

West Virginia Department of Agriculture

Kent A. Leonhardt, Commissioner
Joseph L. Hatton, Deputy Commissioner



July 28, 2017

Thank you for your recent comment regarding the West Virginia Department of Agriculture's Legislative Rule entitled "61CSR14A Rules Dealing with Noxious Weeds/I.

The West Virginia Department of Agriculture (WVDA) has reviewed all comments received regarding this proposed addition of the invasive species Kudzu, *Pueraria thunbergiana* (Sand Z) Benth and Japanese Barberry, *Berberis thunbergii* DC.

The WVDA works closely with the United States Department of Agriculture (USDA) Forest Service, The Nature Conservancy, West Virginia Division of Forestry, West Virginia Division of Natural Resources (WVDNR), Northeastern Integrated Pest Management Center, United States Fish and Wildlife, and the Potomac Highlands Cooperative Weed and Pest Management area. Many of these agencies have specialist that have worked with WVDA on identifying and sharing their concerns with these invasive species.

Japanese Barberry cultivars represent a substantial economic value to the nursery and landscape industries because they are popular, durable plants, widely used for landscaping. Unfortunately, Japanese Barberry is also an invasive plant, and some states have imposed laws preventing the propagation and sale of the species and all cultivars. Over the last few years the WVDA has investigated many complaints regarding *Berberis thunbergii* causing problems on West Virginia farms and forests. The WVDA is very sympathetic to the loss of revenue in our West Virginia nurseries and landscaping industries that will occur with the addition of *Berberis thunbergii* to the Noxious Weed list. However, as the lead agency to protect the farms and forests of West Virginia, we also must look at the big picture.

While looking at the overall benefit vs loss ratio, it became clear after talking to many of the farm owners, weed specialist, and various invasive species experts around the state and throughout the United States, that *Berberis thunbergii* must be added to the West Virginia Noxious Weed list. In recent years, *Berberis thunbergii* has been recognized as an invasive species in many parts of the United States. The threat is such that the plant is illegal for sale in Canada. The Plant Conservation Alliance's Alien Plant Working Group lists it among its "I east Wanted/I. Japanese Barberry is listed as invasive in Connecticut, Massachusetts, New Hampshire, Rhode Island, and Vermont. It is also prohibited from being a seed contaminant in Michigan. *Berberis thunbergii* is also banned from sale in Massachusetts and New Hampshire.

Berberis thunbergii is being recognized as an ecological threat in areas that it is well established. Barberry forms dense stands in natural habitats including forests, open

woodlands, wetland, and meadows. Once established, it displaces native plants and reduces wildlife habitat and forage, increasing pressure on natives by white-tailed deer. It has been found to alter the pH and biological activity of the soil. Barberry is also a human health hazard, not only because it has sharp spines, but also, it acts as a nursery for deer ticks, which can transmit Lyme disease.

Per numerous researchers "most barberry cultivars clearly cannot be considered noninvasive, and even those that are the least fecund, can still be minimally invasive if they reach an age of ten years or more" (Brand, Lehrer & Lubell 2012).

An increasing proportion of ornamental trade involves sales of cultivars and varieties, yet a key area of uncertainty is whether subspecies and varieties should be assessed at the infraspecific or specific level. While weed risk assessment approaches are suitable for screening species at the infraspecific level that are true to type (Gordon et al. 2016) they do not account for the fact that non-invasive cultivars may revert to invasive forms (Brand, Lehrer & Lubell 2012).

The WVDA will continue to research cultivar varieties to determine their place on the West Virginia Noxious Weed list and make changes and allow specific cultivar varieties regulations to be relaxed as scientific and research data dictates.

Again, thank you for expressing your concerns to the West Virginia Department of Agriculture.

Sincerely,



Quentin "Butch" Sayers
Acting Director/Plant Industries Division

July 13, 2017

Jodee Martin
WV Department of Agriculture
1900 Kanawha Boulevard East
Charleston, WV 25305

Dear Ms. Martin.

On behalf of the members of the West Virginia Nursery & Landscape Association, I am writing to request that the West Virginia Department of Agriculture reconsider its proposal to add *Berberis thunbergii* to the state's Noxious Weeds list. Should you proceed with this proposal, we strongly suggest you exempt cultivars that are non-invasive, such as Sunjoy Mini Maroon™ *Berberis thunbergii* 'NCBTI' and Sunjoy Little Cricket™ *Berberis x* 'NCBXI.' I have attached data on these two cultivars.

Amendment 61CSR14A states that surveys have shown that the plant is a detriment to agriculture in West Virginia. May we know what surveys were conducted and in what areas of the state? Is it possible that *Berberis thunbergii* poses a threat in some counties, but not others? Could those regions be exempted?

Does West Virginia have a committee, as other states do, that studies and makes recommendations of plants to be added to an invasive plant list? If so, are members of green industry businesses included on this committee?

Berberis thunbergii is a popular plant with landscapers, growers and homeowners due to its hardiness and deer resistance. It is one of the very few shrubs landscapers can offer that will not be decimated by West Virginia's abundant deer population. Many growers and landscapers in the state have significant numbers of *Berberis thunbergii* in stock and will experience financial loss if they are prevented from selling or planting them. If this proposed ban is implemented, please give careful consideration to its effective date *to* allow these West Virginia business people to minimize financial loss. An effective date of no less than one year after passage will help some businesses, although even that will not adequately provide for growers who currently have young stock that will not be ready for sale for two or more years.

We at the West Virginia Nursery & Landscape Association strive to be environmentally conscious. We recognize the tremendous damage exotic invasive plants can pose. We also find it irresponsible to ban an entire species when the species contains non-invasive cultivars that pose no threat.

Thank you for your consideration.

Sincerely,

Julie Robinson
Executive Director

Ms, Jodee Martin
WV Department of Agriculture
1900 Kanawha Boulevard East
Charleston, WV 25305

Tim Wood
Spring Meadow Nursery, Inc.
12601 120th Ave
Grand Haven, MI 49417 USA
1-800 -633-8859
tim@springmeadownursery.com

Dear Ms. Martin,

I am writing to comment on proposed ban of *Berberis thunbergii* by the state of West Virginia Noxious Weed Amendment Title Series 61 - 14A. Rule ID 16528.

State, Federal and local lawmakers have been scrambling to solve the problem of invasive plant species. Unfortunately for the American gardening public, one of the best solutions to the problem is being completely ignored; creating, promoting and growing cultivated varieties (or cultivars) of these species that do not possess invasive characteristics.

Plant scientists, horticulturists, farmers and gardeners have been selecting and breeding cultivars since the dawn of agriculture. Historically, cultivars have been developed to produce greater crop yields or larger, more colorful flowers. These same techniques can and have been used to produce well behaved, environmentally friendly plants that are not invasive threats like their parents.

It is welcome news that lawmakers and the public now recognize the threat of certain exotic species which can displace native species and alter our native ecosystems. Gardeners, nursery men, landscape architects and other land stewards need to act responsively to preserve native habitats. No one wants to be responsible for the next purple loosestrife, kudzu, or multiflora rose; all well known examples of problematic species. The proverbial Pandora's box has been opened; now the question for lawmakers is how to close the box.

Banning the sale and production of plant species "deemed invasive" is the approach under consideration by some states. For example, Connecticut is on the verge of placing restrictions on roughly 70 plant species. Banning most of these weedy, seedy plants would please environmentalists and gardeners alike. Most have no ornamental value with the exception of Japanese barberry (*Berberis thunbergii*), butterfly bush (*Buddleia davidii*), Privet (*Ligustrum*) and Common buckthorn (*Rhamnus frangula*) which are popular garden plants.

Should gardeners, landscapers, nurserymen and garden centers be forced to forgo some of their best performing plants? The question could be irrelevant, if lawmakers would only

recognize how relatively easy it is to tame these species. Many environmentally friendly cultivars are already available, but are, or will be, banned by unknowing legislators. One example is Common buckthorn *Rhamnus frangula*. Most would agree that the species, which has a germination rate in excess of 95%, is an invasive threat. One would be hard pressed to say the same about a new buckthorn cultivar called Fine Line™, grown for its attractive lacy foliage and distinctly narrow habit. Fine Line is not an environmental threat because it is nearly impossible to grow from seed. Even under ideal university conditions, germination studies yielded a meager 6% germination rate. There are also environmentally safe, essentially sterile cultivars of *Buddleia* (Lo & Behold® Series), *Ligustrum* (Golden Ticket), *Hibiscus* (Sugar Tip®, Azuri Blue Satin®, etc.) and *Spiraea* (Double Play® Doozie™). Cultivars such as these have the potential to, in part, solve the invasive plant problem but in some cases are being banned along with the culprit species.

Gardeners need not feel guilty for growing exotic plants, if they are environmentally safe cultivars. It's frustrating because plant breeders across the country are addressing this issue and their work is going to waste because people are simply uneducated. Legislators are throwing the baby out with the bathwater. Cultivars are part of the solution and should not be labeled as "outlaws" just because their parent species are problematic.

At the moment few people seem to care about the cultivar issue because they don't know that "safe" cultivars exist. Gardeners, like environmentalists, are proud of our natural heritage and want to preserve native habitats. They want to do what is morally right, but they also want to create beautiful gardens in our man made habitats. Cities and suburbs present challenging growing environments and exotic plants often perform better than native plants. Contrary to popular dogma native plants are not more adaptable than exotic species. And they are not more resistant to insect and disease attacks. Quite the contrary; exotic species are often used by plant breeders to create new pest resistant cultivars that do require the use of pesticides.

There are others who do know about non-invasive cultivars and are content to keep quiet because they're not gardeners and they don't want to complicate the invasive plant issue. Their goal is to keep the process moving. And the process is moving and moving fast. The question is "will gardening public wake up and smell the roses?" Perhaps, but it may be too late to make a difference. States continue to ban species of plants along with popular cultivars that pose no threat to the environment.

Gardeners and growers are not the bad guys and they need not be the losers. Cultivars are the answer and not the problem in the complex issue of invasive species.

It is my hope that any new legislation West Virginia that restricts the sale of invasive plant species, *Berberis* or otherwise, should include a means for exempting non-invasive cultivars regardless of species. I have attached a press release I wrote a few years ago that you might find useful. Please include it in my comments.

We currently have two new selections of non-invasive *Berberis* developed by Dr. Thomas Ranney of NCSU. The plants are Sunjoy Mini Maroon™ *Berberis thunbergii*

'NCBTI' and Sunjoy Little Cricket™/Squid Ink™ [The trademark is not yet settled] Berberis x 'NCBXI'. Both plants have been certified as rust resistant by the USDA and are on their published list for approved sales. Dr. Ranney has been working on data to support the Berberis as sterile or nearly sterile. I have attached Dr. Ranney's data for your review and use. Based on the seed variability being under 10% these plants should be considered sterile and be granted an exemption in your amendment.

Sincerely,

A handwritten signature in black ink that reads "Timothy D. Wood". The signature is written in a cursive, flowing style.

Timothy D. Wood
Product Development Manager
Proven Winners/ Spring Meadow Nursery, Inc



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July 13, 2017

Jodee Martin
WV Department of Agriculture
1900 Kanawha Boulevard East
Charleston, WV 25305

Dear Jodee,

I would like to express my concern regarding the amendment to 61CSR14A "Rules Dealing with Noxious Weeds." My concern is with adding *Berberis thunbergii* to the noxious weed list.

G&G Nursery is a wholesale grower of shade and ornamental trees and shrubs. In addition to supplying our local market we also supply plant material throughout north eastern part of the USA. We grow and sell approximately 750 *Berberis thunbergii* and it generates approximately \$11,000.00 in income per year. Obviously, I am concerned about the loss of this income, and the effect this will have on our business.

In addition to the concern regarding long term loss of income I am also concerned about the total loss of the plant material we have in our production "pipeline". We currently have *Berberis thunbergii* that will be ready for sale for the fall 17' spring 18' season as well as the fall 18' and spring 19' season. The *Berberis thunbergii* that will be ready for the fall 18' spring 19' season was just potted up 12-14 weeks ago. Had we been aware of this prospective change we could have altered our production of *Berberis thunbergii*.

I would first like to ask that you reconsider adding *Berberis thunbergii* to the noxious weeds list. Secondly if the *Berberis thunbergii* is added to the noxious weed list I would like to ask that the ruling not go into effect until December 2019.

Please keep me informed regarding any future discussions or decisions in this matter. If I can provide any additional information please do not hesitate to contact me.

Sincerely,

Brett L. Merritt

Berberis fertility rates

(Data compiled by Dr. Thomas Ranney of North Carolina State University)

Table 1. Comparison of female fertility traits among cultivars of *Berberis*.

Cultivar	n	Fruit Set (%)	Seeds/ Fruit	Germination (%)	Seedlings/ Flower	Relative fertility (%)
2012						
'NCBT' Sunjoy Mini Maroon	10	0.3 B	0.10 B	0.0 B	0.0 B	0.0 B
'NCBXI'	5	0.0 B	0.00 B	0.0 B	0.0 B	0.0 B
'Golden Devine'	5	33.8 A	1.15A	38.3 A	0.16A	71.3 A
'Emerald Carousel'	8	42.7 A	1.26A	41.1 A	0.22 A	100.0 A
2014						
'NCBT' Sunjoy Mini Maroon	10	37.4 B	0.09 B	23.3 B	0.003 B	1.2 B
'Golden Devine'	4	66.0A	1.30A	30.3 B	0.284 A	100.0A
'Emerald Carousel'	8	33.5 B	1.13 A	56.4A	0.220 A	77.6A

Relative fertility = seedlings/flower of that cultivar divided by seedlings/flower for the highest cultivar measured that year x 100. Means followed by the same letter, within a column, for a given year, are not significantly different, $P < 0.05$, based on a Waller-Duncan ANOVA means separation.

To evaluate female fertility, plants were arranged outdoors in a completely randomized design prior to flowering in Mills River, NC. Study plants were intermixed with 40 additional *Berberis* taxa to ensure for optimal cross pollination conditions utilizing natural pollinators. Individual branches were marked and the number of individual flowers on each branch was record. Fruit were collected when mature. Seeds were extracted, counted, sowed, and stratified for 90 days at 43° F. Pots with stratified seeds were then moved to a greenhouse maintained at approximately 70° F for 90 days and the number of seedlings were counted for each replicate.



West Virginia Nursery & Landscape Association, Inc.

P.O. Box 20284 Charleston WV 25362 • 304.553.1234 wvnlasso c@gmail.com wvnla.org

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July 13, 2017

Jodee Martin
WV Department of Agriculture
1900 Kanawha Boulevard East
Charleston, WV 25305

Dear Ms. Martin.

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Does West Virginia have a committee, as other states do, that studies and makes recommendations of plants to be added to an invasive plant list? If so, are members of green industry businesses included on this committee?

Berberis thunbergii is a popular plant with landscapers, growers and homeowners due to its hardiness and deer resistance. It is one of the very few shrubs landscapers can offer that will not be decimated by West Virginia's abundant deer population. Many growers and landscapers in the state have significant numbers of *Berberis thunbergii* in stock and will experience financial loss if they are prevented from selling or planting them. If this proposed ban is implemented, please give careful consideration to its effective date to allow these West Virginia business people to minimize financial loss. An effective date of no less than one year after passage will help some businesses, although even that will not adequately provide for growers who currently have young stock that will not be ready for sale for two or more years.

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Thank you for your consideration.

Sincerely,

Executive Director

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Jodee Martin
WV Department of Agriculture
1900 Kanawha Boulevard East
Charleston, WV 25305

I am writing in regards to the proposed Barberry Ban. I won't debate if Barberry (*Berberis thunbergii*) is invasive or not. There is a lot of research showing some cultivars are invasive, but some cultivars are much, much less invasive. Just by doing a quick Google search I found that the Connecticut Nursery and Landscape Association initiated a voluntary ban on the top 25 most invasive cultivars. They banned some of the more invasive species such as Rose Glow and Red Rocket, but allowed continued planting of much less invasive species such as Crimson Pygmy and Royal Burgundy.

I know in our area, with high deer pressure, Barberry is a good landscape plant choice. Barberry is deer resistant and seems to be winter hardy and reliable. If the proposed ban goes forward, I would at least encourage you not to ban all cultivars, only the most invasive.

Here is a link to the list of cultivars banned in Connecticut and which ones are still allowed to be used in the landscape trade.

<http://www.nurserymag.com/article/connecticut-barberry-phase-out/>

Thank you,

A handwritten signature in black ink that reads "Michael K. Dick". The signature is written in a cursive, flowing style.

Michael K Dick



July 17, 2017
Judee Martin
WV Department of Agriculture
1900 Kanawha Boulevard, East
Charleston WV 25305

Miss Martin,

As an introduction, we are Davis Nurseries, ST. Marys, WV. We received a WVNLA letter concerning a proposed ban on Japanese Barberry. We fail to understand a need for this proposal. Our business started in 1981, growing, retailing ,wholesale, and landscaping with Barberry cultivars. I cannot recall seeing a seedling Barberry cultivar outside of a landscaped area and only a very rare few seedlings observed in landscaped areas since our business beginning.

We are a small grower of nursery stock, currently having about 800 Barberry cultivars in production ranging from cuttings to marketable 3 gallon containers. With all sizes included, this represents about \$25,000.00, and with some variation, year to year, about 15% of our gross plant sales. Your proposed ban will hurt us and the industry in general. At this time, very few plants exhibit the color and size range covered by Barberries.

In conclusion, we are against this proposed ban.

It is a great opportunity to respond.

Ottis D. Davis,
Davis Nurseries

7/17/2017

JODEE MARTIN
WV DEPT OF AGRICULTURE
1900 KANAWHA BOULEVARD, EAST
CHARLESTON, WV 25305

I AM WRITING IN CONCERN OF THE BARBERRY BAN THAT I HEARD THROUGH THE GRAPE VINE WAS BEING CONSIDERED. WE HAVE FREEDS GREENHOUSE IN BRIDGEPORT, WV. WE FEEL THAT THIS IS AN ISSUE THAT SOMEONE IS JUMPING THE GUN ON. FOR YEARS NOW WE HAVE SOLD THE BARBERRY PLANTS TO MANY OF OUR CUSTOMERS THAT ARE VERY SATASFIED WITH THEIR PLANTS. THEY ARE ONE OF THE PLANTS THAT ARE NOT BROOTHERED BY DEER, PLUS WE OFFER 7 DIFFERENT COLORS TO BEAUTIFY THEIR YARDS. THIS IS A WINING COMBINATION TO LANDSCAPERS AND GARDENERS ALIKE. THIS YEAR WE HAVE SOLD OVER 300 BARBERRIES.

I HAVE LIVED IN HARRISON COUNTRY FOR 69 YEARS. THIS TIME HAS BEEN SPENT IN AGRICULTURE NOT JUST FARMING BUT 37 YEARS IN GREENHOUSES. PART OF MY FARMING IS SPENT BRUSHHOGGING FOR LOCAL FARMS NEAR BY. I HAVE NEVER RUN INTO SOME WILD BARBERRY GROWING IN THE FIELD THAT WE CUT. NOT EVEN FIELDS THAT HAVE GROWN UP FOR SOME TIME. I AM NOT SAYING THAT THEY MIGHT NOT EXIST, BUT IN SOME 30 YEARS I HAVE NOT COME ACROSS THEM.

EVEN THROUGH SOMEONE WANTS TO CLAIM BARBERRY AS A NOXIOUS WEED. WE LOOK AT IT AS A LOVELY LANDSCAPE PLANT THAT IS HARMLESS IN ANY LANDSCAPE IN ANY AREA, AND THE 7 COLORS WE OFFER JUST SETS OFF ANYONES YARD. THERE IS ALWAYS SOMEONE COMING OUT WITH NEW PLANTS SUCH AS PROVEN WINNERS THAT HAVE BARBERRIES THAT ARE CONSIDERED NON INVASIVE. SO DO NON INVASIVE VARIETIES DIE TOO WITH SUCH A RULING?

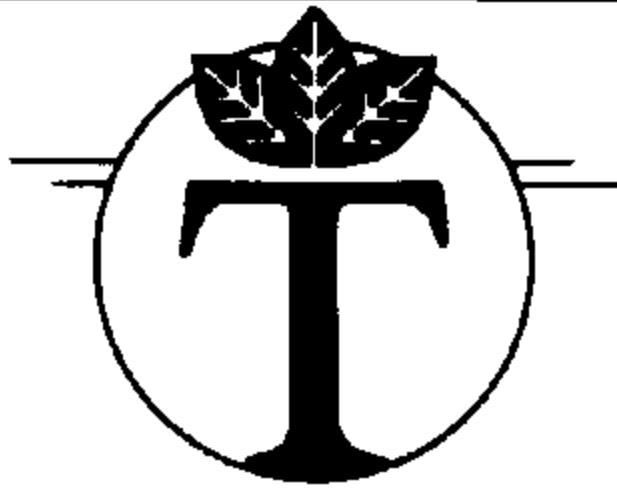
I JUST HEARD ABOUT THIS PROBLEM A FEW DAYS AGO, AND DO NOT THINK THAT ENOUGH TIME HAS BEEN GIVEN TOO THIS ISSUE. THE LANDSCAPERS I HAVE TALKED TO HAVE NOT EVEN HEARD OF THE BAND

DON'T CONDEM ALL BARBERRIES AS INVASIVE BECAUSE SOMEONE CLAIM ONE VARIETY TO BE SO. YOU DON'T CONDEM ALL MEN AS BAD JUST BECAUSE THE JAILS OF FULL OF BAD MEN. DON'T PUT THE CART BEFORE THE HORSE IN JUDGING ALL BARBERRIES AS THE SAME, WE KNOW JUST LIKE PEOPLE ALL BARBERRIES ARE DIFFERENT. DON'T THROW THE GOOD ONES OUT WITH THE BAD.

THANK YOU,

DAVID FREED
FREEDS GREENHOUSE
4536 BENEDUM DRIVE
BRIDGEPORT, WV 26330

304-592-0897



26130 St. Rt. 7

Marletta, Ohio 45750

740-374-9353 1-800-367-4572

7-17-17

Jodee Martin
WV Department of Agriculture
1900 Kanawha Boulevard East
Charleston, WV 25305

Dear Ms. Martin -

I agree with the ban on the invasive forms of *Berberis Thunbergii*. However, there are many different varieties of this species that do not produce fruit and therefore, are not a problem. Taking away all of these barberries would limit what plants we can use that the deer do not eat. So far, I have never had a deer eat barberries.

Dwarf, noninvasive barberries are an intricate part of the modern landscape, and taking them away would change the look of all landscapes. So, please ban the invasive species... but not the "good" ones.

Sincerely,

Russell Thomson
Thomson's Landscaping
26130 State Rt 7
Marietta, OH 45750
(p) 740-374-9353

PS - the modern professional landscaper never uses the invasive species anymore due to its thorns, fast growing nature, and the fact that it is invasive.