

A Grower's Guide

Marsh Mallow

Althea officinalis

Its botanical name is from the Greek word *althe* meaning “to heal.” Marsh mallow has been used since ancient Egyptian times. Many members of the mallow family, including domesticated garden hollyhocks and common mallows, have similar properties. Some believe marshmallows were originally made from the root of this plant, cooked with sugar and whipped until they were fluffy. Marsh mallow is a beautiful plant in the landscape. Its large mass will fill an empty area in gardens and provide a plant with soft texture and a long blooming period.



Family: *Malvaceae*

Life cycle: Herbaceous perennial
(Zone 4)

Native: Originally indigenous to Asia, then spread to southeast Europe and China.

Height: 2 to 5 feet

Sun: Sun, partial sun, shade

Soil: Prefers a moist, loamy soil.
Naturalized in salt marshes along Mid-Atlantic States.

Water: Moderate to high

Flowers: Pale pink flowers bloom from the bottom of the stalk in mid- to late summer.

Seed: Stratify seed for several weeks. Plant directly outside as soon as the soil is workable. Or sow inside then transplant outside in mid- to late spring. Germination rate is 70 to 80 percent. Takes two to three weeks to germinate. Grows in clumps. Space 12 to 24 inches apart.

Pests: No significant pests.

Harvesting: The roots should be harvested in spring or fall. Roots are large and deep, so use a garden fork or needle-nose spade. Flowers and leaves can be hand picked at any time.

Parts used: Leaves, roots, and fresh or dried flowers

Used as: Decoction, infusion, tincture, syrup, elixir, lozenge, compress, poultice, medicinal food, ointment, salve, cream, balm, infused oil, powder

Medicinal benefits: Root (up to 30 percent) and leaves (up to 16 percent) high in mucilage, which is responsible for soothing irritated mucous membranes and skin. Marsh mallow is a soothing herb for the gastrointestinal tract, urinary tract and throat. Often used for winter illnesses and to alleviate skin conditions. Approved in Europe for coughing and bronchitis.

Market potential: Moderate. Prices range from \$5 to \$28 per pound (lb) dry

weight for root, and \$3.90 to \$36 for tops as retail bulk dried herb.

Summary of field trial data: This plant appears to be well adapted to Kansas. It survived on both wet and dry sites and in wet and dry years, but did best under well-watered conditions. Top and root biomass was heavy in the second year. Obviously, if the plant is harvested for the root market, tops could not be harvested the following year. Drying this much plant material could be a problem for large-scale growers, and the demand for this crop is not high. Some insect feeding on leaves was noted, but there was not a significant yield loss to insects or disease.

K-State Field Trial Data 2000-2002 *Althea officinalis*

				Average	Comments
Age of plants in years	1	2	3		
Number of test sites¹	5	3	0		No third-year plants available yet.
Survival rate (%)	94.8	94.7	—	94.8	
Vigor rating²	4.3	4.9	—	4.6	
Height (cm)	80.6	121.3	—	101.0	
Dry weight herb (g/plant)	193.8	470.9	—	—	Plants much larger in year 2.
Dry weight root (g/plant)	99.9	497.5	—	—	
Maturity rating³	3.9	4.8	—	4.3	Flowering occurred earlier in second year.
Insect damage rating⁴	0.8	1.4	—	1.1	Some leaf feeding noted in late season.
Disease rating⁵	0.6	0.4	—	0.5	
Estimated planting density (number of plants/A)	19,360	19,360	—	—	Plants per acre at 1.5- by 1.5-ft. spacing.
Plant density⁶	18,353	18,334	—	—	
kg/A dry weight (g/plant x plant number) – tops	3,557	8,633	—	—	
kg/A dry weight (g/plant x plant number) – roots	1,833	9,121	—	—	
Estimated marketable yield (dry weight lbs/A) – tops	7,835	19,016	—	—	
Estimated marketable yield (dry weight lbs/A) –roots	4,038	20,091	—	—	
Yield x ½ of low price¹ - tops	\$19,585	\$47,540	—	—	
Yield x ½ of high price¹ - tops	\$109,690	\$266,224	—	—	
Yield x ½ of low price¹ - roots	\$10,095	\$50,228	—	—	
Yield x ½ of high price¹ - roots	\$56,535	\$281,274	—	—	

¹ See "How Data Were Collected," on page 3.

² Vigor rating (1=very poor, 3=slightly above average, 5=very good, well adapted)

³ Maturity rating (1=vegetative, 2=early bud, 3=early flower, 4=full flower, 5=seed production, 6=senescence)

⁴ Insect damage rating (scale of 0 to 5; 0=no damage and 5=severe damage)

⁵ Disease rating (scale of 0 to 5 with 0=no damage and 5=severe damage)

⁶ Calculated as starting plant density x survival rate.

How Data Were Collected

The plants described in this fact sheet were grown in K-State test plots in Hays, Colby, Wichita, or Olathe, Kan. Generally, four replications of each species were included at a site. Not all species were screened at each site or each year. The number of locations is noted in the table. Depending on the location and year, either five or 10 plants per plot were established in each of the replications. Details can be found at www.oznet.ksu.edu/ksherbs. Plants were grown from seed in the greenhouse and transplanted in the field in May or June.

All plants at each location were used to determine survival percentage, vigor rating, insect damage rating, and disease rating as described above. Three plants per plot were measured for height, and only one plant per plot was harvested to measure yield each year. Cultivating four plots allowed us to estimate yield from four plants per species at each location per year.

Plants were dried, and top and root weights recorded in grams. Grams per plant were converted to kilograms per acre (kg/A) and pounds per acre (lb/A) to estimate field-scale yield. The population density used to calculate field yields was the optimal population density (determined by the average size of the plants) times the actual percentage survival as measured in the field. There was generally some loss due to transplant shock and, for some species, significant winter loss as well.

Plant spacing recommendations on each fact sheet are for spacing within a row. Distance between rows will depend on the particular farming operation and equipment used. The minimum row spacing will be the same as the plant spacing recommendation. For example, if the recommendation is to set plants 12 inches apart, rows should be a minimum of 12 inches apart as well. However, if cultivator or root-harvesting equipment is on 5-foot centers, plant rows 5 feet apart to facilitate cultivating and harvesting. Adjust estimated plant density per acre on the worksheets to estimate gross yield and net income.

Prices were taken from Appendix B of K-State Research and Extension publication S-144 *Farming a Few Acres of Herbs: An Herb Growers Handbook*. To calculate a rough gross income potential for each herb, estimated yield was multiplied by the lowest and the highest retail price, divided by two. This is a rough estimate of wholesale price. Actual prices would be determined based on a contract obtained from a buyer.

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