

# Herbaceous Perennials: *Oxalis crassipes* 'Rosea'

Part 10 of our 13-part series on herbaceous perennials takes a look at the noteworthy *Oxalis crassipes* 'Rosea'.

by CATHY WHITMAN, BETH FAUSEY, ERIK RUNKLE, ROYAL HEINS, ART CAMERON, and WILL CARLSON

**T**HE genus oxalis includes about 850 species, many of which are native to South Africa or South America. Oxalis is from the Greek word for sharp, referring to the sharp taste of the leaves, which contain oxalic acid. One species of oxalis is all too familiar to many people – it's the yellow-flowered weed that has invaded many gardens and greenhouses. However, not all species are weedy as the genus in-

cludes a number of very attractive plants for the home interior or garden, some with patterned or bronze foliage. The shamrock plant sold for St. Patrick's Day is *Oxalis regnellii*, and another variety of *O. regnellii*, purple oxalis, has deep purple leaves and pink flowers. *Oxalis adenophylla* displays silvery foliage, and *O. tetraphylla* 'Iron Cross' has purple bands on its leaflets.

*Oxalis crassipes* 'Rosea' is commonly known as strawberry oxalis or pink wood sorrel. This species is a perennial that has been used in Southern gardens for many years, where the plants form low mounds and are ideal for the edge of flower borders.

Thanks to its compact growth habit, this variety has good potential as a flowering potted plant, as well as an accent plant in baskets and planters. *O. crassipes* 'Rosea' produces numerous bright pink flowers, and has attractive, vivid green leaves (Figure 1). Like many members of the genus, the leaves close up at night or when light levels are low.

*O. crassipes* 'Rosea' prefers shade to part sun, well-drained soil, and is hardy in

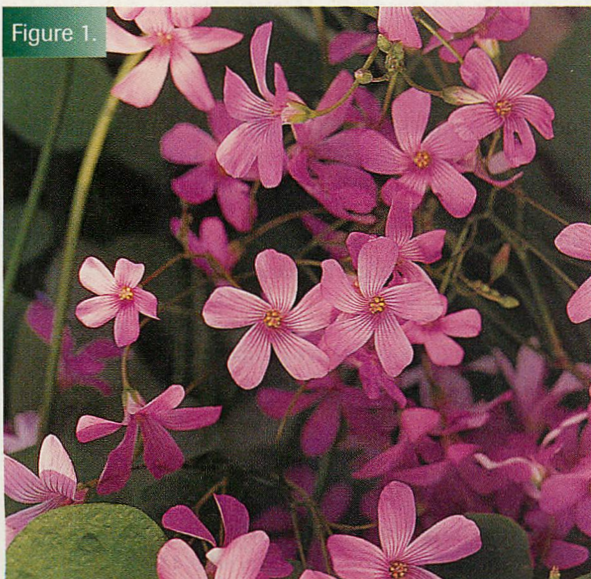


Figure 1. The abundant pink flowers of *O. crassipes* 'Rosea' make it one of the more attractive members of the genus.

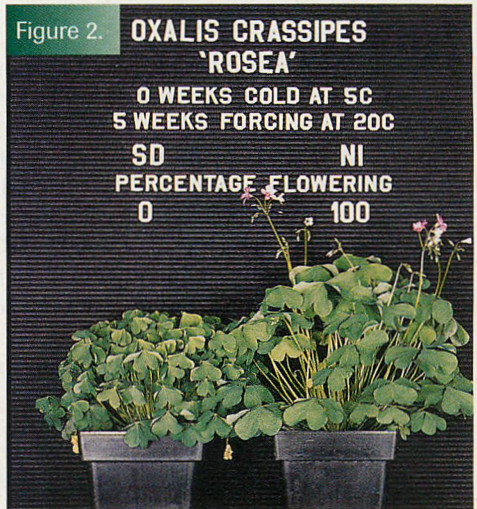


Figure 2. A cold treatment was not needed for flowering of *O. crassipes* 'Rosea' forced under long days. The long day treatment in this experiment was a night interruption (NI): a nine-hour daylength with a four-hour NI provided with incandescent lights from 10 p.m. to 2 a.m. Short day (SD) signifies a nine-hour daylength.

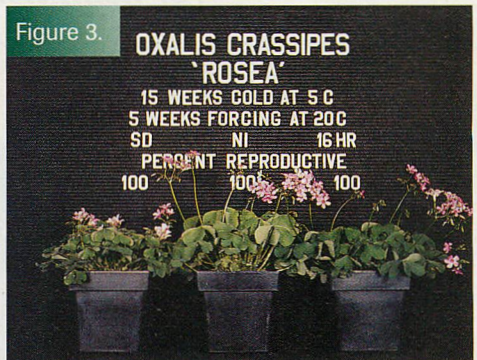


Figure 3. Cold treatments of six or more weeks induced flowering in *Oxalis crassipes* 'Rosea' plants forced under nine- or 10-hour short days. However, the plants produced only a single flush of flowers when forced under short days. Plants forced under long days (16-hour days or NI) continued to produce flowers throughout the course of the experiment.



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USDA zones 5 or 6 to 10 (we are currently testing hardiness in Michigan). This reliable plant has a long bloom season and produces abundant flowers. It goes dormant during hot dry summers, but then reemerges and blooms again in the fall. Another cultivar is 'Alba,' which has white flowers.

#### Propagation And Plant Size

*O. crassipes* 'Rosea' does not set viable seed, so growers and gardeners need not fear that it will become a nuisance. Plants are propagated by division of the rhizomes. Crowns can be divided into pips or offsets; these rooted in three to four weeks at 73°F (23°C). We have had no problems with juvenility, and plants with only 13 to 17 leaves when forcing began bloomed readily.

#### Cold Treatment

A cold treatment was not needed for flowering of *O. crassipes* 'Rosea' when plants were forced under long days, and plants began flowering in as little as five weeks at 68°F (20°C) (Figure 2). A 15-week cold treatment did not significantly hasten subsequent flowering under long days, but cold-treated plants were three to five inches (seven to 13 centimeters) shorter at flower than uncooled plants. If cooled at 41°F (5°C) for six or more weeks, plants produced an initial flush of flowers under short (nine- or 10-hour) days, but they did not continue to flower (Figure 3).

Cold treatment at 41°F (5°C) is not detrimental to this species,

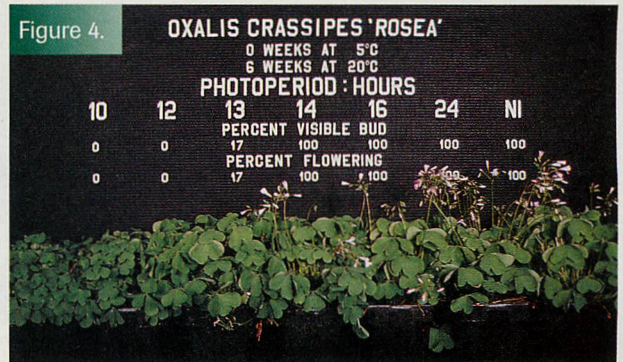


Figure 4. Noncooled *O. crassipes* 'Rosea' plants required photoperiods longer than 13 hours for rapid, complete flowering. NI represents a four-hour night interruption.

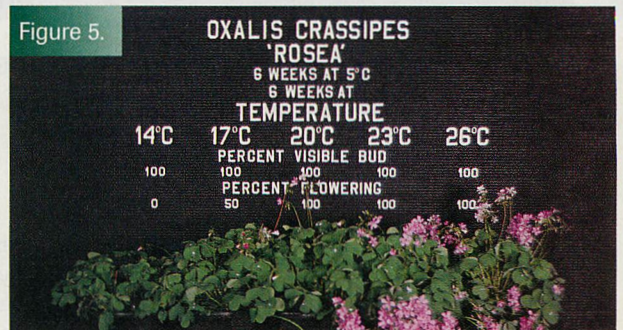


Figure 5. Time to first flower for *O. crassipes* 'Rosea' after beginning long days is about five to six weeks at 68°F (20°C). Plant quality is best at temperatures below 80°F (26°C).

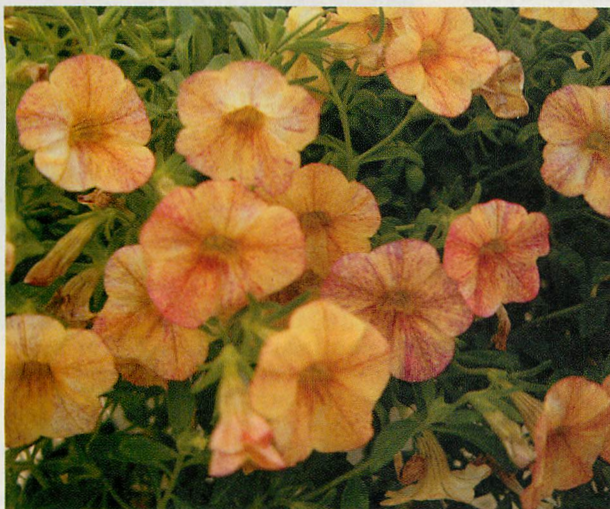


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and plants survived cold storage in lighted coolers for up to 15 weeks with few problems. Thus, although plants tolerated extended periods of cooling at 41°F (5°C), there was no beneficial effect of cold if plants were subsequently forced under long days.

#### Photoperiod

*O. crassipes* 'Rosea' responded strongly to photoperiod.

#### Formula For Success: *Oxalis crassipes* 'Rosea'

- 1 Provide long photoperiods to induce flowering – at least 14 hours or night interruption.
- 2 Use well-drained media. Excellent drainage is important.
- 3 Cold treatments have little effect on flowering or plant appearance. Plants are quite hardy and can readily be held or overwintered in coolers or a cool greenhouse.
- 4 Plants have a very long bloom season but are most attractive shortly after they begin flowering.

Noncooled plants required daylengths longer than 13 hours for rapid flowering (Figure 4). Plants cooled at 41°F (5°C) for six or more weeks produced a few flowers under short days, but didn't continue flowering. For best flowering, long days should be provided to all plants using a photoperi-

Figure 6.



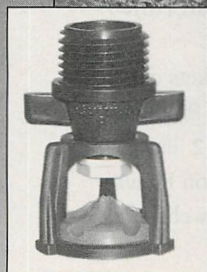
Figure 6. A single *O. crassipes* 'Rosea' plant after extended time in the greenhouse. This species has good potential for hanging basket production because it continues to produce flowers as long as conditions are favorable.

od of at least 14 hours or a four-hour night interruption. If blooming plants are moved to short days, existing flower buds will open but the plants will not form additional flower buds.

#### Light Quantity

As a shade-tolerant plant, *O. crassipes* 'Rosea' does not require high light levels. We did find that supplemental high-pressure sodium lighting (500 to 600 footcandles for 16 hours), which increased daily light amounts by five to six moles per day under our conditions, increased the number of flowers per plant. However, plants grown without supplemental light-

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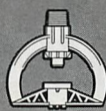
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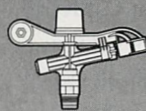
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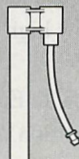
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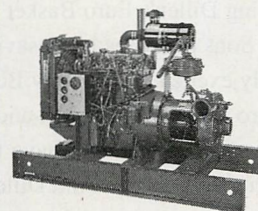


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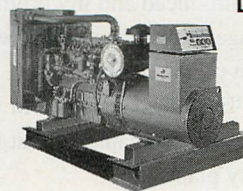
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ing were very attractive and commercially acceptable.

**Media, Fertilization, And Irrigation**

In the garden, *O. crassipes* 'Rosea' prefers well-drained soils. Plants in our experiments performed very well in a

standard soilless medium, and we had no problems with crown or root rot. Nitrogen levels of about 100 ppm N in a constant liquid feed program were sufficient for healthy growth, and we maintained pH levels between 5.8 and 6.2.

**Plant Height Control**

*O. crassipes* 'Rosea' is quite compact in the garden. It reaches a natural height of about 12 inches (30 centimeters) in the

pot, and height control is not necessary if plants are sold shortly after they begin flowering. The plants continue to produce leaves and flowers, and can become floppy after extended time in the pot. Repeated applications of Sumagic at 15 ppm controlled this elongation very effectively. We also observed some height reduction from Cycocel at 1,500 ppm, with no phytotoxicity. If plants become overgrown, they can be complete-



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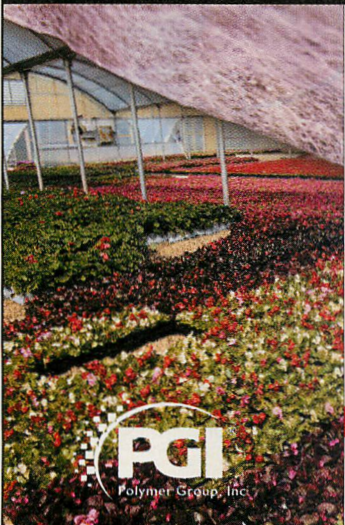
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ly sheared back and they will reflush and re-bloom in several weeks if provided with long days.

### Temperatures And Crop Scheduling

The time to first flower for *O. crassipes* 'Rosea' is about five to six weeks after starting long days at 68°F (20°C) (Figure 5; Table 1). The plants tolerate a wide range of temperatures, but are more attractive at temperatures below 80°F (26°C).

### Disease And Insect Pests

We observed no disease or insect pests on *O. crassipes* 'Rosea' during the course of this research. *O. crassipes* 'Rosea' appears to be a healthy, vigorous, trouble-free crop.

### Postharvest Concerns

*O. crassipes* 'Rosea' continues to produce flowers as long as conditions are favorable and plants are under long days. Plant leaves will close in low-light interior conditions, but will reopen

Table 1. *Oxalis crassipes* 'Rosea' Production Schedule

Duration	Cultural practice	Temperature	Photoperiod
3 to 4 weeks	Make divisions ↓ Rooting	73°F (23°C)	Natural daylength
<b>-OR- Plant plugs</b>			
Variable	Bulk (optional)	60°F to 70°F (16°C to 21°C)	Short days (< 12 hours)
Variable	Cold treatment (optional)	41°F (5°C)	Short days (< 12 hours)
Begin Forcing			Long days (> 14 hours or night interruption)
↓	↓	↓	<u>Visible bud to flower</u>
↓	↓	73°F (23°C)	4 to 5 weeks to flower
↓	68°F (20°C)		68°F - 14 days
63°F (17°C)	5 to 6 weeks to flower		
7 to 8 weeks to flower			

when returned to higher light levels. This plant has the capacity to generate an amazing number of flowers, has a long bloom season, and exhibits good postharvest life (Figure 6). **GG**

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