**Kudzu** \( [\textit{Pueraria montana} (\textit{Lour.}) \textit{Merr.}] \)

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**Problems Caused**

Kudzu \( [\textit{Pueraria montana} (\textit{Lour.}) \textit{Merr.}] \), also known as Japanese arrowroot or vine-that-ate-the-South, is a perennial, high-climbing vine native to eastern India, China and Japan. It was introduced into the United States in 1876 at the Centennial Exposition in Philadelphia and recognized as forage in 1905. By 1946, an estimated 300,000 acres were planted. In addition to its use as forage, kudzu was also widely planted for soil stabilization in the South. It has been used some as an ornamental and for certain edible and medicinal uses.

**Regulations**

It is a Noxious Weed in FL, IL, KS, KY, MS, MO, PA, TX, and WV. It is Banned in CT and Prohibited in MA. Kudzu is a Quarantine and “A” Designated Weed in OR and WA. It can be problematic in all MidSouth states in almost all habitats except aquatic. Kudzu can host Asian soybean rust, a potentially serious pathogen in soybeans \( \textit{Glycine max} \) (L.) Merr.

**Description**

**Vegetative Growth**

The Genus \textit{Pueraria} belongs to the Pea (Fabaceae or Leguminosae) Family. Of the 17 \textit{Pueraria} species, native to the tropics and East Asia, only two grow in the United States, \textit{P. phaseoloides} (Roxb.) Benth. and \textit{P. montana}. Of the two varieties, only \textit{P. montana} var. \textit{lobata} (Willd.) Maesen & S. Almeida (kudzu) is a problem in the continental United States. Kudzu is a perennial, woody, trailing to high-climbing, twining vine reaching around 80’. Trailing stems may root when in contact with the soil and produce large tuberous roots, which have been eaten in Asian countries. Twining generally occurs on objects less than 4”. Stems are covered with stiff, rust-colored or golden hairs when young, maturing brown, woody, and smooth to 10” in diameter. Leaves are alternate and tri-foliolately compound (Figure 3) with leaflets covered with golden hairs and typically lobed. Large leaves have leaflets 2” to 8” long. Petioles are 6” to 12” long with a swollen base and deciduous, ovate-lanceolate stipules.

**Flowering**

Kudzu flowers September-January. The racemes or panicles are axillary, 2” to 12” long, and open from bottom to top. Flowers are about 1” in diameter and occur in pairs or threes in a spiral pattern up the main axis. Lower petals are lavender or violet-purple and the upper petal similar in color or pinkish with a yellow patch near the base. Flowers are fragrant and attract pollinators. Clustered fruit are produced from September to January. They are flattened legumes—1.2” to 3” long, 0.3” to 0.5” wide, and covered with stiff golden-brown hairs. Seeds are ovoid to nearly square and around 0.1” in diameter. Seed viability is variable.

**Dispersal**

Kudzu is dispersed by wind, animals, human activity, and water. Vegetative spread by rooting stems and movement of vegetative parts (stem segments or tubers) in soil is also common.

**Spread By**

Kudzu continues to spread by seed which are wind-, animal-, and water-dispersed and rooting stems. Both seeds and stem segments can be transported in soil to new sites.
### Distribution

Kudzu is native from Japan to China and eastern India. It has escaped in South Africa, Malaysia, western Pacific Islands, and the United States. In the United States, it occurs from Maine to Florida west to Nebraska and Texas. Kudzu has also escaped in Washington and Oregon. Kudzu is widespread throughout the MidSouth, particularly on slopes.

### Control Methods

**Biological**

No widespread biological controls are used in the U.S. Research is ongoing.

**Chemical**

There are herbicide treatments of kudzu. All should be applied at low volumes in the fall.

**Mechanical**

MS Agricultural Experiment Station Bulletins 326, published 1939, states kudzu can be easily controlled with "grazing or frequent and thorough plowing." Bulletin 438, published 1946, stated that kudzu could be controlled with one or two years of continuous heavy grazing or one year of plowing followed by planting and cultivating a row crop. This publication went on to state that frequent mowing for hay, like continuous grazing, would cause the loss of an established stand of kudzu. So, some mechanical methods of kudzu control may be used in areas that can be either grazed, mowed, or tilled. Mechanical controls, including hand removal, can be successful for small infestations. Multiple approaches may be more feasible for larger populations. Removing plants prior to fruit ripening to avoid seed dispersal is suggested. Because stems can propagate through fragmentation, be careful to remove all stems.

**Physical**

Since kudzu grows in a wide range of conditions, cultural methods are generally not utilized. While converting an area to regular tillage may eventually remove kudzu from a site, it can also drastically changes the species composition on the site and should be considered carefully. Since kudzu is a broadleaf vine, a pine-dominated forest community might be another cultural method for consideration.

### References


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