Why turf dies in Nebraska



Dead turf?



Winter injury

- Temperature
 - Swings
 - Too low
- Moisture
 - Crown hydration
 - Too much
- Specific damage
 - Cell disruption

Dead turf?



Causes of Injury

- Stress
- Management
- Application

Sources of Stress



Shade

- Compromised photosynthetic capacity
- Moisture balance
- Adjust Management
- What can we do?

Shade

• Buffalograss

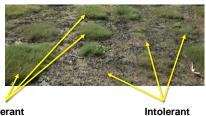
Buffalograss turf grown under shade was thinner and more open than that grown under full sun. There-fore, the turf dry weight was severely reduced. The results of these shade studies indicate that buf-falograss basically is intolerant of shade. However, turf quality differences in shade exist between buffalo-grass varieties. 'Hilite 24' is a recently selected and useraturity represented buffalorerse line. Its curvesion vegetatively propagated buffalograss line. Its superior turf performance under shade is attributable to its greater stolon growth rate. Regardless, it appears that even newly developed, aggressive buffalograsses are unable to perform well in more than 50% shade.

Harivandi and Lu, California Turfgrass Culture 45 (1&2), 1995

Shade

- Shade tolerance of 54 buffalograss lines assessed (FS, 30%, 60%)
- · Five identified as tolerant
- Promising so designed a new study with 52 entries (FS, 60%)

Shade



Tolerant

Traffic

- Soil Compaction
- Compressing the canopy
- Tearing/shearing

Traffic

- Buffalograss
 - poor traffic tolerance
 - why?
 - evolution of turfgrasses?

Traffic

- Advance Lines IV
- 104 elite entries
- Trafficked weekly from June through October
- 2013 & 2014



Traffic



Traffic

• 88 of the 104 were traffic tolerant

Buffalograss

• Is buffalograss tolerant of shade and/or traffic?

Rating Buffalograss

| | Poor | | | | Good |
|---------|------|---|-----|---|------|
| Shade | C | | Е Х | | |
| Traffic | С | | Е | x | |
| Density | C | | | Е | |
| Color | | С | | Е | |
| Heat | | | | | Œ |
| Drought | | | | | Œ |
| Cold | | | | С | Е |

Sources of Injury

- Stress
- Management
- Application

Mismanagement

- Fertility
- Pesticide applications
- Maintain appropriate moisture level
- Scalping
- Traffic routing

Mismanagement

- Triple checking?
- Scouting/tracking/reporting
- Mistakes happen

Dead turf?

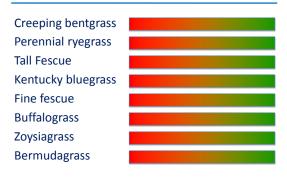


• Would you reseed?

Dead turf?

• If so, what considerations would you make?

Species selection - Management



Application

- Right turf in the right place
- Considered new cultivars? (think of the buffalograss examples)

Thank you

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