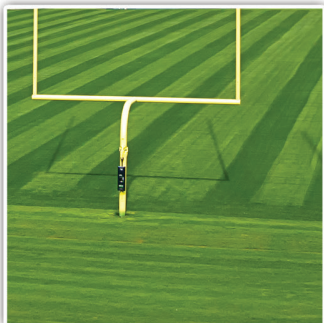


IRONMACE CUTTER

ELITE VEGETATIVE BERMUDAGRASS

FORGE

YOUR OWN PATH!



- ▶ **Rapid Establishment**
Sprig-to-sod quickly
- ▶ **Top-Rated Turf Quality**
High NTEP Ratings
- ▶ **Excellent Drought Tolerance**
Stays Green With Less Water
- ▶ **Improved Disease Resistance**
Use Less Fungicides



IRONCUTTER

ELITE VEGETATIVE BERMUDAGRASS

From the wind-swept turfgrass plots of Enid, Oklahoma rises a new successor in cold-tolerant vegetative bermudagrass: **IRONCUTTER™**. IronCutter is the result of a 10-year research and breeding partnership from the legendary turf and forage breeder Dr. Charles Taliaferro (breeder of vegetative bermudagrass Patriot, Latitude 36, and Northbridge), Johnston Seed Co., and exclusive marketer **MVP Genetics**. IronCutter entered the National Turf Evaluation Program's (NTEP) 2013 Bermudagrass Trial as JSC-2-21-18-V, where it emerged as an ideal choice for turf managers seeking better all-around consistency and the highest turfgrass quality across the entire reach of bermudagrass's growing zones. (Table 1 at right.)

IronCutter, a clonally propagated F1 interspecific hybrid that's highly sterile, is a cross between *Cynodon dactylon* var. *dactylon* (L.) Pers. and *Cynodon transvaalensis* Burtt-Davy. In summer 2007, IronCutter was selected from humble roots, a small crossing block in an Enid, Oklahoma turf nursery, and grown as individual plants in a greenhouse during the winter of 2008. Emerging as a serious contender in late 2009, IronCutter was then isolated under the rigors of golf course fairway protocols to judge turf quality and other important characteristics like Spring Green-Up, and Traffic Tolerance. It proved elite there, and again in the NTEP, producing a 90% Score in the Maximum Top 25%, a metric of top performance for all trials in every location.

The result is a crowning achievement for a new vegetative bermudagrass – superior scores over top cultivars like **Tahoma 31™**, **TifTuf™**, and **Latitude 36®** in key benchmarks like turfgrass quality, traffic tolerance, and spring density. Combined with stable genetics and consistent production, IronCutter is the new #1 choice for turf managers of all industries.

ESTABLISHMENT

Remove all construction debris, brush, and other undesired vegetation prior to grading the lawn site. If necessary, thin trees to make soil preparation and mowing easier. Slope the soil away from the house for drainage. Fertilizer and lime applications should be based on soil test results. Spread the fertilizer uniformly at the correct rate and mix thoroughly to a depth of 4 to 6 inches using a rototiller. After the incorporation, smooth grade or level the area to correct surface irregularities. Apply at least one inch of water and allow the soil to settle.

MAINTENANCE

Bermudagrass requires frequent, low rate N applications (4 to 5 lbs./1000 sq ft annually) to maintain the highest turf quality. Potassium, phosphorus, and micronutrients should be applied based on a soil test. For minimum maintenance, a complete fertilizer like 16-4-8, 10-10-10, or 12-4-8 can be applied in spring and fall with additional applications of nitrogen in the summer. Irrigation on an "as needed" basis is the most efficient way to maintain proper moisture. Irrigate at the first signs of moisture stress. IronCutter should be mowed at the recommended height of one-half to one and one-half inches.

OPPOSITE PAGE

Figure 1: IronCutter shows excellent spring greenup in Georgia.

Table 2: IronCutter performs well under traffic conditions and shows excellent resistance to Leaf Spot.

Figures 2-4: IronCutter has excellent color, spring greenup and ranked highest in summer density based on the LSD.

Table 1. Turf Quality by State

VARIETY	FL	MD	TX	GA
IRONCUTTER™ (JSC 2-21-18-V)	6.4	7.7	7.4	6.5
TAHOMA 31™	5.7	7.6	7.0	6.0
TIFTUF™	6.3	6.7	7.8	6.3
TIFWAY	6.0	6.9	7.0	5.6
LATITUDE 36®	5.8	7.4	7.1	5.8
CELEBRATION®	5.5	5.6	6.0	5.4
LSD	0.6	0.6	1.1	0.7

2013-2017 NTEP BERMUDAGRASS DATA. RATINGS 1-9; 9=BEST

1. SPRING GREENUP - GA LOCATION, LSD 1.5

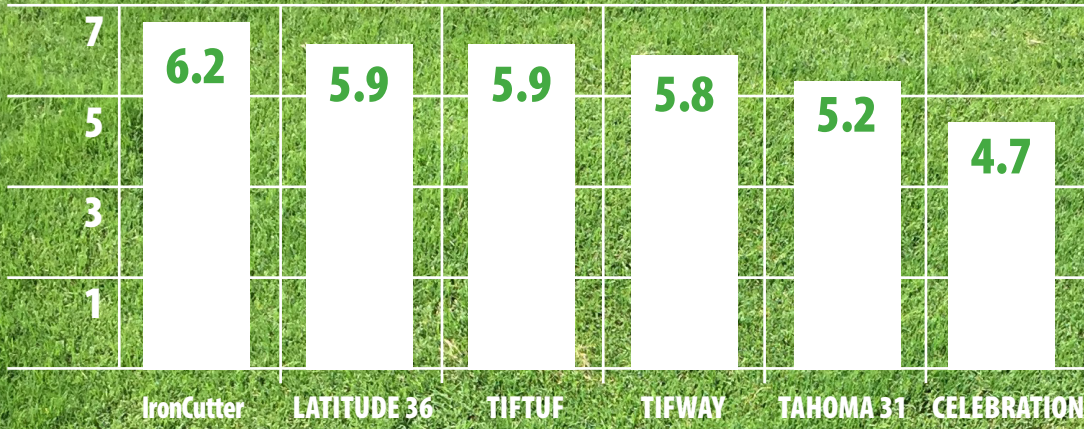


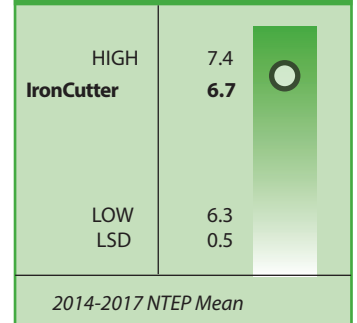
Table 2. NTEP Trial Data

VARIETY	TRAFFIC TOLERANCE % COVER ¹		LEAF SPOT TOLERANCE ²	TURF QUALITY MEAN ³
	BEFORE TRAFFIC	AFTER TRAFFIC		
IRONCUTTER™ (JSC 2-21-18-V)	99.0	70.0	7.0	6.7
TAHOMA 31™	99.0	70.0	6.3	6.8
TIFTUF™	96.3	70.0	6.3	6.8
TIFWAY	91.7	73.3	5.7	6.3
LATITUDE 36®	89.3	58.3	5.0	6.6
CELEBRATION®	43.3	18.3	5.7	6.0
LSD	29.5	25.7	2.2	0.3

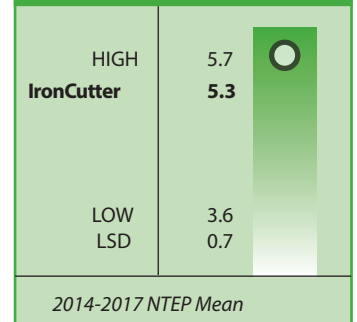
2013-2017 NTEP BERMUDAGRASS DATA. TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST

¹2016 NTEP FROM LEXINGTON, KY. ²2017 NTEP FROM COLLEGE PARK, MD. ³AVERAGE OF ALL 17 LOCATIONS 2013-2017.

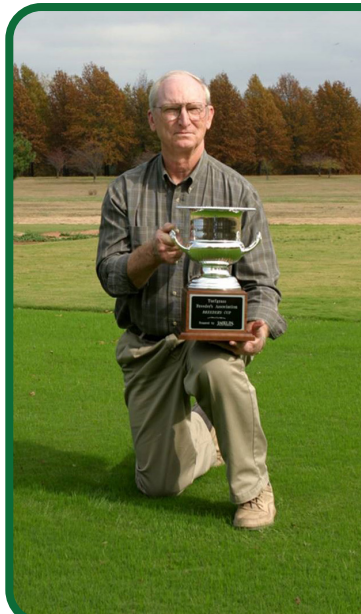
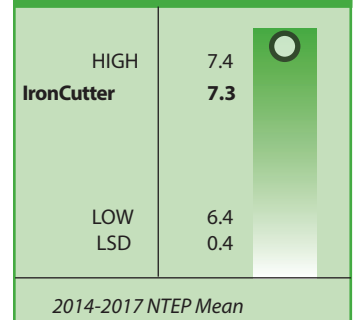
2. GENETIC COLOR



3. SPRING GREENUP



4. SUMMER DENSITY



IronCutter - FORGED BY A LEGEND: Dr. Charles Taliaferro

A distinct bermudagrass name like IronCutter should have a great background story. For the legendary breeder Dr. Charles Taliaferro, who grew up in the small farming community of Leon, Oklahoma, IronCutter makes up the very meaning of his family's name. The anglicized Taliaferro comes from the Italian family name Tagliaferro, literally translated "IronCutter". With that kind of foundation, and strong ties to Oklahoma agriculture, a young Charles Taliaferro enrolled at Oklahoma State University (OSU), graduating in 1962 with a B.S. in Agronomy. After a stop in College Station, TX to earn a Ph.D from Texas A&M University in Plant Breeding and Cytogenetics, Dr. Taliaferro went to work for the USDA-ARS in Tifton, Georgia under the guidance of Dr. Glenn Burton, the internationally known forage and turfgrass breeding expert. Dr. Burton was just starting to receive acclaim for breeding and releasing TifWay 419 bermudagrass during this period, and it was there in Tifton that Dr. Taliaferro cemented his interest in bermudagrass breeding. After 4 years in Tifton, Dr. Taliaferro returned to OSU as a faculty researcher and professor, primarily focused on breeding Bermuda, buffalo, switch, and other pasture grasses. In the 80's, in large part to funding from the United States Golf Association, Dr. Taliaferro was able to focus more on breeding bermudagrasses for turf use.

In Dr. Taliaferro's time with OSU, he excelled with seeded bermudagrasses, including Guymon, the world's 1st improved seeded bermudagrass cultivar. While Guymon did not have the fine texture desired for high quality turf, it was widely utilized

because it could be grown in via seed. Dr. Taliaferro then developed Wrangler, the 1st cold-tolerant seeded forage type, as well as cold-tolerant Yukon and Riviera for turf markets. Riviera was the first bermudagrass specifically developed for turf purposes, propagated by seed that was competitive with vegetative varieties. Riviera was widely adapted with exceptional turfgrass quality, reaching #1 in turfgrass quality in National Turfgrass Evaluation Program trials of the early 2000's for both seeded and vegetative cultivar plots. A crowning achievement, Dr. Taliaferro then turned to breeding traditionally propagated vegetative varieties, breaking through with elite cultivars Patriot, Northbridge, and Latitude 36.

As Dr. Taliaferro moved from OSU to the Johnston Seed Company, he continued to work in both seeded and vegetative bermudagrass breeding, with high turf quality and wide, adaptive releases. These efforts encompassed a lifetime of field knowledge and science, and led to fruition with IronCutter being identified as a promising cultivar in 2007. IronCutter was subsequently entered into the 2013 NTEP, performing exceptionally in all turf categories. IronCutter is very widely adapted, specifically across a wide range of rainfall locations. With elite Spring Greenup scores, it displays excellent sod density, and retains its vibrant green color, persisting with #1 turf quality in trials where the competition can't cut through. IronCutter is the newest, best choice for cold-tolerant vegetative bermudagrass, and available for use on golf courses, playing fields, parks and residential lawns.

WE MAKE LICENSING TURFGRASS EASY



They say competition brings out the best in you; nowhere is that more relevant than in turfgrass breeding. From beginning to end, MVP Genetics cultivars are put through rigorous testing to measure attributes including color, drought tolerance, leaf texture, disease and pest resistance, wear tolerance, and genetic stability. Only the strongest will survive and make their way into the hands of qualified MVP growers & licensees. But testing and evaluation doesn't end there. MVP cultivars are constantly University-tested for regional adaptability: And then onto the biggest test – the fields of play.

Many vegetative cultivars will perform well under ideal conditions. But the true test of a good bermudagrass is how it performs in the real world. Any shortcoming will reveal itself on the field. MVP cultivars have performed flawlessly around the world. We are the leader in sports turf technology. Choose cultivars that are champions on the field...choose MVP Genetics.

MVP is committed to promoting sustainable turfgrass cultivars worldwide, and has partnered with the A-LIST program. The A-LIST (Alliance for Low Input Sustainable Turf) seeks to define and promote turfgrass varieties that continue to exhibit good turf quality in less-than-ideal conditions. Approved varieties will perform well even when irrigation and fertilizer are drastically reduced. The trials are conducted and managed independently around the country. Look for the A-LIST Approved Variety tag to be sure the varieties you choose look great and reduce the inputs needed to do so.



BERMUDAGRASS RESEARCH & DEVELOPMENT

MVP Genetics is devoted to developing and acquiring grass of the highest genetic quality. We continually look for cultivars with improved resistance to disease and pests. You'll find our varieties on the front page of the NTEP. We work closely with major university research programs like Oklahoma State University, Texas A&M, NC State University, and many other public and private breeding programs.

GENETIC PRESERVATION

We stringently work with State Crop Improvements Associations and our network of Foundational Growers to preserve our licensed cultivars. Whether domestically or worldwide, we support our licensees, offering field guidance and help to ensure their stock stays exactly how it starts for years to come.

FARMER FOCUSED

We are the farmer, and we license the farmer's crop. So we understand how to market grass, to adjust marketing plans just like the seasons adjust, continually changing and trialing to produce the most responsive efforts that put our growers and licensees first. We honor their partnership by always striving to make our products and marketing better.

SERVICE & DELIVERY

You'll always talk to a real person when you call MVP – someone who'll answer the questions you have. And we always deliver cultivars with the cleanest, highest purity to the right place...on time!

PROGRESSIVE-RELIABLE-SERVICE DRIVEN

Put our experience and resources to work for you. Contact us today.

8955 Sunnyview Rd. NE Salem, OR 97305

Phone: 503.588.7333 • Fax: 503.587.8688

info@mvpgenetics.com • www.mvpgenetics.com