

# Response of *Lespedeza cuneata* (*sericea*) to different cutting regimes in the Sandy Sourveld of KZN

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# Introduction

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Need for legumes pastures

*Lespedeza cuneata* =

- Perennial legume, dry land
- High tolerance – low pH  
and P – sandy soils
- Low input pasture/hay
- Lack of local info



# Uses

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**Mixture: 2% more  
CP in *E. curvula***

**Longlands 50 cm depth  
pH: <5 Clay: <12**



# Objectives

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- ❖ To determine the influence of different defoliation treatments on the production of **Lespedeza** – develop management strategies for grazing and haymaking
- ❖ To determine **Gastro–intestinal nematodes control properties of Lespedeza: Bio-active forage – Tannins**

# Materials and methods

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- ❖ **Site:**

Dundee Research Station, KZN

- ❖ **Soil type**

Hutton, 900mm, 20% clay.

# Materials and methods cont.

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## ❖ Climate

Summer temp. 12.4°C - 26.1°C

Harsh cold winters with frost

Summer rainfall

LTA rainfall 783 mm a<sup>-1</sup>



# Materials and methods cont.

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## ❖ Establishment:

Fine seedbed, planted Feb 2011

Seeding rate: 15 kg ha<sup>-1</sup>

## ❖ Treatments:

6, 8 and 12 week defoliation frequencies  
with cutting heights 5 and 15 cm X 3 reps.

Nett plot size 12 m<sup>2</sup>

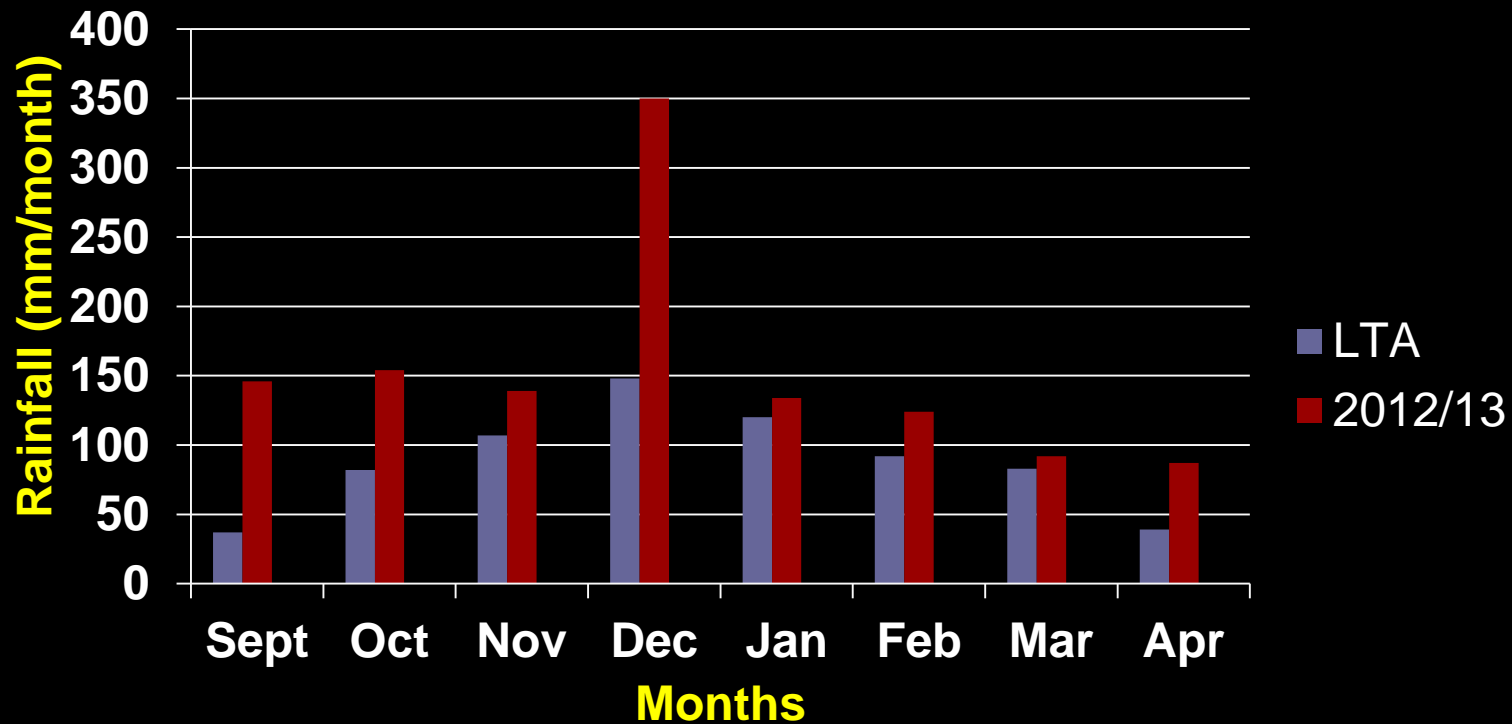
# Materials and methods cont.

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- ❖ Dry matter yield
- ❖ Quality analysis + Tannins
- ❖ Sample divided – leaf : stem ratio.

# Results and discussion

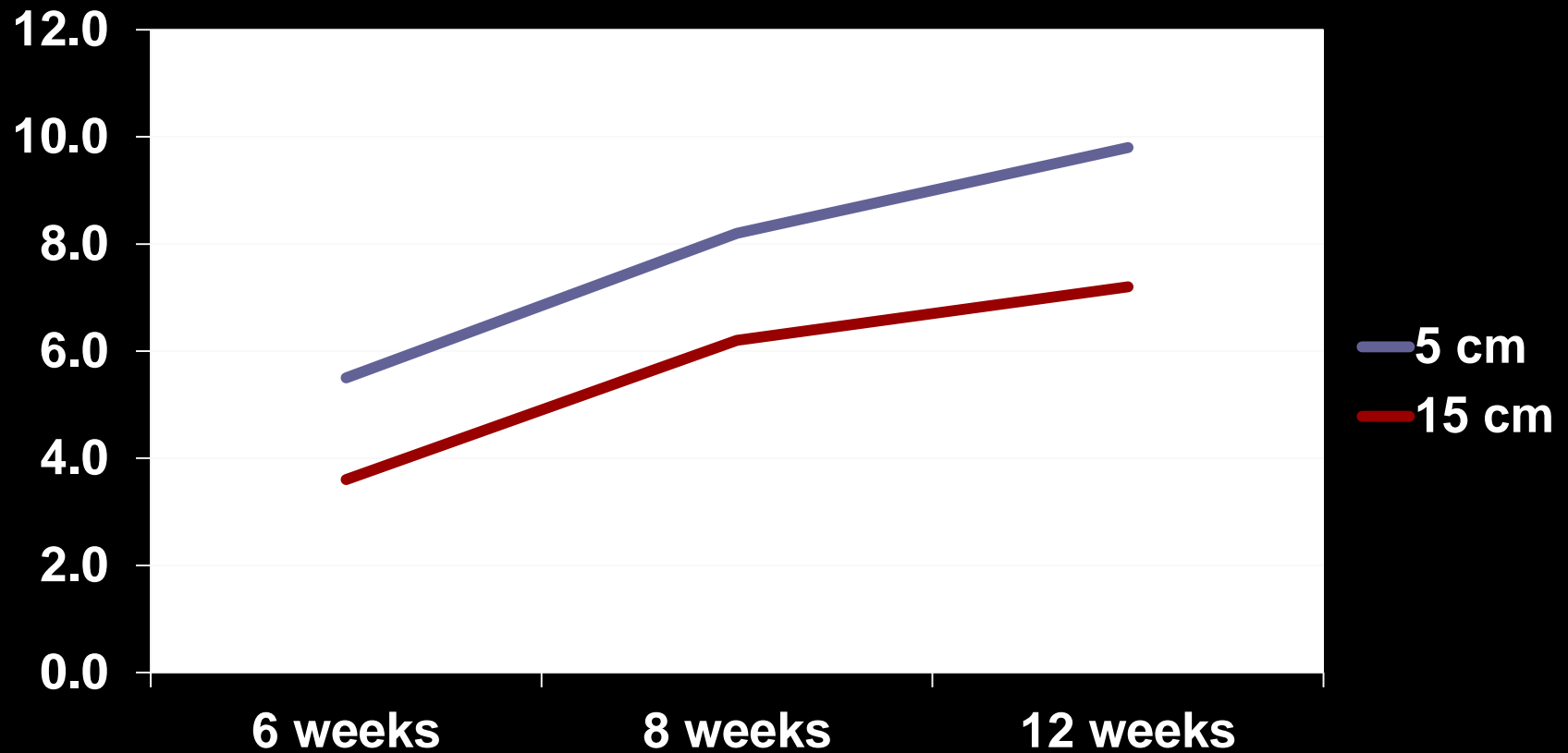
LTA compared to 2012/13 growing season (mm month<sup>-1</sup>)



# *L. cuneata* yield (t ha<sup>-1</sup>) under different cutting treatments

	Cutting heights	
Cutting Frequency	5 cm	15 cm
6 weeks	5.5cd	3.6d
8 weeks	8.3a	6.1bc
12 weeks	9.4a	7.0b
LSD = 1.324, P<.001		

# Total DM yield in t ha<sup>-1</sup>





***L. cuneata* yield (t ha<sup>-1</sup>) under  
different cutting treatments**

**Cutting heights**

**5 cm**

**15 cm**

**7.72a**

**5.58b**

LSD = 0.764

P<.001

*L. cuneata* yield (t ha<sup>-1</sup>) under different cutting treatments

Frequency

**6 wks**

**8 wks**

**12 wks**

**4.51c**

**7.21b**

**8.21a**

LSD = 0.936

P<.001

# Stem: leaf ration

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Cutting frequency	Leave: stem ratio
6 weeks	65 : 35
8 weeks	58 : 42
12 weeks	39 : 61



# Conclusion and way forward

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- ❑ This legume is adapted to the area
  - Soil type / rainfall / yield
  - Red soils: High pot. irrigation and wet years
  - Dry land: ? Dundee rainfall variation
- ❑ **Challenges for optimum use.**



# Conclusion and way forward

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- ❑ Survival /Sustainability of sward
- ❑ Palatability
- ❑ Further research needed to provide management strategies for farmers



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