

'Nekan'

Pitcher sage

Salvia azurea Michx. ex. Lam. var.
grandiflora Benth.



Figure 1. Photograph of Nekan pitcher sage in full bloom. Note the open form and tall stature of the plant. Photograph by R. Alan Shadow, East Texas Plant Materials Center.

'Nekan' pitcher sage (*Salvia azurea*) is a cultivar released in 1977 in cooperation with the Nebraska Agricultural Experiment Station.

Description

Pitcher sage is a member of the mint family (Lamiaceae). It is a warm-season, long-lived perennial, herbaceous, native forb species. Stems of this plant are single to several growing to a height of 2 to 4 feet. The stems are sparsely branched, square in cross section and arise from a thick, short rootstock. The roots of this plant may extend from 6 to 8 feet in depth. The gray green linear leaves are opposite on the stem and extend out from all four sides. Although its foliage is fragrant, pitcher sage doesn't have

as strong an odor as many of the members of the mint family. Lower leaves will sometimes be shed early in the growing season depending on environmental conditions. Pitcher sage usually begins blooming in July and will frequently bloom until early October. The light blue flowers are attached by short stalks on the terminal inflorescence or in the axils of the upper leaves. The greatly enlarged lower drooping petal of the flower is covered at the base by a stiff upper petal or hood. The fruit consists of one or two nutlets that are elliptical in shape, flattened, and approximately 1/8 inch long.

Source

Nekan is a cooperative release by the USDA-NRCS Manhattan Plant Materials Center and the Nebraska Agricultural Experiment Station in Lincoln, NE. The release was made in 1977 after accessions from Nebraska, Kansas and South Dakota were evaluated at Manhattan. The Kansas accession PMK-1408 (Marion County) was selected for additional evaluation in 1972, because of overall better performance and excellent ratings for vigor and stand establishment. Growth of PMK-1408 proved to be uniform with respect to height and spread.

Conservation Uses

Pitcher sage is readily eaten by all classes of livestock and wildlife. The foliage is especially sought in the spring due to its high protein content. Pitcher sage will decline in abundance in native rangelands that are over stocked and intensively grazed. The flowers are pollinated by bumble bees and may be visited by hummingbirds. The plant is attractive to migrating monarch butterflies and other pollinating insects. Landscape professionals have described this species as being disorderly due to its tall stature, openness of form and tendency to sprawl or lodge. However, the extended length of blooming and the spectacular blue colored flowers make it an interesting choice especially in native plant gardens or for prairie restoration projects.

Area of Adaptation and Use

Nekan grows in the eastern 1/2 of Kansas and Nebraska and into the western 2/3 of Missouri, southwestern Iowa, northeastern Oklahoma and northwestern Arkansas. It prefers an open sunny site on well-drained upland soils. It grows on a number of different soil types and is quite drought tolerant due to its extensive, deep root system.

Establishment and Management for Conservation Plantings

Stands of this species can be established from seed. Plantings can be made either in the spring or fall, but with spring plantings the seed will need to be stratified for 4 to 8 weeks in a cold, moist environment. The planting will

require a clean, weed free, firm seedbed for best results. A treatment of mowing may be required once seedlings begin to grow to reduce annual weed competition. A 6 to 8 inch mowing height should restrict the weeds and allow the Nekan to survive. The application of fertilizer is discouraged the seeding year unless phosphorus and potassium levels are extremely low. Nitrogen fertilizer should never be applied to new plantings since it tends to promote the growth and competitive advantage of annual weedy species.

Ecological Considerations

There are no serious insect or disease problems with this member of the Lamiaceae family. Pitcher sage is known to volunteer from seed, but it will not spread aggressively under most situations.

Seed and Plant Production

Propagation of Nekan is best accomplished by planting stratified seed or nutlets in the spring or a fall dormant plantings to allow for a natural cold, moist period through the winter. A firm, clean, weed free seedbed should be prepared by disking, harrowing and cultipacking the site prior to planting. Perennial weed problems should be eliminated from the site before seeding. In fact a year's fallowing of the site with no perennial weeds and no residual chemical residue would be ideal. A drill equipped with a legume box, double disc openers, depth bands, and press wheels should be used to precisely plant seed units at ¼ to ½ inch deep in the soil. A monoculture planting in 24 to 36 inch rows at 30 pure live seeds per linear foot of row should provide an adequate stand of Nekan. Weed control should be practiced throughout the growing season to aid in the establishment of the plants. Cultivation or hand roguing and mowing should allow plants to establish. However, due to its open stature the stand will never canopy over so continued weed control is a must with this native species. Harvest of seed in the fall can be accomplished by straight combining with a standard combine. Since Nekan's flowering is indeterminate, with seed ripening extended over a long period of time, the harvested seed will not be uniform in terms of maturity. In addition, a certain amount of seed units will be lost because of shattering. Harvested seed will need to be dried and processed using a fanning mill and screens to produce a saleable product. A five year average of seed production at Manhattan, Kansas yielded 17 pounds per acre. The average purity of those seed lots was 99.03% with an inert component of 0.91%. Germination percentages of seed from the same 5 year cycle had an average germination of 43% with a dormant or hard seed percentage of 6%. Nekan is not a high seed yielding species, plus the fact that weed pressure is relatively constant due to the openness of the plant's form and tall stature can increase overall production expenses.

Thus, high field maintenance costs associated with relatively low seed yield produces a species that is not readily produced in the commercial market. The species can be grown as nursery stock to transplant into native areas and conservation plantings in the horticultural trade industry.

Availability

For conservation use: This cultivar is available from certain seed vendors, but probably no certified version of the seed can be purchased.

For seed or plant increase: Breeder or foundation seed can be obtained from the Manhattan Plant Materials Center. There is no registered class of Nekan pitcher sage.

For more information, contact:
Manhattan Plant Materials Center
3800 South 20th Street
Manhattan, Kansas 66502
(785) 539-8761 FAX (785) 539-2034
<http://www.plant-materials.nrcs.usda.gov>

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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