



71st Southeastern Turfgrass Conference,
Tifton, GA, May 16, 2017

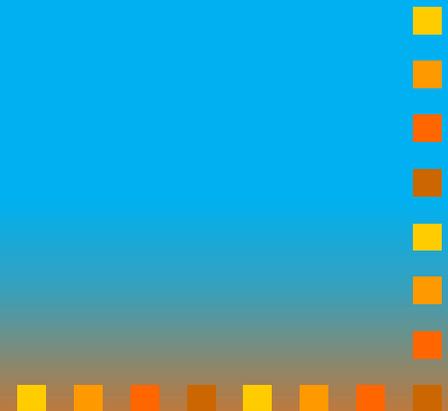


Breeding Turf Bermudagrass at Oklahoma State University

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Bermudagrass Turf

Lawns



Golf courses



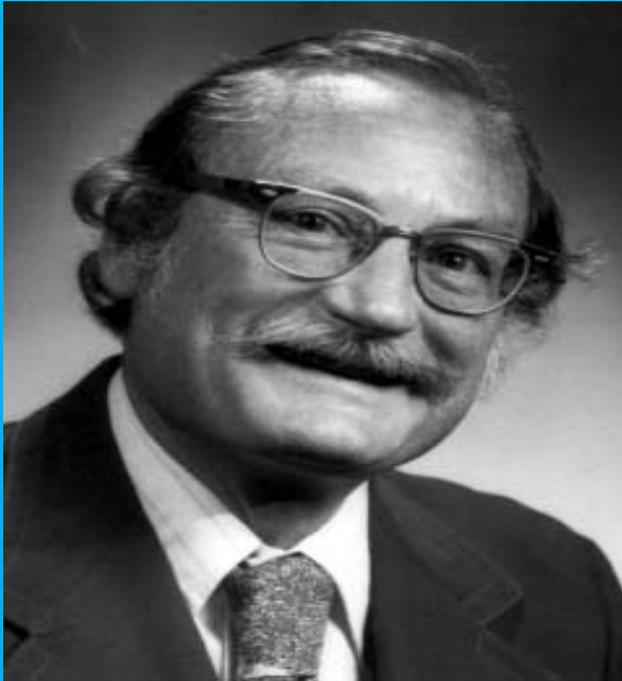
Sports fields



Soil stabilization



Harlan and colleagues



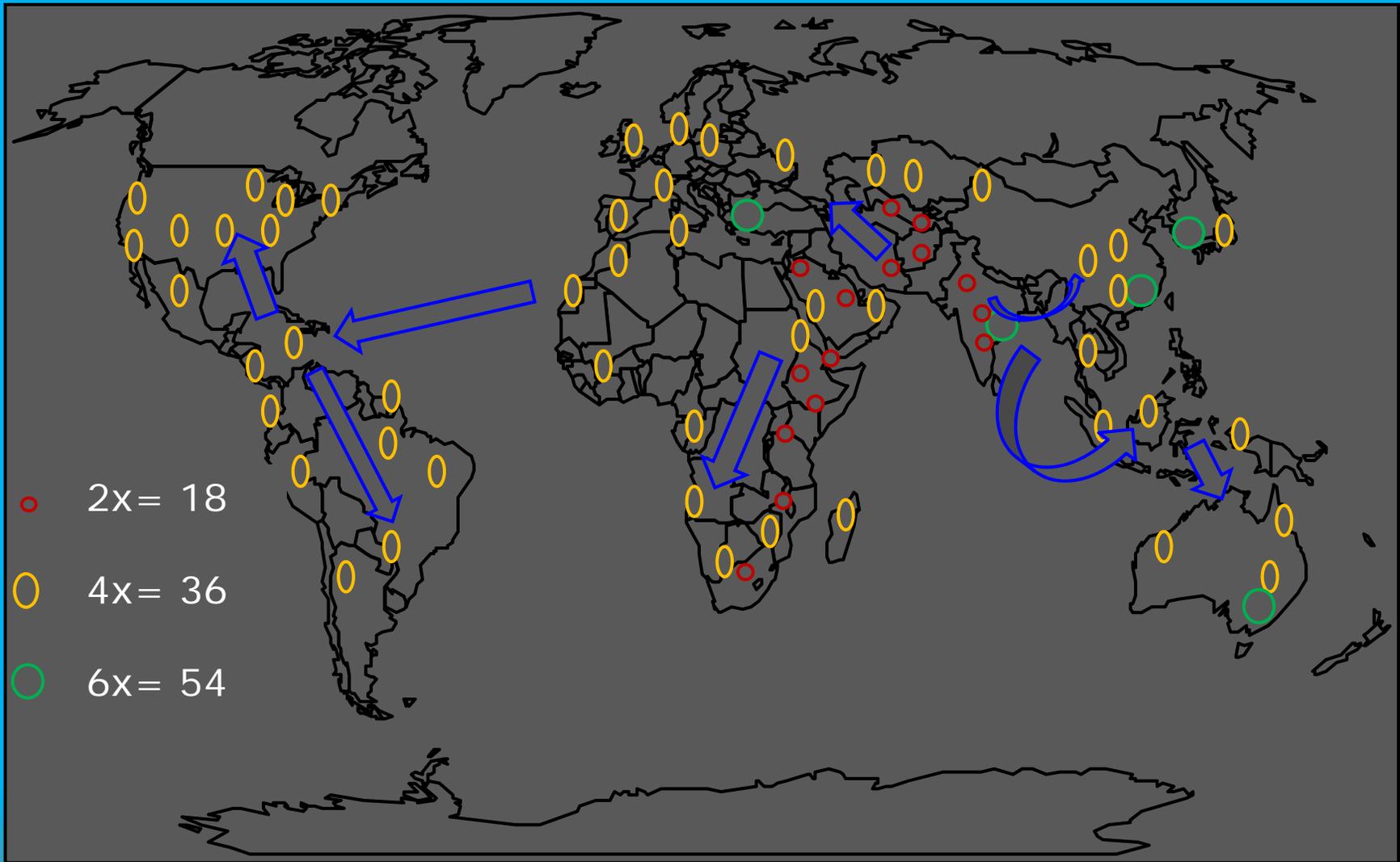
Jack Harlan and
colleagues revised
Cynodon taxonomy in the
1960s

1. *Cynodon aethiopicus*
2. *C. arcuatus*
3. *C. barberi*
4. *C. dactylon*
5. *C. incompletus*
6. *C. nlemfuensis*
7. *C. plectostachyus*
8. *C. transvaalensis*

Common Bermudagrass



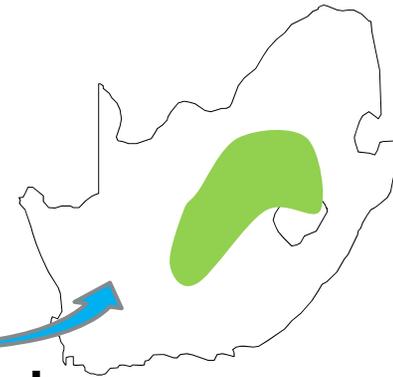
Evolution & Distribution



Wu, Y.Q. 2010. *Cynodon*. Jewell et al. 2012. *Crop Sci.* 52:879.



African Bermudagrass



Harlan et al. 1970. East Afr. Agric. For. J.

Taliaferro & Colleagues

- The turf bermudagrass breeding and genetics research program at OSU was initiated by Dr. Charles M. Taliaferro in the 1980s.



High quality, cold hardy seeded cultivars:

- Yukon (1996)
- Riviera (2000)

High quality, cold hardy vegetatively propagated cultivars:

- Patriot (2002)
- Advanced selections: Latitude 36 and NorthBridge



Taliaferro et al., 2004. TERO.





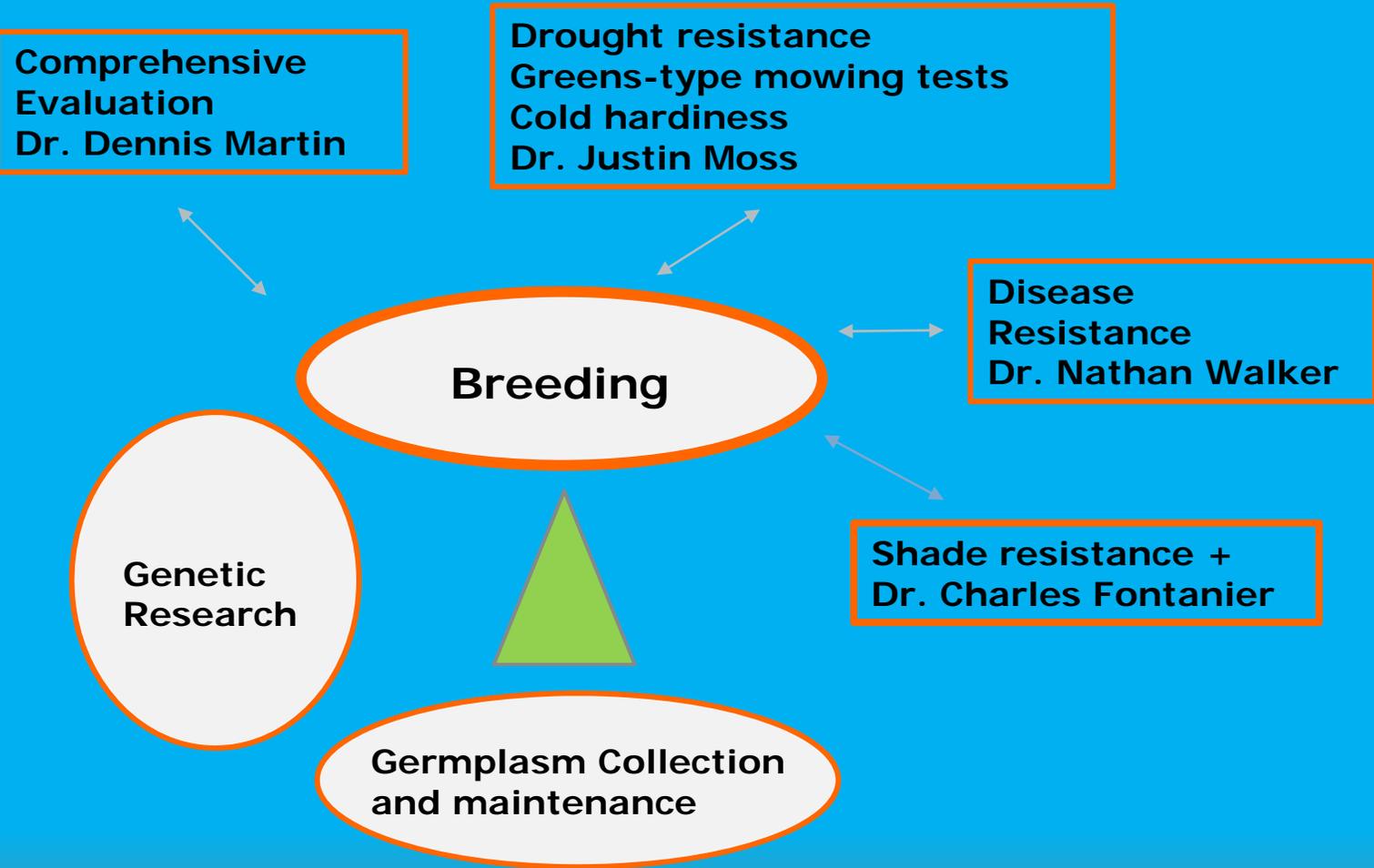
Breeding Goal



The goal of the program is to develop high turf quality cultivars combining abiotic stress resistance (cold, drought, shade, and salinity) with biotic stress resistance (Spring Dead Spot and leaf spot) .



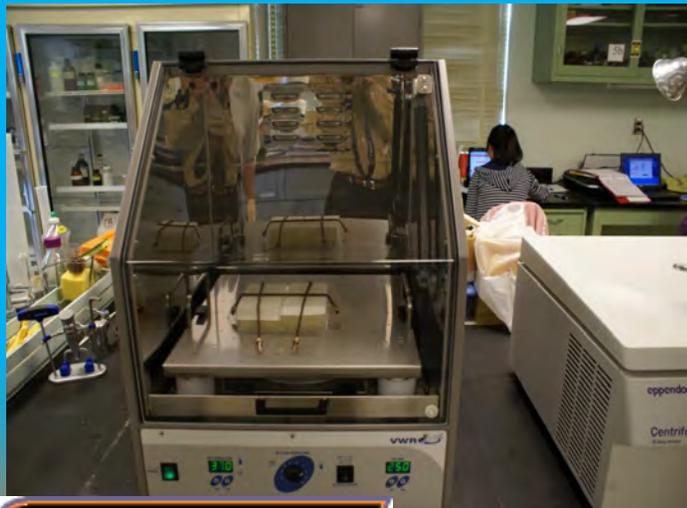
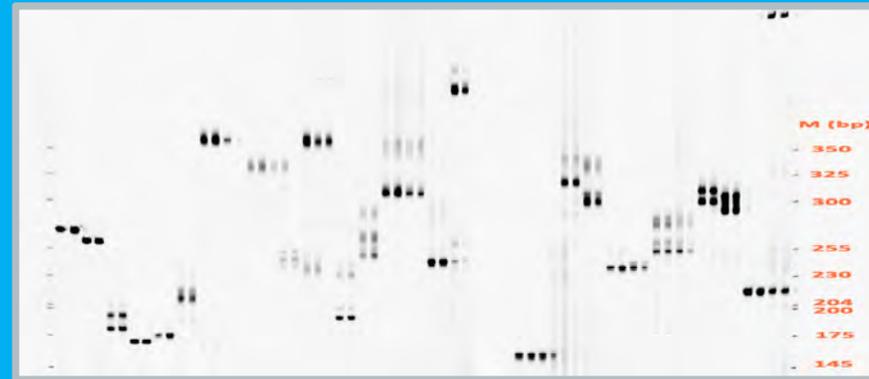
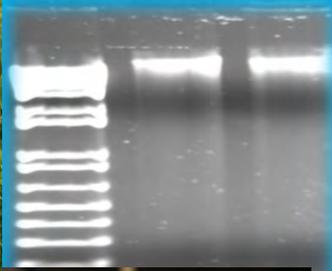
OSU Development Team



USDA SCRI Projects



AFLP, SSR, SNP Markers



Library	Sequenced Clones	SSR markers developed
A (AC) _n	759	283
B (AG) _n	758	377
C (ATG) _n	759	70
D (CAG) _n	759	68
E (AAC) _n	759	205
Total	3794	1003



Latitude 36 and NorthBridge



Wu, Martin, Taliaferro, Anderson, Moss, Bell, Walker. 2010.





New Experimental Selections



New varieties: high turf quality with improvements in biotic and abiotic resistance for sustainable turf use.



Acknowledgements

OSU faculty team: D.L. Martin, J.Q. Moss, N. Walker, C. Fontanier, T. Boyer, and C. Chung

Graduate students: Dustin Harris, Shuhao Yu, Lakshmy Gopinath

Staff: Tilin Fang, Gary Williams

Off-campus collaborators on projects by USDA SCRI and USGA



Oklahoma Turfgrass
Research Foundation

