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VEGETATION MANAGEMENT GUIDELINE
Smooth sumac (*Rhus glabra*)

Photo by Kenneth R. Robertson, INHS

SPECIES CHARACTER

Description
This shrub or small tree reaches up to 20 feet (6.1 meters) tall and has a spreading crown. The bark is light brown and smooth on young plants. Twigs are stout, angular, smooth, and covered with a whitish coat that can be wiped off. Leaves are pinnately compound with 7-31 leaflets that are green on upper surface and nearly white on lower surface. Leaves turn red in autumn. The small, numerous flowers occur in much branched clusters. The fruit is a cluster of red drupes. Each drupe (a fleshy fruit with a hard or stony center) is round, has short hairs and contains a single seed.

Similar Species
Black walnut is a tree that often has the end leaflet lacking. Winged sumac has winged leaf stalks. Staghorn sumac has velvet covered twigs. Smooth sumac should be accurately identified before attempting any control measures. If identification of the species is in doubt, the plant's identity should be confirmed by a knowledgeable individual and/or by consulting appropriate books.

Distribution
Smooth sumac is native to and occurs throughout the U.S. and into southern Canada, but is most common in the eastern U.S. It occurs throughout Illinois but is not as common in southern counties as winged sumac.Smooth sumac is native to and occurs throughout the U.S. and into southern Canada, but is most common in the eastern U.S. It occurs throughout Illinois but is not as common in southern counties as winged sumac.

Habitat

This species is usually found on disturbed sites, abandoned fields, railroad edges, fence rows, rights-of-way,etc.

Life History
This native but sometimes aggressive shrub occurs in clumps and spreads by seeds and rootstocks. It flowers from late May until mid-August. Seeds are formed by September. It sprouts easily, grows rapidly, and aboveground stems are relatively short-lived while roots persist and form new stems.

Effects Upon Natural Areas
Smooth sumac is known to shade and replace prairie plants and endangered species. It is one of the primary woody invaders that moves into glades and hill prairies in much of Illinois, where its dense clones eliminate other native species.

CONTROL RECOMMENDATIONS

RECOMMENDED PRACTICES IN NATURAL COMMUNITIES OF HIGH QUALITY
Managers first must decide what part of the population should be removed. In general, sumac should be left in ravines and draws within prairie communities. It should not be eliminated totally from communities where it occurred in presettlement times, but should be controlled where it has invaded or spread to the detriment of other native vegetation.
Stems should be cut with an ax, lopper, or sharp blade in July or shortly after flowering. Sprouts then should be cut in August. Spot-treating cut stumps with Roundup (a formulation of glyphosate) will minimize resprouting. While the Roundup label recommends a 50-100% concentration of Roundup for stump treatment, a 10-20% concentration has proven effective. Roundup can be applied to cut stumps either with a low pressure hand-held sprayer or else by wiping it on the stump with a sponge applicator (similar to paint applicators). The herbicide applicator must be extremely careful not to contact nontarget species with Roundup since this herbicide is nonselective and will kill most photosynthetically active plants when the herbicide is applied in July or August. By law, herbicides only may be applied as per label instructions and by licensed herbicide applicators or operators when working on public properties.
If sumac is intermingled with many other native plants, Roundup should not be used and the sumac should be cut twice, once in July and once in August. Cutting at the appropriate time is crucial for effective control. Double-cutting (once in July and once in August) may need to be repeated for several consecutive years to achieve effective control in dense populations.
Where fire will carry through a stand, burning in August will often kill mature plants, but sprouts must be cut. In glades and prairies, an occasional August burn should be sufficient.
For maintenance control, edge individuals that provide the source of young plants invading high-quality prairie or glade communities should be cut and the stumps spot-treated with Roundup, as described above. An occasional August fire should be sufficient to keep the sumac population in check.
Midsummer (July or August) mowing or cutting of sumac can reduce its vigor.

RECOMMENDED PRACTICES ON BUFFER AND SEVERELY DISTURBED SITES
The control procedures recommended above for high quality natural areas are also applicable to buffer and severely disturbed sites. In addition, foliar applications of Garlon 3A (a selective translocated herbicide that is a formulation of triclopyr) or 1-2% Roundup applied according to label instructions also are effective. If herbicides are used, great care should be taken to avoid contacting nontarget plants with the herbicide. In addition, **do not spray so heavily that herbicide drips off the target species.** The herbicide should be applied while backing away from the treated area to avoid walking through the wet

herbicide. Large smooth sumac clones should not be allowed to develop next to naturally open communities.

FAILED OR INEFFECTIVE PRACTICES

- hand control: fall or winter cutting has little effect.
- mowing: early- or late-season mowing has little effect and is not practical on all sites, particularly steep glades and hill prairies. As mentioned above, midsummer mowing or cutting is an effective control.
- fire: early spring fires can actually increase sprouting and encourage the spread of smooth sumac. Dormant season (late fall, winter) fires do not control sumac.
- herbicides: are not as effective during the dormant season.
- grazing: encourages sumac growth and spread.
- biological controls: none are known that are feasible in natural areas.

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