ECOSYSTEM SERVICES OF OVERSEEDING AESCHYNOMENE INTO BAHIAGRASS PASTURES IN FLORIDA

Jaime Garzón, João Vendramini, Maria Silveira, Lynn Sollenberger, José Dubeux, Hui-Ling Liao, Hiran da Silva, Vinicius Gomes, Igor Machado and Hugo Rodrigues

Ecosystem services for legume inclusion on pastures

Provisioning	Supporting	Regulating	Cultural
Forage yield and nutritive value	**N fixation**	**Impact on N_2O emissions**	Photography, wildlife viewing
		Impact on potential pathogen microorganisms	

Sollenberger et al. 2019, Crew et al. 2004

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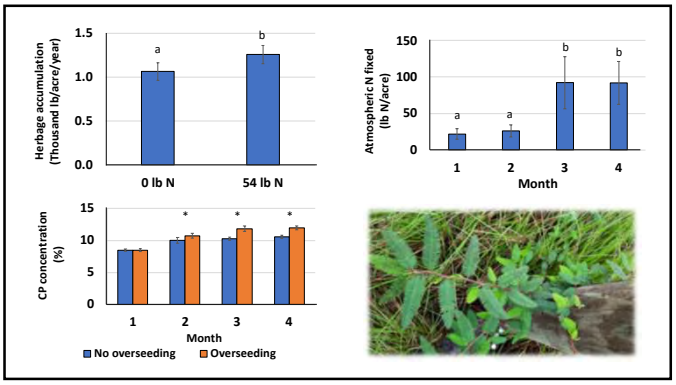

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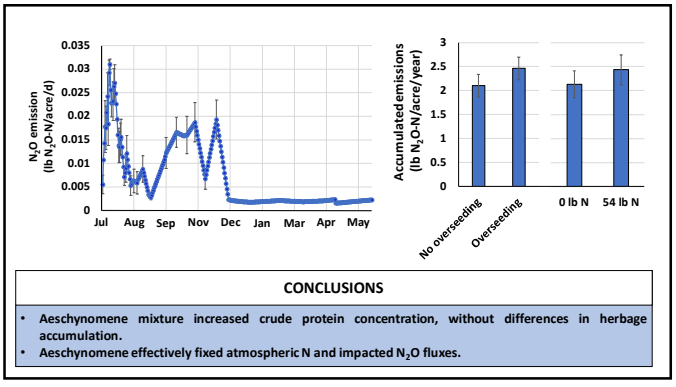

CONCLUSIONS

- Aeschynomene mixture increased crude protein concentration, without differences in herbage accumulation.
- Aeschynomene effectively fixed atmospheric N and impacted N_2O fluxes.

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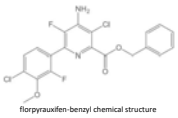
Efficiency of DuraCor on weed control and forage tolerance in Florida Grazing Lands

Caetano A.R. Sales, Brent Sellers, Pratap Devkota, and Marcelo Wallau

- DuraCor® is a premix of florpyrauxifen-benzyl & aminopyralid developed by Corteva Agriscience and recently approved for use on pastures and rangeland.
- DuraCor is emphasized by:

  Low use rate
  Nonrestricted use
  Does not contain 2,4-D or dicamba



florpyrauxifen-benzyl chemical structure

DuraCor® HERBICIDE

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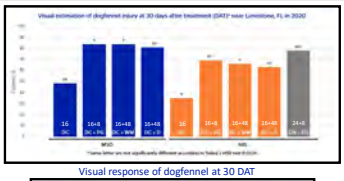
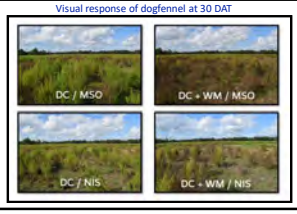
Objectives:

Evaluate weed response to DuraCor and along with tank-mix partners for optimum weed control.

Evaluate established forage tolerance as well as during establishment .



Visual response of dogfennel at 30 DAT



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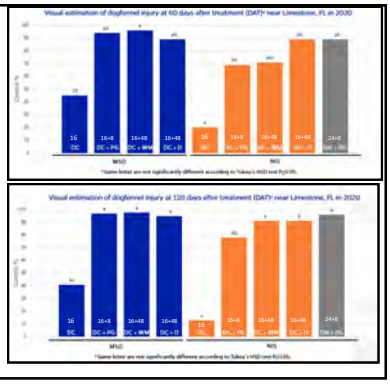
Preliminary Conclusion:

The data indicates that DuraCor will require additional tank-mix partners for optimum dogfennel control.

Similar results were seen with GrazonNext HL (Sellers and Ferrell, 2008)



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Evaluating the Agronomic and Environmental Impacts of New FL-DEP Biosolids Rule

PhD Student: Leandro Vieira-Filho
Advisor: Dr. Maria Silveira

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New FL-DEP Biosolids Rule

Public concerning on nutrient loss

What changes?

- Seasonal high water table <6 in.
- Mandatory BMP enrollment.
- P-based rates.
- Water quality monitoring.

Other problems

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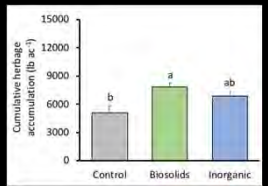
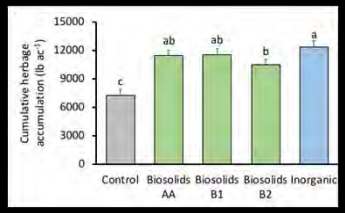
New Biosolids Rule

Preliminary data



Old Biosolids Rule

Adapted from Lu et al. (2019)



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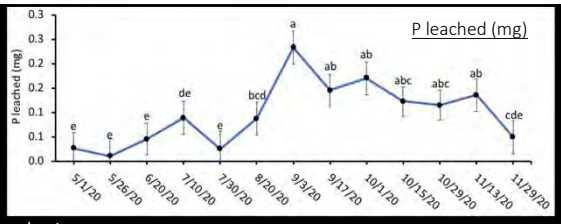

Conclusions:

- New FL-DEP biosolids rule will cause reduction in bahiagrass herbage accumulation when using biosolids as the only nutrient source.
- Regardless the rate or source, no environment impact was observed.

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