



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

'Kanoka'

Roundhead Lespedeza

Lespedeza capitata Michx.

A Conservation Plant Release by USDA NRCS Manhattan Plant Materials Center, Manhattan, KS



Figure 1. Roundhead lespedeza flowering in late August at the PMC. Photograph by Alan Shadow, East Texas Plant Materials Center.

'Kanoka' roundhead lespedeza (*Lespedeza capitata*) is a cultivar released in 1998 by the Natural Resources Conservation Service's Manhattan Plant Materials Center.

Description

Kanoka is a native, warm-season, deep-rooted, perennial legume that reproduces from seed. It is stiffly erect and produces white flowers from August to September on stems 2 to 4 feet tall. Stems are usually unbranched except for short branches at the top that support the inflorescences. Leaves have an alternate arrangement, are pinnately trifoliate, reside on short petioles and have elliptically shaped leaflets. Both stems and leaves are densely covered with appressed hairs that give the plant a silvery green sheen. Flowers are crowded in conspicuous green ball like clusters that are grouped together at the tip of the stems. The typical legume fruit is a one seeded, indehiscent pod. Rhizobial nitrogen fixing bacteria live in nodules on the plants extensive, deep root system. Roundhead has a root system that penetrates 5 to 8 feet deep in the soil with many branching lateral roots that spread throughout the topsoil.

Source

Kanoka was selected from an assembly of 20 accessions collected in Kansas, Oklahoma and Nebraska. Two collections from Woodson County, Kansas and a single collection from Nowata County, Oklahoma were bulked and assigned the Plant Introduction Number (PI-468118). The selected, bulked accessions were not further selected or modified. Kanoka consistently produced seed of higher quality and quantity and the plants were taller and bloomed later than the other accessions tested.

Conservation Uses

Roundhead lespedeza is a palatable and nutritious native legume that is consumed by all classes of livestock. It is a desirable component of warm-season grass mixtures, providing nitrogen input and adds protein to the consumed forage. Upland game birds and rodents consume its seeds and Native Americans used its leaves to make tea.

Area of Adaptation and Use

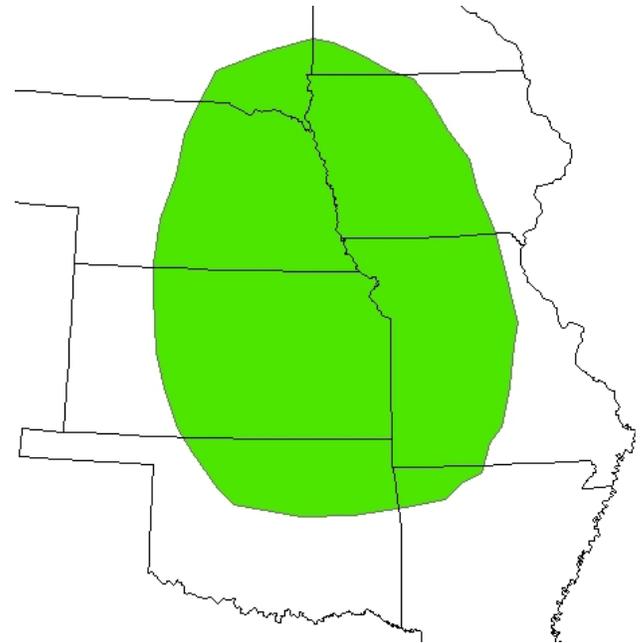


Figure 2. Area of adaptation of Kanoka roundhead lespedeza.

Establishment and Management for Conservation Plantings

Kanoka can be best established by using a native grass drill with a legume box attachment. For a solid stand seeding, plant in late fall or early spring into a moist, firm, weed free seed bed at a rate of 4 pounds of Pure Live Seeds (PLS) per acre. Decrease the seeding rate if roundhead is part of a grass forb mixture. A seeding rate of one PLS pound or less is usually acceptable especially if other forb species are used in the planted mixture. Plants should be well established before grazing is permitted. Grazing or mowing leaving a high stubble height should help with potential weed control. Leaving a tall stubble height about one month before flowering will promote a greater floral display and additional reproduction from the plants. Delaying further defoliation until after seed maturity will restore plant vigor for greater production and persistence while allowing for plant reproduction.

Ecological Considerations

The plant grows naturally in diverse habitats such as dry wooded areas, prairies, and sandy dunes. It prefers well drained, light textured soils and even rocky sites. It performs best in areas receiving at least 20 inches of precipitation, but will survive in moisture accumulating areas in a semiarid region. The plant is moderately drought tolerant and is winter hardy. There is moderate to strong tolerance to burning when in a dormant condition. Roundhead lespedeza is infected by a rust pathogen (*Uromyces lespedezae-procaumbentis*) and a tar spot fungus (*Phyllachora lespedezae*) that causes disease symptoms on the plants. Herbivore damage to roundhead lespedeza can be attributed to two types of insect herbivores. The first type of damage is by generalist chewing herbivores, primarily grasshoppers. The second type of damage is by *Pachyschelus laevigatus* (Coleoptera) and it is a more specialized insect that does predominately feed on roundhead lespedeza.

Seed and Plant Production

For optimum seed production, rows should be spaced at 30 inches apart or at spacing that accommodates the available equipment. Plant untreated seed in late fall or scarified seed in the spring on a firm, moist, weed free seed bed. Seeds should be planted at ¼ to ½ inch deep. The rate of seeding should be 20 to 30 PLS per foot of row. The average number of seeds per pound is 174,000. Seed should be treated prior to planting with the correct rhizobium species to promote nodulation of the new

plants. During establishment, irrigate only to avoid plant stress due to drought and never between seed germination and the 4 to 5 leaf stage of the seedling. Two years are usually necessary for stands to establish and actually begin producing seed. Some plants may actually flower the first growing season, but seed production of any amount is unlikely. Seed yield at the Manhattan PMC averaged over six years after establishment was 110 pounds per acre. The average germination over the same six year period was 52% with 36% hard or dormant seed. The average purity was 99.77% and the inert material was 0.22% in those same years.

Availability

For conservation use: Kanoka roundhead lespedeza is generally commercially available.

For seed or plant increase: The Manhattan PMC maintains breeder and foundation class seeds. There is no registered class of seed for this variety only certified seed production is allowed.

For more information, contact:
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Citation

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov>>

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