

## Hydrangea for Temperate Landscaping

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Hydrangeas are popular ornamental shrubs grown for landscaping temperate regions. These are usually hardy plants with 3-6 feet plant height and are originated from south east Asia and north-south America. Due to big flower heads in between dark green foliage, it gives a beautiful contrast effect in natural scenery. Usually, the flower heads of hydrangeas are either mop head (globe shaped flower cluster), or panicle (long, cone-shaped flower cluster) or lace cap (flattened cluster of tiny, immature buds surrounded by 4-5 petals). Out of these the most commonly recognized form of *Hydrangea* bloom is mopping head. It is one of the rare plants that accumulate aluminium released from acidic soils and forms complexes in the hydrangea flower imparting blue colour.

### Species

It belongs to genus *Hydrangea* and comprises of about 100 species. Most of the species of hydrangeas are mild toxic in nature due to the presence of glucocyanides. Out of several species of hydrangeas, *Hydrangea macrophylla*, *H. quercifolia*, *H. arborescens* and *H. petiolaris* are the common occurring species. *Hydrangea macrophylla* are the big leaved hydrangeas commonly found in garden. The leaves, roots and flowers bear antimalarial, antitussive and diuretic properties and are reported to be more potent antimalarial than quinine. It is commonly known as big leaf hydrangea or common hydrangea. *H. quercifolia* is another species which is commonly known as oak leaf hydrangea and is categorized under

specimen hedge which if left untrimmed, display a natural background for screening undesirable portions of the garden. To bring mobility in a landscaping area *H. arborescens* and *H. petiolaris* species are more important. *H. arborescens* bears scented flowers whereas *H. petiolaris* is a climber type species with sweet scented leaves.

### Varieties

Under ever-blooming hydrangeas (flowering occurs continuously both in last seasons and current season's stems) 'All Summer Beauty', 'David Ramsey', 'Endless Summer', 'Mini Penny', 'Oak Hill' and 'Penny Mac' varieties are available. Under long blooming hydrangeas (flowering occurs in vigorous old and new shoots over a very long season) 'Altona', 'Ami Pasquier', 'Europa', 'Forever Pink', 'Frillibet', 'Lilacina', 'Lanarth White', 'Mousseline', 'Nikko Blue' varieties are available.

### Soil

Hydrangeas are the versatile plants which can thrive both in sandy to clayey loamy soils. It can grow easily in acidic to alkaline soil; however, soil drainage is an important factor to be adapted. Soil should be of proper tilth and proper organic amendments should be made. For proper temperature and moisture maintenance, mulching is required. Heavy soils are unfit for hydrangeas as this may lead to improper plant growth and root rot problem.

### Propagation

Hydrangea plants are propagated in monsoon by softwood cuttings. Soft wood cuttings are made from a healthy 1-2 year stem. With the help of a sharp clean knife, 6-8 cm cuttings are prepared and the lower half of the leaves is stripped off. After root hormone treatment, the cutting is inserted 3-4 cm deep into sterile moist sand, vermiculite or sphagnum moss.

### Planting

After rooting, the cutting is planted in a mix of loam and peat moss. For planting, 4x4 ft sized pit is dug and is filled with well drained organic manured soil. Due to aggressive root growth of plant, deep soil is dug and plant is taken out carefully. After this the plant is planted and pressed properly. Light irrigation is done to make the soil moist. It is usually done in

early summer or late winter in an area having afternoon shady conditions.

### Flowering

Hydrangea flowers are produced from early spring to late autumn season. Large flowers appear in the form of flower heads at the stem end. Each individual *Hydrangea* flower is relatively smaller; however, the display of color is enhanced by a ring of modified bracts around each flower. In most species of *Hydrangea*, the flowers are white, but in some species, can be blue, red, pink, or purple. In *Hydrangea* species the exact color often depends upon the acidity or alkalinity of the soil. Acidic soil produces blue flowers; neutral soil produces pale cream flowers, and alkaline soil results in pink or purple flowers. In many species, the flower heads contain two types of flowers, small fertile flowers in the middle of the flower head, and large, sterile bract-like flowers in a ring around the edge of each flower head. *H. macrophylla* flowers well in morning sun to afternoon shade and requires at least 5 hours sunlight a day. Full shade is dangerous for plant growth and its flowering. Oak leaf hydrangea can sustain in a wide range of sunlight but in hotter climate blooms for a longer time.

### Fertilization

Fertilizers are applied during active growth of plant or during spring-summer season. This plant responds well to slow releasing balanced fertilizers like Osmocote usually with 10:10:10 N: P: K ratio.

Fertilization is stopped after August or in dormant period. Usually per plant with moderate growth 100-200 g of fertilizer is sufficient.

### Pruning

Pruning is done immediately after blooming. The entire *Hydrangea* shoot can be cut back to the ground if it is too vigorous. After pruning hydrangeas quickly re-grow to its prior size and begin blooming again. Pruning should be done with care as the biggest culprit for lack of flowers is incorrect pruning. The easiest way is to take out some of the older canes so that overcrowding of shoots is discouraged and new shoot growth is encouraged. Stems are cut back to a healthy set of buds.

### Thinning

To encourage larger flower clusters, thinned is done. Half of the original number of stems are thinned out in order to produce a greater number of quality flowers.

### Common problem

One of the common problems in hydrangea is lack of flowering. This problem may arise due to a number of factors like too much shade or too much application of nitrogen fertilizers. Heavy irrigation, frost and incorrect pruning are other causes which may lead to flower failures in hydrangeas.

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