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UNIVERSITY of FLORIDA  
Range Cattle  
Research & Education Center



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## The use of sunn hemp as a cover crop and forage in Florida

The March Ona Highlight Webinar Series

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## Sunn hemp

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- Sunn hemp (*Crotalaria juncea*) is a tall herbaceous annual plant widely grown in the tropics, primarily as cover crop



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## Sunn hemp

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- The genus *Crotalaria* includes some species known to be toxic to livestock
- The toxic compound pyrrolizidine alkaloid is primarily found in *Crotalaria* seeds
- According to Mosjidis et al. (2012), sunn hemp is a valuable source of forage without toxic effects to animals
- However, seeds should not be part of the animal diet

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## Sunn hemp

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- There is a growing interest in cultivating sunn hemp as a cover crop in vegetable and row crop areas in Florida
- Producers would like to know the potential of using sunn hemp as a forage for livestock
- However, there is limited information on the characteristics of different sunn hemp cultivars and the feasibility of using sunn hemp as a forage

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## Sunn hemp

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- Therefore, a series of studies have been conducted in Florida to evaluate different cultivars and the use of sunn hemp as a forage




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## Sunn hemp Production

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Cultivar	Harvesting time		Flowering Time
	60 d	Flowering	
	lb DM / acre		days
AU Golden	1,790	3,500	83
Blue Leaf	1,300	13,000	174
Tropic Sun	3,000	13,500	159
Ubon	1,700	4,450	92

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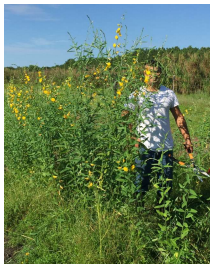

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### Sunn hemp

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### Sunn hemp Nematode and N fixation

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Cultivar	Decrease in Nematode Population (Meloidogyne spp.) (%)	N fixation (lb N/acre)
AU Golden	44b	52b
Blue Leaf	73a	56b
Tropic Sun	83a	72a
Ubon	32b	47b

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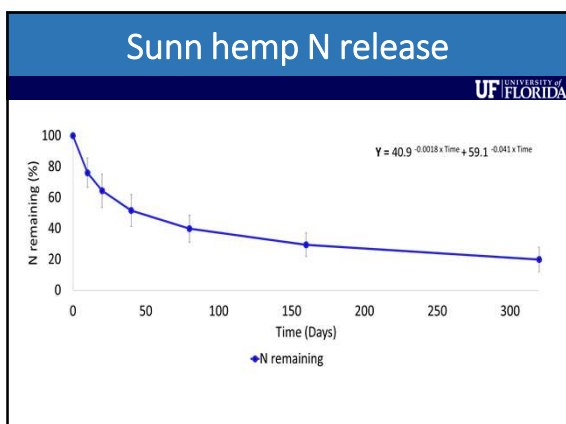
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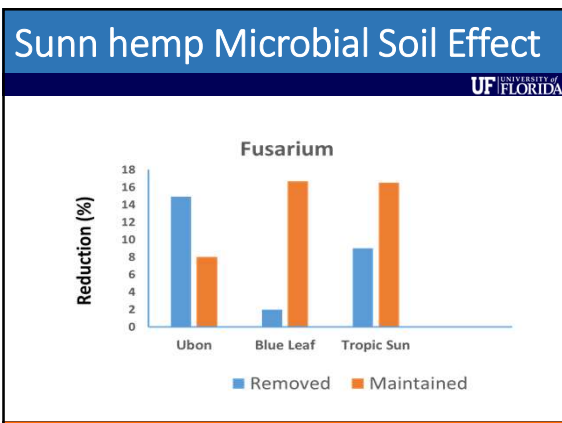
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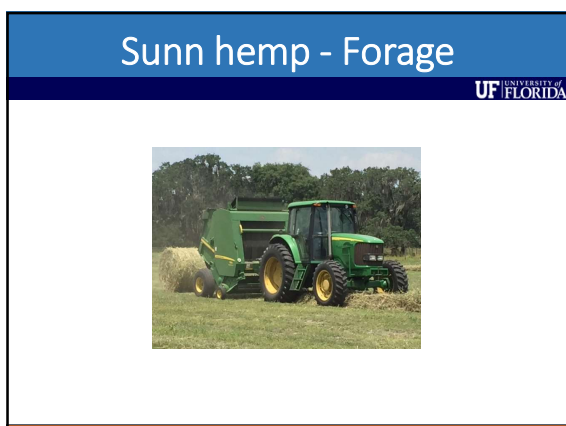
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### Sunn hemp - Forage

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Weeks after seeding	CP (%)	IVTD (%)
4	31.6a	72a
5	22.3b	69a
6	14.3c	61b
7	12.6d	59c
SE	1	3

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### Sunn hemp - Silage

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	Propionic Acid (% Green forage)			Contrast	SE
	0	0.5	1.0		
pH	5.6	5.4	4.5	Linear	0.18
Lactic acid (% DM)	0.03	1.47	5.68	Linear	1.17
Acetic acid (% DM)	5.00	2.39	2.16	Linear	0.23
Propionic acid (% DM)	1.78	2.40	3.80	Linear	0.30
Butyric acid (% DM)	5.09	3.93	0.38	Linear	0.91
Ammonia (% N)	57	42	21	Linear	7.7

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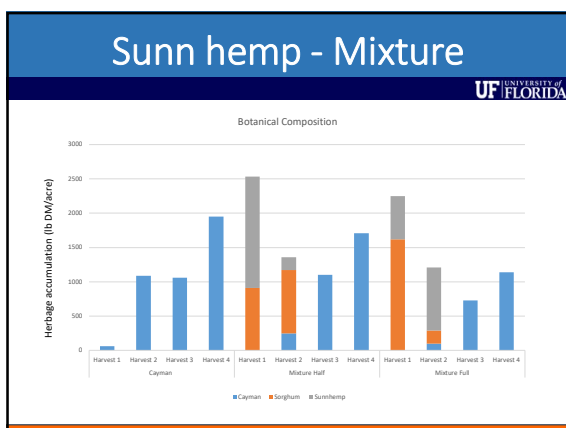
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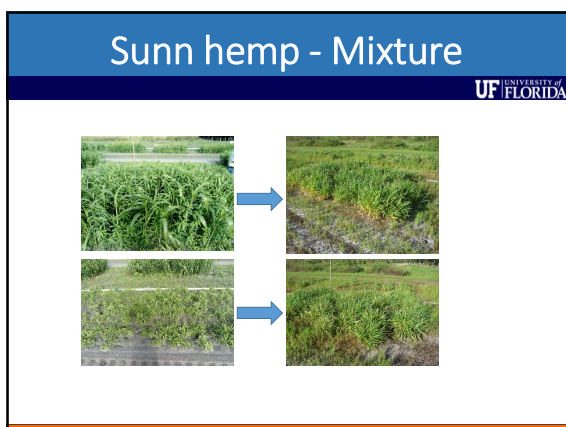
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**Sunn hemp - Forage**

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**Sunn hemp - Forage**

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Treatment	Forage intake (% BW)	In vivo DMD (%)
Sunnhemp	1.2b	52a
Sunnhemp + Bermudagrass	1.4b	52a
Bermudagrass	1.6a	48b
SE	0.1	1.3

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**Sunn hemp - Forage**

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	Treatment (g seed/2 L Rumens Fluid + Buffer)			SE
	0	30	60	
IVTD (%)	52a	48a	39b	1.5

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