

RELATIVE COMPETITIVE ABILITY OF BULBOUS BLUEGRASS (*POA BULBOSA*) AND CHEATGRASS (*BROMUS TECTORUM*) WITH PERENNIAL GRASSES

JORDAN SKOVGARD, BRIAN MEALOR, BETH FOWERS



BULBOUS BLUEGRASS (*POA BULBOSA* L.)

- Eurasian
- Unique reproduction
- Invasive potential



MATERIALS AND METHODS

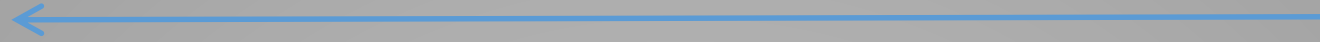
- 12 weeks
- Clay-loam Field Soil
- 6" Pots
- Western wheatgrass (*Pascopyrum smithii*)
- Idaho fescue (*Festuca idahoensis*)
- Bluebunch wheatgrass (*Pseudoroegneria spicata*)
- Bottlebrush squirelltail (*Elymus elymoides*)
- Crested wheatgrass (*Pascopyrum cristatum*)
- Cheatgreass (*Bromus tectorum*)



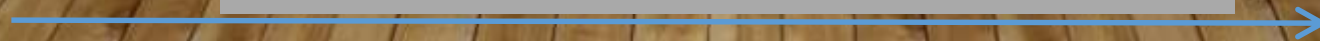
MATERIALS AND METHODS

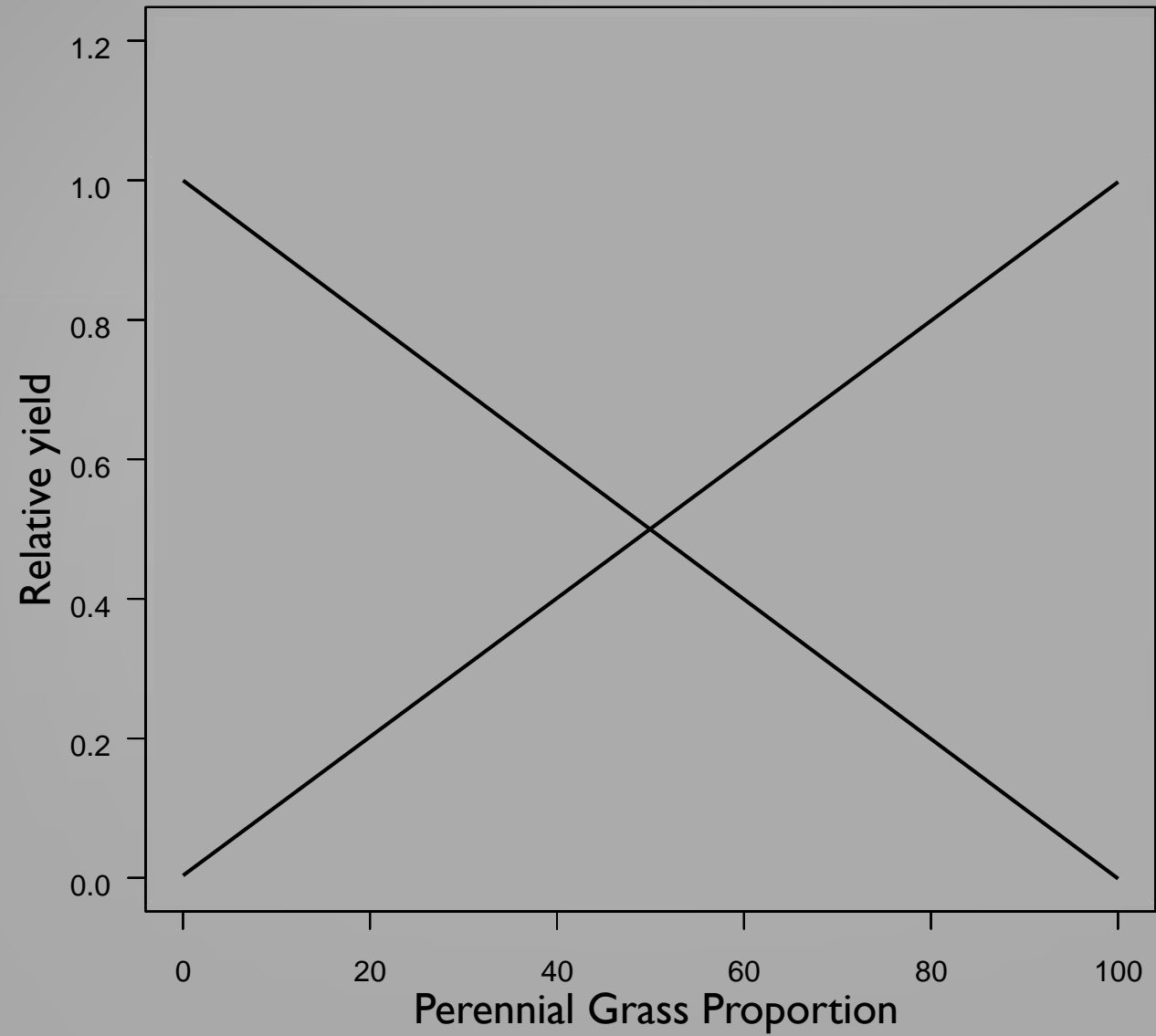


INCREASING PROPORTION OF TARGET

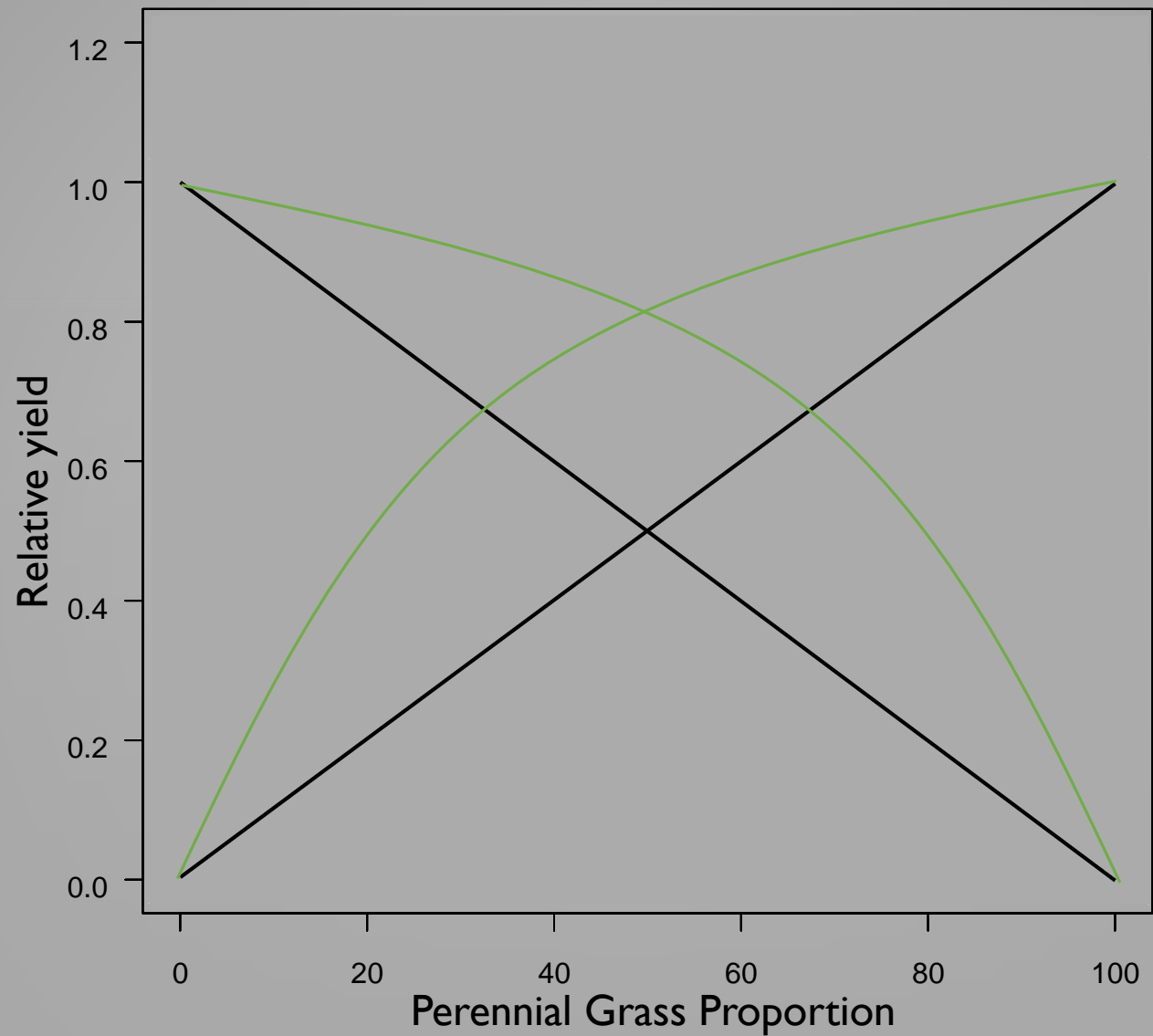


INCREASING PROPORTION OF COMPETITOR



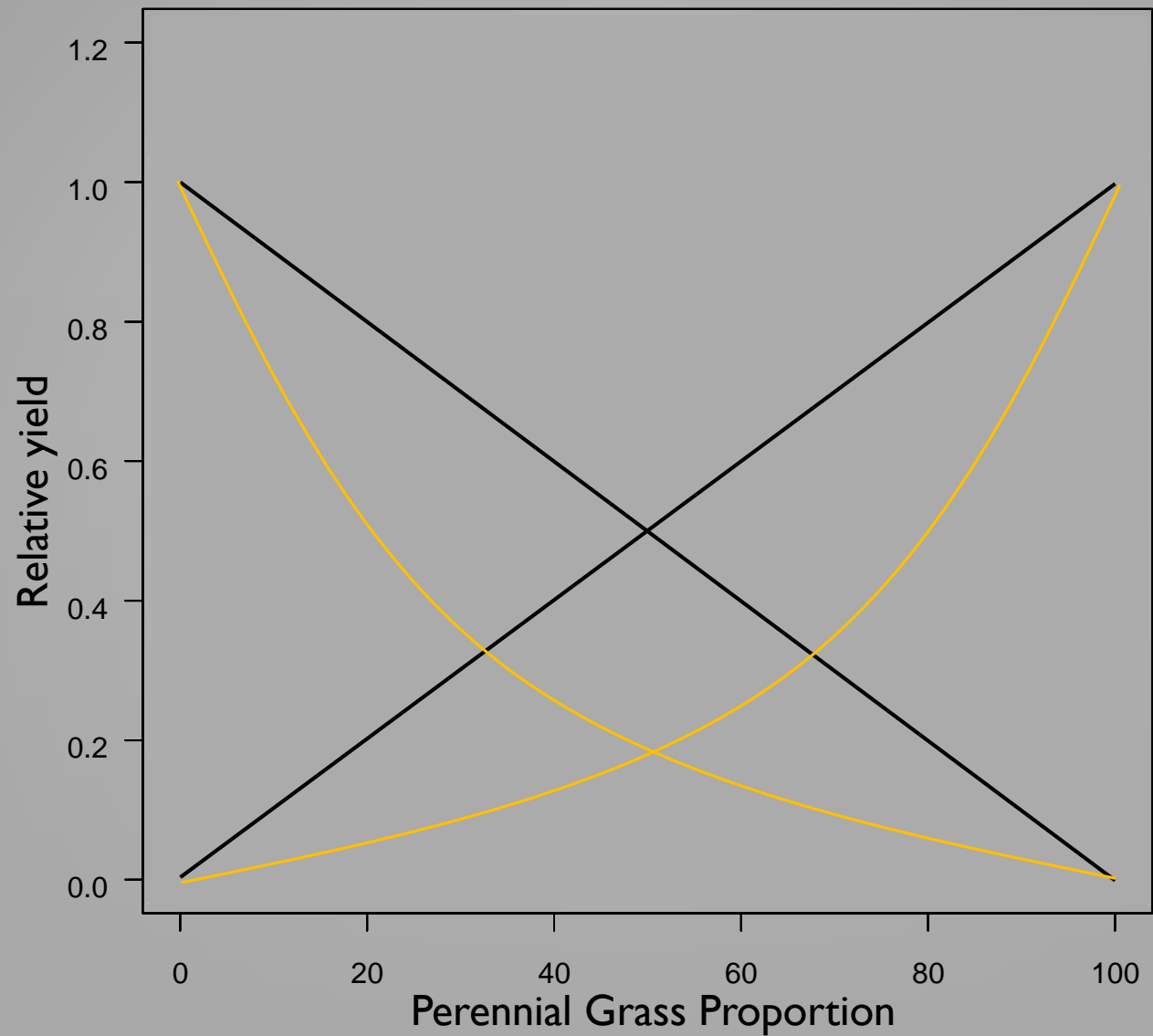


Straight lines indicate lack of competition OR equal competitive abilities.



Straight lines indicate lack of competition OR equal competitive abilities.

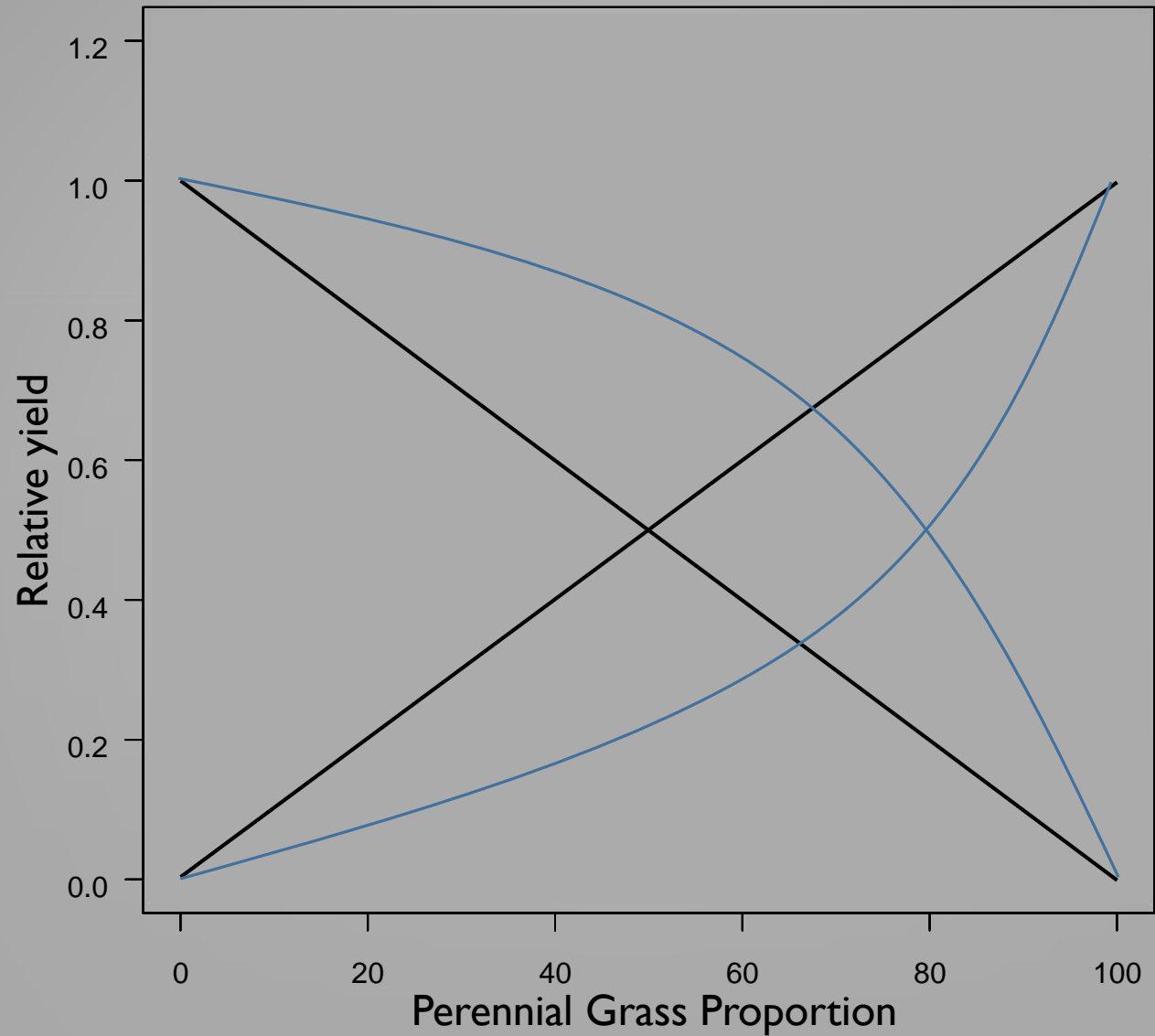
Concave/concave response indicates potential facilitation (mutualistic) relationship.



Straight lines indicate lack of competition OR equal competitive abilities.

Concave/concave response indicates potential facilitation (mutualistic) relationship.

Convex/convex response indicates mutual antagonism - both species reduced.



Straight lines indicate lack of competition OR equal competitive abilities.

Concave/concave response indicates potential facilitation (mutualistic) relationship.

Convex/convex response indicates mutual antagonism - both species reduced.

Concave/convex response indicates one species (concave) more competitive than the other.

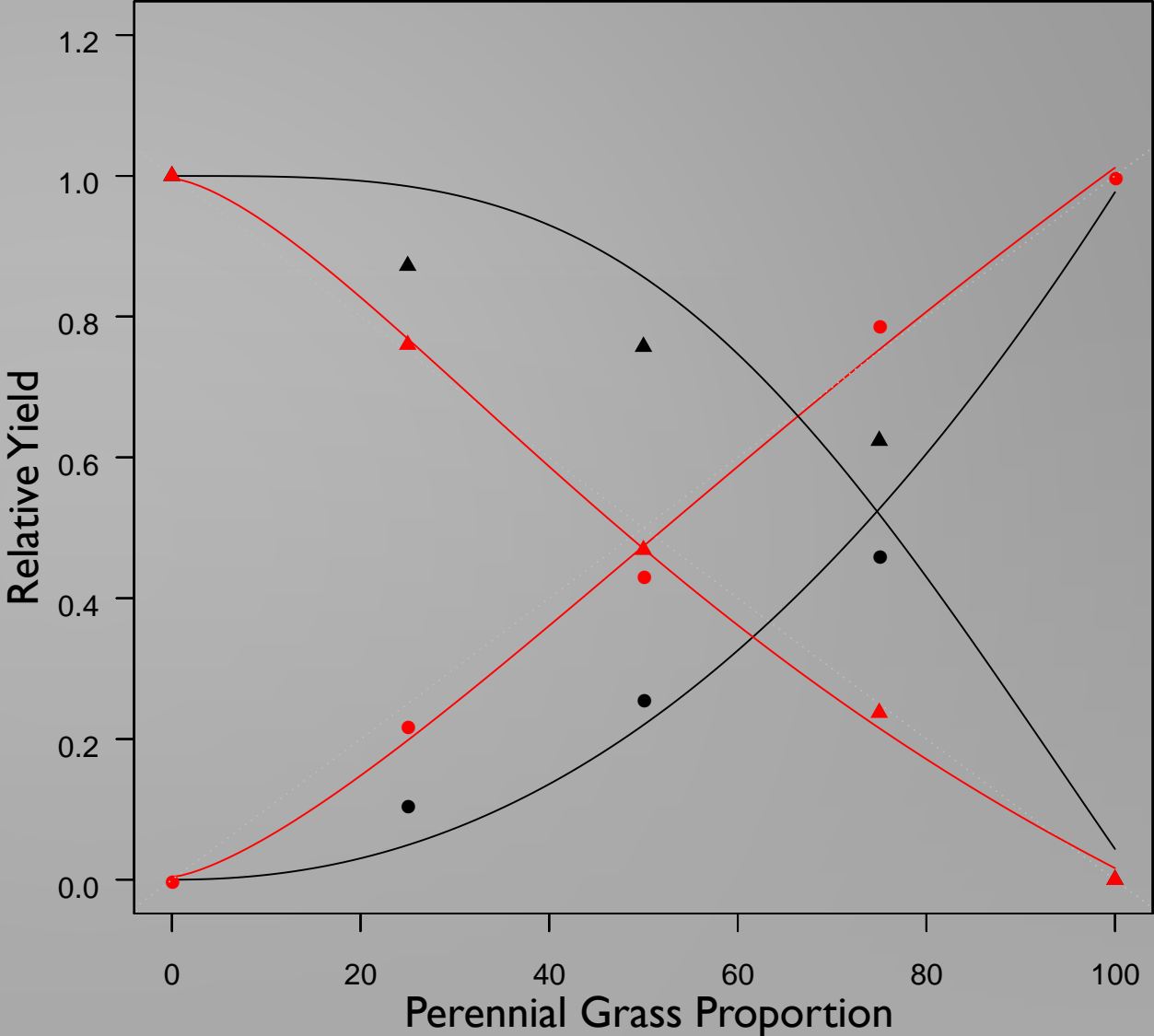
RESULTS

● : Perennials with cheatgrass

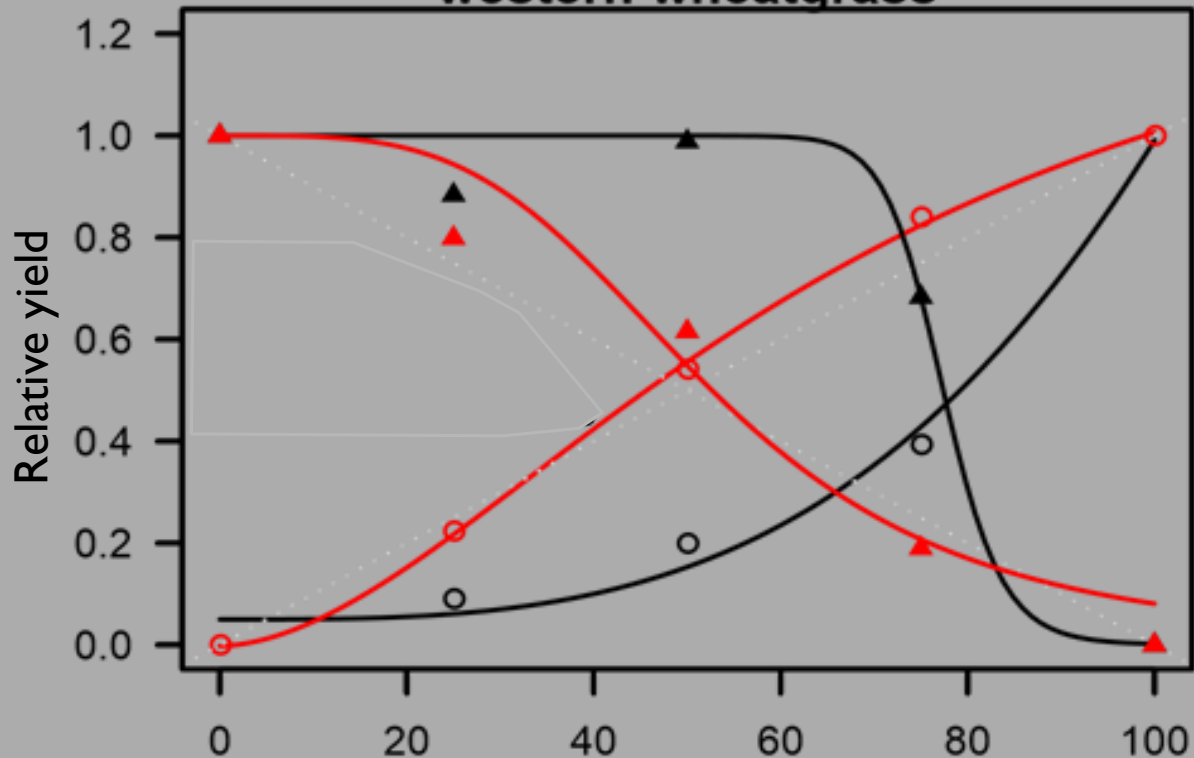
▲ : Cheatgrass

● : Perennials with Bulbous

▲ : Bulbous Bluegrass



western wheatgrass



● : Perennials with cheatgrass

▲ : Cheatgrass

○ : Perennials with Bulbous

▲ : Bulbous Bluegrass

Western wheatgrass/cheatgrass



Western wheatgrass/bulbous bluegrass



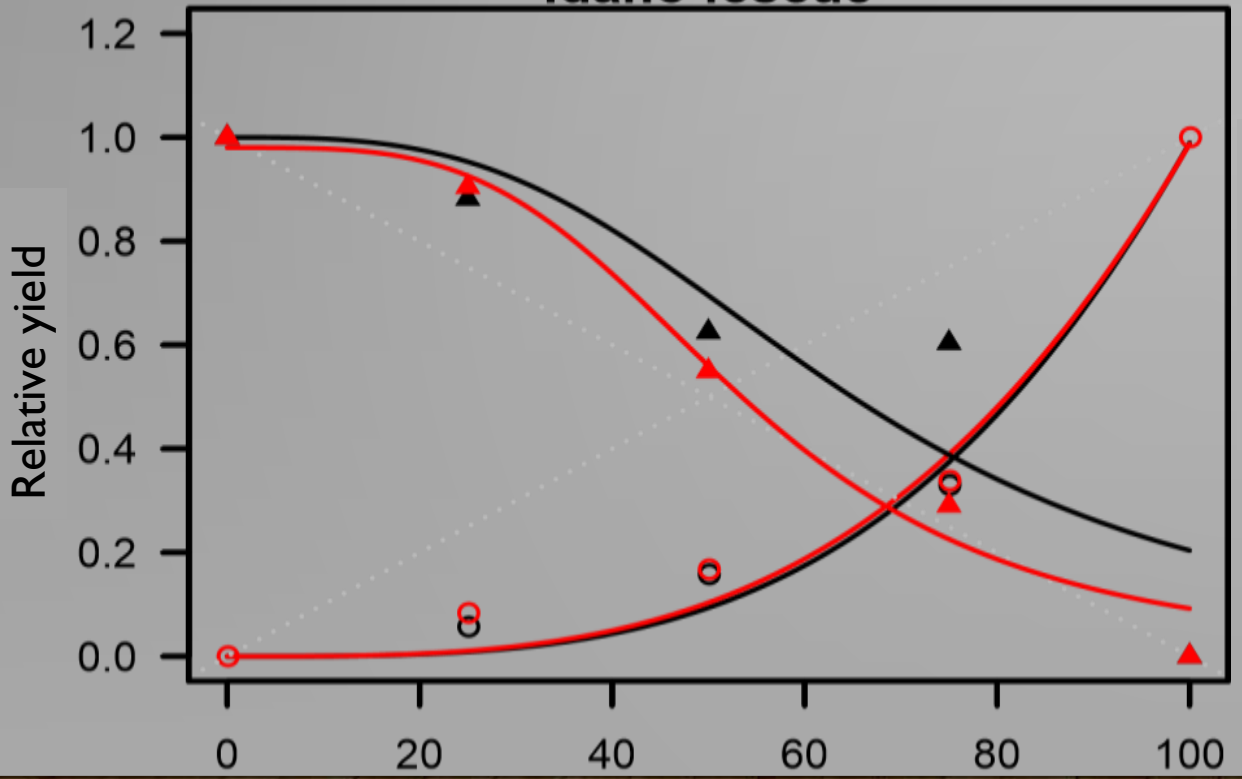
● : Perennials with cheatgrass

▲ : Cheatgrass

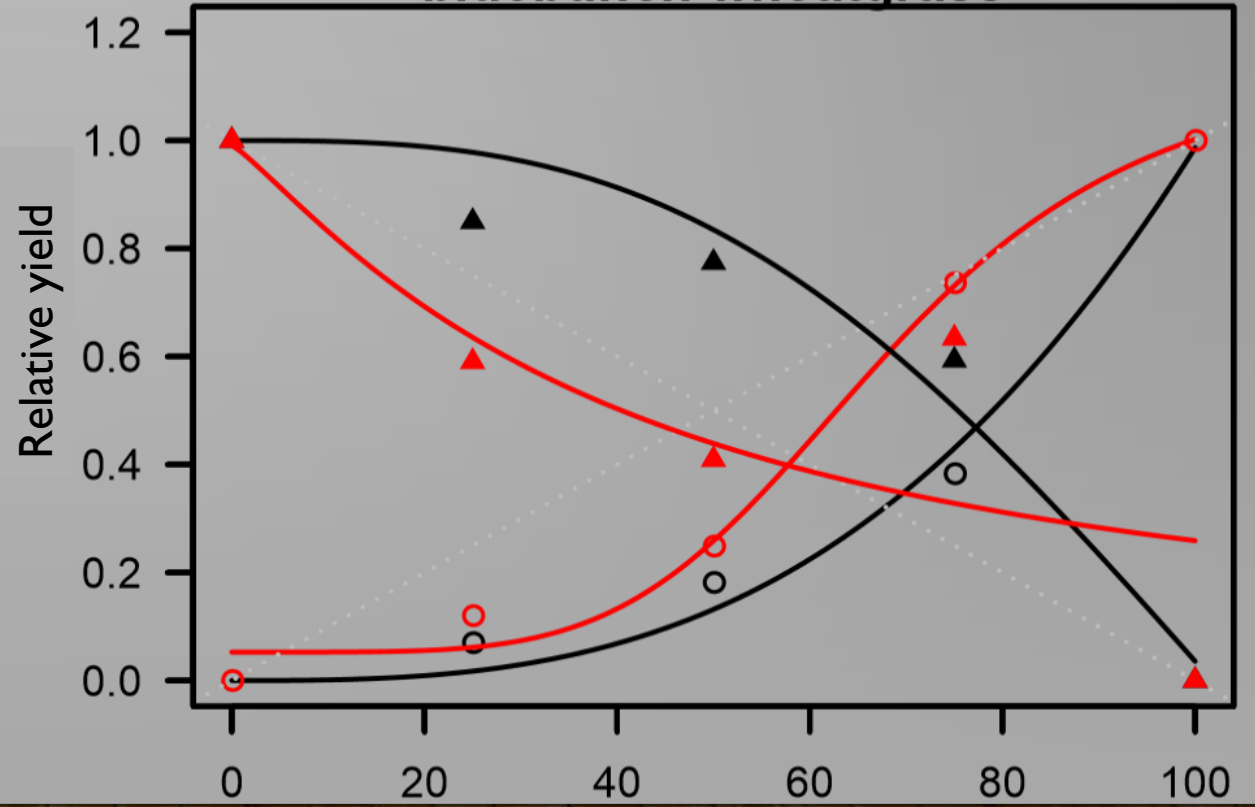
● : Perennials with Bulbous

▲ : Bulbous Bluegrass

Idaho fescue



bluebunch wheatgrass

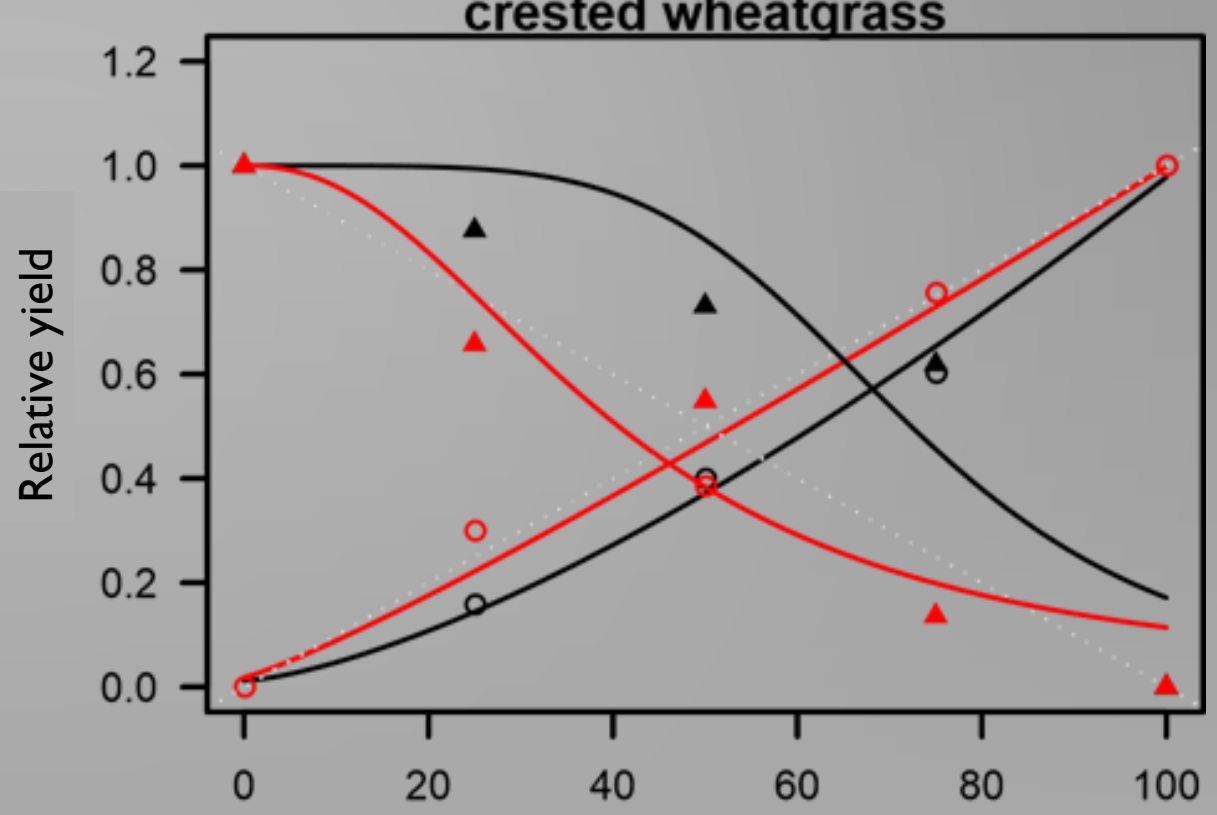
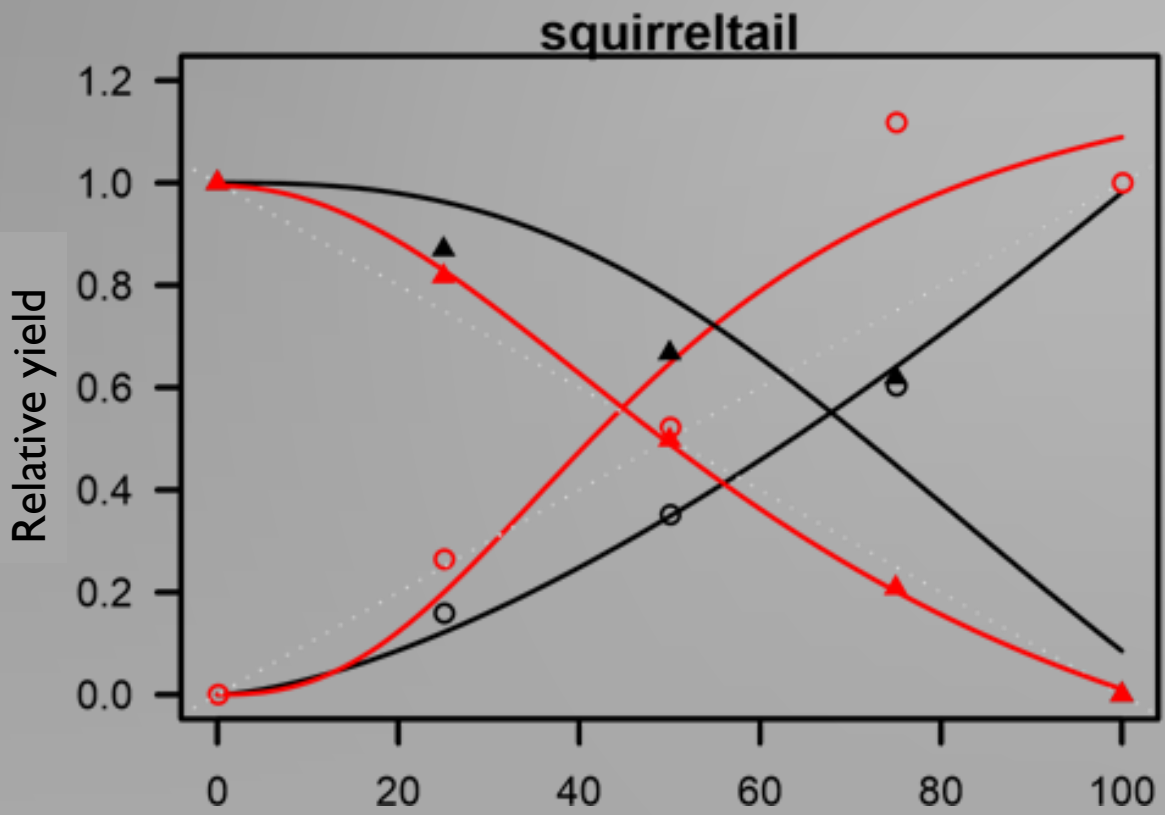


● : Perennials with cheatgrass

▲ : Cheatgrass

● : Perennials with Bulbous

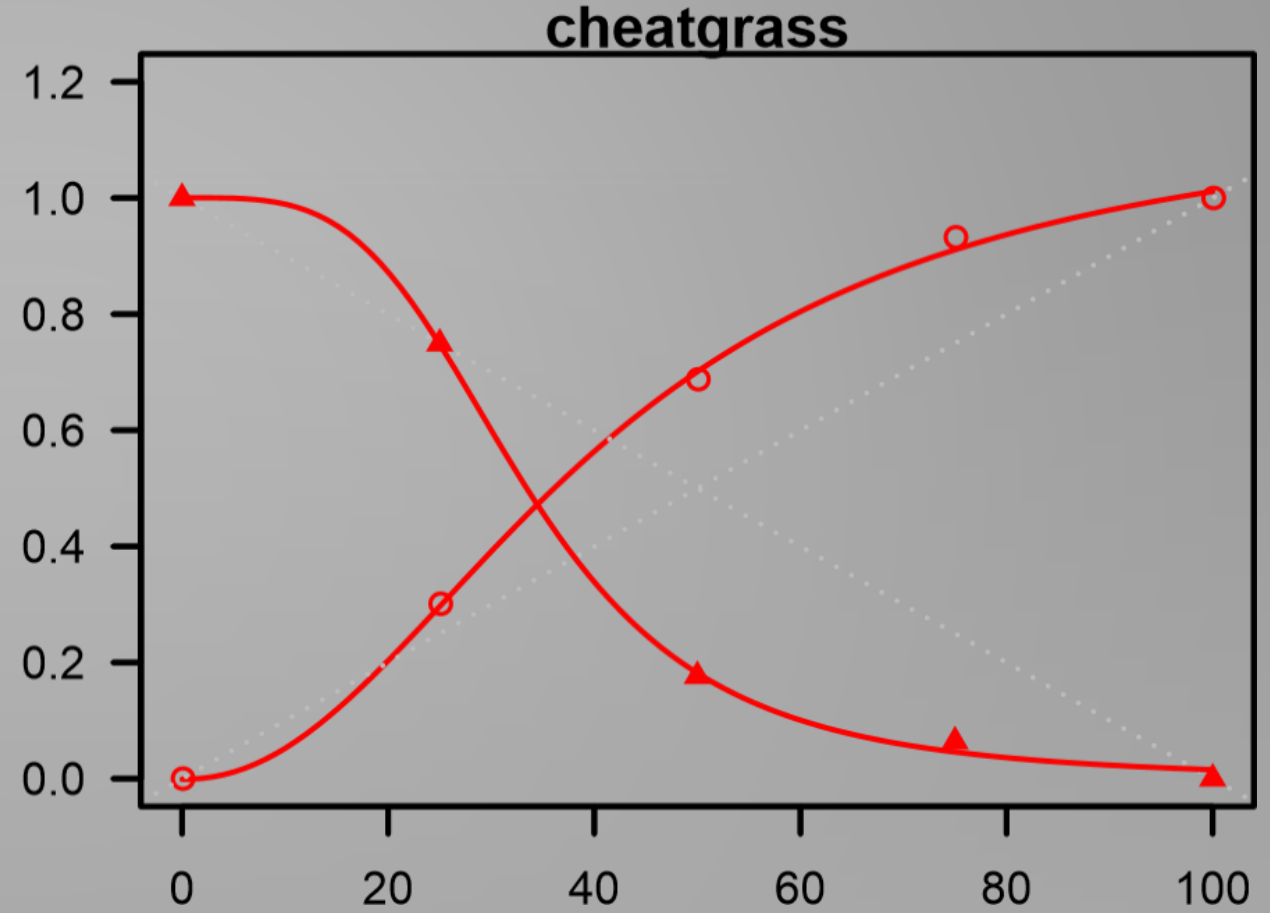
▲ : Bulbous Bluegrass





▲ :Bulbous Bluegrass

● : Cheatgrass



CONCLUSION

- Generally, cheatgrass more competitive than bulbous bluegrass
 - No perennials suppressed cheatgrass growth
- Species-specific responses
 - May inform decisions in restoration settings



DISCUSSION

- Restrictions
 - Greenhouse
 - Lacks field component
- Bulbous could still have an impact



ACKNOWLEDGMENTS

- Brian Mealor,
- Beth Fowers, Clay Wood, Jaycie Arndt, Kristina Kline,
- Sheridan Research and Extension Center Crew
- Plant Sciences Department

A wide-angle photograph of a lush green field. In the background, a white fence runs across the frame, with several cows grazing or resting behind it. The foreground is filled with tall, vibrant green grass. The overall scene is peaceful and rural.

THANK YOU