

# ***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



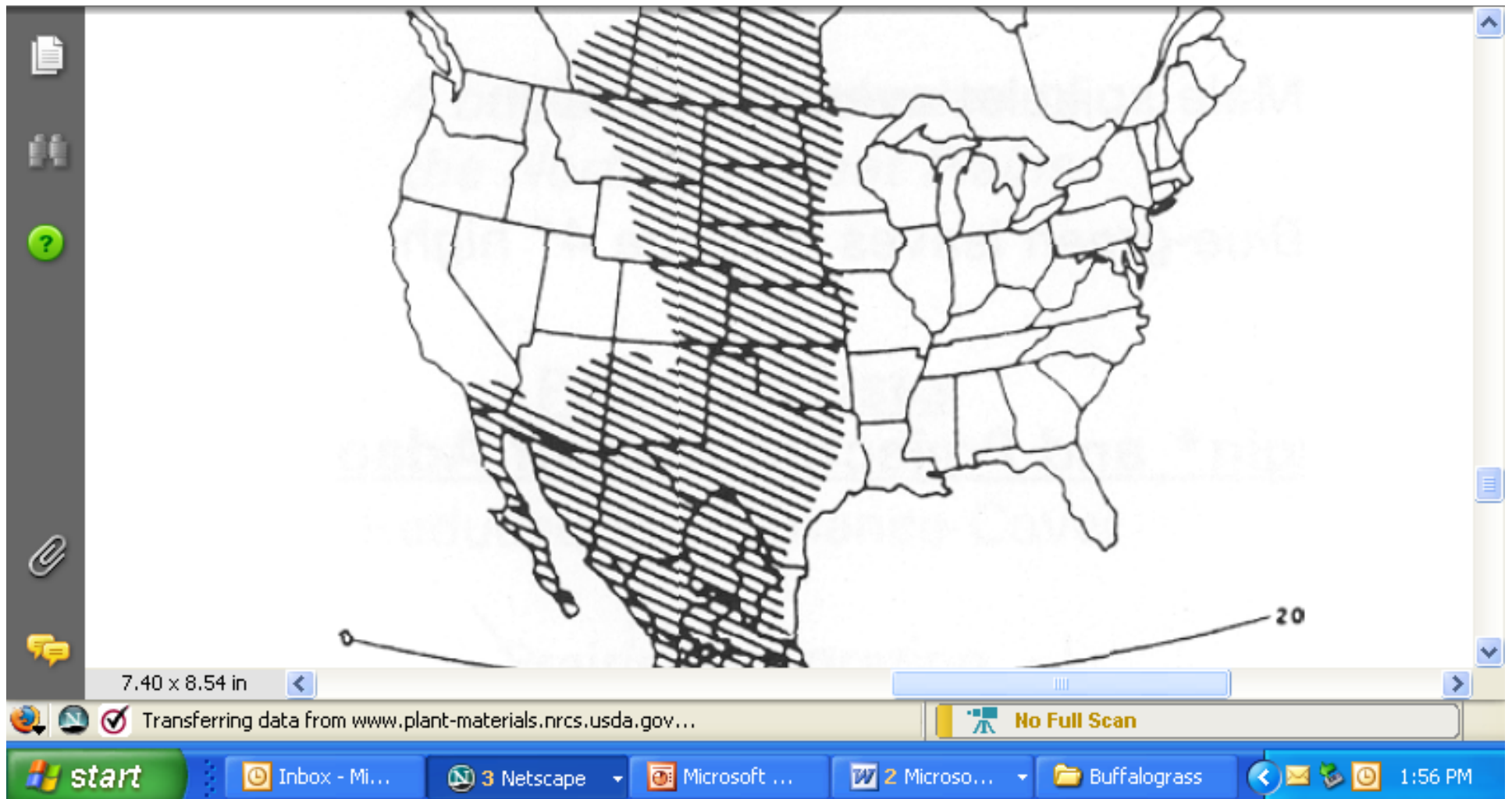


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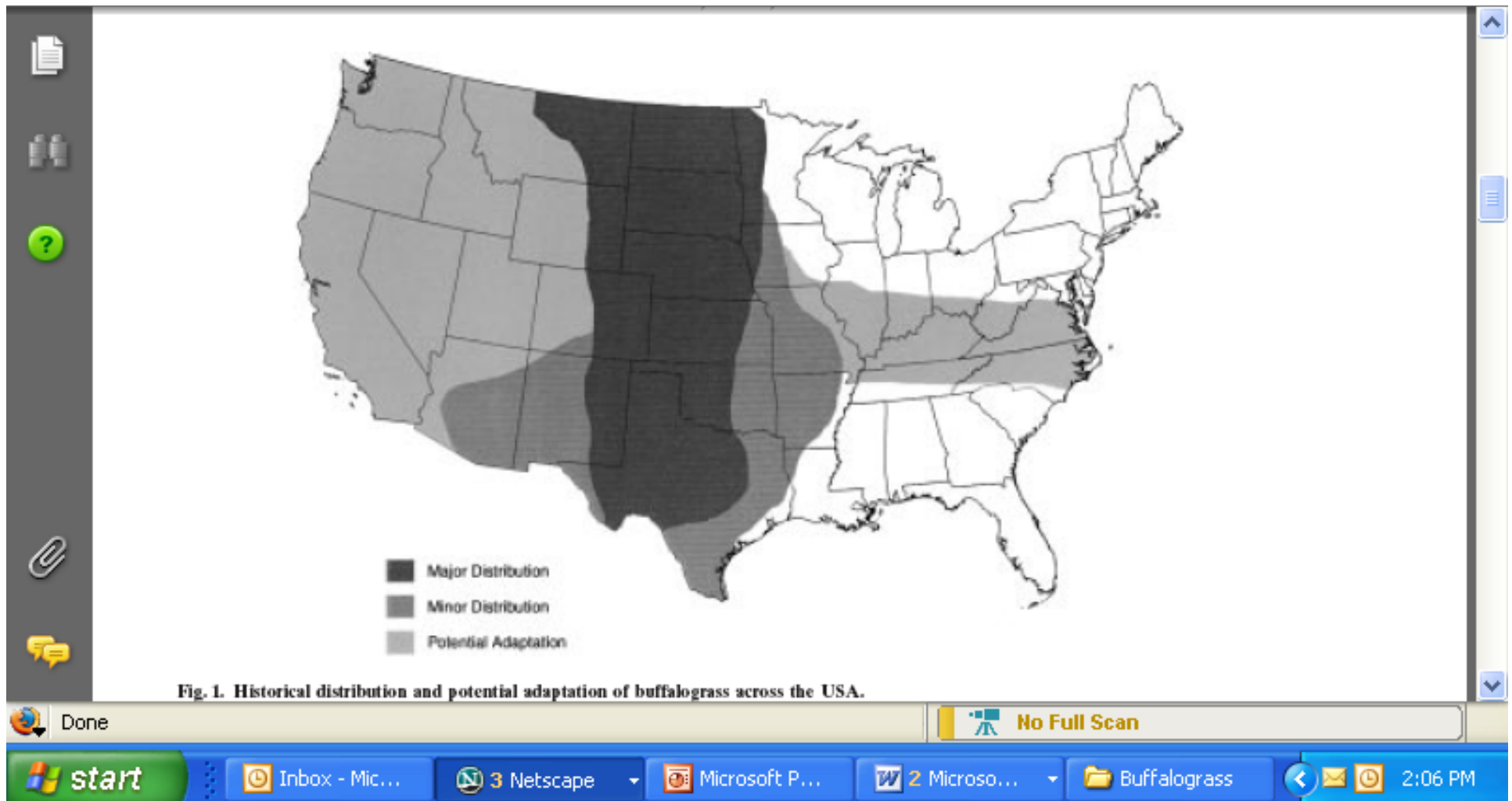
# Native range of buffalograss

from North American Range Plants, 3<sup>rd</sup> Ed. Copyright 1986.



# 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

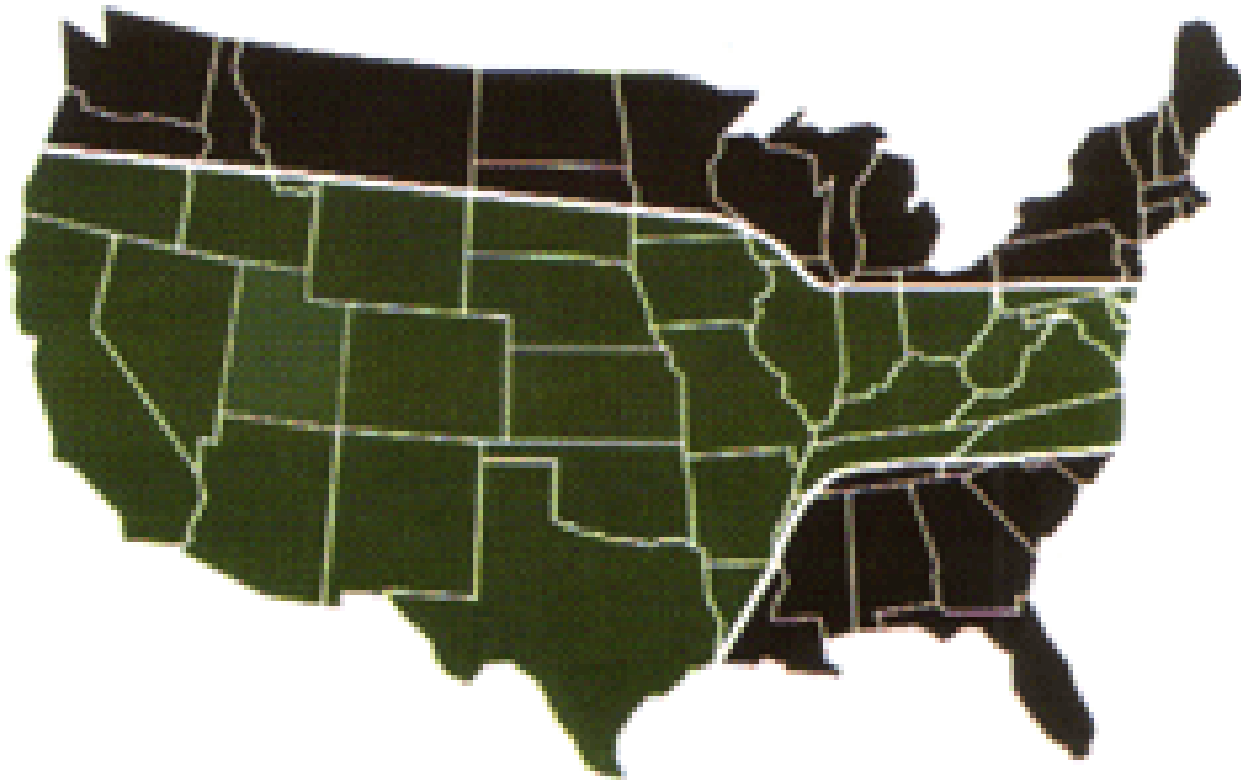


Image credit Native Turf Development Group

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

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-7239/CR-6609web.pdf>



## Commercial Sources of Buffalograss Seed, Sod and Plugs

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### About This Directory

This directory was created to aid in locating commercially available sources of buffalograss seed, plugs and sod in and around the central and southern Great Plains region. Although the information presented in this directory was current at publication time, cultivar availability is subject to change. Retail nursery operations not regularly stocking buffalograss products were not included in this directory. In addition to locating sources in this directory, consumers are encouraged to contact their local retail center to determine product availability.

Information presented herein was gathered during July 2010. Buffalograss sod, plug or seed producers or other business entities specializing in the production or sale of buffalograss who are not listed in this directory and who wish to be included in the next update should direct their request to: Dennis Martin, Oklahoma State University, 358 Agricultural Hall, Stillwater, OK 74078, phone:405.744.5419 or dennis.martin@okstate.edu.

### How to Use This Directory

**Step 1:** In order to locate sources that carry buffalograss, one must first determine cultivar(s) or blend(s) name(s) to search for sources. Choose the cultivar or blend names (listed in alphabetical order) in the left hand column of

Table 1. The cultivar type, whether originating from seed or from a vegetative source, is listed in the second column of Table 1. Vegetative cultivars are only available as sod or plugs. Some seeded cultivars may be available as sod, but rarely.

**Step 2:** Reference the enterprise name producing or distributing the product in the far right hand column of Table 1. Shown in parentheses following the enterprise name is the specific product form, either seed, sod or plugs. The enterprise location, designated by a two letter state code, is shown in the far right hand column. Note that some cultivars may no longer be commercially available and could not be found at this writing.

**Step 3:** After locating the name of a supplier, find the contact information for the supplier in Table 2 (listed in alphabetical order).

**Step 4:** Questions concerning current product availability, price, shipping, installation as well as other specific information should be directed to the commercial supplier. Information on cultivar performance, establishment and maintenance can be found in Extension Fact Sheets HLA-6418: *Selecting A Lawn Grass In Oklahoma*, HLA-6419: *Establishing A Lawn In Oklahoma* and HLA-6420: *Lawn Management In Oklahoma*.

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# **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**<sup>TM\*</sup>, † – 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

<http://www.jeinc.com/Websites/jeinc/Images/seed/pdf-folder/BuffaloEstMngmtGuide2008.pdf>

## *Establishment and Management Guide to NaTurf<sup>brand</sup> 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>



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## SAVING WATER, ONE YARD AT A TIME!

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

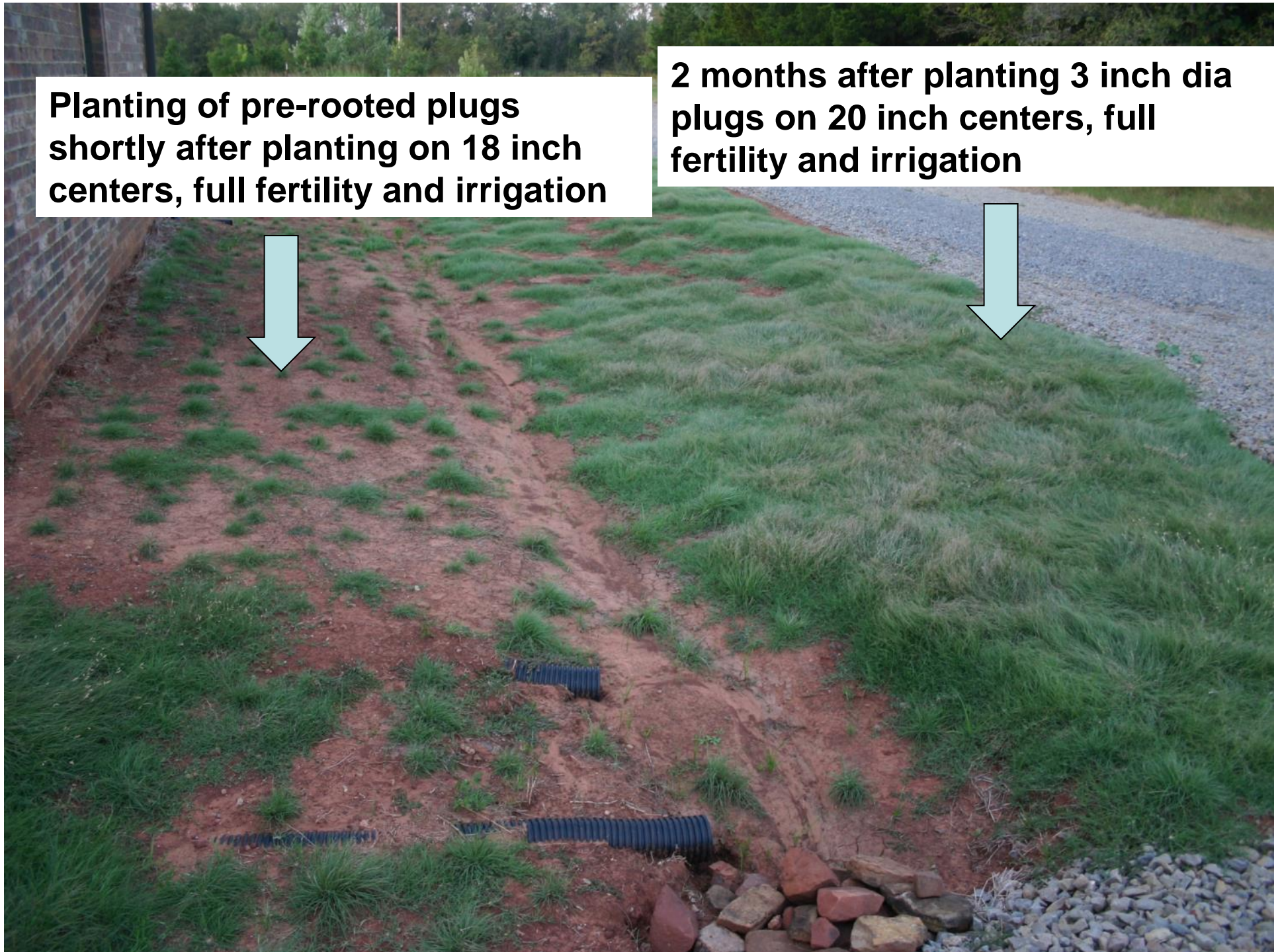
# Sod Costs

- '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?

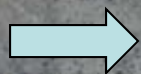
- Your ability to irrigate to meet water needs and fertility needs will determine the duration of establishment period
- Establishment buffalograss is “front-end loaded” ie most of your work is up-front in a properly designed program. Heavy irrigation, fertility and weeding during establishment phase.
- 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

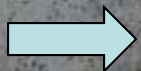
- Water it if you want quality. 0.5 to 1.0 in/wk in a drought
- Fertility: 1 – 3 lbs of N per 1,000 sq. ft. per year. Split applications at least into Late April, early June, early Sept
- Mowing: None to 4 times per month, height 3 inches up. Prestige requires less mowing. Seeded types require more frequent 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

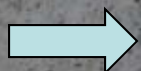
**Vertical aerial shoots**



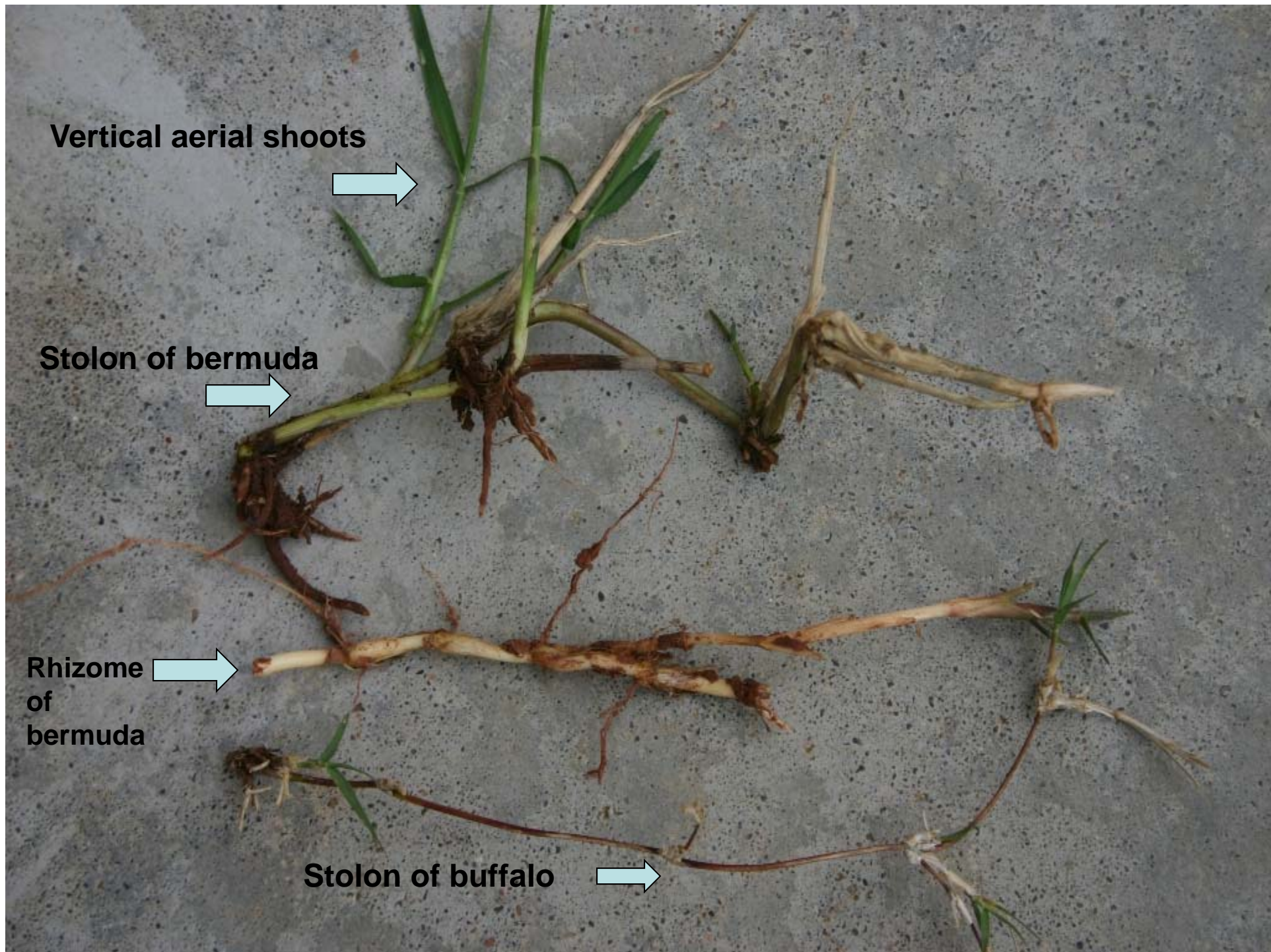
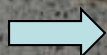
**Stolon of bermuda**



**Rhizome  
of  
bermuda**



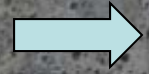
**Stolon of buffalo**





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

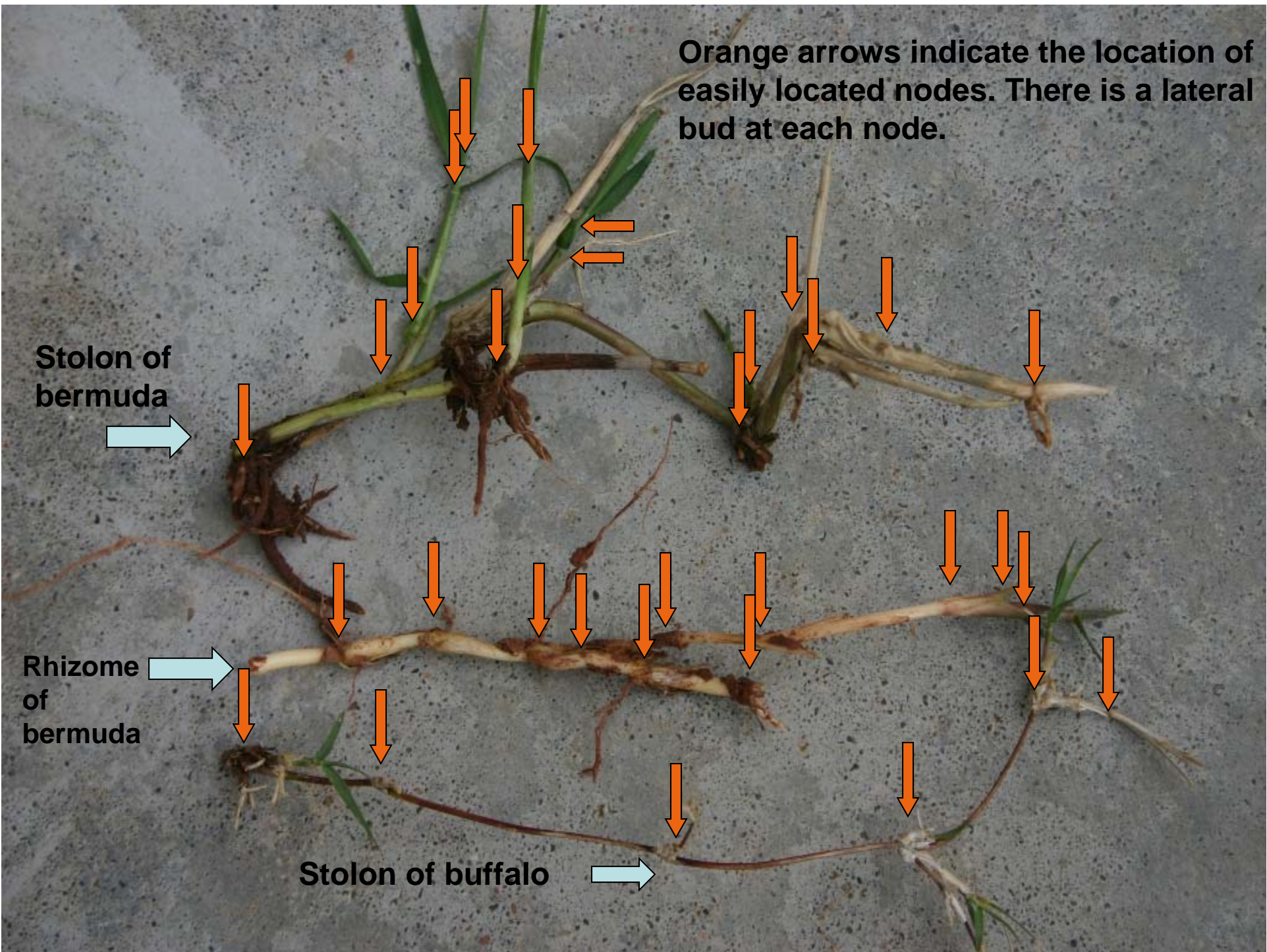
Stolon of bermuda



Rhizome of bermuda



Stolon of buffalo



# 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 quinchlorac



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!

