

***Clematis* and *Hydrangea*: An Avid Collector Shares a Passion for Plants**

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Summary

Clematis and *Hydrangea* are popular garden plants. New selections are commonly being made available to gardeners. Also, both *Clematis* and *Hydrangea* require different cultural practices depending on the

selectin being grown and this can be confusing to novice gardeners. Criteria for plant evaluation and growing tips are provided in this paper.

INTRODUCTION

In this paper, I will attempt to share my experiences with *Clematis* and *Hydrangea* evaluation and production.

Clematis

I have evaluated thousands of *Clematis* selections over the past 25 years. My mission has become to simplify their evaluation and bust myths surrounding *Clematis* plants. For *Clematis*, I will present information about objectively scoring plants for garden performance and breeding potential. I will also discuss plant pruning and the enthusiasm for native species.

Clematis performance is objectively evaluated on a scale of 1 to 10 using the following criteria.

1. Flower quality of color: Is the color consistent? No extreme fading with more than 6 hours of sun? Are flowers resistant to discoloration?
2. Flower form: Is the form consistent? No disfiguring due to early weather aberrations?
3. Flower durability: do flowers last better than other comparable flowers when blooming in a garden?
4. Flower quality: Are sepals self-cleaning by dropping off before they become brown and unattractive?
5. Plant weatherliness: Are plants winter hardy to at least zone 5 and do they handle periods of high heat well?
6. Plant foliage quality: Is foliage durable and not prone to any type of discoloration?
7. Plant: Is the plant sterile without fruit production or do they produce attractive persistent fruit? Do plants spread by volunteer seedlings?
8. Plant size: Are plants compact or medium sized? (compact being under 5 ft, medium 5 to 9 ft).
9. Flower performance: Does the plant grow and flower well with minimal fertilizer to no fertilizer?
10. Flower and plant remontancy: Do plants regrow fast and flower in less than 7 weeks after a mid-season cut?

There are also several negative aspects of *Clematis* growth that need to be evaluated. These include:

1. Excessive lateral spreading plant growth by rhizome or stolon extension (except native plant *C. socialis*). Large size plants over 15 ft height at maturity.
2. Shy to flower, not many flowers for the volume of the plant or only producing terminal flowers.
3. Untidy central boss that is shedding filaments when the sepals are still intact, or other issues with unattractive center of the flower.

By assigning one point to each positive and negative attributes, *Clematis* selections can receive an objective score between one and ten. There are a good number of high point winners in our evaluations, but way too many low scoring plants on the North American market (**Figs. 1, 2, and 3**).



Figure 1. Two high scoring *Clematis* selections. A. ‘Perel D/Azure’ B. ‘Mazurek’ scored 10 points in the evaluation.



Figure 2. *Clematis ochroleuca* was a North American native plant with high potential (10-point score) as a garden plant and for plant breeding.



Figure 3. *Clematis* species that were low scoring plants for potential breeding due to their size and habit included A. *Clematis viorna* and B. *Clematis pitcheri*.

True *Clematis texensis* is one of the strongest native plants that you can grow (**Fig. 4**). However, *C. texensis* are very difficult to propagate. Available plants are variable from open pollinated seeds and hybrids have been sold as species.



Figure 4. *Clematis texensis*.

***Clematis* Pruning**

Choosing a pruning method for *Clematis* can be simplified using the “Green – Yellow – Red” method. “Green” means to prune plants hard. Plants in this group bloom on new wood and have abundant large flowers appearing later in the season. This also includes non-vining types. They can be pruned multiple times (every three to four weeks) during the season. “Yellow” means to slow down and show caution. Wait until plants have finished flowering or only prune to remove excess plant growth. “Red” indicates stop or have limited pruning because these plants bloom on old wood. These include the earliest flowering species such as *Clematis montana* or plants in the *Clematis Atragene* group.

***Clematis* Production**

There are some misconceptions about producing *Clematis* that can influence the choice to grow and produce plants. There is the assumption that trellising *Clematis* is needed to sell plants, but this can create

headaches that are not profitable. Also, there is the perception that *Clematis* propagation may be trickier, and more plant material required for vegetative pieces. *Clematis* have a bad reputation as difficult with many losses in the garden that can limit their popularity.

Can our native *Clematis* fit into the mix and stand up to their non-native brethren? Do native North American plants fit into the trends in landscape and what customers want? My recent experience in consulting with companies selling hybrids or species of North American species is that *Clematis* has a bit of cult fervor, but market size needs to be considered. Indeed, *Clematis ochroleuca* is a harder sell than *Clematis* ‘Perle d’Azur’ or ‘Mazurek’ (Figs. 1 and 2).

There has been numerous examples where North American species and their hybrids that have become available on the market. These include commercial breeding efforts and new introductions (Figs. 5 and 6).



Figure 5. A commercially successful *Clematis* hybrid is ‘Stand by Me’ from Has Hansen at Walters’ Garden using A.) *Clematis integrifolia* from Eurasia and *Clematis fremontii* from North America.



Figure 6. Native North American *Clematis* species and hybrids. A. *Clematis viorna* hybrid; B. *Clematis crispa* hybrid; C. *Clematis gattingeri* from Tennessee; D. *Clematis addisonii* from the shale barrens in Virginia.

***Hydrangea* – The New Frontier**

The world of *Hydrangea* has changed forever since grandma’s days. Some of the old fashioned yet reliable types found just about everywhere have been surpassed by a plethora of outstanding new varieties. With over 70 known species and some 600+ varieties dealing with *Hydrangea* can be quite the morass.

Some edification is definitely needed to sort things out especially when it comes to knowing how to prune different *Hydrangea* species.

***Hydrangea* Pruning Made Simple**

It can seem overwhelming in the spring to face your garden and take the simple steps to set your *hydrangeas* up for maximum flowering. In a nutshell, pruning of any plant always comes back to when the

plant flowers, on what type of stem, (old or new) as well as size considerations. My pruning method solves the confusion by breaking the genus into pruning groups green, yellow, and red.

Sometimes called the stoplight guide.... everyone already knows that green means go, yellow means caution and red means stop. These groups are based on plant genetics and explains how to prune your *Hydrangea* which is everyone’s biggest dilemma in the spring garden.

Green means go...these hydrangeas usually flower on new stems so we prune them hard in the spring, meaning remove the old stems in early winter or spring. If the stems are not cut hard, some may break a little growth on the bottom part of the stems. While you can cut to just above a growth break, removing the stems down low will

create a better shaped plant as well as a better flowering impact. Types of *Hydrangea* that are green pruned are *Hydrangea arborescens*, *Hydrangea paniculata* and selections include Annabelle, Incrediball, Hass Halo, Limelight, Berry White, and Bobo.

Yellow means caution...these hydrangea bloom mostly on old stems. In the spring cut the stems to just above a nice fat bud break. Some reshaping can be done in the spring if you use a lower bud break on outer stems to create better plant support and silhouette. Types of hydrangea that are yellow pruned are *Hydrangea macrophylla* (big leaf), *Hydrangea serrata* (mountain hydrangea), *Hydrangea involucrata*, and *Hydrangea aspera* and selections include Bloomstruck, and Summer Crush.

Red means stop! These hydrangeas need old stems to generate spring regrowth and flower on the old stems. Old flowers that might linger can be deadheaded off, but other than that stop! No pruning needed. Pruning these hydrangeas will not kill the plant, but you will not have flowers from the new growth until the following year. Types of hydrangeas that are red pruned are *Hydrangea schizophragma*, *Hydrangea dichroa*, *Hydrangea quercifolia*, *Hydrangea anomala petiolaris* and selections include Munchkin, Ruby Slippers, Little Honey.

Easing the Confusion

The ideal role of the propagator and producer in simplifying things for gardeners include reducing misinformation, labeling and tagging plants correctly, using tags or QR codes to expand information especially about how to grow plants well in the home garden.

An example of the impact of misinformation is that *Clematis terniflora*, an

Asian species had historically been referred to by the syn. *paniculata*, (not species *paniculata*). Plants were tagged in the USA by propagators as *paniculata*, therefore able to ship to the restricted states who had banned the plant *Clematis terniflora* ‘Sweet Autumn’ due to the invasive spread. *Clematis terniflora* is considered an invasive (and poisonous) species, particularly in the East, including North Carolina, Alabama, Delaware, Florida, Georgia, Illinois, Maryland, New Jersey, South Carolina, Tennessee, Colorado, Washington, Oregon. In the right climate, escaped plants spread invasively along riverbanks and roadsides. Plants with the *paniculata* tag can be found in nurseries to this day. *Clematis paniculata* the species would be in italics, is diecious, and is not hardy in North America. Clearly NOT what is sold tagged as *paniculata*. ‘Sweet Autumn’ is likely a hexaploid variant of *terniflora*. (*C. flammula robusta*) and propagation should be stopped. <https://www.invasive.org/alien/pubs/midatlantic/clte.htm>

Back to the passionate and positive side ...Pruning *Hydrangea* Could propagators influence the confusion with pruning right from the get-go, so the customer knows how to handle *Hydrangea* and *Clematis* before they purchase the plant or immediately afterwards?

In Poland, one propagator sells *Clematis* in colored pots to correspond with flower color. This was deemed a success because flower color with *Clematis* is a number one interest and made it easier for the customer since *Clematis* cannot often be displayed in flower, and many tags do not have photos or QR codes. For *Hydrangea* and *Clematis* could plant tag color or pot color correspond to the pruning style? Other variables and info can be grouped with pruning color (**Table 1**).

Table 1. General care of *Hydrangea* by pruning color.

	Green Prune	Yellow Prune	Red Prune
Sunlight	Up to 6 hours	At least 4 hours	At least 4 hours
Winter Mulch	2 to 3 inches	Up to 6 inches	Normal garden level
Soil, Watering	Neutral to acidic, water from trunk to dripline	Neutral to acidic, water from trunk to dripline	Neutral to acidic, water from trunk to dripline
Plant size	Large to colossal 8 ft plus	Small to medium 2.5 to 5 ft	Medium to large 5 ft plus
Flower size	Large 5 inches plus	Medium 2.5 in to 5 in	Medium to large 2.5 in to 5 in

The Right Fit for Native Plants

Hydrangea's native North American plants are less interesting and may have a hard fit to find commercial viability. Flowers are smaller, plants rangier... can demand be created for them against the plethora of show stopping hydrangea varieties on the market?

Clematis have a similar struggle for native plants to find their way into commercial popularity. We have to face the fact that like Ultra Processed Foodstuffs, customers vote with their purchases and for big sales it is usually big flowers.

Outliers like me, and maybe you...are not the customer.