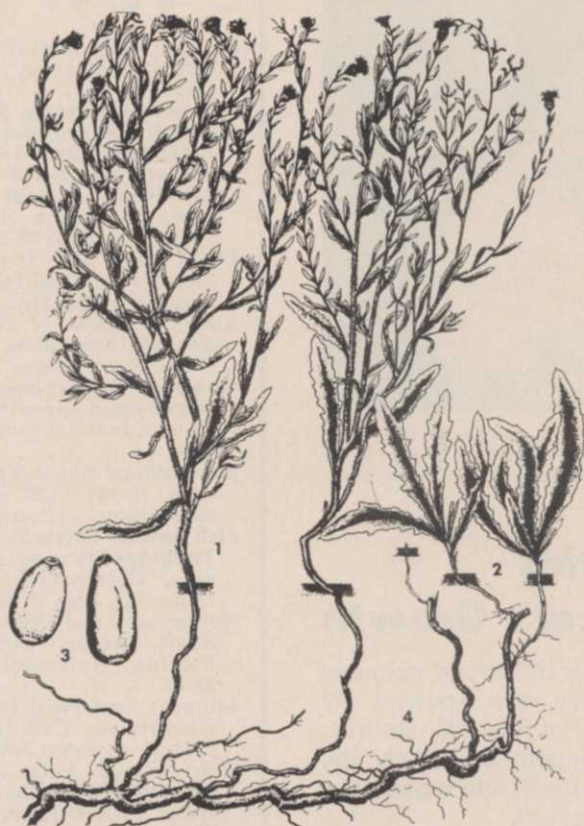


RUSSIAN KNAPWEED

(*Centaurea repens*)



Russian knapweed, sometimes called Turkistan thistle, is an extensively rooted perennial which reproduces both by seed and by widespread creeping roots. Found on waste areas, fields, and roadsides, it thrives in semi-arid or dry land environments. Russian knapweed ranges south from the Dakotas to Missouri and west to the Pacific. Arms of its range extend into Texas and Michigan. It is subject to restrictive legislation throughout its distribution, and becomes more abundant and serious further west. Native of southwestern Russia and Asia Minor, it is believed that seeds of this pest were introduced in shipments of alfalfa seed around 1900.

Finely grooved stems (1) may grow to a height of 3 feet. They are densely hairy with some woody tissue, although Russian knapweed is not a true woody plant. Branching is frequent near the plant base.

Lower leaves are larger and more scalloped; they resemble dandelion leaves, except that knapweed is more hairy. They appear to sit directly on the stem, but gradual narrowing of the leaf results in a short petiole (leaf stalk). Topmost leaves are somewhat willow-like, narrow and smooth-edged.

Each branch of a stem bears a single head of flowers. What appears to be a "flower" of Russian knapweed (and also the rest of the family Compositae) is actually a head of many tiny tubular flowers. Each head of flowers is about 1/2 inch in diameter; colors vary from rose to purple to blue.

Each tiny flower produces one seed (3). It measures 1/8 inch long and is colored gray-white. Small longitudinal ridges may be seen with magnification.

Creeping roots (4), from which new plants arise, are extensive and sturdy in established stands. New stems are produced from lateral shoots at various depths (2).

Chlorobenzoic acid derivatives such as TBA, sodium chlorate alone or combined with borates, monuron, and fenac are some of the powerful herbicides needed to control this stubborn weed pest.

Prepared in cooperation with Crops Research Division, Agricultural Research Service, United States Department of Agriculture, Beltsville, Maryland.
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Turf Bureau Offers Bulletins

Use of organic fertilizers in turf management programs is detailed in 4 bulletins available from the Turf Service Bureau, Milwaukee Sewerage Commission, P.O. Box 2079, Milwaukee 1, Wis., one of the world's largest producers of organic fertilizers.

Bulletin No. WT-1, "The Role of Lime in Turf Management," offers CAs a detailed explanation of the liming process, including a section on plant reaction to lime and significance of this reaction, as well as practical pointers, such as methods of soil testing, and the kinds and rates of lime to apply.

Better bent grasses, especially for golf greens, and improved fairways are covered in Bulletins Nos. WT-2 and WT-3. Information and reports in these two guides will benefit every contract applicator, however, as the turf management aspects will apply to numerous other situations.

A permanent fertilization record and handbook is featured as Bulletin No. WT-4, to enable turfmen to keep detailed and accurate records of treatments.

For a free copy of all four bulletins, write to the Turf Service Bureau, Milwaukee Sewerage Commission, Milorganite Division, P.O. Box 2079, Milwaukee, Wis.

Sod Webworm Controls Given

Small brown spots in lawns, frequently attributed to Japanese beetle infestation, might be due to sod webworm attack, Dr. J. B. Polivka, research entomologist at the Ohio Agricultural Experiment Station, Wooster, cautions CAs.

Brown areas of infested lawns usually contain the larvae, found in a silken web containing chewed grass, he points out. Sod webworms feed on grass leaves just above the crown of the plant.

Materials which will effectively control this pest are Ethion or phorate at a 10-lb.-per-acre rate, Sevin at 8 lbs. per acre, or Di-Syston at 2 lbs. per acre active material, Dr. Polivka reports.

"Applied three times during the summer of 1962, these materials kept trial plots completely free from webworms," the entomologist concluded.