Tanglehead Research and Management

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Background

- Native plant??
- Little historical evidence in South Texas
- More evidence in West Texas
- "Native" also to Australia, Hawaii, India, China, Mexico
- Minor component of S. Texas rangelands
- Thought to be an ice cream plant, decreaser

- Began to increase on S. Texas sand sheet – 10-15 years ago?
- Began to rapidly spread
- Began to dominate grasslands and form monocultures



Recent Results

- Buelow, m.s. research
- Tanglehead areas vs. non-tanglehead:
 - 28% taller vegetation
 - 48% less bare ground
 - -43% less primary forb cover
 - 29% less secondary forb cover
 - 22% less native (non-tanglehead) grass cover
 - -21% less exotic grass cover

- Dominates and grows most rapidly on loamy sand soils
- Occupies deep sand soils and others



- Spreads fast by seed
- Carried by many vectors









Invades and dominates exotic grasslands





Hypotheses of Causes

- 3 main hypotheses
 - Weather patterns, climate
 - Exotic genotype
 - Cryptic invasion (e.g. Phragmites)
 - Reduced grazing pressure
 - Combination?

Genetics



Weather

• Summer rains? Other pattern?

Jun - Sept. Rainfall Hebbronville, TX



Weather

Hebbronville, TX Rainfall



Weather

- Worthy of investigation
- May be a pattern involved we haven't considered or aren't able to
- Will help to learn more about growing/ spreading conditions



Sand Sheet County Cattle





Inconclusive



Monitoring

- Distribution
- Spread
 - Landscape
 - Soils
 - Weather
 - Competition
 - Fire
- Seed/ seedling recruitment

Management

- Grazing not controlling spread
- Must be constantly burned to be palatable
- Cattle will often prefer other grasses if available
- Once established on large areas, will outgrow grazing regimes



Management

- Assessing typical practices
 - Grazing- various regimes
 - Disking
 - Burning (Spring, Summer, Fall)
 - Herbicide (glyphosate, imazapyr)
 - Shredding

Conclusion

- A lot we don't know about tanglehead
- Problem continues to grow
- Research efforts are needed
- Must be managed regardless of status and cause

Questions?

