44-26 Simulated Versus Insect Herbivory Does not Change Protein Precipitable Phenolics and Nitrogen Concentrations of Legumes

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BACKGROUND

- Condensed tannins defend plants against herbivory
- Condensed tannins vary in different plant species
- Condensed tannins change with stress
- Mechanical versus insect herbivory not studied

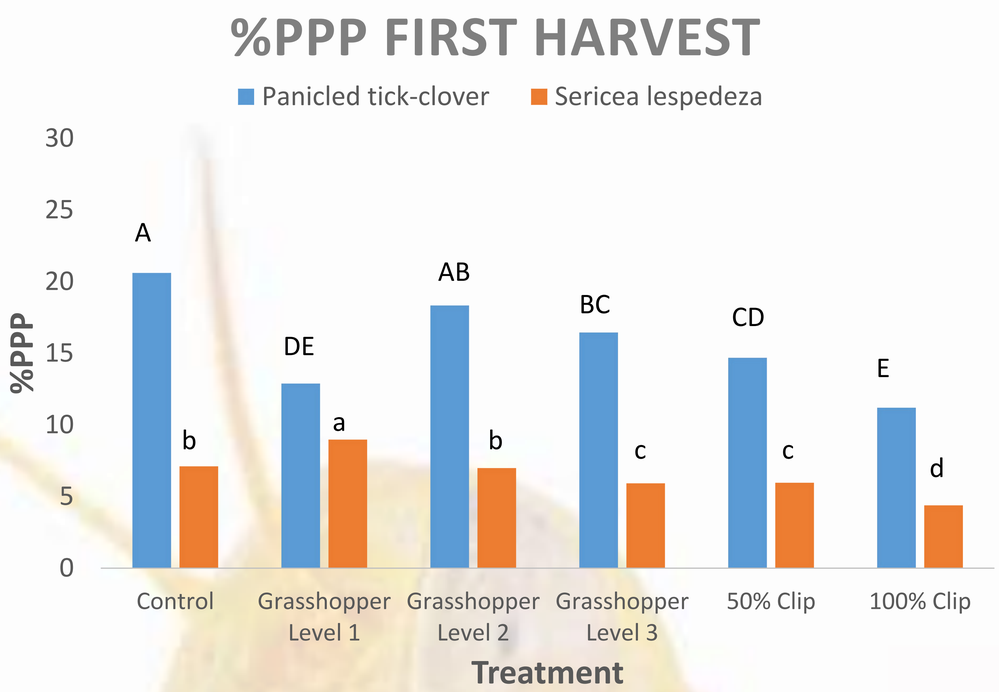
OBJECTIVES

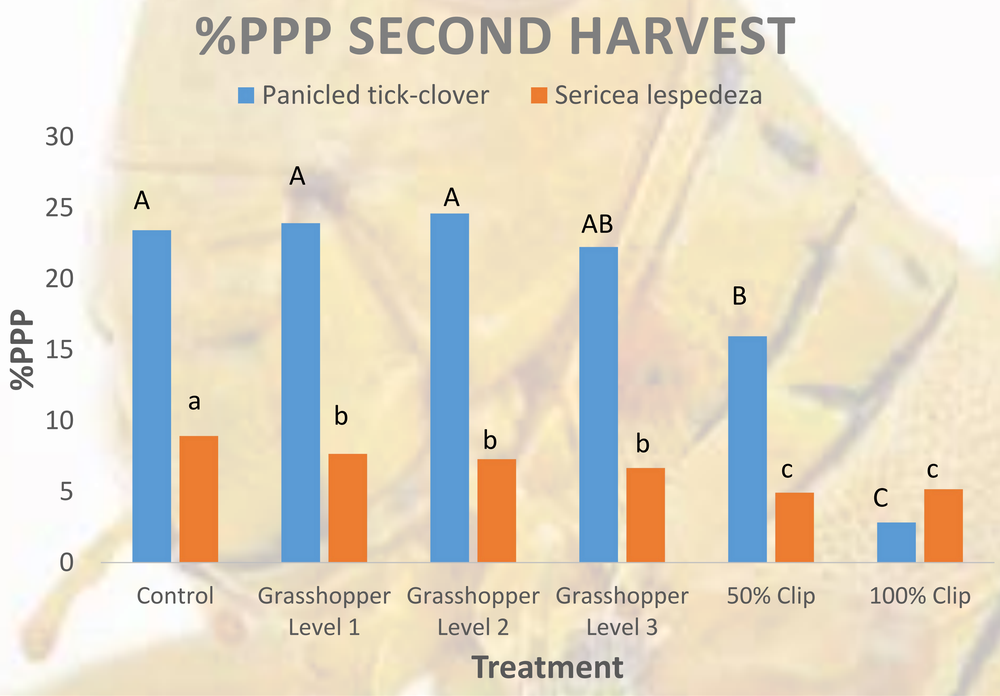
Determine if varying levels of simulated and differential grasshopper (*Melanoplus differentialis*) herbivory and plant ontogeny affect leaf regrowth:

1) Protein precipitable phenolics (PPP) concentration
2) N concentration

Sericea lespedeza
(*Lespedeza cuneata*; SL)

Panicled tickclover
(*Desmodium paniculatum*; PTC)





Different letters denote difference ($P \leq 0.05$) within bar color for both charts

RESULTS

- **First Harvest:**
  - **%N in PTC 100% clip 1.8 times greater ($P \leq 0.05$)**
  - **%N in SL control and 100% clip 1.3 times greater ($P \leq 0.05$)**
  - **For the first harvest, percent PPP of the PTC control was greater ($P \leq 0.05$) than the other treatments**
  - **No differences ($P > 0.05$) %PPP for SL**
- **Second Harvest:**
  - **No differences ($P > 0.05$) in the %N in the second harvest for either plant**
  - **%N 1.1 times greater ($P \leq 0.05$) in SL than in PTC**
  - **No differences ($P > 0.05$) in percent PPP across treatments for both plants**
  - **PTC 100% clip was 12 times lower ($P \leq 0.05$) than remaining treatments**

CONCLUSION

Herbivory types do not affect N or condensed tannin concentrations