

BRUSH SPRAYING

AMMONIUM SULFAMATE

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1. GENERAL

1.01 This section describes the materials, equipment and methods of application of herbicides of the ammonium sulfamate type used in the control of brush.

1.02 Ammonium sulfamate is non-volatile, and, although there may be some spray drift of the material as applied in water solution, the amount of active material reaching adjoining growth in this manner will normally be insufficient to cause damage. Its use is indicated, therefore, when it is desired to spray areas adjacent to ornamental plantings or crops susceptible to the compounds of 2,4-D and 2,4,5-T, as described in other sections. It may also be useful for application on varieties of brush which can not be controlled in a satisfactory manner with those materials.

1.03 Ammonium sulfamate is less selective than the growth regulators, and a thorough application will eliminate top growth from most forms of plant life. Resprouting will occur from the roots of a number of common species, however, and retreatment will be required at intervals, depending on the rate and density of the regrowth.

1.04 Although the initial effect of ammonium sulfamate is to leave the ground apparently bare of living vegetation, this condition does not carry over into the second growing season. Weeds and grasses return the following year to eliminate any hazard of soil erosion.

2. MATERIALS AND EQUIPMENT

Materials

2.01 Ammonium sulfamate is available as a dry, crystalline material, yellowish in color and soluble in water but not in oil. It is applied in water solution or in the dry form, depending on the type of treatment.

2.02 In applying ammonium sulfamate as a foliage spray, better wetting of the leaf surface is obtained when a non-soap type spreader is used in the spray. Typical of such materials are Triton B-1956 and Du Pont Spreader-Sticker. They are added to the solution at the rate of 4 ounces per 100 gallons of solution.

Equipment

2.03 As the use of ammonium sulfamate as a foliage spray requires large volumes of solution, power equipment of the capacity described in G10.361.1 is required, as well as the lengths of hose needed to reach areas inaccessible to the tank truck.

2.04 Spray guns of the pecan or orchard type are used to apply the solution. Ammonium sulfamate is highly corrosive to the metals commonly used in guns of this type. For this reason, consideration should be given to obtaining guns and replacement parts made of stainless steel, copper or bronze, in order of preference, if any great amount of spraying with this material is contemplated.

2.05 For continuous work with ammonium sulfamate, other exposed metallic parts of equipment should be coated with an acid-resistant paint such as SAF No. 87 Black Paint (Sonneborn Sons, Inc., New York City). Another material which is recommended for all surfaces except those which reach high temperatures is Bitumastic No. 50 (Koppers Co., Westfield, New Jersey). The use of air-cooled motors for driving pumps is also recommended as a means of eliminating the problem of radiator corrosion.

2.06 After each day's operations, tanks, pumps and spray guns used with ammonium sulfamate should be flushed out to reduce corrosion. Use clean water to which washing soda has been added in the proportion of 1 pound to 5 gallons of water. Similarly, all metallic surfaces exposed to spray drift should be flushed down with water.

3. APPLICATION

Foliage Spraying

3.01 For foliage spraying, dissolve ammonium sulfamate in water at the rate of 1 pound per gallon, stirring continuously as the crystals are added. After the material is completely dissolved, no further agitation is necessary. If a spreader is used, it should be added to the solution at this time.

3.02 Apply the spray so as to cover completely all foliage and stems down to the ground line. For brush averaging 3 to 5 feet in height, up to 350 gallons per acre will be required, depending on the density of the growth. Sufficient solution should be applied to cause a slight dripping from the leaves.

Stump Treatment

3.03 Ammonium sulfamate can be used to control sprouting of freshly cut stumps by applying the material either in solution or dry.

(a) For stumps over 6 inches in diameter, use a solution containing 4 pounds of ammonium sulfamate per gallon of water. Spray the solution over the cut surface of the bark and to all the remaining bark and exposed roots.

(b) For stumps 6 inches and less in diameter, cut the stump so that the cut surfaces form a "V". Place approximately 1 tablespoonful of dry crystals in the notch so formed.

Frilling

3.04 Large trees can be killed with ammonium sulfamate by making a series of overlapping downward cuts encircling the tree near the ground line. Saturate the "frill" thus created with a solution of 4 pounds of ammonium sulfamate dissolved in 1 gallon of water.