The Silent Revolution – The Art and Science of 21st Century Peonies

-Nate Bremer, Solaris Farms-

1. The Silent Revolution – The Art and Science of 21st Century Peonies - Nate Bremer – Solaris Farms
2. The Silencing
    - Lack of interest by the American public during 1960's to 1990's. Perception of all peonies is and remains to a great extent "Grandma's Peony" (fragrant, ant laden flowers that end up on the ground from their weight).
    - Myths and Misconceptions preventing widespread popularity
    - Price points are higher for peonies than other plants
    - Availability of quality cultivars is limited due to lack of propagators and growers
    - Past experience with inferior cultivars which are common in the trade
    - Cultural difficulties – most gardeners are used to plants requiring more attention and tend to provide conditions which are not those required by peonies
    - Warm climate zones struggle with peonies as do those that are extremely hot in the summer months
    - Incorrectly identified peonies are often the norm in commerce and gardeners find this frustrating
    - Inferior or the same cultivars are most commonly available and choice has been limited
    - Peonies are often sold in spring when gardeners are most enthusiastic – Fine, but gardeners need to be aware that fall plantings are more productive and successful
3. Entrenchment

    'Sarah Bernhardt' and a short list of other cultivars have been the most commonly available peonies for nearly a century. These old cultivars, while quite beautiful, exhibit many poor plant habits and their floral displays are inferior to many more recent introductions. Reason for entrenchment: Ease and low cost of propagation from old cut flower fields, poor education of the nursery industry, longevity of exposure to the gardening world and cost compared to newer cultivars.
4. The Revolution…
    - The INTERNET may be the largest reason for a peony renaissance (also misinformation). It allows greater exposure to newly developed plants, but has also allowed hybridizers to more quickly communicate with one another.
    - The Event Industry in the United States and much of the world has grown by leaps and bounds. Peonies are popular cut flowers for these events and are growing in demand.
    - The development of new cultivars with unusual traits and greater adaptability have recently taken center stage.
    - Gardeners are finding greater use for peonies beyond their short bloom displays in spring. Landscapes are now utilizing peonies to a greater degree.
    - Intersectional/Itoh, Lutea Hybrid and Suffruticosa/*P. rockii* influence cultivars have allowed peonies to be grown where they were not able to be grown in the past.
    - More specialty nurseries have come online and are offering select peonies
    - Specialty organizations like arboretums, public gardens, botanic gardens and parks are gaining popularity and assisting in the education of the gardening public in regards to peonies.
    - Commercial entities in the green industry have recognized the potential profitability of peonies and have grown. This isn't all good news.
    - In the late 1980's to late 1990's peony connoisseurs began to take notice in larger numbers.
    - Peony societies are becoming more popular. The largest and oldest, The American Peony Society, has once again become active and has numerous resources which have been helpful for educating the gardening public.
5. Fueled by…
    - A unique group coalesced over a 100-year period to bring us to this point
    - Hybridizers,
    - Propagators
    - growers
    - Distributers
6. Diversity!
    - Groups allow for diverse use
    - Each group and cultivar have unique characteristics
    - Provides diversity of use, bloom period and structure
7. Lactiflora Group
    - Common garden peony
    - Very long lived
    - Old cultivars tend to have poor flower carriage and bend to the ground with flower weight
    - Multiple flower forms
    - Often fragrant
    - Many make great cut flowers
    - A number of new cultivars have strong stems an are superior landscape subjects
    - Require full sun and good drainage
    - Cut annual stems to the ground in fall and remove debris from planting area
    - Avoid inexpensive sources due to plant quality, disease and identification
8. Herbaceous Hybrid Group
    - Early bloom
    - Large flowers in many forms, sizes and vibrant colors & blends

- Many have strong stems
- Newer types expensive, but many are reasonably priced and are of excellent for landscape use
- Require full sun an good drainage
- Hardy to zone 3
- Cut Annual stems to the ground in fall and remove debris from planting area
- Avoid inexpensive source due to plant quality, disease and identification

9. Herbaceous Species Group
    - These are typically small growing herbaceous peonies which are suitable for rock gardens and small plantings
    - Mostly single form flowers
    - Flower carriage is generally very good
    - Many variable foliar characteristics – often ornamental
    - May go dormant earlier in the year than other peonies
    - Some may be planted in light shade (*P. anomala* and its hybrids)
    - Require sharp drainage
    - Sourcing can be difficult due to rarity and specialty requirements
    - Often more expensive than others
    - Avoid inexpensive sources due to plant quality, disease and identification
10. Suffruticosa Group (Woody)
    - Most commonly available woody peony
    - Chinese cultivars should be avoided due to poor adaptability to continental climates
    - Japanese and American hybrids are best
    - Intolerant of wet conditions and high rainfall areas
    - Light shade tolerance
    - Hardiness zone 4 to 8, but zone 5 or higher, or microclimate in lower zones best
    - Grows to 3 to 5 feet or more depending upon siting and hardiness zone
    - Huge ornate flowers of red, pink, white and blends of those colors
    - Single, double and semi-double flower forms and no fragrance
    - Avoid inexpensive sources due to poor quality plant material, disease inaccurate identification
11. Suffruticosa Group (*P. rockii* and influenced hybrids)
    - Relatively new in commercial offerings
    - Hardiest of woody peonies – to hardiness zone 3, but hardiness 4 or greater is recommended
    - Light shade tolerance
    - Fine, well-spaced leaflets carried on long lived woody stems
    - Ornamental, long lived foliage during the growing season.
    - Some cultivars may reach 6 or more feet in height and may carry hundreds of large flowers.
    - Flowers range in color from red to pink to white. Also blends. Almost all cultivars have dark basal flares
    - Not easily sourced due to demand and relative rarity
    - Chinese imports, while most common are inconsistent in performance and often are diseased
    - Avoid inexpensive sources due to inaccurate identification, disease and quality
    - Slow to establish, but good grower there after
12. Lutea Hybrids (Woody)
    - Hybrids between two woody groups (Delavanyae x Suffruticosa)
    - Many different foliage habits, which are ornamental and long lasting
    - Tend to grow no taller than 3.5 to 4.5 feet in cold climates
    - May lose stems in winter, but are capable of blooming on new wood
    - Light shade tolerance
    - Produces ground shoots which enhance the shape of the plant
    - Flowers are highly variable from cultivar to cultivar
        - Double, single, semi-double
        - Large to medium size
        - Colors include yellow, corals, reds, blends, flares and near orange
        - Carriage may be downward in old cultivars – outward in newer cultivars
    - Hardy to Zone 4, but 5 to 8 or a microclimate planting in colder areas is best
    - Excellent for foundation plantings
    - Requires good drainage and is more tolerant of moist conditions than other peonies
    - Rapid growers once established
    - Few sources and may be expensive due to rarity
13. Intersectional (Itoh Group)
    - Cross between a herbaceous peony and woody peony
    - Grow as a herbaceous peony (cut stems to ground in fall and remove debris from garden)
    - Hardiness zone 3 to 8 (solid)

- Excellent Disease Resistance and wind resistance
- Rapid growth
- Ornamental long lasting foliage, much like Lutea Hybrid woody peonies
- Colors range from yellow, pink, red, coral, blends and may be color changers
    - Most red cultivars should be avoided for poor lasting foliage (genetic fault)
- Excellent upright flower carriage.

14. Landscape and Garden Use
15. Longevity
    - 50 or more years with minimal attention and maintenance
    - Prices should be viewed as a long term investment (we often spend the cost of a peony on a single evening's meal)
16. Emergence
    - Spring brings many shoots of different colors and forms
    - Highly unique and ornamental shoots occur most in species, hybrids and the Lutea Hybrids
17. Bloom
    - Flowering – late spring/early summer
    - Choosing cultivars with different bloom seasons can supply up to 6 weeks of bloom
    - Mass plantings can make a bold statement
    - Specimen planting allows for greater focus and interest
18. Post Bloom
    - The variety of foliar forms, colors and shapes are highly variable in peonies and many are quite decorative out of bloom
    - Peonies make wonderful foils for climbing plants (Clematis) and close plantings with Lilium.
    - Seed heads may supply interest as the become large through the season
    - Species seed heads are often quite colorful in fall
19. Disease Resistance
    - Many new cultivars are exhibiting excellent disease resistance
    - APS Award of Landscape Merit selections have as one of their selection criteria "Disease Resistance"
    - Diversity allows for selection of the best for disease resistance
20. Low Maintenance
    - Peonies are not "princesses" and generally require much less attention than many other plants
    - Providing a good site and some space minimizes maintenance
    - Some pruning for woody peonies and fall cleanup for herbaceous peonies are the basic terms of maintenance for peonies
21. Use
    - Peonies are multiple use plants
    - In or out of bloom they provide multiple use
    - Let your imagination be your guide
    - All that is needed is selection of appropriate plant material

22. Knowing the Plant
    - Peonies are not like many plants and their care is much less than for other garden plants
    - They flourish if provided the basics and will last a life time
    - High culture is their worst enemy (difficult for most people to deal with)
23. Site
    - Siting a peony properly will ensure long term success and will take care of most growing issues
24. Soil & Fertility
    - Fertile soil is necessary, but texture is often overrated (loose and friable isn't necessary)
    - Peonies often grow on rough gravel laden soils in nature and our domesticated plants do equally as well
    - Heavy amendment of soils should be avoided as it often changes drainage and soil structure
    - Peat and other compost materials hold water, thus must only be used as minor soil constituents.
    - Peat is a major factor in failure of new plantings – great packing material, not good for long term peony growth
    - Peonies do poorly on soils in which sand is the main constituent (its infertile)
25. Planting Considerations - Herbaceous
    - Fall only
        - Root in cooling soils (not warming soils of spring)
        - May be planted anytime soil is workable (not determined by air temperature – frosts are not a determining factor for planting, frozen soil is)
    - Some cultivars require specific conditions to perform best
    - 3+ years to establish completely
26. Planting Material – Herbaceous
    - Divisions from young plants (3 to 5 year olds)
    - Divisions must grow new roots – the old ones are not adapted to the new planting site and soil.

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- 3 to 5 dormant vegetative bud (eyes) divisions with **proportional root system**
- Not all buds typically are initiated
- Large old root divisions are less desirable
    - Decay
    - Lack of youthful properties
    - Serve as reservoirs
- Do not replant clumps without dividing
    - May do well 1 or 2 years and then go into decline
- Planting material is cultivar specific – don't expect everything to be the same

27. Planting Herbaceous Divisions
    - Hole preparation – may be a trench
        - Will accommodate division easily without effort
        - Thoroughly worked and broken down soil
        - Avoid amending hole – amend area broadly
        - The Million Dollar Hole and The Bird Bath Effect
    - .5" to 2.5" depth
        - Dependent on climate impacts on soil temperature
    - Any orientation is fine (avoid eyes facing down). Horizontal is fine and practiced by growers.
    - Soil should be evenly moist so it can be easily compressed
    - Fill planting hole 3/4th water and let settle, compress, add soil and overfill hole so soil creates a 2" mound broadly above planting, compress. Planting should be higher than surrounding area and will shed water.
    - **Intersectional are planted as herbaceous peonies are. Bury all stems if they come with the plants.**

28. Planting Considerations – Woody Peonies
    - Fall only
        - Best planted when soils are warmer as they root in warmer soils than herbaceous peonies
        - May be planted anytime soil is workable (not determined by air temperature – frosts are not a determining factor for planting, frozen soil is)
    - Planting material is cultivar specific – don't expect everything to be the same
    - Some cultivars require specific conditions to perform best
    - 5+ years to establish completely
    - Woody peony stems are essentially an extension of the crown of a peony and is subject to climate air qualities.

29. Planting Material – Woody Grafts & Divisions
    - Grafts or Divisions – both are excellent
        - Grafts are best for cold climate planting; Divisions are excellent for warmer climates.
        - Divisions require longer establishment time in cold areas and may die if planted late in the season
        - Poor quality grafts – adventitious and have given grafted plants a bad name.
        - Best grafts are 2 to 5 years in age.
        - All planting material should have stems cut back significantly. Encourages new shoots from below the soil line.
            - Old stems are short lived and will not sustain vigorous plant growth.
        - New plantings must grow new roots – the old ones are not adapted to the new planting site and soil.
    - Number of stems is not an indicator of plant viability or quality.
    - Old plants should be divided prior planting to force new rooting. Old plants lack youthful vigor and make poor transplant candidates
        - May do well 1 or 2 years and then go into decline
        - Divided plants are often unsightly and the use of a saw accomplishes division

30. Adventitious Rootstock – Image of herbaceous growth at base.
    - Scourge of inexpensive, poor quality woody peonies most commonly available to consumers
    - Competes for growing resources with woody peony
    - Often inhibits own-root development

31. Planting Woody Peonies
    - Hole preparation – may be a trench
        - Will accommodate graft/division easily without effort
        - Thoroughly worked and broken-down soil
        - Avoid amending hole – amend area broadly
    - 6"+ depth for grafts
        - Buried stems will become subsurface crown tissue and produce woody peony roots.
        - Protects graft union and allows for plants to grow new stems from below the surface – protection tactic from stem loss above the surface.
        - Rooting is cultivar specific
    - 3 to 4" depth for own-root divisions.

- Planting orientation can be horizontal, angled or upright. We prefer angled planting. The more stem that is buried, the better for long term health and performance.
- Soil should be evenly moist so it can be easily compressed
- Fill planting hole 3/4th water and let settle, compress, add soil and overfill hole so soil creates a 2" mound broadly above planting, compress. Planting should be higher than surrounding area and will shed water.

Warning… Shallow planting (like that for herbaceous peonies) is probably the major reason grafted woody peony plantings fail.

32. Maintenance – Fall Cleanup – Herbaceous
    - Removes disease organisms which may impact future growth
    - Late Fall as plant move into dormancy – early cut down reduces energy inputs and will impact subsequent plant vigor
    - Cut to the ground
    - Remove stems and foliage from the garden.
33. Maintenance - Pruning – Environmental Damage (Woodies)
    - Prune for plant health and promotion of new growth
    - Remove weak, dead and dying stems
    - Cut well below lowest dead area
        - Weather related
    - Spring after new growth emerges
    - Remove all damaged tissue to living stem tissue
    - Old plants may take several years revive
    - Young plants are quickest to recover
    - Very old plants can be rejuvenated to a youthful state by heavy pruning of old wood.
    - Spring after new growth begins
34. Maintenance – Pruning - Animal/Physical Damage
    - Remove old stems if weak – they do not resurrect themselves Stem loss due to physical damage
        - Human damage
        - Animal damage
    - Plants will regenerate with new basal growth
35. Maintenance – Pruning - Aesthetic
    - Cultivar specific
    - Climate requirements – warmer and stable winter climates
    - Prune in fall or winter months, but always prior to initiation of new growth.
    - Not particularly successful in climates in northerly zones due to highly variable and lengthily winter conditions.
36. Disease-Fungal
    - Most common and detrimental are the botrytis complex of fungus
        - Wet/cool conditions of spring are conducive conditions
        - Various cultivars show different resistance
        - Good air movement is best preventative measure
    - Mildew
        - No significant damage to plant growth
        - Climate change has caused new strains to reach more northerly regions
        - Air movement and full sun are helpful in preventing
        - Some cultivars are more resistant, but have not proven to be consistent in this regard
        - Development is inconsistent from year to year.
        - May occur early or late
        - Herbaceous peonies are more likely to host this fungus
37. Disease-Viral
    - Nearly all peonies carry some kind of virus. Most viruses found in peonies have little or no impact on plant growth and some may even be benevolent.
    - No current cures or treatments
    - Lemoine's - A trio of viruses
        - root disfigurements
        - slow overall plant growth & stunted
        - spreads through sucking organisms and contaminated tools.
    - Tobacco Rattle Virus and some other related viruses
        - yellow spots and rings on foliage
        - Plant growth does not appear to be hindered in most instances
        - Foliage may become unsightly.
        - May infect other plants in the garden.
        - Spreads through sucking organisms and contaminated tools.

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- **Testing for virus is recommended for those with foliar symptoms, rather than self-diagnosis. High temperatures, low humidities, poor air quality, freeze-thaw cycles and high UV may cause foliar damage mimicking virus infections. Climate change has caused many extreme conditions that are now impacting peony foliage in ways we have not observed in the past.**

38. Hybridizing – The Rabbit Hole
    - New peony cultivars are produced from seed. Each seedling has a unique genetic makeup – thus seedlings are not the same as their parents. Seedlings from the same cross may somewhat resemble their parents, but more often than not, they may express different colors, forms, plant habits or anything else which is controlled by their genes. Hybridizing is a "rabbit hole" – once started, there are so many directions and choices to be made that one can become lost or find themselves in a "wonderland".
    - Hybridizing is accomplished by growing seeds from crosses and then selecting the most promising offspring for propagation and perhaps registration-distribution will follow. It's a long-term activity that often requires 10 or more years of plant maturity before the first release of **selected** plant material. Many people grow seeds from open pollinations (insect or wind pollination) – only one parent is known and, in such cases, "Mother Nature" is performing the first steps. Hand pollination is accomplished by collecting pollen from a male parent and then brushing it onto the stigmas of the female parent (seed producer). Hand pollination is the preferred method to produce seed by most peony hybridizers. Parents used in hand pollinations can be tracked/recorded by the hybridizer and can reveal important information about inheritance. To date, hand pollinations have yielded the greatest number of advancements.
39. Seedlings
    - Peony seed, in most cases can be planted outside and excellent germination can be expected. There is no need to baby them and start them indoors – they are not princesses. APS has excellent seed starting articles and anyone wishing to grow peonies from seeds should visit the website and download an article which matches the type seed they would like to grow. Space and patience is required to grow the resulting seedlings to maturity. The majority of seedlings grown in respected hybridizing programs are culled due to inferior qualities or duplications of existing cultivars in commerce. Lutea Hybrid and Intersectional Group seed are best started indoors, as their large fleshy seeds are prone to winter damage (rotting).
40. Seedling (example)
    - (Tranquil Dove x Dreamtime). Obverse flares (patterns on the back of the petals) are fairly common on Herbaceous Hybrid Group cultivars. However, they are often not pronounced. With greater frequency these patterns are becoming a featured trait in new cultivars which have the Saunders Herbaceous Hybrid 'Tranquil Dove' in their ancestry. Numerous species also express obverse flares, thus there is much room for patterned flowers in peonies. Unfortunately, these flares are seldom visible on the petal fronts, which are most often viewed.
41. Seedling (example)
    - Herbaceous Hybrid seedling – (*P. anomala sbsps. veitchii var. woodwardii x P. tenuifolia).* There are many cultivars of similar parentage available. Notably 'Little Red Gem'. Is this unique enough for registration and distribution?
42. Seedling (example)
    - Suffruticosa with *P. rockii* influence seedling. Huge flowers carried well on strong stems. May be a unique and desirable quality.
43. Selection
    - "Any respected hybridizing program employs a ruthless culling program." Selection is perhaps the most difficult task within any hybridizing program. Space is required to grow plants to a relatively mature state before selections are made. Many of the seedlings will have beautiful flowers, but have plant faults and vice-versa. Some grow slowly and yet others do not perform well after dividing. Climate will impact selections differently each year and numerous other variables enter the selection equation. In the case of woody peony hybridizing programs, a dedicated space for a single plant usually requires 4 square feet (minimum) of growing space and the plant will remain in that location a minimum of 7 years! Woody peonies become very large in 7 years and digging culls is not for the faint of heart (literally)!
44. Introduction
    - Kim. 2019. Bremer. Among the largest flowers in the Herbaceous Hybrid Group. Plants are notably short with thick stems which support the plus size flowers easily.
45. Recommendations – Herbaceous Cultivar Sampling
    - Sampling of Recommended Cultivars. Modern peonies are an extremely diverse group of plants which are not well known by the general gardening/landscape community. Most of these new and advanced plants are now just reaching the marketplace through specialty growers. Because peonies grow slowly, are relatively more expensive to propagate than other plants, new advanced hybrids are not often available through general nursery offerings. Improvements in plant habit, landscape use, floral traits, size, use and numerous other visible traits abound. Visit the American Peony Society's Vendor listing for possible specialty sources.
    - Image: 'May Lilac'. 1950. Saunders. An APS Award of Landscape Merit cultivar. Strong stems hold beautifully colored semi-double flowers over wide deep green foliage. Plants are relatively short at around 26 inches.

46. 'Tranquil Dove'. 1993. Saunders/Laning/Rogers. Extremely unique foliage and upright plant habit. Of easy culture and is a good substitute for A.P. Saunders' cultivar 'Halcyon', which has proven less adaptable and difficult to grow in some locations. Relatively short plants at 22 inches. Superior – you'll have to hunt for it through a specialty nursery, but it's available.

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47. Calliope. 2020. Nate Bremer. Herbaceous Hybrid. An extremely photogenic cultivar which displays fading of flowers at numerous stages. While single, the reproductive structures are ornamental. Produces large numbers of side buds to extend bloom and stems are strong enough to hold numerous flowers. Fast grower with excellent disease resistance.
48. Etched Salmon. Cousins. 1981. Herbaceous Hybrid. Award of Landscape Merit 2012. Gold Medal 2002. Perhaps the finest of all the hybrids for plant habit, straight stems and overall display. Does best in cold climates. Superior bomb/double with unique well organized petaloides. Petals and petaloids are a lighter frosted color along their edges at maturity. Excellent show flower and cut flower. Of easy culture, but is difficult to divide due to crown configuration. Not adventitious compared to other coral cultivars which often cause problems with unwanted shoots in the garden and field.
49. 'Dreamtime'. 2013. Seidl/Bremer. Herbaceous Hybrid. An APS Gold Medal 2024. Salmon pink semi-double flowers held on strong stems. One of the most profuse bloomers of all peonies and creates a huge early-mid season display. Of very easy culture and is fast growing. Superior and held in high regard by anyone who grows it. A better choice for most than its popular parent 'Salmon Dream'.
50. 'Joker'. 2004. Bockstoce/Landis/Rogers. Herbaceous Hybrid. APS Gold Medal winner 2021. Superior double form flowers which are carried on excellent stems. Flowers have unique fading characteristics (inner flower is different shade than outer). Of easy culture and rapid grower. Good cut flower and garden plant.
51. Old Faithful. 1964. Glasscock/Falk. Herbaceous Hybrid. 'Old Faithful' produces large deep red double blooms. Stems are long and relatively sturdy, but must be grown in full sun. This cultivar has seen recent successful exposure in the Dutch Cut Flower market. Plants are very disease resistant. This cultivar produces extremely large roots (bicep size) and often proves to be difficult to divide, but is an easily grown plant.
52. 'Early Windflower'. 1939. A.P. Saunders. Herbaceous Hybrid. Unique and large clump forming seed strain cultivar. One of the few true *P. emod*i hybrids. Much sought after by collectors. Excellent for partial shade and makes a stunning specimen over time.
53. *Paeonia tenuifolia.* Herbaceous species which is often sold as a "Fernleaf Peony". While not rare in commerce, sourcing the actual species can be difficult. Many different peonies are sold as "Fernleaf peonies" which probably should be avoided as it can cause confusion. Foliage is very finely cut and needle-like. Plants are early bloomers and are easy to grow, given they are not planted in wet location. American gardeners prefer the double flower form (flora plena), but truth be told, the single flower form plants tend to be more vigorous and put on a better show.
54. *Paeonia anomala sbsps. veitchii*. An Asian species which flourishes in shadier locations. Excellent for rock gardens. One of the latest species to emerge, but quickly outgrows other species to bloom in the early part of the season. Highly variable in plant size due to native population origins. Excellent finely cut foliage. Of easy culture in northern gardens (resent the extreme heat of southern gardens).
55. 'Lancaster Imp". 1987. Roy Klehm. Lactiflora. Gorgeous clean cream-white bomb shaped double blooms held on stiff stems. Great for the garden and cut flower use. Easy to grow and disease resistant. 2024 Gold Medal Award peony.
56. 'Rozella'. 1990. Reath. Lactiflora. APS Award of Landscape Merit winner 2009. Large shocking pink flowers carried on perfectly stiff stems (no support needed). Foliage is dark and clean. One of the very best Lactiflora cultivars, but it lacks fragrance.
57. 'Pietertje Vriend Wagenaar'. 1996. Friend. Lactiflora. 2018 APS Gold Medal. Pink double flowers with many darker speckles. A unique cultivar with outstanding plant habits and excellent stem strength. Excellent in the garden or in shoals, rows or other mass plantings. Good cut flower.
58. Recommendations – Woody Cultivar Sampling

'Tria'. 1986. Nassos Daphnis. Lutea Hybrid. Heavy blooming medium sized flowers of light yellow stained/blushed in red. Produces 3 buds per stem, which lengthens the bloom season. Often overlooked, but one of the best performers in the woody peony group.
59. 'Manchurian Promise'. 2016. Bremer. Lutea Hybrid. Large, vigorous plants which make outstanding landscape plants. While relatively new, this cultivar is seeing good distribution in a number of growing zones. Flower colors may be variable in different climate conditions (typical of Lutea Hybrid Group plants) and are generally cream yellow with an overlay of coral-salmon-peach with dark flares. Reliable and quite and proving to be an excellent landscape plant.
60. 'Vesuvian'. 1948. A.P. Saunders. One of the few red flowers with double form found in the Lutea Hybrid Group. Plants make compact mounds and have excellent foliage throughout the summer season. Easy to grow and very consistent. Often overlooked, but for all its fine attributes should be more widely grown.
61. 'Wisteria Reflections'. 2016. Nate Bremer. Relatively new introduction with large flowers carried in abundance on compact plants. Lutea hybrids often do not produce an abundance of flowers like Suffruticosa Group cultivars, thus this introduction is step in the right direction. Of easy culture and has now been grown in numerous regions, proving its adaptability and performance.
62. 'Angel Choir'. 1999. Roger Anderson. A highly floriferous and prolific Suffruticosa Group plant which exhibits *P. rockii* influence. Very hardy stems and extremely reliable in cold climate situations. Plants become large and make outstanding specimens for the landscape.
63. 'Capt'n Kate'. 2013. William Seidl. Easily grown Suffruticosa Group cultivar with typical *P. rockii* traits. Superior floral display in abundance. Plants become large and are excellent candidates for landscape plantings.
64. 'Hana-kisoi'. Historic Japanese Suffruticosa Group cultivar. One of the most common and popular of all Japanese Suffruticosas present large semi-double pink flowers in abundance. Plants make excellent foundation plantings and have proven to be adaptable to harsh winter climates. Most plants sold in the United States are from imports which employ adventitious nurse roots, which cause many gardeners to be unsuccessful.
65. 'Murad of Hershey Bar'. 1986. William Gratwick. One of the earliest of all woody peonies to commence growth and bloom. Plants are often caught in snowstorms in Wisconsin, but show little cold temperature damage compared to later blooming types.
66. 'Murad of Hershey Bar'. 1986. William Gratwick. Plants become large and creates excellent landscape specimens. The deep red flowers are large and single in form which are carried over petioles tipped in narrow leaflets – stained red in the early season. Excellent and of easy culture.
67. Recommendations – Intersectional/Itoh Cultivar Sampling –

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- 'First Arrival'. 1986. Roger Anderson. The first of many of Roger Anderson's introductions and remains one of the very good ones. Flowers are open deep lavender and fade to lighter tones. No support needed here and foliage is impeccable. Plants make excellent landscape plants. Many of the new Intersectional crosses are distributed by large nursery producers and are not registered, thus no long term information will be available outside nursery catalogs. Many of the Intersectionals are now being micro-propagated, which may cause challenges and longer wait periods to become stable plants. A number of very good Intersectional cultivars are available, but there are many which are inferior. This group suffers from genetic recombination, a trait passed on for their Lutea Hybrid parent and then multiplied in resulting offspring. Note: The most consistent cultivars will likely be available from specialty nurseries who have concern for long term plant quality.

68. 'Sonoma Yedo'. 2010. Irene Tolomeo. Nearly a full double yellow Intersectional/Itoh peony. Flowers are large and the form is excellent. Stems are rather long and arch out away from the plant, but carry the plus size flowers with ease. Best in Show winner at the 2024 Syracuse, New York American Peony Society Flower Show and Exhibition. Makes a great mounded landscape plant if past flower stems are cut after bloom. Another sibling, 'Sonoma Halo' is similar and is equally as excellent. 'Yedo' and 'Halo' are consistent plants and produce consistent flowers. These may be used as cut flowers. 'Bartzella', another yellow Intersectional is the best garden plant, but is lacking for cut flower purposes. The best of all yellow Intersectionals for cut flower purposes is 'Garden Treasurer', a Don Hollingsworth introduction.

69. Intersectional/Itohs – A word about

- Intersectional/Itoh Group peonies are amongst the most popular of the new hybrids, but they are not without faults. Due to their genetic background, which usually includes a Lutea Hybrid Group Parent, they are prone to genetic recombination of genes. The recombining of genes can make certain cultivars prone to changes in their phenotypes, with gene expressions which are inconsistent and often unpleasant to view. Additionally, many cultivars are now being micro-propagated, causing chronic rooting problems and sometimes further propagule genetic instability. The rush to produce a popular plant type for profit, in many instances, has resulted in numerous inferior plants being distributed. Buyer beware.

70. American Peony Society

- The most respected and accurate information for peonies is the American Peony Society. The Society maintains a large public website, which features a myriad of information. The Peony Registry is of special interest to those who would like to know more about registered peonies.

71. Guides & Information

- The American Peony Society:
  - Learn (various topics: https://americanpeonysociety.org/learn/
- Solaris Farms
  - Culture and Care (various detailed documents): https://solarisfarms.com/culture-care/
  - Perennial Plant Conference (program related documents: https://solarisfarms.com/perennial-plant-conference/
- Peony Societies, Universities, Specialty Growers
- AVOID: Social Media, Generalist Nurseries and much of the information supplied online (myth & misinformation ridden)