ALBERTA invasive species COUNCIL
abinvasives.ca
info@abinvasives.ca

Last Updated January 2014

Alkali Swainsonpea

Sphaerophysa salsula (aka Swainsonpea, Austrian peaweed, Swainsona, red bladder-vetch)

Provincial Designation: Not Regulated

PHOTO: Bugwood.org

Overview:

Alkali swainsonpea is a long-lived perennial legume of the Pea family. It is native to Asia and believed to be introduced as a contaminant of alfalfa seed[3] or for soil stabilization.[2] This plant reproduces both by seed and vegetatively and flowers May through July. Seeds have a very hard coat and require scarification to germinate.[2] Mature plants can be herb-like or shrubby.[1]

Swainsonpea develops an extensive root system with creeping lateral roots which can produce new shoots.[2] Being a legume the roots can associate with nitrogen fixing bacteria.[2]

The seeds are nearly identical in size, shape, and eight to alfalfa seeds making sorting and cleaning of alfalfa seed contaminants extremely difficult.[2]

Habitat:

Alkali swainsonpea needs well drained soils and tolerates alkali soils.

Identification:

Stems are erect to ascending, branching and grow 0.3-0.6 m tall, rarely to 1.3 m. Branches have a longitudinal rib and sparse to dense flattened hairs.[1]

Leaves: The compound leaves are odd-pinnate with 11-21 leaflets and the main leaf axis 5-8.5 cm long. Leaflets are oval-oblong, 5-15(-25) x 3-6(-10) mm, and margins have short, white, flattened hairs. Stipules up to 0.5 cm are fused at the petiole base.[2]

Flowers: Stems are almost twice as long as the inflorescence,4 6.5-13(-17) cm,[1] sparsely hairy, and borne in the leaf axils.[2] Flowers are pea-like in loose clusters near tip of stem and 6-16 flowered.[1] Flowers emerge brick red to pinkish-brown, drying to violet or purplish.[4] Flowers are 12-13 x 12-16mm.[1] Stigmas are finely hairy. Seed pods are oval to spherical, grooved on top, 3.5 x 1.7 cm, and borne on a 10 mm stalk. The pod surface is sparsely hairy except densely hairy along the groove.[1] Seed pods are indehiscent.[2] Seeds are brown, nearly semi-circular and about 2.5 mm long.[1]

Prevention:

Alfalfa is considered to be more competitive than Swainsonpea and invasions are more likely in thinning stands.[2] Maintaining vigorous, healthy, desirable plant cover can help prevent establishment.

Control:

Grazing: Cattle will graze this plant but is not a control option because of the plant's tendency to re-sprout. There is also the possibility that the hard-coated seeds may pass through the digestive system intact,[2] facilitating weed spread. Invasive plants should never be considered as forage.

Mechanical: Cultivation will result in sprouting from severed roots.[2] Hand pulling is ineffective as it is impossible to remove all of the root system. Mowing will prevent seed production.

Chemical: Currently no selective herbicides are registered for use on Alkali Swainsonpea. Always check product labels to ensure the herbicide is registered for use on the target

continued next page

ALBERTA invasive species COUNCIL
abinvasives.ca
info@abinvasives.ca

Alkali Swainsonpea (Continued)

plant in Canada by the Pesticide Management Regulatory Agency. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: None researched to date.

PHOTO: Bugwood.org

PHOTO: Robert L. Carr

PHOTO: Robert L. Carr

REFERENCES

1 Sphaerophysa salsula in Flora of China. www.efloras.org
2 Swainsonpea. California Department of Food and Agriculture. www.cdfa.ca.gov/plant/ipc/weedinfo/shpaerophysa-salsula.htm
3 Swainsonpea Pest Risk Assessment. Washington State Noxious weed Control Board. /www.nwcb.wa.gov
4 Hitchcock, L., Cronquist, A. Flora of the Pacific Northwest. 1973. University of Washington Press. Page 273.