The Benefits and Challenges of Using Buffalograss

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This presentation will be mounted to the web within 48 hours

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The “Yard” can be a balance of lawn and landscape features.
Buffalograss in winter
• Example: Jan 25, 2010 canopy brushing reveals high number of green aerial shoots in Bowie Buffalograss
More sustainable (behind sidewalk) less sustainable (in front of sidewalk). Do you like what you see?
9 July 2012 – no irrigation during drought
‘Wrangler’ bermudagrass (left)
‘Texoka’, ‘Cody’ buffalograss (right)
Brown canopy of buffalograss is highly flammable
Buffalograss stand in cemetery at Pawnee, Oklahoma
Buffalograss plants
having female flowers (left)
Male flowers (right)
Buffalograss

• Principally dioecious, occasionally monoecious – meaning male and female flowers are born on separate plants but occasionally occur on the same plant

• Native North American warm-season stoloniferous (above-ground runners) perennial grass

• 4 ploidy levels found in nature
  – Diploid (2x sets of chromosomes) – southern range
  – Tetraploid (4x) – southern through middle plains
  – Hexaploid (6x) – southern through middle and northern range
  – Pentaploids (5x) have been found in nature also

• Currently only major turf species of US that was native to North America
Buffalograss

• Seed contained in burs
• Burs are not spiny as the name implies
• 1-5 seed often present in the bur
Buffalograss: Non-mowed and mowed at 3 inches
Common Confusion

• Sometimes buffalograss is confused with blue or hairy grama or with sideoats grama because of a similar appearance to the foliage
• Flowers are notably different
• Most importantly, buffalograss at maturity has profuse stolons, the above three species are not known to produce stolons
Bluegrama
Native range of buffalograss
Major distribution (dark), minor (medium) distribution and potential adaptation of buffalograss

Johnson et al. 2001 Crop Science Journal
PROJECTED AREA OF ADAPTATION OF CODY AND BOWIE BUFFALOGRASSES SHOWN IN GREEN

Image credit Native Turf Development Group
Generally you can take a northern provenance buffalograss south but it may not be wise to take a southern provenance buffalograss north due to increased risk of Winter-kill!
Fact Sheet for buffalograss product availability
Seeded Buffalograsses
General Purpose Soil
Stabilization, Lawn and Grounds

- Texoka – many sources
- Comanche - several
- Bison – Johnston Seed
- Plains – Bamert Seed
- Topgun – Bamert Seed
- Sharp’s Improved – Sharp Brothers
Seeded Buffalograsses Offering Higher Visual Quality

- **Cody#** - Johnston Seed, Stock Seed Farms, Sharp Brothers
- **Bowie #** - Johnston Seed, Stock Seed Farms
- **Buffalo Pals™*, †** – Pennington/Seeds West
- **Sharp’s Improved II, ‡** - Sharp Brothers
  - # highest quality seeded- type in author’s tests
  - *a blend
  - † Not yet tested by author
Buffalograss Seeding Establishment Guide


Establishment and Management Guide to NaTurf brand Buffalograss

from Native Turf Group
Seed Cost

• Bowie and Cody buffalograss cost approx $14 - 16/lb
• Compare to Riviera bermuda at $15/lb
• VNS Common bermuda at $5/lb
Bowie seeded buffalograss at 6 weeks after planting. 2 lbs of burs per 1,000 sq. ft. 1 lb of N from 10-20-10 at seeding and again at 1 month after seeding. Irrigation to keep soil moist.
Vegetatively Planted (including but not limited to):

- ‘609’ – female – OK US 412 and south
- ‘Prairie’ – female – OK and TX
- ‘UC Verde’ – female – desert southwest in AZ, CA
- ‘Eco’ – male – offered in south TX
- ‘Legacy’ – female – northern and southern use
- ‘Prestige’ – female, low growing – OK, TX, AR, south
- ‘Frontier Turfallo’ – male and female, seeded type grow as plugs for sale - TX and OK
Buffalograss Plug Planting Guide

http://www.toddvalleyfarms.com/PlugInstallation.htm

Click here for Instructions for Installing Bella Bluegrass Plugs

Instructions for Installing Buffalograss Plugs
Plug Flat Tray Shipping container
Buffalograss Plugs
Plug flat trays

- Typically 72 plugs per tray
- Cost about $40 - $50 per tray (depending on source)
- Use ship auger on cordless drill to drill 1.5 inch holes on 18 inch centers
- Will cover to 100% in about 90 days during spring/summer if irrigate at 100% of ET, optimize P & K and 1 lb of N per growing month
- Weed control as buffalograss matures
Sod Costs

• ‘609’ and ‘Cody’ buffalograss sod costs approx $0.30/ sq ft
• Common bermudagrass sold as U-3 costs approx $0.17/sq ft
Planting of pre-rooted plugs shortly after planting on 18 inch centers, full fertility and irrigation

2 months after planting 3 inch dia plugs on 20 inch centers, full fertility and irrigation
Planting of Seed in Lawn

- Soil temp of 60F but better if in the 70s or higher
- 1 to 3 lbs of burrs per 1,000 sq. ft. in lawn
- Incorporate burr to 0.25 to 0.5 inches deep
- Fertilization required for proper establishment. Optimize phosphorus and potassium (soil test)
- 0.75 lbs N at seeding, 1 lb of N per growing month during establishment phase in a lawn
- pH range of 6 to 11, 6.5 to 7.6 best, don’t acidify
- Germination time: 7* - 21 days for treated seed
- Keep soil moist during establishment phase
Planting of Sod

- Proper soil preparation just as essential
- Soil test for pH, P and K, Optimize
- Till to 4 inches, grade, refirm
- Soil amendments
- Sod or plug: plugs on 6, 12, 18 inch centers
- 1 lb of N/1,000 sq. ft. at time of plugging and repeat at monthly intervals until 100% cover
- For sod 0.5 lbs of N per 1,000 sq. ft. at time of sodding
- Irrigate to root in plugs or sod, keep soil moist until established
- Remove bermudagrass by hand/shovel or spot spray with glyphosate at 5% solution as per label
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How long will it take?

- Your ability to irrigate to meet water needs and fertility needs will determine the duration of establishment period.
- Establishment buffalograss is “front-end loaded” ie most of your work is up-front in a properly designed program. Heavy irrigation, fertility and weeding during establishment phase.
- 90 to 120 day grow-in is feasible from seed or plugs in a lawn if properly is given.
- 1 – 5 year grow in likely under low maintenance in soil stabilization projects.
- Weed control is essential for success.
Maintenance

• Water it if you want quality. 0.5 to 1.0 in/wk in a drought

• Fertility: 1 – 3 lbs of N per 1,000 sq. ft. per year. Split applications at least into Late April, early June, early Sept

• Mowing: None to 4 times per month, height 3 inches up. Prestige requires less mowing. Seeded types require more frequent mowing.

• Herbicides: Pre and post programs useful. See labels. Some varieties are sensitive. Herbicide programs usually are required

• Buffalo is sensitive to 2,4-D when temperature is above 85F. Good tolerance to most herbicides though.
Challenging Perennial warm-season grasses
Rhizome of bermuda

Stolon of buffalo

Vertical aerial shoots

Rhizome of bermuda

Stolon of bermuda

Stolon of buffalo
Rhizome of bermuda

Stolon of bermuda

Orange arrows indicate the location of easily located nodes. There is a lateral bud at each node.

Stolon of buffalo

Rhizome of bermuda
Bermudagrass

- Must control before you establish native grass.
- Begin extermination minimum of 10 to 12 months in advance of planting. Use temporary turf during extermination process.
- Herbicide/till/fallow/herbicide/herbicide
- Glyphosate (example: Roundup 4S) at 5 qts/acre, repeat spot out with 3% solution
- Tillage to break rhizomes and germinate dormant lateral buds
Use of wheat and annual ryegrass for soil stabilization during winter
Cool-season temporary grass fades out in summer
“Advancing front” technique
Herbicide Research
Windmillgrass – selective removal with Tenacity herbicide
Field bindweed – control with dicamba or quinchlorac
Prostrate spurge
Crabgrass – control pre-emergence. Post-emergence with quinclorac
Armadillos dig in buffalo lawns also!
Short-tailed cricket mound in buffalo lawn.
Mites on buffalograss leaf
In general, buffalograss suffers from the same cadre of problems that affect common and hybrid bermudagrass in Oklahoma.
Buckbrush as an understory plant. Note organic debris layer. Enjoy OK’s rugged beauty!