



## Reasons Why Trees and Shrubs May Fail to Bloom

All trees and shrubs produce flowers. The flowers of many trees and shrubs are small and inconspicuous. Maples, oaks, and pines, for example, do flower, but they usually go unnoticed by most individuals. Many other trees and shrubs, such as crabapples and lilacs, are planted specifically for their attractive flowers. Many gardeners become concerned when their flowering tree or shrub fails to produce blossoms. The failure of woody plants to bloom may be due to several factors.

**Plant Immaturity** -- All plants must be physiologically mature before they are capable of blooming. During the juvenile stage of growth, plants do not bloom. For annuals, such as marigolds and petunias, the juvenile stage may last for only a few weeks. Trees, however, may not be physiologically mature for 10 or more years. Apple and pear trees planted in the backyard garden may not flower and bear fruit for 4 to 6 years. The actual length of time from planting to flowering varies tremendously. Differences exist among varieties or cultivars. Generally, a Jonathan apple tree will bear fruit sooner than a Red Delicious. Dwarf and semi-dwarf fruit trees bear earlier than standard-sized trees. Lilacs may not bloom for 3 to 5 years after planting.

**Winter Injury** -- The flower buds of most plants are generally less hardy than the leaf buds. Low winter temperatures may kill the flower buds without damaging the leaf buds. For example, temperatures below -20°F will kill the flower buds on peach trees. As a result, those peaches that survive in Iowa often fail to produce a crop. Many forsythia varieties often fail to bloom well because of low temperature injury. Two forsythia varieties that bloom reliably in Iowa are 'Meadowlark' and 'Northern Sun.' The flower buds on these two varieties have survived temperatures of -30 to -35°F.

**Alternate Flowering** -- Some trees, such as fruit trees and crabapples, bloom heavily one year and then sparsely the following year. Hand thinning of excess fruit on fruit trees will help to overcome this tendency to flower and bear fruit in alternate years. 'Bob White,' 'Dolgo,' and 'Red Splendor' are three crabapple varieties that tend to flower heavily in alternate years.

**Cultural Practices** -- Heavy pruning and excessive nitrogen fertilization promote vegetative growth and inhibit the production of flower buds. Generally, fertilization of trees and shrubs is unnecessary if the plant is growing well and possesses good leaf color. Spring-flowering shrubs, such as forsythia and lilac, bloom from buds formed during the previous season's growth. Pruning these shrubs heavily in late winter or early spring will remove much of the flowering wood.

**Insufficient Sunlight** -- Many trees and shrubs require at least 6 to 8 hours of direct sunlight in order to bloom properly. Generally, the amount of flowering decreases as the shade increases. Lilacs, for example, bloom heavily in full sun, but bloom sparsely in shaded sites. Even many shade tolerant plants bloom poorly in heavy shade.

These are some of the common reasons why trees and shrubs may fail to flower. Good plant selection, proper planting and care should help to insure flowering. Gardeners, however, should also be patient. A non-blooming plant may just need a little more time.

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