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
Invasion

- 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
Invasion

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

- Spreads fast by seed
- Carried by many vectors
Invasion

• 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?
Weather

- Summer rains? Other pattern?
Weather

Hebbronville, TX Rainfall

Rain (inch)

Jul- Sept

Apr- Jun

0.00 2.00 4.00 6.00 8.00 10.00 12.00 14.00 16.00

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
Grazing

Sand Sheet County Cattle

Thousand Head

Grazing

• 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?