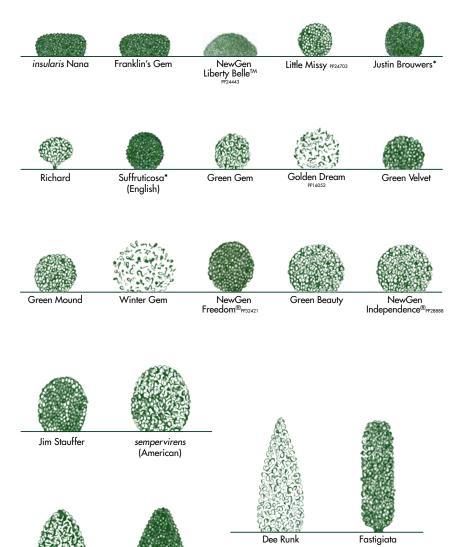


BOXWOOD G U I D E



SAUNDERS BOXWOOD Cultivar Comparison



*Cultivar is discontinued

John Baldwin

SAUNDERS BROTHERS BOXWOOD GUIDE

7th Edition



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Working Alongside Others

Saunders Brothers is a diverse agricultural operation. We strongly believe that one way we achieve success is by associating with other industry professionals. We support research, collaborate with peers, share information, and promote horticulture and agriculture on the local, state, national, and international levels.























Welcome to the 7th Edition of the *Boxwood Guide*.

The *Boxwood Guide* was first published in 2005 as a tool for garden retailers, professionals, and boxwood enthusiasts. We continue to update each edition of the Boxwood Guide with the latest information, based on our observations and feedback from customers. Since the publication of our 6th edition, we have added new, improved cultivars and dropped some older selections.

This 7th edition briefly addresses boxwood care and maintenance tips, plus individual cultivar pages share advice specific to those selections. Looking for more information? Our sister company, Saunders Genetics, offers in-depth advice on all aspects of boxwood including site selection, planting, routine care, and a comprehensive guide to boxwood pests, disease, and abiotic issues at www.NewGenBoxwood.com.

This book is a result of a journey that began over 75 years ago when our dad, Paul, propagated his first boxwood with the help of our grandmother. Tom, Bennett, Jim, Robert, our 4th generation children, and countless employees want to thank you for taking the time and interest to read and learn more about this fabulous plant that has been part of our family for decades. We hope the *Boxwood Guide* helps you better understand boxwood and enjoy them as much as we do.

The Saunders Brothers Family

The Saunders Story



(back row, L to R): 3rd Generation; Jim, Tom, Bennett, and Robert (front row, L to R): 4th Generation; Marshall, James, Annie, Tye, and Price

The Beginning

In 1915, my grandfather and four of his brothers decided to form a farm partnership and Saunders Brothers was born. Our dad, Paul, was born in 1933 and quickly developed a great love for the farm. As the farm emerged from the Great Depression, my grandfather and two of his brothers remained partners. In 1947, the nursery was born when Dad propagated his first boxwood. Mom and Dad married in 1956 and had seven children, all sons. We became the backbone of the workforce in our teen years. Dad farmed part-time and was a land surveyor to support the farm and seven hungry boys. In the early '80s he quit surveying and chose to focus totally on the farm.

Expansion Time

In the 1980s, three of my brothers and I returned to the farm to join Dad in the family operation. In the 1990s, we began expanding our boxwood selection to new cultivars in search of plants to replace English boxwood which was highly disease-prone. The nursery grew quickly with unheated greenhouses springing up over the hillsides. We continued to harvest fruit and manage a modest cattle herd. The new greenhouses were quickly filled with boxwood but also a wide selection of other shrubs and eventually perennials and annuals.

In 2000, Saunders Brothers made a major move to begin growing larger boxwood in the fields to complement our container production. We quickly began planting areas around our orchards that were not in production. With

this move, we began supplying boxwood to larger landscape projects. With the increased demand for space to plant boxwood, the cattle herd began to dwindle.

Becoming Boxwood Experts

Dad's work on boxwood testing provided us with a great base to continue to broaden our boxwood knowledge. In the early 2000s, we saw a surge in boxwood leafminer in landscapes coinciding with the increased planting of new cultivars of boxwood (other than English and American). In response, we developed our test blocks of boxwood and purposely introduced boxwood leafminer. Our goal was to determine cultivar resistance, thus reducing the use of pesticides. With this work, we accumulated over 100 cultivars of boxwood that proved to be priceless and the basis for our next mission that was about to appear on the horizon.

The Storm on the Horizon

In 2011, a new beast appeared in the United States, boxwood blight. When we heard about the disease, we dedicated enormous resources to learning about it. We began working with researchers by donating thousands of plants, giving input into multiple research projects, making every attempt to better educate gardeners and the community about this disease, and traveling both domestically and internationally to better understand the disease. We wondered if the array of cultivars that we had accumulated may offer some answers. We, along with others, began testing those plants and realized there may be hope in varietal resistance. We were beginning to understand a disease that many once thought would be the end of boxwood.

Continuing the Tradition

In the late 2010s and early 2020s, five of the 4th generation of family were welcomed into the business. Each chose to return to the farm after fulfilling their required time working elsewhere, settling into distinct phases of the business including production, sales, human resources, and shipping.



Field Production

Today and Tomorrow

In 2020, Saunders Genetics, our newly formed company, launched NewGen Boxwood®, a family of boxwood that offers greater resistance to diseases and pests as well as incredible garden performance. NewGen Boxwood® is the result of many years of trialing in labs, test gardens, landscapes, production, and other areas. Saunders Brothers is proud to be growing three selections of a new generation of better boxwood, NewGen Freedom®, NewGen Independence®, and new in 2024 - NewGen Liberty Belle $^{\text{TM}}$.

Saunders Genetics continues to pursue new and superior boxwood that create solutions to the boxwood challenges of today. Several additional NewGen® cultivars are expected to be released in the next few years. Saunders Genetics' breeding program has produced 1,000s of unique boxwood seedlings. We



(L to R) Marshall, Price, Annie, Tye, and James; the next generation

hope that their newly constructed laboratory will allow early testing of these plants for diseases. In addition, a newly planned production area will allow additional in-ground testing for long-term performance as well as greenhouses for expanded production of container plants.

Through all of this, our container and field operations continue to grow not only boxwood but over a thousand other varieties of container plants including annuals, flowering shrubs, evergreen and deciduous shrubs, container trees, perennials, and roses. Boxwood, however, remain our signature plant and are grown in both containers and the field. We are proud of our new container boxwood production area which opened in late 2023. It features greenhouses and facilities that were built with sustainability, labor savings, and efficiency in mind.

From the first generation – our grandfather and his brothers' diligence to keep and grow the farm through the Depression; to the second generation – my dad's first boxwood nursery when he was 13 and the foundation he built; to the third



2023 Greenhouse expansion at our Randolph Farm location

generation – the brothers – and the growth of our business through the 1990s until today; and to the fourth generation – our children as they begin to take significant roles in our diversified business, we thank you for believing in Saunders Brothers. We are excited about where Saunders Brothers is going. It is our goal to continue to create solutions to boxwood problems for generations to come.

Boxwood Care

We love boxwood! Why? Boxwood have graced gardens and landscapes for centuries. They are beautiful, evergreen, durable, long-lived, and deer-resistant – virtually irreplaceable. Starting out with thoughtful cultivar selections, site preparation, and ongoing maintenance will help ensure success for years to come. This section provides a brief overview of our boxwood care advice; please visit our sister site www.NewGenBoxwood.com for more in-depth information and the latest information on boxwood pests and diseases. The website is constantly updated to provide you with the best and most comprehensive information available.

Below is a condensed list of practices we believe any landscape professional or home gardener should use as a guideline when planting and caring for boxwood.

Cultivar Selection

Carefully select your boxwood based on the criteria listed on the cultivar pages of the Boxwood Guide.

Drainage

Boxwood prefer well-drained soils. Take care to avoid areas where there is standing water, outlets for gutters or drains, or locations where soils stay consistently moist.

Soil Preparation

Proper soil preparation is essential to ensure long-term success with boxwood. Prepare soils by improving drainage, reducing compaction issues, and introducing up to 20% new soil nutrients and organic matter.

Plant High

When planting, dig the hole twice (or more) as wide as the root ball and only deep enough that you will leave 2" of the root ball above the original soil surface. Backfill with soil onto the sides of the root ball and feather to the top of the root ball.

Irrigation

Water thoroughly at the time of planting and completely wet the entire root zone and surrounding area. Periodically water thereafter as needed (weekly). Deep, thorough watering is better than daily light ones. Allow root zone to dry between waterings. Little to no supplemental water is needed 1.5-2 years after planting.

Mulch

Mulch 1" after planting and 1/2" annually thereafter. Be sure the mulch is aged or decomposing. Mulching is highly effective in boxwood blight mitigation as it helps prevent the spores from splashing up onto lower foliage.

Fertilization

Boxwood typically do not need a lot of fertilizer. Avoid using fertilizers that lower pH below the desired pH range of 6.5-7.0. Apply fertilizer at the drip line of the plant and on top of the mulch.

Boxwood Care 5

Pruning

Each cultivar requires differing pruning techniques. Prune in late winter to early spring to create good airflow in and around the plant and maintain the desired shape. Clean tools before and after pruning.

Winter Issues

Some cultivars are more prone to leaf discoloration (orange or bronze cast) than others, especially if placed in a full sun, south – or southwest-facing situation. The discoloration usually resolves with warming temperatures and new growth in spring. Going into winter, new growth can suffer frost or freeze damage (tan or bleached appearance). These desiccated shoots can be snipped off without harming the plant.

Boxwood Leafminer

Susceptibility to leafminer differs by cultivar. Inspect each winter/early spring for boxwood leafminer larvae and treat them as needed.

Boxwood Blight

To date, Saunders Brothers has not tested a boxwood that is totally resistant to boxwood blight. We recommend periodic inspections during periods of prolonged rain and warm temperatures (60-77°F), especially in mid to late fall. If boxwood blight is found, use Best Management Practices (BMPs) from Virginia Tech or other reputable sources to control the movement of disease.

If boxwood blight is found:

- Remove the inoculum and carefully dispose of it.
- Increase airflow in and around the diseased boxwood if it is not removed.
- Mulch to decrease splashing.
- Sanitize all gardening tools regularly.
- Consider the use of fungicides when weather conditions favor blight activity.
- Replant with cultivars that have good disease resistance. Plant and prune to ensure good airflow and sunlight penetration into the plant.

Glossary of Terms

Zone

Based on the USDA Plant Hardiness Zone Map. Each cultivar is listed with the zones the plant is known to do well in. Know the zone of the area you are planting and choose the cultivar accordingly. Most boxwood are considered cold hardy to zones 5 or 6 and are known to do well in zone 8. Conditions within each zone will vary based on wind, sun, and micro-climate.

Growth Rate

This figure will allow you to compare cultivar growth rates on the same scale, though the rate varies based on weather, location, soil, and gardening practices. Consider growth rate when choosing a cultivar to avoid choosing a plant that will not meet expectations in size or maintenance requirements.

Sun Exposure

Each boxwood is listed with our planting recommendations regarding sun exposure. All boxwood do well in shady areas, while some cultivars will also do well in part-sun or sunny locations. Direct afternoon sun exposure during winter will cause some cultivars' foliage to bronze, but this will typically brighten to green in spring as temperatures rise and new foliage emerges. Please note comments on sun exposure and bronzing in the care section of each cultivar.

Sun: Location is sunny from late morning to late afternoon.

Part Sun: Location is shaded primarily from late morning to late afternoon.

Shade: Location has minimal direct sun.

Attributes

The cultivar's overall traits, including specific information on foliage, growth, and shape/habit.

Care

Recommendations on how to care for each cultivar. Pruning techniques specific to each cultivar are described. Pruning or thinning to allow air movement and sun penetration into the interior of the plant is beneficial in all boxwood. Comments are made also regarding winter bronzing and specific notes are made on plants that are especially susceptible to areas with questionable drainage. When in doubt, the planting site should be elevated about 2" above the original soil level to encourage proper drainage.

In addition, with each boxwood listed, we have commented on the cultivar's resistance or susceptibility to boxwood leafminer and boxwood blight, the two leading pests of boxwood. More information can be found at www.NewGenBoxwood.com/boxwood-care.

Comments

Additional information, both positive and negative, on each cultivar is based on personal observations of Saunders Brothers as well as other landscape professionals. We have also included specific details about some of the attributes. The "comments" section is where we tell the story behind the plant.

Uses

Suggestions for possible uses of the boxwood cultivar in the landscape. Consider plant growth rate, ultimate size, exposure, and gardening practices, in addition to the possible use, to be sure the plant is properly suited for the specific location.

Use in place of

Substitutes are often similar in appearance, habit, use, or maintenance requirements.

Size

Approximate 15 and 25-year-old size of the boxwood listed. Size is impacted by environment, maintenance practices, weather, and the size and age of the plant at installation. Take care not to choose a cultivar that will quickly outgrow the designated space.





Photo courtesy of Lynn R. Batdorf

Dee Runk

Cultivar: Buxus sempervirens 'Dee Runk'

Zone: 6-8

Growth Rate: Fast to medium, 3 to 6 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'Dee Runk' is an excellent cultivar with a naturally vertical habit. Can create a tight conical shape with pruning. It will develop a broader columnar habit with little to no pruning. Use for narrow hedges or accenting a door or corner. Deer resistant.

Care: Maintain desired shape each late winter with light pruning, as well as remove any limbs that have been damaged or pulled away from the plant by winter weather. Further light pruning is possible in late spring if heavy new growth pulls limbs away from the plant. If a tight conical form is desired, additional training will be required. Depending on growth and prior maintenance, heavier pruning every 3-5 years to shape the plant may be necessary. Good drainage is a must for this sempervirens cultivar. Mulching, even for more resistant cultivars, is advantageous for blight mitigation.

'Dee Runk' shows moderate resistance to boxwood leafminer and moderate resistance to boxwood blight. Good airflow around and within this boxwood, as well as its upright habit, significantly increases its resistance to boxwood blight.

Comments: 'Dee Runk' is one of the prettiest and most versatile boxwood we grow. We believe this plant is best when pruned into a tight conical form. Its versatility of growing in full sun, part sun, or shade makes it a great option in many different landscapes. We have seen Japanese maple scale on 'Dee Runk'; scouting and treatment are essential. 'Dee Runk' is very similar to 'Fastigiata' and was Paul Saunders' favorite plant.

Uses: Tall specimen, allée, tall hedge, medium hedge, foundation plant, holiday foliage, containers

Use in place of: 'Fastigiata', 'Graham Blandy', Highlander, Green Tower®



- Size at 15 years: 7' Tall x 2.5' Wide*
- Size at 25 years: 10' Tall x 3' Wide*

*dependent on habit chosen





Fastigiata

Cultivar: Buxus sempervirens 'Fastigiata'

Zone: 6-8

Growth Rate: Fast to medium, 3 to 6 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'Fastigiata' is an outstanding upright cultivar. The foliage is rich bluish-green. Depending on the gardener's preferences, this boxwood can either be trained into a narrow column, a conical shape, or, with minimal pruning, it can be a broader columnar shape. It is an excellent choice for narrow hedges or accenting a door or corner. Deer resistant.

Care: Maintain desired shape each late winter with light pruning, as well as remove any limbs that have been damaged or pulled away from the plant by winter weather. Further light pruning is possible in late spring if heavy new growth pulls limbs away from the plant. If a tight conical form is desired, additional training will be required. Depending on growth and prior maintenance, heavier pruning every 3-5 years to shape the plant may be necessary. Little or no pruning will yield a broader columnar habit. Mulching, even for more resistant cultivars, is advantageous for blight mitigation. 'Fastigiata' shows moderate resistance to boxwood leafminer and moderate resistance to boxwood blight. The upright habit of this boxwood, as well as good airflow around and within this boxwood, greatly increases its resistance to boxwood blight.

Comments: This is a good upright boxwood. We have chosen to prune it into a narrow column. Its foliage is slightly bluer than 'Dee Runk'. 'Fastigiata' is thriving in some of our personal gardens as a slender tall privacy hedge. We have seen Japanese maple scale on 'Fastigiata'; scouting and treatment are essential. Please see www.NewGenBoxwood.com for the latest information on this pest.

Uses: Tall hedge, medium hedge, tall specimen, allée, foundation plant, containers

Use in place of: 'Dee Runk', 'Graham Blandy', Highlander, Green Tower®



- Size at 15 years: 6' Tall x 2' Wide*
- Size at 25 years: 10' Tall x 2.5' Wide*

*dependent on habit chosen





Franklin's Gem

Cultivar: Buxus sinica var. insularis 'Franklin's Gem'

Zone: 5-8

Growth Rate: Slow to medium, 1 to 3 inches per year

Sun Exposure: Part sun or shade

Attributes: 'Franklin's Gem' is a low, spreading cultivar with lime green new growth in the spring. New growth will slowly transition to an olive green. Deer resistant.

Care: 'Franklin's Gem' should be pruned lightly in late winter to early spring to make a stronger and denser plant. This cultivar should not be sited in full sun. Mulching, even on more resistant cultivars, is advantageous for blight mitigation.

'Franklin's Gem' shows good resistance to boxwood leafminer and good resistance to boxwood blight. It has few pest or disease issues when planted and cared for properly.

Comments: A light annual pruning will lessen the tendency of the plant to open in the center over time. Demand for 'Franklin's Gem' is increasing as trials demonstrate good resistance to leafminer and boxwood blight. Genetic testing shows it is the same plant as *B. sinica* var. *insularis* 'Nana'.

Uses: Small specimen, low hedge, foundation plant, edging, parterre, or knot garden

Use in place of: insularis 'Nana', 'Tide Hill', 'Little Missy', 'Justin Brouwers', NewGen Liberty Belle™



- Size at 15 years: 1.5' Tall x 3' Wide
 Size at 25 years: 2' Tall x 4' Wide



Golden Dream

Cultivar: Buxus microphylla 'Peergold' PP16052

Golden Dream

Zone: 6-8

Growth Rate: Slow to medium, 1 to 3 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: Golden Dream has a beautiful rounded and compact habit. The variegated foliage is edged with gold. From a distance, the variegation makes the entire plant appear lime-green. Deer resistant.

Care: Golden Dream can be pruned lightly in late winter or early spring. Mulching, even on more resistant cultivars, is advantageous for blight mitigation.

Golden Dream shows good resistance to boxwood leafminer and good resistance to boxwood blight. It has few pest or disease issues when planted and cared for properly.

Comments: This unique golden boxwood is relatively new to the market. It offers more of a lime coloring than the traditional white or creamy variegation. We like the fact that it is a *microphylla* and have observed it is more tolerant of sunny locations as well as marginal soil conditions. Beginning in mid-fall and through the winter, Golden Dream takes on a natural orange tint as orange-red spots appear in the variegation; the orange tint will quickly disappear in the spring as temperatures rise.

Uses: Medium specimen, medium hedge, foundation plant, foliage for holiday decorations

Use in place of: 'Elegantissima', Aureovariegata, Variegata



- Size at 15 years: 3' Tall x 3' Wide
 Size at 25 years: 4' Tall x 4' Wide



Green Beauty

Cultivar: Buxus microphylla var. japonica 'Green Beauty'

Zone: 6-8

Growth Rate: Medium, 2 to 4 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'Green Beauty' is an excellent medium-sized cultivar that has deep green glossy foliage with little winter bronzing. It has a naturally rounded habit that will typically be slightly wider than tall. Its branching structure makes for a very strong plant that can withstand breakage from most moderate to heavy snowfalls. Deer resistant.

Care: 'Green Beauty' should be pruned lightly in late winter or early spring to maintain a more uniform shape. It will typically start a secondary flush of new growth in the late summer to early fall. This new growth may be burned or discolored by fall frost before it hardens off. These branches or "horns" can be pruned off any time after the first hard freeze of the fall or left on the plant until early spring pruning. If the plant outgrows its desired size, it tolerates radical pruning. Mulching, even on more resistant cultivars, is advantageous for blight mitigation.

'Green Beauty' is susceptible to boxwood leafminer but shows good resistance to boxwood blight. It has few other pest or disease issues when planted and cared for properly.

Comments: 'Green Beauty' has become very popular due to its good resistance to boxwood blight. Its durability, responsiveness to pruning, and disease resistance are very good. We have used 'Green Beauty' to replace English boxwood that died from boxwood decline, with good results. Pruning as a young plant is a must to develop a good shape. 'Green Beauty' has been planted extensively in the Main Fountain Garden at Longwood Gardens in Kennett Square, Pennsylvania.

Uses: Medium specimen, medium hedge, foundation plant, containers

Use in place of: English, NewGen Independence®, 'Green Velvet', 'Green Mound', Chicagoland Green™, 'Jim Stauffer'



- Size at 15 years: 3' Tall x 3' Wide
 Size at 25 years: 4.5' Tall x 5' Wide



Green Gem

Cultivar: Buxus 'Green Gem'

Zone: 4-8

Growth Rate: Medium, 2 to 3 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'Green Gem' is a cold-hardy hybrid boxwood with a spherical habit. It is the smallest of the "Green Series" of boxwood (see 'Green Velvet' for more information). It is similar in shape to 'Green Mound' but slightly smaller. Deer resistant.

Care: 'Green Gem' should be lightly pruned in late winter or early spring to maintain the desired shape. To minimize bronzing, avoid planting in areas of direct winter sun. Mulching is beneficial and is highly recommended as part of a program for blight mitigation.

'Green Gem' is very susceptible to boxwood leafminer and shows average resistance to boxwood blight.

Comments: It was developed in Canada at Sheridan Nurseries. This boxwood has been planted extensively over the past 30-40 years. Its hardiness and compact size make it popular with landscapers.

Uses: Small specimen, low hedge, foundation plant, edging, parterre or knot garden, containers

Use in place of: 'Little Missy', 'Justin Brouwers', 'Green Velvet', 'Green Mound'



- Size at 15 years: 2' Tall x 2' Wide
 Size at 25 years: 2.75' Tall x 2.75' Wide



Green Mound

Cultivar: Buxus 'Green Mound'

Zone: 4-8

Growth Rate: Medium, 2 to 3 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'Green Mound' is a cold-hardy hybrid boxwood with a spherical habit. It is often referred to as being in the "Green Series" of boxwood (see 'Green Velvet' for more information). It is like 'Green Velvet' but more rounded in its natural shape. Deer resistant.



Care: 'Green Mound' should be pruned lightly in late winter or early spring to maintain the desired habit. It may be sheared into edging and other formal applications. 'Green Mound' will bronze slightly in winter especially when exposed to direct sunlight. The bronzed leaves will typically return to green as spring temperatures rise and new foliage emerges. Mulching is beneficial and is highly recommended as part of a program for blight mitigation.

'Green Mound' is very susceptible to boxwood leafminer and shows average resistance to boxwood blight.

Comments: This is another of the cold-hardy Sheridan Nurseries boxwood from Canada. It tends to reach its 15-year size at a moderate rate and then growth will slow at that point.

Uses: Small specimen, low hedge, foundation plant, edging, parterre or knot garden, containers

Use in place of: 'Green Velvet', Chicagoland Green™, 'Green Gem', 'Little Missy', 'Justin Brouwers'



- Size at 15 years: 2.25' Tall x 2.25' Wide
 Size at 25 years: 3' Tall x 3' Wide







Green Mountain

Cultivar: Buxus 'Green Mountain'

Zone: 5-8

Growth Rate: Medium to fast, 2 to 4 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'Green Mountain' is a cold-hardy, roundedconical hybrid boxwood. It is often referred to as being in the "Green Series" of boxwood (see 'Green Velvet' for more information). Deer resistant.



Care: Prune 'Green Mountain' lightly in late winter or early spring to maintain desired habit. 'Green Mountain' is often sheared in a tight pyramid or conical shape to distinguish it from other plants in the "Green Series"; however, when left unpruned, it will develop a more rounded-conical habit. 'Green Mountain' will bronze slightly in winter especially when exposed to direct sunlight, but bronzing will fade as temperatures warm. Mulching is beneficial and is highly recommended as part of a program for blight mitigation.

'Green Mountain' is very susceptible to boxwood leafminer and shows average resistance to boxwood blight.

Comments: This is another of the cold-hardy boxwood from Sheridan Nurseries in Canada. Some gardeners believe annual light pruning is necessary on this cultivar to improve its rigidity as an upright plant, or the plant may open with snow. It grows with relative vigor until it is about 15 years old then slows down.

Uses: Medium specimen, medium hedge, low hedge, foundation plant, containers

Use in place of: 'John Baldwin', 'Dee Runk', 'Fastigiata'



- Size at 15 years: 3.5' Tall x 2.5' Wide
 Size at 25 years: 5' Tall x 3.5' Wide





Green Velvet

Cultivar: Buxus 'Green Velvet'

Zone: 5-8

Growth Rate: Medium, 2 to 3 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'Green Velvet' is a cold-hardy hybrid boxwood that was developed in Canada. The plant has a somewhat rounded habit that is slightly wider than tall. The foliage on this cultivar is a beautiful medium- to light-green in spring and slowly transitions to dark green. It is a selected seedling cross between Buxus sempervirens and Buxus sinica var. insularis and part of the "Green Series" of boxwood which also includes 'Green Mountain', 'Green Mound', and 'Green Gem'. Deer resistant.

Care: 'Green Velvet' should be pruned lightly in late winter or early spring to maintain desired habit. It may be sheared into edging and other formal applications. 'Green Velvet' will bronze slightly in winter especially when exposed to direct sunlight. Typically, in spring, as temperatures rise, bronzed foliage will fade back to green, and new spring foliage begins to emerge. Mulching is beneficial and is highly recommended as part of a program for blight mitigation.

'Green Velvet' is very susceptible to boxwood leafminer and shows average results in resistance and susceptibility to boxwood blight.

Comments: 'Green Velvet' has been very popular for the past 30-40 years. However, with time we are finding increasing issues with boxwood leafminer, boxwood blight, and *Phytophthora* root rot. We have observed root issues possibly related to poor drainage, which may be explained by its sempervirens parentage. In many landscapes, it will reach its 15-year size at a moderate rate, and then growth will slow. It is very similar to the cultivar Chicagoland Green™.

Uses: Small specimen, low hedge, foundation plant, edging, parterre or knot garden, containers

Use in place of: Chicagoland Green™, 'Buddy', 'Green Mound', 'Green Gem', 'Justin Brouwers'



- Size at 15 years: 2' Tall x 2.5' Wide
 Size at 25 years: 2.75' Tall x 3.5' Wide

2.5 Cultivars





insularis 'Nana'

Cultivar: Buxus sinica var. insularis 'Nana'

Zone: 6-8

Growth Rate: Slow to medium, 1 to 3 inches per year

Sun Exposure: Part sun or shade

Attributes: 'Nana' is a low-spreading cultivar with lime-green new growth in the spring. New growth will slowly fade to a light green. Although considered a smaller cultivar, it matures relatively fast. Deer resistant.

Care: Prune 'Nana' lightly in late winter or early spring to make a stronger and denser plant. Thinning is not typically necessary but, if this cultivar is sheared heavily, some thinning in late winter to early spring will allow air and sunlight to penetrate the plant. Mulching, even on more resistant cultivars, is advantageous for blight mitigation.

'Nana' shows good resistance to boxwood leafminer and good resistance to boxwood blight. It has few pest or disease issues when planted and cared for properly.

Comments: 'Nana' is popular due to its resistance to boxwood blight and resistance to boxwood leafminer. Annual light pruning will help develop rigidity in this boxwood and lessen the chance of the plant opening in the center as it matures. Genetic testing data indicates that 'Nana' and 'Franklin's Gem' are the same plant.

Uses: Small specimen, low hedge, foundation plant, edging, parterre or knot garden

Use in place of: 'Franklin's Gem', 'Tide Hill', 'Little Missy', NewGen Liberty Belle™



- Size at 15 years: 1.5' Tall x 3' Wide
 Size at 25 years: 2' Tall x 4' Wide

2.7 Cultivars





Jim Stauffer

Cultivar: Buxus microphylla var. japonica 'Jim Stauffer'

Zone: 5-8

Growth Rate: Medium to fast, 2.5 to 5 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'Jim Stauffer' is an excellent foundation plant that is slightly more vigorous than some cultivars yet can be maintained in a formal shape. It grows in a comparable height-to-width ratio. It also responds very well to pruning or shearing. 'Jim Stauffer' can serve as a substitute for Buxus sempervirens (American) when a plant of similar shape is desired, but with a smaller ultimate size. Deer resistant.

Care: Lightly pruning 'Jim Stauffer' in late winter or early spring is necessary to maintain a more uniform shape. It will occasionally start a secondary flush of new growth in the late summer to early fall that may freeze before it hardens off. These branches or "horns" can be pruned off after the first hard freeze of the fall or in early spring. 'Jim Stauffer' tolerates more radical pruning if the plant has outgrown its desired size. Mulching, even on more resistant cultivars, is advantageous for blight mitigation.

'Jim Stauffer' shows moderate resistance to boxwood leafminer and good resistance to boxwood blight. Minimal disease and pest issues when planted and cared for properly.

Comments: We like this boxwood. It has foliage that is very similar to 'Green Beauty' but its habit is slightly more upright. Its hardiness also makes it the choice of many gardeners in colder climates.

Uses: Medium specimen, medium hedge, foundation plant, containers

Use in place of: sempervirens (American), 'Green Beauty', NewGen Independence®, 'Wintergreen', 'Winter Gem'



- Size at 15 years: 3.25' Tall x 3' Wide
 Size at 25 years: 5' Tall x 5' Wide



John Baldwin

Cultivar: Buxus microphylla 'John Baldwin'

Zone: 6-8

Growth Rate: Medium, 2 to 3 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'John Baldwin' is grown for its true broad, conical habit. Foliage is fine textured as leaves are relatively small compared to many boxwood. New foliage has a blue tint which will slowly fade to a blue-green. Its durability in both sun and shade makes it valuable in the landscape. Deer resistant.



Care: As a juvenile plant that is less than 2 feet or so in height, prune 'John Baldwin' in late winter to early spring to develop a conical habit. Once the plant gets 2-3 feet tall, it requires less pruning, typically having to remove only side shoots or "horns" each late winter or early spring. Thinning is not necessary but, as with any boxwood, it will help increase airflow and sunlight penetration into the interior of the plant. Mulching is beneficial and is highly recommended as part of a program for blight mitigation.

'John Baldwin' is susceptible to boxwood leafminer but shows moderate resistance to boxwood blight. It has few other pest or disease issues when planted and cared for properly.

Comments: Use this cultivar as an alternative to 'Green Mountain' when a true conical shape with minimal pruning is desired. This may be the best pyramidalgrowing boxwood that we have seen. From a distance, it looks very similar to an *Ilex crenata* 'Steeds'. As a *microphylla*, it is proving to be more durable regarding disease and its adaptation to a wider range of soil conditions.

Uses: Medium specimen, medium hedge, foundation plant, containers

Use in place of: 'Green Mountain', 'Dee Runk'



- Size at 15 years: 3.5' Tall x 2.5' Wide
 Size at 25 years: 6' Tall x 4' Wide



Little Missy

Cultivar: Buxus microphylla 'Little Missy' PP24703

Zone: 5-8

Growth Rate: Slow to medium, 1.5 to 3 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'Little Missy' is a compact rounded cultivar. It is cold hardy and sun tolerant. It can be used in applications where a smaller-sized or sheared plant is desired. The foliage is dark green and comes to a pronounced point at the end of the leaf. Deer resistant.

Care: 'Little Missy' requires little to no pruning, but a light shearing in late winter will increase its compactness. Mulching is beneficial and is highly recommended as part of a program for blight mitigation.

'Little Missy' shows moderate resistance to boxwood leafminer and good resistance to boxwood blight. It has very few pest or disease issues when planted and cared for properly.

Comments: The shape and size of 'Little Missy' remind us of a half-sized 'Green Velvet'. It is also a great option to use as a substitute for 'Justin Brouwers' although it is slightly more vigorous. Its winter hardiness and durability, disease and pest resistance, along with its smaller size, are all pluses for this plant.

Uses: Small specimen, low hedge, foundation plant, edging, parter or knot garden

Use in place of: 'Justin Brouwers', 'Green Gem', 'Green Velvet', 'Green Mound'



- Size at 15 years: 2' Tall x 2' Wide
 Size at 25 years: 3' Tall x 3' Wide



NewGen Freedom®



Cultivar: Buxus 'SB 300' PP32421 NewGen Freedom®

Zone: 5-8

Growth Rate: Fast, 3 to 6 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: NewGen Freedom® is a relatively vigorous, rounded cultivar that fills space quickly and responds well to pruning, thus making it an excellent choice for residential or commercial landscapes. It is slightly taller than wide. It has beautiful glossy, medium-green foliage. Deer resistant.



Care: NewGen Freedom® should be pruned at least once each year in late winter to early spring; a second pruning in summer may be advisable. If not pruned, the plant will open in the center, especially in spring when new foliage is young and flexible. NewGen Freedom®, like some other boxwood cultivars, tends to bronze in winter, especially if grown in full sun and/or unprotected exposure. An additional application of fertilizer during the growing season and sufficient irrigation in fall can also help mitigate bronzing of this vigorous cultivar. Mulching, even on more resistant cultivars, is advantageous for blight mitigation.

NewGen Freedom® shows good resistance to boxwood leafminer and good resistance to boxwood blight. It has very few disease or pest issues when planted and cared for properly.

Comments: NewGen Freedom[®] is a spectacular plant when pruned annually. From a distance, its foliage color and shape can be mistaken for English Boxwood. Its habit is more uniform and tighter than Buxus microphylla 'Wintergreen' or Buxus microphylla 'Winter Gem'. It also looks similar to Buxus Sprinter[®] but has tested as superior in boxwood blight trials.

Uses: Medium specimen, medium hedge, foundation plant, containers

Use in place of: 'Winter Gem', 'Wintergreen', Sprinter®



- Size at 15 years: 3.5' Tall x 3.5' Wide
 Size at 25 years: 5' Tall x 5' Wide

3.5 Cultivars







NewGen Independence®



Cultivar: Buxus microphylla 'SB 108' PP28888

NewGen Independence®

Zone: 5b-8

Growth Rate: Medium, 2 to 4 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: NewGen Independence[®] is a deep green, medium-sized cultivar that holds excellent color throughout the winter. It has a rounded habit that is nearly as tall as wide. NewGen Independence® can be used in formal plantings where a medium-sized, round plant is desired. It is an excellent replacement for English boxwood for foundation plantings. The branching structure is very strong allowing it to withstand most moderate to heavy snow loads. Deer resistant.



Care: NewGen Independence[®] should be pruned lightly in late winter to early spring to maintain a uniform shape. It is not uncommon for fall frosts to burn new growth that occurred in the late summer or fall. These burned shoots can be removed after the first freeze of fall or in late winter/early spring, depending on the gardener's preference. Mulching, even for more resistant cultivars, is advantageous for blight mitigation.

NewGen Independence® shows moderate resistance to boxwood leafminer and good resistance to boxwood blight. It has few pest or disease issues when planted and cared for properly.

Comments: NewGen Independence® was chosen for its leafminer and boxwood blight resistance. On initial inspection, it appears to be very similar to Buxus 'Green Beauty' but its leaves are slightly more elongated. It also rates superior to 'Green Beauty' in leafminer trials. NewGen Independence® is the backbone of the Rose Garden at the White House in Washington, DC.

Uses: Medium specimen, medium hedge, foundation plant, containers

Use in place of: 'Green Beauty', English, 'Green Velvet', 'Buddy', 'Green Mound', 'Jim Stauffer'



- Size at 15 years: 3' Tall x 3' Wide
 Size at 25 years: 4.5' Tall x 4.5' Wide





NewGen Liberty Belle™



Cultivar: Buxus sinica var. insularis 'RLH-BI' PP24443

NewGen Liberty BelleTM

Zone: 5b-8

Growth Rate: Slow to medium, 1.5 to 3 inches per year

Sun Exposure: Part sun or shade

Attributes: NewGen Liberty Belle™ has a low, spreading, billowing form, graced by glossy, deep green foliage. Best performance in shade to part sun. Excellent as a specimen or container plant. Can also be pruned or sheared for low hedges. Demonstrated superior boxwood blight resistance in our trials as well as good boxwood leafminer resistance. Deer resistant.



Care: Plant in shade to part sun to avoid discoloration. Thinning is not necessary; prune only if a certain shape is desired or to remove any winter tip burn or other damage. Few disease or pest issues when planted and cared for properly. Mulching, even on more resistant cultivars, is advantageous for blight mitigation.

Comments: Exceptional blight resistance is paired with a low, mounding, and freely branching form that won't overwhelm small spaces. NewGen Liberty Belle[™] is perfect for shady urban and suburban gardens and patios.

Uses: Small specimen, low hedge, foundation plant, containers, edging, or shady knot garden

Use in place of: insularis 'Nana', 'Franklin's Gem', 'Tide Hill'



Size at 15 years: 1.5' Tall x 3' Wide
 Size at 25 years: 2' Tall x 4' Wide





Richard

Cultivar: Buxus harlandii 'Richard'

Zone: 7-9

Growth Rate: Slow to medium, 1 to 3 inches per year

Sun Exposure: Part sun or shade

Attributes: 'Richard' has unique rounded foliage with an indentation at the tip that results in a heart-shaped leaf. At first glance, it does not look like a boxwood. The unusually shaped foliage and glossy texture make 'Richard' distinctive. The plant's habit is vase-shaped and slightly wider than tall. Deerresistant.

Care: 'Richard' should be placed in the landscape where it is sheltered from harsh winter winds and extreme cold. It flushes relatively early in spring and is more prone to frost damage. 'Richard' requires little to no pruning. Mulching, even on more resistant cultivars, is advantageous for blight mitigation.

'Richard' shows good resistance to boxwood leafminer and good resistance to boxwood blight. It has very few other disease or pest issues.

Comments: This unique boxwood is beautiful when planted in a protected area. In central Virginia, we have placed it in protected sites on the east or northeast side of the landscape and it has done well; however, in the west and southwest locations where it is unprotected, it has suffered winter damage. We do not recommend exposed areas of Zone 6 or colder. The *harlandii* group is showing good resistance to boxwood blight and is being used as a reference point in testing.

Uses: Small specimen, low hedge, foundation plant

Use in place of: None, due to its uniqueness.



- Size at 15 years: 1.75' Tall x 2' Wide
 Size at 25 years: 2.5' Tall x 3' Wide





sempervirens (American)

Cultivar: Buxus sempervirens (American boxwood)

Zone: 5-8

Growth Rate: Medium to fast, 3 to 5 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: American boxwood is a classic, large-growing, upright to rounded boxwood. In an ideal environment, the plant will continue to grow for 75 to 150 years and develop into a massive shrub (sometimes as large as 15 ft, tall and wide or more). It has excellent dark green winter foliage and cuttings are a favorite for holiday decorations. Deer resistant.

Care: Prune American boxwood lightly in late winter or early spring to maintain desired habit. It tolerates more radical pruning if the plant has outgrown its desired size. Thin in winter for holiday decorations or early spring before new growth appears to increase airflow and light penetration into the interior of the plant thus reducing the incidence of disease. Mulching is beneficial and is highly recommended as part of a program for blight mitigation.

American boxwood shows moderate resistance to boxwood leafminer and average resistance to boxwood blight. Good airflow around and within this boxwood, as well as the use of mulch, greatly increases its resistance to boxwood blight.

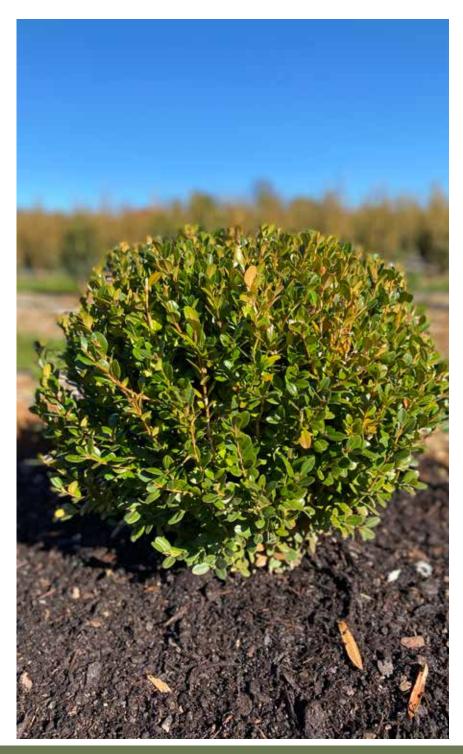
Comments: This boxwood has been the backbone of traditional Colonial American landscapes for many years. Avoid using this plant where it will ultimately be too large for the landscape. Be especially careful to plant this cultivar in areas with good drainage. Maintain good airflow in and around American boxwood to lessen the incidence of boxwood blight. Even when infected with boxwood blight, we have seen this plant continue to thrive when mulched, lower limbs removed from the "splash zone", and the plant thinned to increase airflow.

Uses: Tall specimen, allée, tall hedge, medium hedge, foundation plant, foliage for holiday decorations

Use in place of: 'Jim Stauffer'



- Size at 15 years: 4' Tall x 3.5' Wide
 Size at 25 years: 6' Tall x 5.5' Wide



Winter Gem

Cultivar: Buxus microphylla var. japonica 'Winter Gem'

Zone: 6-8

Growth Rate: Fast, 4 to 6 inches per year

Sun Exposure: Sun, part sun, or shade

Attributes: 'Winter Gem' is a round-shaped cultivar that is relatively vigorous. It tolerates a wide range of sites and uses. New foliage emerges a lime-green color and transitions to a deep, glossy green. Deer resistant.



Care: 'Winter Gem' should be pruned each year in late winter to early spring to maintain the desired shape. Additional lighter pruning may be necessary in early to mid-summer, depending on the desired look and vigor of the plant. 'Winter Gem' tolerates more radical pruning if the plant has outgrown its desired size. It tends to bronze when exposed to direct winter sun, but the bronzing will quickly disappear in spring as temperatures rise. Mulching, even on more resistant cultivars, is advantageous for blight mitigation.

'Winter Gem' shows good resistance to boxwood leafminer and good resistance to boxwood blight. It has few other pest or disease issues when planted and cared for properly.

Comments: This is a great plant to fill space quickly. It has a vigorous growth habit that can get rather wiry, but it can be controlled with a good pair of hedge shears. 'Winter Gem' is similar to the cultivars Wintergreen' and 'Faulkner'.

Uses: Medium specimen, medium hedge, low hedge, foundation plant

Use in place of: NewGen Freedom®, 'Wintergreen', 'Faulkner'



- Size at 15 years: 3.5' Tall x 3.5' Wide
 Size at 25 years: 5' Tall x 5' Wide

4.5 Cultivars

BOXWOOD Cultivar Summary

| Cultivar | Page | Zone | Exposure | Blight Tolerance | Leafminer Resistance |
|--|------|------|------------|---------------------|-------------------------|
| Dee Runk | 9 | 6-8 | 000 | + § | + |
| Fastigiata | 11 | 6-8 | \bigcirc | + § | + |
| Franklin's Gem | 13 | 5-8 | 0• | ++ | ++ |
| Golden Dream PP16052 | 15 | 6-8 | \bigcirc | ++ | ++ |
| Green Beauty | 17 | 6-8 | \bigcirc | ++ | - |
| Green Gem | 19 | 4-8 | \bigcirc | + - | |
| Green Mound | 21 | 4-8 | \bigcirc | +- | |
| Green Mountain | 23 | 5-8 | \bigcirc | + - | |
| Green Velvet | 25 | 5-8 | 000 | + - | |
| insularis Nana | 27 | 6-8 | ● | ++ | ++ |
| Jim Stauffer | 29 | 5-8 | 000 | ++ | + |
| John Baldwin | 31 | 6-8 | 000 | + | - |
| Justin Brouwers | | 6-8 | 000 | | |
| Little Missy PP24703 | 33 | 5-8 | 000 | ++ | + |
| NewGen Freedom® PP32421 | 35 | 5-8 | 000 | ++ | ++ |
| NewGen Independence® PP28888 | 37 | 5B-8 | 000 | ++ | + |
| NewGen Liberty Belle ^{TM PP24443} | 39 | 5B-8 | 00 | +++ | ++ |
| Richard | 41 | 7-9 | ● | ++ | ++ |
| sempervirens (American) | 43 | 5-8 | 000 | + - | + |
| Suffruticosa (English) | | 6-8 | J • | | + |
| Winter Gem | 45 | 5-8 | 000 | ++ | ++ |

| Boxwood Blight and Leafminer Resistance Key | | | | |
|---|-----|--|--|--|
| Superior Resistance | +++ | | | |
| Good Resistance | ++ | | | |
| Somewhat Resistant | + | | | |
| Average Resistance/Susceptibility | +- | | | |
| Susceptible | - | | | |
| Very Susceptible | | | | |

| Exposure Key | | | |
|--------------|----------|--|--|
| 0 | Full Sun | | |
| • | Part Sun | | |
| • | Shade | | |

Boxwood blight resistance data based on multiple years of trials and observations from Saunders Brothers 2012-2023.
 Our trials and observations have not found any boxwood with total resistance to boxwood blight.

^{**} Boxwood leafminer resistance data based on decades of trials and observations from Saunders Brothers 2008-2023.

[§] Boxwood blight resistance enhanced by the plant's upright architecture.

BOXWOOD Cultivar Summary

| Cultivar | SBI Overall Rating | Saunders Brothers (SBI) Comment | |
|-------------------------|-----------------------|---|--|
| Dee Runk | ** | Great upright when pruned correctly. | |
| Fastigiata | ** | Excellent upright when pruned correctly. | |
| Franklin's Gem | ** | Low growing, good resistance to leafminer and blight. | |
| Golden Dream | ** | Gold color is unique. Durable plant. | |
| Green Beauty | ** | One of our favorite medium sized box for many years. | |
| Green Gem | * | Good small boxwood. Best in zones 4 to 6. | |
| Green Mound | * | Globe-shape midsize. Best in zones 4 to 6. | |
| Green Mountain | * | Popular egg-shaped boxwood. Best in zones 5 to 6. | |
| Green Velvet | * | Very popular midsize. Best in zones 5 to 6. | |
| insularis Nana | ** | Low growing, good resistance to leafminer and blight. | |
| Jim Stauffer | ** | Good hardy medium to large size boxwood. | |
| Justin Brouwers | Х | Discontinued by SBI due to disease and pest susceptibility. | |
| John Baldwin | ** | Good pyramidal boxwood. Better than Green Mountain. | |
| Little Missy | *** | Excellent small to midsize boxwood. | |
| NewGen Freedom® | *** | Fast growing boxwood with few problems. | |
| NewGen Independence® | *** | Green Beauty look with minimal leafminer. | |
| NewGen Liberty Belle™ | *** | Low, billowing habit, excellent blight resistance. | |
| Richard | ** | Unique heart-shaped foliage. Best in zones 7 and warmer. | |
| sempervirens (American) | * | Good large boxwood. Susceptible to boxwood blight. | |
| Suffruticosa (English) | Х | Discontinued by SBI due to disease susceptibility. | |
| Winter Gem | ** | Fast growing boxwood with looser growth habit. | |

| Overall Rating | |
|----------------|-----|
| Top Choice | *** |
| Good Choice | ** |
| Average Choice | * |

In memory of Paul M. Saunders

(1933-2022)

Paul Saunders entered the Gates of Heaven on March 11, 2022. His life instilled an enormous passion for farming and plants, especially boxwood, in his family, friends, employees, and



anyone he met. He began propagating boxwood in 1947 as a 4-H project with great hope and ambition and he never looked back. He and our mom first potted boxwood in tin cans collected from the local school cafeterias. His reputation for boxwood grew and in 1962, he shipped his first boxwood to The White House to frame Jackie Kennedy's Rose Garden. Multiple shipments were made in the years to come, most recently in 2020 when Melania Trump renovated The Rose Garden.

Dad's passion to find and test boxwood never ceased. He and mom traveled thousands of miles distributing trial boxwood to nurseries, researchers, universities, arboreta, and gardening enthusiasts up and down the East Coast and to the Mid-West. International testing sites were also established in the United Kingdom, the Republic of Georgia, and Ukraine. His goal was to identify the best boxwood for specific regions and he was willing to share with anyone. In the 1990s, their boxwood journeys also took them to Eastern Europe and Asia on a plant-collecting expedition. He published the National Boxwood Trials Report most recently in 2011, with data from over 60 trial collaborators in the US and abroad. In 2020, one of his dreams came true, when Saunders Genetics launched the first branded boxwood program in the United States, NewGen®, a distinctively better family of boxwood.

Dad's enthusiasm for horticulture and agriculture laid a solid foundation for what Saunders Brothers is today. Throughout his life, he expressed his love for the farm and said his happiest days were when he returned home from college, military service, a business trip, or even a vacation. He often said that "he was living a dream". Dad was laid to rest on the farm in our family cemetery where he maintains a view of our peach and apple orchards, boxwood field plantings, and his beloved Blue Ridge Mountains. The Gates of Heaven will henceforth and forever be adorned by Paul Saunders' boxwood.

– Tom, Bennett, Jim, & Robert