



A Conservation Plant Released by the Natural Resources Conservation Service
Bismarck Plant Materials Center, Bismarck, North Dakota
and Rose Lake Plant Materials Center, East Lansing, Michigan

'Sholty'

Yellow-flowered alfalfa

Medicago sativa subsp. *falcata* (L.)
Arcang. (syn. *M. falcata* L.)



'Sholty' yellow-flowered alfalfa is more drought tolerant and winter hardy than conventional alfalfa and is better suited for nesting habitat, biomass production, and stockpiling forage.

'Sholty' yellow-flowered alfalfa [*Medicago sativa* subsp. *falcata* (L.) Arcang]. (syn. *M. falcata* L.) is a cultivar released cooperatively in 2015 by the South Dakota Agricultural Experiment Station, South Dakota State University, Michigan Agricultural Experiment Station, Michigan State University, USDA-NRCS Bismarck Plant Materials Center, Bismarck, North Dakota and USDA-NRCS Rose Lake Plant Materials Center, Lansing, Michigan. It was tested as SD201 prior to naming it as the cultivar Sholty.

Description

Sholty is a true yellow-flowered alfalfa, with few or no purple type flowers. Sholty has characteristics typical of the *falcata* subspecies (yellow-flowered) of alfalfa. It is a perennial legume with alternate sets of three oval shaped hairy leaflets. It grows up to 30 inches tall and has multiple, erect stems. The *falcata* type alfalfa generally has a growth habit that is more "bowl-shaped" than upright. It has a deep-set crown that protects it from trampling and numerous, active crown buds that result in production of new stems and a broad crown area. Flowers are similar in shape to conventional purple or mixed flower type alfalfas. The root system is fibrous, in contrast to the tap-root of purple-flowered alfalfa. Seed pods of yellow-flowered alfalfa are sickle shaped, while purple-flowered have spiral-shaped pods. Sholty averages 325,000 seeds per pound.

Source

Sholty (tested as SD201) was selected and developed by South Dakota State University. Cooperative releasers assisted in testing and breeder seed production of the cultivar. It is a 41 genotype synthetic cultivar with genotypes from 13 different sources of germplasm, including 7 Plant Introductions, 4 experimental collections from rangeland populations in South Dakota, and 2 cultivars ('Anik' and 'Kuban'). It was developed from one cycle of selection for vigor, tolerance to potato leafhopper yellowing, leaf retention, and semi-erect growth habit.

Conservation Uses

Intended uses include improving depleted pastures, providing nesting habitat for gamebirds, forage for livestock, and pollinator habitat. The yellow-flowered type alfalfas have a high level of plant dormancy that makes them more drought tolerant and winter hardy than conventional purple-flowered alfalfa. They are better suited for nesting habitat, biomass production and stockpiling forage than conventional alfalfa, especially in semiarid regions. Sholty, planted into cool-season grass stands at Highmore and Brookings, South Dakota produced more dry matter (lb/acre) when harvested in mid-July and had greater regrowth in September than the conventional hay and pasture-type varieties. Sholty produces high amounts of forage in semiarid regions from a delayed single harvest per growing season management system in the northern Great Plains (North Dakota and South Dakota) and a two-harvest system in the sub-humid Great Lakes Region (Michigan).

Leafhoppers can deplete forage quantity and quality of alfalfa. Sholty has a high tolerance to potato leafhopper yellowing that enables it to be stockpiled in the field during early summer without stunting and leaf drop. Sholty significantly out yielded 'Don' and 'Yellowhead' yellow-flowered alfalfas in a delayed one-harvest system harvest in mid-July in Brookings trials.

Area of Adaptation and Use

Sholty has been tested in Plant Hardiness Zones 2, 3, and 4 from Michigan to the Dakotas. It may also be adapted to other areas within Plant Hardiness Zones 2, 3, and 4.

Establishment and Management for Conservation Plantings

Sholty can be established using the same methods as establishment for conventional alfalfa varieties. As a legume, the seed is small and should be planted shallow at a ¼ to ½-inch depth.

Ecological Considerations

Sholty is long-lived and winter hardy.

Seed and Plant Production

Seed production is generally lower in yellow-flowered types of alfalfa because its flowering is highly indeterminate and its sickle-shaped pods are more likely to shatter than the coiled pods of conventional purple-flowered cultivars. It is classified as a subspecies of *Medicago sativa* and freely hybridizes with it. Seed production will likely come from a management practice that stimulates the plants to produce a large flush of flowers over a relatively short period of time. This would result in an abundance of flowers of similar age for pollinators and potentially a large crop of seed of uniform age and maturity.

Availability

For conservation use: Seed production fields are being established in 2015. Seed for conservation use will likely be available within the next 3 years.

For seed or plant increase: Foundation seed will be managed by the South Dakota Foundation Seed Stocks Division, Brookings, South Dakota. Foundation seed will be made available on an exclusive basis to seed producers who contractually agree to produce and market the seed using the name Sholty. A royalty fee will be assessed.

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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/>>



'Sholty' yellow-flowered alfalfa was evaluated by the Bismarck Plant Materials Center in a conservation field trial near Bison, South Dakota.

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