

FC Noxious Weed Control Best Management Practices



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Kochia

Bassia scoparia

Family: Chenopodiaceae

Class B Noxious Weed
Control & Containment

Background Information

Kochia is of the Chenopodiaceae family and may also be referred to as Mexican firebrush or mock cypress. This Class B noxious weed is a major agricultural pest in Franklin County. Kochia is a summer annual, originating from Russia. It was deliberately introduced into North America as an ornamental but because of its drought-hardiness, ability to grow in poor soils, and tumbling dispersal of seeds it quickly spread throughout much of the U.S., invading cultivated fields, roadsides, ditch banks, rangeland, pastures, and gardens.

Kochia's deep taproot and adaptability to dry or moist sites gives it a competitive edge in semi-arid climates. Rosettes emerge in the spring before many perennials species have begun growth. With warm temperatures kochia plants grow rapidly sometimes exceeding 6 feet in height at maturity. With each flush of moisture throughout a season kochia seeds will germinate. Flowering and seed production occurs July through October with each plant capable of producing over 14,000 seeds, dispersed as mature plants roll in a tumbleweed-like manner.

Impacts

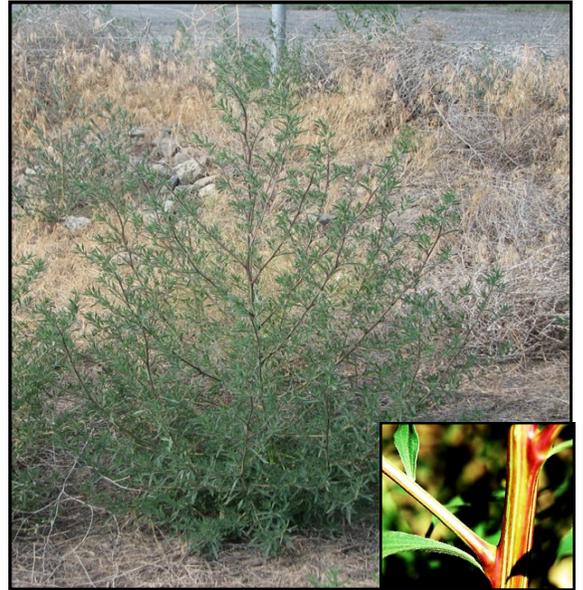
Kochia is a serious economic problem in cultivated fields and has a competitive advantage because it produces a chemical that reduces the growth and germination of more desirable plants. Kochia contains high levels of oxalates, alkaloids, and nitrates that are toxic to a variety of grazing animals if consumed in large quantities. Populations expand rapidly when no control efforts are in place and will quickly become large infestations under the right circumstances. Tall kochia plants limit visibility and create very serious road hazards.



A roadside kochia infestation in Franklin County. This healthy stand grew over 7 feet tall, blocking the view of the intersection and the signage.

Key Identifying Traits

- ◆ Frosty green rosette matures into erect, branched plant with leafy, hairy stems.
- ◆ Stems round, red-tinged as plant reaches maturity.
- ◆ Leaves 1/2 to 2 inches long, lance shaped, and hairy.
- ◆ Inconspicuous flowers are greenish in color, surrounded by clusters of long hairs.
- ◆ Upper flower spikes commonly nod.
- ◆ Mature plants turn red in the fall.



Kochia has an erect main stem which branches creating a bushy plant when mature. Stems also become red-tinged with age.



Seedlings have fine, pubescent hairs giving young plants a frosty green appearance..

Biology and Ecology

- ◆ Summer annual reproducing exclusively by seed.
- ◆ Seeds typically viable for 1-2 years.
- ◆ Flowering and seed production from July to October; several seedling flushes per year.
- ◆ Extremely drought resistant, but does well under irrigation.
- ◆ Plants break away and roll as tumbleweeds dispersing seed.

Control Measures

Prevention: Do not allow kochia to set seed; be persistent in your control strategy to prevent seed germination and seed production.

Biological: None available at this time.

Cultural: Improve the desired vegetation stand to create competition.

Mechanical: Very young plants can be pulled before the taproot descends. Tillage and mowing prior to seed set will reduce seed production but will have to be repeated several times over the season to control new flushes that germinate.

Chemical: Kochia seed does not have extended viability, three years at most. Establish a control program to keep kochia from seeding year after year. Pre-emergent herbicides will reduce seed germination but the remaining seedbank will need follow-up treatment. Foliar applied herbicides effective in controlling kochia while it is actively growing include glyphosate, 2,4-D, dicamba, and fluroxypyr. Herbicide combinations and rotating mode of action will provide more complete control. Always add a surfactant to penetrate the hairy leaf surface. Repeat applications to control later flushes will be required. Survey your land often to determine the extent that kochia has infested or re-infested your property.

ALWAYS FOLLOW LABEL INSTRUCTIONS, THE LABEL IS THE LAW

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