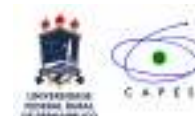




Relationship among condensed tannins, botanical composition and bare soil of rangelands in Pernambuco, Brazil

Osniel F. de Oliveira^{1*}, Mércia V. F. dos Santos¹, James P. Muir², Márcio V. da Cunha¹, José C. B. Dubeux Jr³, Hiran M. S. da Silva¹, Felipe M. Saraiva¹



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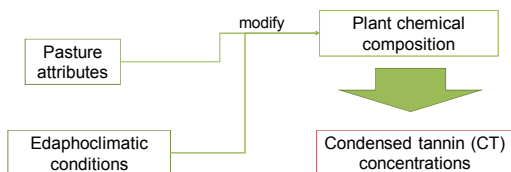
¹Animal Science, Rural Federal University of Pernambuco, Recife-PE, Brazil. *osniel.faria@zootecnista.com.br

²Texas A&M Agrilife Research, Stephenville, TX USA

³University of Florida – North Florida Research and Education Center



Justification



Materials and Methods



- **Rainfall from 432 to 1056 mm:** Serra Talhada (1), Flores (2), Sertânia (3), Arcoverde (4), Pesqueira (5), Tacaimbó (6), Bezerros (7) and Vitória de Santo Antão (8)
- **Forbs and shrubs** with 5-mm diameter and 1.5-m height
- **Analysis** → Condensed tannins, botanical composition and bare soil
- **Soils** (depth to 20-cm) → loamy, eutrophic, with low acidity and average-to-high fertility;
- **Statistics** → principal components and cluster analysis by Tocher method



Results and Discussion

- ✓ Condensed tannins concentrations were negatively related (-2.13) to the incidence of legumes, forbs and shrubs (2.43) → allelopathic effect
- ✓ Bare soil (-0.61) and CT (-0.57) were negatively related to rainfall (0.92)

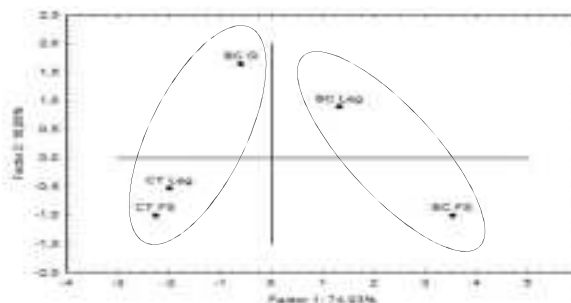


Figure 1. Dissimilarity among pasture botanical composition (BC), condensed tannins (CT) and total phenolics (TP). G – Grass, Leg – Legumes, FS – Forbs and Shrubs.

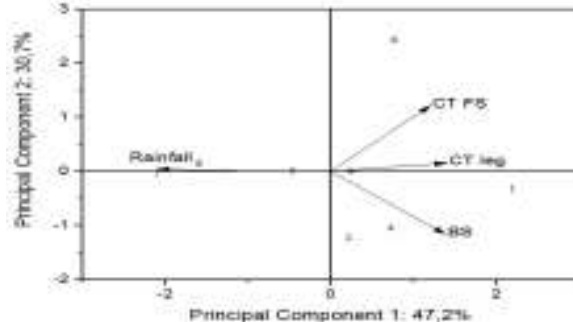


Figure 2. Relationship among bare soil (BS), condensed tannins (CT) and rainfall. FS – Forbs and Shrubs, Leg - legumes. Numbers 1 to 8 represent locations.

Conclusion

As regions became drier → soils are more exposed
 → forbs and shrubs synthesized more CT