized in a powerful stream of compressed air. This allows for better penetration into dense vegetation. This type of sprayer is well suited for treating stands with a well-developed understory from ground level. Boom sprayers consist of a boom, which holds a series of nozzles over the spray area. The nozzles dispense the chemical. Boom sprayers are useful for treating agricultural areas and areas that have been thoroughly site-prepared.

Broadjet sprayers are an adaptation of the standard boom sprayer. They use a single large nozzle, or a cluster of small nozzles to replace the boom. Wick sprayers are another adaptation of the standard boom-type spray rig. Herbicide is applied through wicks attached to the spray nozzles. The advantage of this type of apparatus is that vegetation can be selectively treated because the equipment operator can see exactly where the chemical is being applied. It is a violation of Federal Law to use these herbicide 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:

Application of herbicide through the use of ground equipment allows application of chemical site prep or release in areas or situations where aerial application is not feasible. Ground application also allows a degree of selectivity of targeted vegetation that is not possible with aerial application. Chemical site preparation removes unwanted vegetation that would otherwise hamper planting efforts and possibly increase your costs. In addition, most site prep herbicides have some residual effect, which will aid in the initial establishment of young pines improving growth and decreasing mortality due to a reduction in competitive stress.

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Other Recommendations:

Gallons per acre of spray solution applied will depend on vegetation density. Contact an herbicide specialist for a chemical prescription tailored specifically to your treatment area. It is recommended that you have a contract with the vendor and a guarantee on the chemicals used should the application be ineffective in controlling the target species. Great care should be taken to avoid application to non-target areas and applications should cease when wind speed exceeds 10 mph. All applicable Texas Forestry Best Management Practices for silvicultural chemicals should be followed.

Chemical site preparation is especially effective when followed by prescribed fire. Such an operation, which is also referred to as a brown and burn, serves to further eliminate hardwood competition and reduce debris improving planter access. Burning should not occur until at least 60 days after application to allow the herbicide to move into the roots of targeted species. Burns should not be conducted on release sprays for stands of pine that have already been established.

Additional Information:

For more information on forestry herbicides, including application rates, targeted species, and material safety data sheets (MSDS) consult your local herbicide vendor, chemical representative, or the online CDMS herbicide database on the Internet. The database has label and safe handling information for all major forestry herbicides. The CDMS web address is: [http://www.cdms.net/pfa/LUpdateMsg.asp](http://www.cdms.net/pfa/LUpdateMsg.asp)

Cost:

Costs for ground-based herbicide applications range from $60-90 per acre for release treatments and $80-130 per acre for site preparation treatments. Costs will vary depending on tract size, location, vegetative cover, availability of vendors, chemical costs, application rates, etc.