

PEONY'S ENVY NURSERY AND DISPLAY GARDEN

The Kings and Queens of Flowers - Introduction to Peonies

Twenty five species of peonies in four subgenera are currently validated, reference Hada (2004). The science is somewhat fluid,

with the promotion and demotion between species and subspecies a relatively common occurrence. This presentation highlights three species of herbaceous peonies—the queens--*P. officinallis*, *P. lactiflora*, and *P. obovata*, subspecies *japonica*; one species of tree peony—the kings-- *P. suffruticosa* along with a subspecies *P. rockii*; and one group of hybrids commonly known as the Itoh peonies or more broadly as intersectional peonies. Peonies are native throughout the northern hemisphere and have been cultivated for centuries both in Europe and Asia.

LECTURE NOTES

Types of Peonies



Herbaceous



Intersectional



Tree



PEONY'S ENVY

WWW.PEONYSENVY.COM

Kingdom Plantae

Division Magnoliophyta

Class Magnoliopsida

Order Saxifragales

Family Paeoniaceae

Genus Paeonia

Herbaceous Peonies are hardy deer-resistant perennials that live for generations. Time and cultivation has produced an astounding selection of flower color, form, and fragrance. Blooming from late May into June, they enhance the structure and beauty of any perennial garden and produce some of the best cut flowers available.

Intersectional Peonies, also know as Itoh Hybrids, are a cross between an herbaceous peony and a tree peony. These peonies produce tree peony flowers and foliage on plants that behave like herbaceous peonies. Their strong stems do not require staking and their unique crossing produces cut flowers in shades not available in herbaceous peonies. Intersectional peonies bloom between their parents, after tree and before herbaceous.

Tree Peonies are strong woody shrubs that last for centuries. They are both deer resistant and easy to grow. Reaching maturity in 10-15 years at a height of three to seven feet, they add structure and elegance to gardens in all seasons. Blooming from April into May, tree peonies offer dinner-plate sized flowers in all shapes & colors and continue to compliment the garden with lush green leaves in the summer fading to bronze and purple in the fall.

FLOWER COLOR AND SHAPE



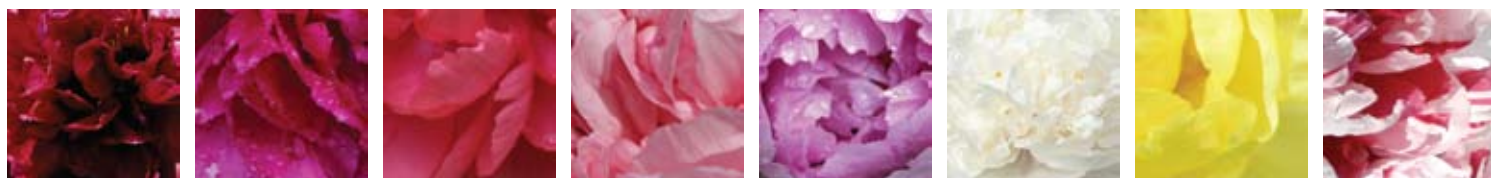
WWW.PEONYSENVY.COM

Flower Color

Peonies come in a multitude of colors. Cultivated for centuries peony flowers range from purest white to deepest merlot, from chiffon to coral to stripes.

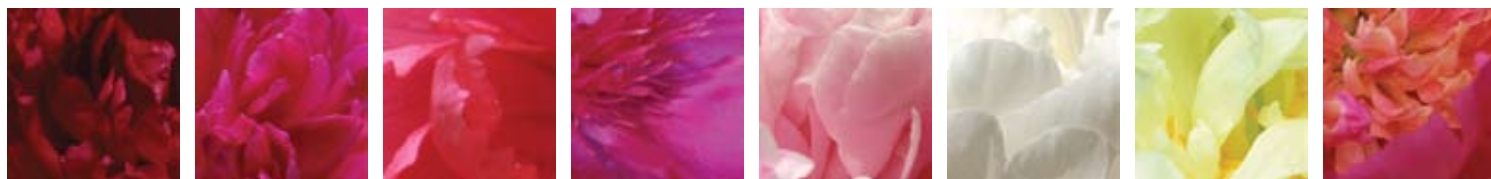
The Basics of Color - Yellow tree and yellow intersectional peonies are common but yellow herbaceous are rare. Coppery browns are available only in intersectional varieties. True red cultivars are hard to find; the herbaceous peonies P. 'Cinnabar Red' and P. 'Red Charm' are as close to Valentine's red as peonies offer. White and pink herbaceous peonies are strong growers and tend to be fragrant, black herbaceous are generally not. Black herbaceous are strong growers but black tree peonies tend to be weak.

Colors of Tree Peonies



Black Red Coral Pink Lavender White Yellow Multi

Colors of Herbaceous Peonies



Black Red Coral Purple Pink White Yellow Multi

Flower Shape



Anemone Single Lotus Chrysanthemum Rose Golden Circle Crown Hundred Proliferate

Peony flowers come in 8 flower forms from a simple daisy like flower to a complex ball of petals. The more petals, the longer the flower will last, but more petals means more weight and heavier flowers, and thus the need for support. Lighter flowers are sometimes labeled "landscape peonies" as they are easy to use in the landscape with no need for support. Heavier flowers are old fashioned favorites, a mainstay of the perennial border and the cut flower industry for over one hundred years.

GUIDE TO TREE PEONIES



Plant Height

Tree peonies can grow to be seven feet high, but most specimens even after decades remain between three and five feet. As a rule, the milder the climate, the less winter die back and the taller the potential of the plant. Tall varieties add five to six inches of new wood every year while dwarf varieties add less than one. Taller varieties will make a bigger statement earlier in your garden; dwarf varieties can be planted as borders and under windows. Dwarf varieties can be expected to reach 3', Medium 5' and Tall 7'



Tall



Mid



Dwarf

Plant Form

Tree peonies bushes grow upright or more laterally. Usually taller varieties are more upright and dwarf varieties more lateral, but not in all cases. Upright varieties sacrifice some lower leaf coverage and need to be placed in the garden accordingly.



Erect



Partially Spreading



Spreading

Leaf Type

Tree peony leaves provide beauty in the garden for three seasons. They leaf-out in early in April and provide spring, summer and fall color. The size of the leaf varies from long and thin to big and fat and can make a difference in the plant's use in the garden.



Long Thin



Medium



Round/Orbicular



W W W . P E O N Y S E N V Y . C O M

Flower Posture

Tree Peony Flowers can be upright, lateral, or pendulous. Upright flowers are carried at the ends of stiff stems, well above the leaves and grow at the top and sides of the bushes. Lateral flowers grow at the edge of the leaves. They are easy to see, but concentrate themselves on the sides of the bushes. Pendulous flowers have short, flexible stems and hang down under the leaves.



Upright



Lateral



Pendulous

Recommended Varieties

Tall - High Noon, Rosy Purple, Red Facing the Sun, Smiling in the Thickets, Rosy Sunshine, Concubines Feather

Medium - Sun on the Sea, Red Lotus, Red Swallow, Hu's Red, Fragrant Champion, Red Fortress

Dwarf - Finest in the World, Black Flower Champion, White Jade, Lian Tian Jade, Noble Indian Red

Recommended Gansu Varieties

Purple Lotus, Pink Lotus, Pink Scarf, Budding Beauty

For information on tree peony planting and care please visit www.peonysenvy.com/care_tree.html

Tree Peony References

Lianying, Wang, et.al. 1998. Chinese Tree Peony, Beijing China. China Forestry Publishing House.

Chen, D. Z. & McLewin, W. (2006) Peony Rockii and Gansu Mudan. Wellseley-Cambridge Press Stockport, UK.

GUIDE TO INTERSECTIONAL PEONIES

History

The group of peonies known as the Itoh of Intersectional peonies is a relatively new introduction. They are a hybrid produced by crossing a tree peony with an herbaceous peony. Mr. Toichi Itoh of

Japan is credited with being the first to do this successfully. He crossed *Paeonia x lemoninei*, a hybrid tree peony, with *P. lactiflora* 'Kakoden', a white-flowered herbaceous peony. The tree peony was used as the pollen parent, the herbaceous as the seed parent. The crossing produced 36 seedlings, nine of which had dominant characteristics of tree peonies and became the first Itoh hybrids. Four of these seedlings, with permission from Mr. Itoh's widow, were patented by Louis Smirnow in the late 1960's. The American Peony Society refers to this new group as the Itoh Hybrids Group, but more widely the original four are the Itoh Hybrids and all subsequent hybrids are referred to as intersectionals.

This group of plants is only now becoming widely available, coming down in price from up to 1,000 per plant in the late 1990's to less than 100 more recently. The leaves and flowers resemble tree peonies, but the foliage is herbaceous. One plant may produce 50 or more dinner-plate sized flowers on strong short stems that do not require staking. They reach peak bloom between tree and herbaceous peonies, can be used as cut flowers and offer an astounding array of yellows and golds-- colors not widely available in herbaceous peonies. They are disease resistant, less susceptible to powdery mildew than their herbaceous parent and less susceptible to botrytis blight than their tree peony parent. Hybridization and cultivation methods continue to be active, with Don Hollingsworth, Roger Anderson, William Seidl, and Don Smith all working in the field.

Original Toichi Itoh Hybrids - Introduced in the United States by Louis Smirnow in the late 1960's

P. 'Yellow Crown', P. 'Yellow Dream', P. 'Yellow Heaven', P. 'Yellow Emperor'

Other Intersectional Hybrids

Don Hollingsworth's P. 'Garden Treasure' 1984-APS Gold Medal Winner

Roger Anderson's P. 'Bartzella' 1986, P. 'Copper Kettle' 1999, P. 'First Arrival' 1986

Don Smith's P. 'Impossible Dream' 2004

William Seidl's P. 'White Emperor' 1989

Intersectional Peony References

Page, Martin "2005" *Paeonia Itoh Hybrid*. New Plants. pp. 36-39



W W W . P E O N Y S E N V Y . C O M

GUIDE TO HERBACEOUS PEONIES

Flower Posture

Flower form and peony height influence the behavior of herbaceous peony plants. Traditional peonies, such as those that could be found in your grandmother's garden, were often bred to have long stems and huge full flowers. These enormous blossoms produce some of the best cut flowers available. As garden plants these peonies tend to bend under the weight of the flowers and require staking to remain upright. Plants with these characteristics include those of chrysanthemum, rose, golden circle, crown and hundred proliferate flower forms and have innumerable dense petals. Lighter flower forms such as anemone, single, and lotus tend to float above the plant, requiring far less support. However, due to their fewer number of petals these flowers tend to do not last as long in the hot sun nor are they the best cut flower varieties.



The necessary support for the herbaceous peony is determined by flower form and plant height. The shorter the plant the sturdier the stems. The taller the plant the more support it will need. The most low maintenance garden plants tend to be 2.0-2.5' anemone, single and lotus varieties. The best cut flowers tend to come from 3' tall chrysanthemum, rose, golden circle, crown and hundred proliferate shaped flowers.



Anemone
Single
Lotus



Chrysanthemum
Rose
Golden Circle
Crown
Hundred Proliferate

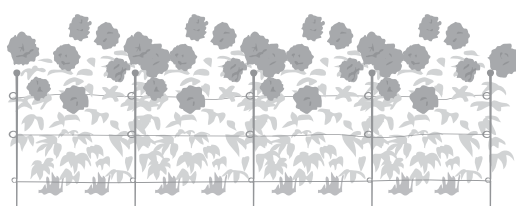
Staking Options



Tomato Rings



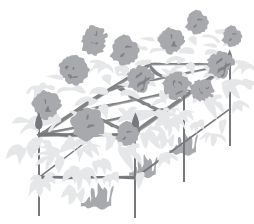
Peony Rings



Border Fencing



Fencing



Fencing with Bamboo Lattice Overlay



Recommended Varieties

Single - Plate of White Jade, Pink as a Young Girl, Moonlit Purple Lotus

Anemone - Buddha's Lotus Seat, Butterflies Favorite, Purple Phoenix Feather, Purple Lotus Seat, Smart Girl

Boarder/Row Planting - Great Prosperity, Exquisite Jade, Spring Laughter, Black Dragon

Fragrant - Xi's Face Powder, Bronze Stemmed Purple, Fat Concubine, Festiva Maxima, Rare Flower of Frosty Dew

Cut Flowers - Pink From Seed, Peach Blossom in Flying Snow, Champion of Purple Red, Embroidered Black Ball, Snow Peak

For information on herbaceous peony planting and care please visit www.peonyseenvy.com/care_herbaceous.html

Herbaceous Peony References

Carsten Burkhardt's Web Project Paeonia - <http://www.paeon.de/>

Seven Weeks of Bloom - <http://bloomdate.paeonia.com>

Peony Societies

American Peony Society - www.americanpeonysociety.org

Heartland Peony Society - www.peonies.org

Pacific Northwest Peony Society - www.pnwpeony.org

Mid-Atlantic Peony Society - www.midatlanticpeony.org

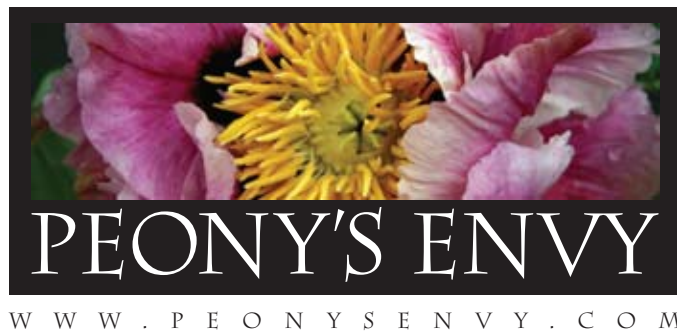
Minnesota Peony Society - www.mnpeony.org

The Peony Society-UK - www.paeonia.org

PEONY CARE

General Care

Peonies are relatively low maintenance plants. They are naturally deer resistant and live for generations. Peonies do not require a lot of fertilizer and once established require little water. Often the best looking peonies can be found in abandoned gardens where they are able to prosper with neglect.



Herbaceous peonies are sensitive to planting depth and should be planted 1 to 2 inches below the surface of the soil depending on your horticultural zone. Do not mulch herbaceous peonies as this causes them too well insulated preventing them from flowering.

Tree peonies should be planted deeply, the depth determined by whether or not it is a grafted plant. Grafted peonies should be planted so the graft is six inches below the surface of the soil. Tree peonies on their own root need to be planted so that the joint of the first notch or branch is just below the surface of the soil. For details on planting instructions and care please visit our website at www.peonysenvy.com

Disease - in increasing order of severity

Powdery Mildew-white grey mold. Onset in late summer and early fall when humidity is high. Fast spreading and insidious. Turns leaves white and then brown as the leaves wilt prematurely. Prevention is the best if not only cure. Ten percent milk solution or 1% baking soda solution sprayed on plants in early spring through just before the bloom is reported to kill spores prior to infection. Copper sulfates are often recommended chemical treatments. However, as this disease is more cosmetic than lethal, early organic treatments to prevent and good fall and spring treatments to eradicate are encouraged as alternatives.

Red Spot, Leaf Blotches, Measles-cladosporium paeoniae. Onset late summer. Again more cosmetic than lethal. Remove infected portions of plants.

Mosaic Virus - light yellow and green wavy lines appear on leaves late spring into summer. More cosmetic than lethal, cut away diseased portions. If virus continues for several years in the same plant, remove this plant as a way to prevent infection from spreading.

Botrytis Blight-Botrytis paeoniae . A fungus like the more common Botrytis cinerea, but with plants in the family paeoniaceae as strict hosts. Onset on buds stems and leaves early spring when temperatures remain below 70 degrees, humidity high and air circulation poor. Dark red sausage shaped sclerotia appear on stems and buds, and edges of leaves turn black. White spores are

sometimes present. Fast spreading and lethal to tree peonies. Cut away diseased portions on herbaceous and intersectional peonies immediately. As it is not possible to cut away more than a small fraction of a tree peony and maintain its viability, chemical applications may be necessary. Copper sulfates are recommended.

Followed by fall and spring clean-up and treatment of soil the following spring.

Phytophthora Blight-looks similar in onset to Botrytis with the added danger that the crown and root are also infected. Rot can occur under ground where detection is more difficult. Treatment with copper sulfate is recommended and plant removal may be necessary if detection is not made early. If it is necessary to remove an infected plant, remove infected soil as well and do not replant peony roots in the same area for several years.

Phomopsis-a disease infecting woody shrubs and more commonly found in junipers-phomopsis is beginning to show up on tree peonies. Highly lethal, dark scabs show up on the stems and branches. White dust appears at the edges of the scabs as the disease progresses. Treatment is required and copper sulfate is recommended.

In all cases, let common sense prevail. Remove diseased portions of plants when the weather is dry, bag diseased portions of the plants immediately after cutting and do not compost, dip clippers in 10% bleach solution after each cut. Prevention is best cure, well spaced plants with good air circulation, as well as fall and early spring clean-up are recommended. Early treatment is better than late, and if disease lingered in the garden in the fall, treating the ground early spring before plants emerge helps reduce re-infection. Healthy plants become infected less easily, so keep the dirt and plants healthy: compost, compost, compost. Check organic options before chemical ones. When in doubt as to what ails your plant, sooner than later, send samples of infected plants to your agricultural extension office's diagnostic center to better determine options for treatment.

Peony's Envy offers one of the most extensive collections of tree and herbaceous peonies in the Northeast. The nursery collection features over two hundred and fifty distinct cultivars. The gardens - located in Bernardsville, New Jersey within easy access of New York City and Philadelphia - feature over 30,000 plants in three acres of gardens. The nursery and gardens are open to the public in spring and fall check the website www.peonysenvy.com for hours and join the mailing list for newsletters, updates, and online specials.

Kathleen Gagan is the founder and owner of Peony's Envy.

