

# **POISON IVY and ITS ERADICATION**

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Poison Ivy

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It is safe to assume that most people are more interested in the methods of eradicating 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 sumac is also known as poison dogwood and poison elder. These latter names are misleading as poison sumac is in no way related to either dogwood or elder and no species of these latter is poisonous. Poison ivy is also called poison oak, an equally misleading term, but no doubt having its origin in the fact that in one of its various leaf types the single leaflets of poison ivy somewhat resemble oak leaves. This leaf type is listed as a variety or species by some authorities. The names Mercury and three-leaved ivy are often used as common names for poison ivy.

Poison sumac is the more poisonous of the two plants, but it grows only in swampy places and is not of so much immediate concern to all of us as is its omnipresent and unnecessarily plentiful cousin, poison 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, stonewalls, 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. It is with this plant that most of us are concerned.

## 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 and by the application of herbicides. Hard work and the danger of poisoning at once preclude the general application of the first method. The use of herbicides is by far the safest and easiest method of eradication and the one to which we will devote our attention. There are three herbicides which we know will eradicate poison ivy, "Atlacide", "Ammate" and borax.

## Herbicides Used in Control

"Atlacide" is the trade name for a preparation of sodium chlorate combined with some material to eliminate the fire hazard. It is a granular compound which is dissolved in water at the rate of one 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 one pound per gallon of water.

The borax used is the common commercial borax and is applied to the soil where the poison ivy is growing at the rate of ten pounds per square rod.

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.

Both "Atlacide" and "Ammate" are absorbed by the plant through the leaves and the resultant killing is accomplished by the herbicide being distributed throughout the entire plant from the leaves. This action makes it necessary to give the poison ivy a very thorough spraying, but it is not necessary to soak the soil. 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. 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.

"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. Our experiments and observations indicate that they are more effective if applied on a cloudy day because there is a better chance for the materials to be absorbed under these conditions than on a hot, dry day when the solution dries quickly on the leaves. 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. *Do not forget to do this.*

At the present time, "Ammate" and "Atlacide" may be hard to find locally, but either one or both should be obtainable on order from dealers in agricultural supplies or large drug and chemical supply houses. The corner drug store is not necessarily a source of supply for such materials. We make no mention of price beyond saying that the larger the quantity, the more favorable the price.

### Summary

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

*Availability*—"Atlacide" and "Ammate" sometimes scarce or not available for the duration of the war. Borax plentiful.

*Cost*—Borax is cheaper than the other two materials.

*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 10 pounds per square rod than "Ammate" or "Atlacide" at 1 pound per gallon applied at the rate of 1 gallon per 100 square feet.

*Safety*—All equally safe to use in respect to injury to person, clothes or apparatus. They are not especially poisonous, but we suggest that animals should not be allowed to feed on treated areas.

*General*—It is not safe to use borax around trees and shrubs. The other materials can be used safely if not applied directly to such plants. Borax will have some temporary residual effect on the soil which will disappear with weathering or application of lime.

### 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 will do the job successfully.