

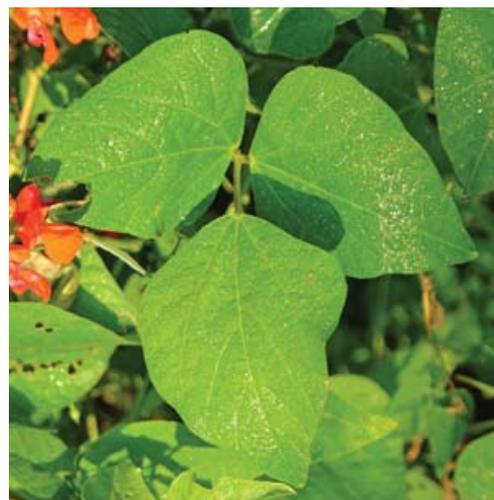
Scarlet Runner Bean, *Phaseolus coccineus*



Scarlet runner bean growing on a tall teepee.

Scarlet runner bean, *Phaseolus coccineus*, is a tender herbaceous plant native to the mountains of Mexico and Central America, growing at higher elevations than the common bean. By the 1600's it was growing in English and early American gardens as a food plant, but now is more frequently grown as an ornamental for its showy sprays of flowers. Unlike regular green beans (*P. vulgaris*) this is a perennial species, although it is usually treated as an annual. In mild climates (zones 7-11) it is a short-lived perennial vine, forming tuberous roots from which new shoots sprout annually in areas with frost where it is not evergreen. In Mesoamerica the thick, starchy roots are used as food.

P. coccineus looks very similar to pole beans, with dark green, heart-shaped trifoliate leaves with purple tinged veins on the undersides. The quick-growing twining vines can get up to 15 feet or more in length (although they tend to be closer to 6-8 feet in most Midwestern gardens), rambling through other vegetation, or climbing on a trellis or other support in a garden.



Scarlet runner bean has typical trifoliate leaves similar to regular beans.

About two months after sowing plants produce scarlet red, or occasionally white, typical legume flowers with the two lowermost petals combining into a "keel", the uppermost petal modified into a hoodlike "standard", and the petals on the sides spreading as "wings." Up to 20 inch-long flowers are produced in each cluster (raceme) along the vines. Flowers



Scarlet runner beans flowering (L), with closeup of buds (C) and open flowers (R).



The red flowers are attractive to pollinators such as ruby throated hummingbirds (L) and bumble bees (R).

open at sunrise and fade at sunset. The flowers are highly attractive to hummingbirds and bees. Flowers are followed by typical bean pods up to a foot long. Under ideal conditions scarlet runner bean is the most productive of all the beans. Fewer pods are set in hot weather, so the best bean production may occur in cooler summers or in the fall. The seeds are about an inch long, with 6-10 seeds per pod. Runner beans readily cross-pollinate, so they must be isolated in order to have seed from heirloom varieties come true.

The edible flowers have a bean-like flavor and can be used in salads. The green pods are edible until they become fibrous, and can be boiled, steamed, sautéed, or baked (but should eaten raw only sparingly). Because they are tougher than many green beans, they are best sliced before cooking. Some people do not like the rough texture of the skins. The white or multicolored seeds inside the pods can be eaten fresh while still light pink (shelled and cooked like lima beans) or dried.



The seeds are multicolored, often black with maroon mottling.

The dried seeds, which have a chestnut-like flavor, require a long cooking time and are best soaked for 6 to 8 hours before cooking. The seed color varies from white to shining black to violet-black mottled with deep red or violet-purple mottled in black, although their gray color when cooked is not particularly attractive.



If pollinated, the flowers are followed by long pods (L) with a rough texture (R).

Scarlet runner bean is often grown as an ornamental just for the colorful flowers. Removing the developing pods will encourage the plant to continue to flower. Use the vining plants as a temporary cover on a chain link fence, as a seasonal privacy barrier, or up a trellis to screen a unattractive view. Grow them on a tuteur or a teepee made of 6-8 poles or long canes tied together at the top as a vertical element in a border or bed, or as a focal point in the garden. Combine them with white morning glories or yellow and orange *Thunbergia alata* for a variety of colors on the support structure.



When grown on a trellis scarlet runner beans offer a vertical element in the ornamental garden.

For the best results grow scarlet runner beans in full sun in rich soil with plenty of organic matter and average moisture. This species is more cold tolerant than other green beans so seeds can be sown before the soil has warmed completely (but the soil temperature is at least 50F), but the foliage cannot tolerate frost so don't plant too early. Sow in place, placing the seeds 2 to 3 inches deep and spacing them 4 to 8 inches apart. Unlike regular beans, when the plants germinate, the cotyledons remain in the ground (called hypogeal germination). Germination takes 7 - 14 days. Or start indoors a few weeks before the average last frost and transplant into the garden after hardening off the young plants. Place supports such as poles, strings or netting near the plants at the time of sowing or transplanting. Protect the young plants from rabbits and slugs. Provide abundant water during flowering and pod expansion; mulching around the plants will conserve water. Do not fertilize heavily as this will promote lush foliage instead of flowers and beans.



Scarlet runner bean seedling (L) and common bean (*P. vulgaris*) seedling (R). Note the absence of visible cotyledons for the runner bean (L) compared to the large whitish cotyledons below the first true leaves of the common bean (R).

To save seed, allow pods to remain on the vines as long as possible, preferably until they are completely dry and the seeds rattle inside (but if frost threatens pick the mature pods and bring them indoors to complete drying). Although this plant is normally grown as a warm season annual, the tuberous roots can be dug up and stored in cool, damp sand for replanting in spring. The resulting plants should flower much sooner than plants started from seed.

A number of cultivars have been selected, but many are not readily available. Frequently seed packages are offered for just "scarlet runner beans."

- 'Black Runner' – has intense crimson flowers and jet black seeds
- 'Butler' – has string-less pods
- 'Golden Sunshine' – has chartreuse green foliage
- 'Hammond's Dwarf' – a bush type that produces earlier and smaller crops than climbing cultivars
- 'Moonlight' – has white flowers and stringless pods
- 'Painted Lady' – an heirloom variety with bicolored red and pink or white flowers on a vigorous vine. The seeds are cream colored streaked with deep brown markings
- 'Pickwick Dwarf' – a bush type that matures earlier than the species
- 'Polestar' – has string-less pods to 12 inches, but best picked when only 6-8 inches long
- 'Scarlet Emperor' – produces heavy crops of long, stringy pods and black and purple mottled seeds
- 'Scarlet Runner' – produces burgundy and black mottled seeds
- 'Sunset' – has pink flowers
- 'White Dutch Runner' – has white flowers and seeds



Bicolored flowers of 'Painted Lady' scarlet runner bean.

– Susan Mahr, University of Wisconsin - Madison

Additional Information:

- *Phaseolus coccineus* – on the Floridata website at www.floridata.com/ref/p/phas_coc.cfm