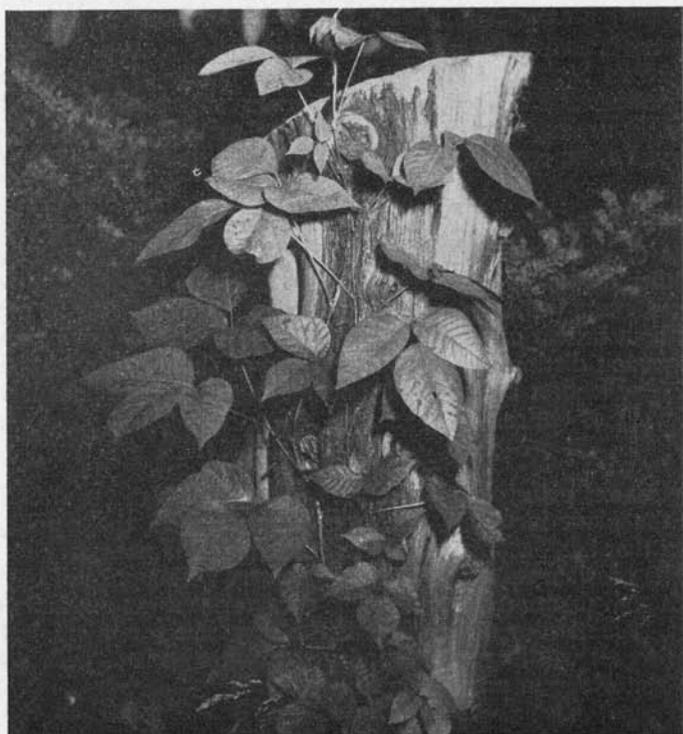


POISON IVY

and its ERADICATION

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It is safe to assume that most people are more interested in how to get rid of poison ivy than they are in its botanical classification. The main purpose of this circular is to supply information on eradication methods, but a brief outline of the family history and distinguishing characteristics of the plant seems appropriate.

DESCRIPTION AND OCCURRENCE

Poison ivy is a common wild plant growing over most of North America south of Nova Scotia. It belongs to a small family of plants represented in the northeastern United States by seven species, two of which are poisonous, *Rhus venenata* DC., poison sumac, and *Rhus Toxicodendron* L., poison ivy. Poison ivy is also called poison oak, mercury and three-leaved ivy.

Poison ivy grows on all types of soil, wet or dry, fertile or poor, under all conditions of light and shade, and in successful competition with all and sundry other plants. It may grow as a trailing vine in grassland, climb on fence posts, stone walls, trees, and even buildings, or appear as an upright shrub without benefit of auxiliary support. But it is all the same poison ivy with a common distinguishing characteristic of shiny green leaflets in sets of three. The leaflets are pointed, and the edges may be lobed, variously notched, wavy or entire.

POISONOUS ACTION

The poisonous principle of poison ivy is urushiol, a material found in all parts of the plant including the roots. Contact with the plant, or with something that has been in contact with the plant, is necessary to produce injury. The possible exception to this is contact with smoke of the burning plant, although there seems to be some disagreement among authorities on this point. It is not our proper function to prescribe treatment, but we can say that prompt washing with laundry soap after contact with poison ivy will help materially in preventing injury.

METHODS OF ERADICATION

Poison ivy can be eradicated by removal of the plant or by the application of herbicides. The first method involves hard work and the danger of poisoning. The use of herbicides is by far the safest and easiest method of eradication and the one to which we will devote our attention. We know from experiments that *Atlacide*, *Ammate* or borax will eradicate poison ivy if used properly.

Atlacide is the trade name for a preparation of sodium chlorate combined with a material to eliminate the fire hazard. It is a granular compound which is dissolved in water at the rate of three-fourths of a pound per gallon and sprayed on the foliage. One gallon will spray approximately 100 square feet.

Ammate is a commercial preparation of ammonium sulfamate and, like *Atlacide*, is sprayed on the foliage at a concentration of three-fourths of a pound per gallon of water.

The borax used is the common commercial borax. It is applied dry to the soil, where the poison ivy is growing, at the rate of 10 pounds per square rod. Borax for herbicidal purposes is sold under the trade name of *Boreescu*.

It should be remembered that all these materials will kill nearly all other plants just as effectively as they do poison ivy, and care must be taken in using them around useful plants, shrubs or trees. It is safe to spray poison ivy under trees and shrubs with *Atlacide* or *Ammate*, provided none of the material gets directly on such trees or shrubs. It is *not* safe to put borax on the soil around trees or shrubs.

Our experience with formulations of 2,4-D (2, 4-dichlorophenoxyacetic acid) for the eradication of poison ivy is more limited than with the above-mentioned materials. Others have found that the kill of poison ivy with 2,4-D salts is erratic and may be somewhat less than satisfactory. The ester formulations of 2,4-D are reported to be more effective than the salts. These, however, are volatile and must be used with care, as the fumes can be carried and cause injury to cultivated plants at some distance.

More recently a combination of the esters of 2,4-D and 2,4,5-T (2,4,5-trichlorophenoxyacetic acid) has been shown to eradicate poison ivy. This material is volatile and the fumes, as well as spray drift, may cause injury to useful plants at some distance from the area of application. Because of this characteristic, great care should be taken to prevent injury to crops and useful plants in the vicinity of the treated area. This combination is sold under such names as *Ded-Weed Te-5*, *Weedone Brush Killer 32* and *Esteron Brush Killer*, and should be used according to the manufacturer's directions.

Atlacide, *Ammate* and 2,4-D formulations are absorbed by the plant through the leaves and distributed throughout the plant from there. This action makes it necessary to give the poison ivy a very thorough spraying, although the soil need not be soaked. Borax is absorbed by the plant through the roots, and it is not necessary to apply the borax to the foliage to kill the plant. Whatever material is used, a better kill results if the poison ivy plant is left standing until the next spring, rather than mowing it off as soon as the leaves are dead.

Ammate and *Atlacide* are more effective if used in August or very early September, although a good kill will result if they are applied at any time the poison ivy plant is in full leaf. 2,4-D is most efficient when applied while the plant is growing rapidly during June or early July. The time of year or weather conditions at time of application do not seem important where borax is used, except that it be used some time during the growing season.

None of these materials is dangerous to handle nor are they considered poisons. It is suggested, however, that reasonable care be taken when using them and that they not be used where livestock can feed on the treated plants. If either *Ammate* or *Atlacide* is used in a sprayer that will later be

used for spraying crop plants, it will be necessary to clean the sprayer *very carefully* with several washings of clean water to prevent injury to such plants from residue left anywhere in the sprayer. Formulations of 2,4-D or 2,4,5-T are even harder to clean out of a sprayer, and it is suggested that the sprayer used for the application of any herbicide be used only for this purpose and not used to spray useful plants.

SUMMARY

The following summarizes our experience and experiments with the herbicides discussed in this circular.

Availability—All materials available.

Ease of Application—Borax requires no special equipment for applying. Others require spray apparatus.

Effectiveness—In our experiments borax has given more complete original kill at 4 pounds per 100 square feet than *Ammate* or *Atlacide* at $\frac{3}{4}$ pound per gallon applied at the rate of 1 gallon per 100 square feet.

Safety—All are equally safe to use in respect to injury to person or clothes. *Ammate* may be corrosive to spray machinery if not carefully cleaned after using. None of the materials is especially poisonous, but we suggest that animals should not be allowed to feed on treated areas.

Effect on Useful Crops—It is *not* safe to use borax around trees and shrubs, and it will have some temporary residual effect on the soil which will disappear with weathering or application of lime. *Atlacide* and *Ammate* can be used safely around trees, shrubs and cultivated plants, provided they are not put directly on them. *As indicated in the text, great care must be taken when using 2,4-D or 2,4,5-T.* All sprayers used for applying any of these materials should be cleaned thoroughly before using them for useful crops. An even better procedure is to use one sprayer only for herbicides and not for any other purpose.

EFFECTIVENESS OF CONTROL MATERIALS

In conclusion, may we say that these materials are not possessed of magic qualities and are effective only when correctly and thoroughly applied. They will not result in a 100 per cent kill on the first application under ordinary conditions. It will probably take two seasons' work to eradicate well-established poison ivy. But we can say that these materials, together with perseverance, will eradicate poison ivy, as well as a wide variety of other undesirable plants. The materials mentioned in this circular are not necessarily the only ones that will eradicate poison ivy, but they are the ones which we know by experience or from reliable information will do the job successfully.