



Growth and Development: Like many other species of the Chenopodiaceae, it becomes a tumble weed when mature. An abscission zone develops at the base of the stem in autumn. When winds reach velocities of 25 mph, the stem breaks and the plants tumble. Kochia overwinters as seeds. The seeds germinate very early in spring because of their frost tolerance. Kochia grows very rapidly through spring and summer and sends down a very long taproot (up to 16 feet). It flowers in late summer and sets seed.

Reproduction: The species typically produces around 14,600 seeds per plant. Seeds are dispersed in the fall when the plant becomes a tumbleweed. The plant tumbles with the wind, dropping seeds as it is blown about. Laboratory studies report germination rates of 76% or better over a temperature range of 39-106 F. Seeds buried in the soil have 5% viability after one year and 0% after two years. Kochia reproduces by seed only.

Population Dynamics: Kochia is able to spread long distances very rapidly. Its ability to tolerate drought also enables it to spread quickly. It was considered a rare plant in North Dakota and Kansas in the late 1920's, but with the drought during the 1930's it became abundant.

Response to Herbicides: Infestations of triazine resistant kochia has been found along railroad lines in eleven states. Research has shown that triazine resistant biotypes were more susceptible to 2,4-D ester than triazine susceptible biotypes. There are also biotypes resistant to 2,4-D or Banvel (dicamba). It is suggested that rotating herbicides would reduce the possibility of an increase in the proportion of plants tolerant to 2,4-D or Banvel.

Response to Cultural Method: Early tillage in the spring gives good control of the seedlings. Mowing or slashing the plants before flowering is effective in reducing seed production.

Biocontrol Potentials: None

References:

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