

FUCHSIAS

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Fuchsias in bloom are one of the most magnificent horticultural crops. Their delicate, richly colored flowers are among the most beautiful and decorative in the plant world. Blooming in shades of red, pink, white and purple they have become a very popular and profitable greenhouse crop.

In contrast, unless one is familiar with them, one would hardly recognize as Fuchsias those that grow in rain forests in Central and South America and New Zealand. These native species have diminutive flowers and leaves as opposed to those of present day horticultural varieties which have been genetically bred for large, showy flowers. A Jesuit priest, Father Carolus Plumier, is reported to have found a



flower he named *Triphylla flore coccinea*. This later became *Fuchsia triphylla* named in honor of Leonhart Fuchs, a sixteenth century herbalist.

Fuchsias are tender woody perennials. In favorable climates they may become sizeable shrubs. As such they may be grown for years.

TIMING

Although a relatively easy crop to produce, fuchsias can be frustrating to grow. This is due to its tendency to flower later than desired and, with the energy crisis, growers are producing plants at lower night temperatures which delay flowering.

Day length is the most important factor controlling flowering of fuchsias. They are short night plants, meaning that if they are exposed to night lengths shorter than 12 hours, the plants will initiate and develop flower buds. If night



lengths are longer than 12 hours, the plants will remain vegetative. Night length is naturally short enough between March 1 and October 15, at which time flower buds initiate and develop. Between October 15 and March 1 the natural night lengths are too long and only vegetative growth occurs.

By interrupting the middle of the dark period with low intensity (5-20 ft. candles) incandescent lighting, long winter nights can be divided into two very short nights. With the above in mind, fuchsias can therefore be artificially illuminated with 5-20 ft. candles from October 15 to March 1, creating a short night condition which will induce flowering. The reverse can be achieved by shading to shorten the day length between March 1 and October 15. This will produce vegetative growth for cutting production.

Growers interested in stimulating early spring sales by displaying fuchsias in full flower should try lighting the plant for a period of four hours in the middle of the night (10:00 p.m. to 2:00 a.m.). Researchers have reported that over twice the normal number of winter flowers were produced when plants were given supplemental light. Flower production was obtained in most plants when only 6-10" tall at 60°F (Sachs and Brets, 1960).

PRODUCTION SCHEDULE

1. Begin stock plants from cuttings under long night conditions in August or September. This will stimulate vegetative growth. Grow plants in a 60°F greenhouse. Fuchsia are very responsive to temperature. At 73°F flowering will occur after plants have been exposed to 40-45 long days. If lower temperatures are maintained add approximately one day for each degree lower than optimum (73°F) to calculate the approximate time of flowering (Freeman, 1979). Fuchsia should not be grown at temperatures below 60°F.

2. Take cuttings with at least two or three mature pairs of leaves after mid-November. Rooting should take place in about three weeks.

3. Plant a) one cutting per six inch pan in December or b) 5" in January or c) three cuttings per 6" not later than February 15. Pinch two weeks later or when at least four pairs of new leaves are present. Do not light. They should flower in May.

4. If early flowering is desired, move the schedule up accordingly. Light the plants with 5-20 footcandles incandescent light for four hours each night (10:00 p.m. to 2:00 a.m.) for 21 days.

After this exposure to short nights for flower bud initiation, night length may be disregarded. For instance, to flower for April 15, begin lighting on February 20, allowing 55 days at 60°F.

VARIETIES

There are a great many varieties of fuchsia. The current popularity of hanging pots has all but eclipsed the upright growing varieties in favor of the pendulous. Explore the diverse types available. And remember that many can be grown as standards to form a spectacular show of color on top of a straight trunk.



PESTS

Whitefly is the most common pest encountered. Resmethrin has greatly alleviated this problem (CT GNL 51). Other registered materials include dithio, DDVP, demeton, disulfoton, endosulfan, malathion, nabam and oxydemeton-methyl (CT GNL 86).

Aphids cause curling of leaves and can seriously damage a crop. All of the above materials plus guthion and nicotine will control them.

Mealy bugs may be a problem, especially when old stock plants are carried over. Labelled materials include demeton, dithio, DDVP, malathion and nabam.

Spider mites are seldom found on fuchsias unless a heavy infestation occurs on other nearby plants. Most miticides will provide efficient control.

DISEASES

Fuchsia rust is widespread and can cause serious loss (Figure 4). It may be most serious during propagation. Varietal resistance exists (CT GNL 79). Ferbam or mancozeb should be included in your dust or spray program as a preventative. If rust is found, a spray of one of these materials will protect the foliage from new infections but will not eradicate the old ones.

Fuchsias are relatively resistant to other common greenhouse diseases.

In conclusion the ability to control flowering in Fuchsia could be very useful and profitable. Full blooming plants practically sell themselves. The ability to control flowering time will permit commercial growers to produce a colorful selection of full blooming plants



Figure 4. Rust, *Pucciniastrum epilobii*, on fuchsia.

for the public whenever desired. This could offer a good winter sales item to compete with or amend the traditional flowering pot plants.

LITERATURE

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