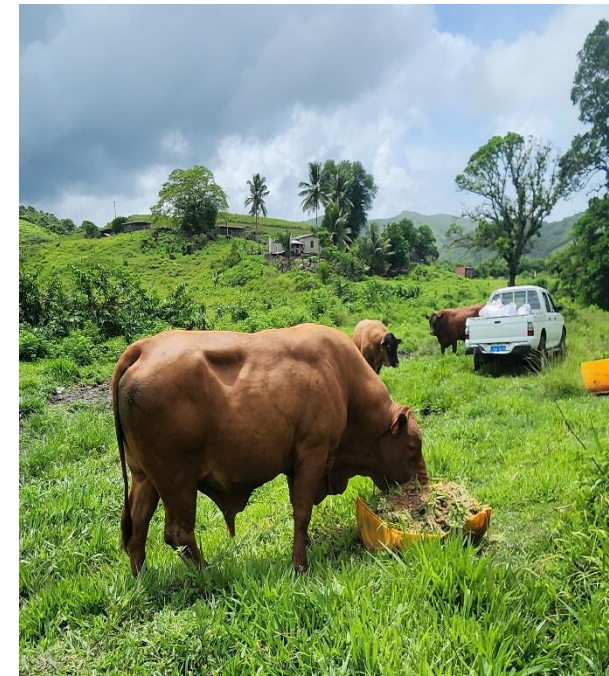




Juncao Grass and its Application as Livestock Feed

Research work in Sigatoka Research Station (SRS), FIJI



Outline of Presentations

1. Brief Introduction
2. Research Juncao Grass In Fiji
3. Application of Juncao Technology in Fiji
 - Juncao Grass As Feed For Sheep
 - Juncao Grass As Feed For Goat
 - Juncao Grass As Feed For Poultry
 - Juncao Grass As Feed For Beef Cattle

Brief Introduction

- Sigatoka Research Station (SRS) is one of the main livestock research stations in the country where 3 types of livestock (Cattle/Goat/Poultry) are researched utilizing approx. 300 acres.
- The station has 253 heads of cattle, 450 heads of goat and 500 heads of chicken, 5-6 acres of Juncao grass. Apart from SRS, Koronivia Research Station also uses Juncao grass as livestock feed for dairy cattle.
- Juncao grass was later introduced to the Livestock industry as a fodder crop in 2017 prior to this the main sources of fodder available was Elephant grass and Guatemala.
- Fiji practices open grazing system under pastures in all ruminants animals.
- Juncao grass is used in Fiji when there is scarcity of pastures especially during the dry seasons.
- Research work started in 2021 - 23 to investigate its growth rate & performance with crude protein levels at different growth stages.

Research Juncao Grass in Fiji

- Juncao grass was introduced to Nawaicoba Quarantine Station, Nadi, Fiji with assistance of Dr. Lin from Juncao Technology Centre, Fiji in 2016
- 2019 it was introduced to SRS for the purpose conducting further research on this grass as a livestock feed for cattle, goats and poultry.
- A trial conducted in 2021 at SRS to analyze the nutritive content at various stages of growth.
- Currently Juncao grass has been introduced to all livestock research station in Fiji covering 25 acres



Growth and Performance Study

- Established in 2020 at SRS.
- Measurements were taken on a weekly basis for 2 full seasons (2021 – 23).

Observations & records:

- During Dry Spells – growth rate 5 - 7cm/week without fertilizer.
- During Wet Seasons – 10cm to 12cm/week (also after fertilizer application).



Nutrient Analysis

Table 1. Nutrient Analysis of Juncao Grass in SRS, Fiji

Different Heights (m)	DM %	CP %	Ash %
0.5 (4 weeks)	91 – 93	9.1 – 11.5	10 - 20
1.0 (6 - 8weeks)	91 – 93	7.6 – 8.7	10 – 20
1.5 (8 – 10weeks)	91 – 93	7.6 – 8.7	10 – 20
2.0 (10 – 12 weeks)	91 – 93	5.8 – 6.7	10 – 20

Table 2. Nutrient Analysis of Juncao Grass in Kwazulu – natal (Lin, 2010) S.Africa

Growth Period	DM	Crude Protein	Crude Fibre
4 weeks	15.8	10.8	28.5
6 weeks	17.1	8.8	32.2
8 weeks	18.3	8.7	32.8
10 weeks	18.5	6.5	33.0
12 weeks	20.4	5.9	31.9

Application of Juncao Grass as Livestock Feed

Application Juncao Grass as Feed (Sheep)

- Used for supplementary feeding during breeding, flushing, weak & sick stock
- Used during weaning of lambs
- A good fodder supplement especially during dry spells when pasture growth are low

Supplement Ration with Juncao Grass supplied to Sheep

Ingredients	Amount
Freshly Cut & Chaffed Juncao Grass	20 kg
Mill Mix	10 kg
Coconut Meal	5 kg
Molasses	4 L



Juncao Based Feeding on Sheep



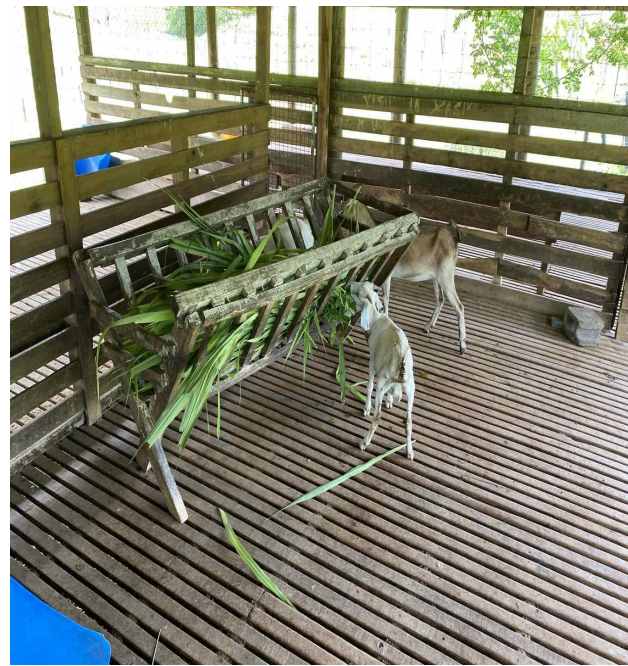
Juncao Grass as Feed for Goats

- Fed on daily bassets in goat sheds during closing of stock
- Fed to kids, during weaning of kids, flushing, sick & weak stock which are in-housed
- A good fodder supplement especially during dry spells when pasture growth are low
- Supplement used for feeding breeding stocks are:

Ingredients	Amount
Freshly Cut & Chaffed Juncao Grass	20 kg
Mill Mix	10 kg
Coconut Meal	5 kg
Molasses	1 L

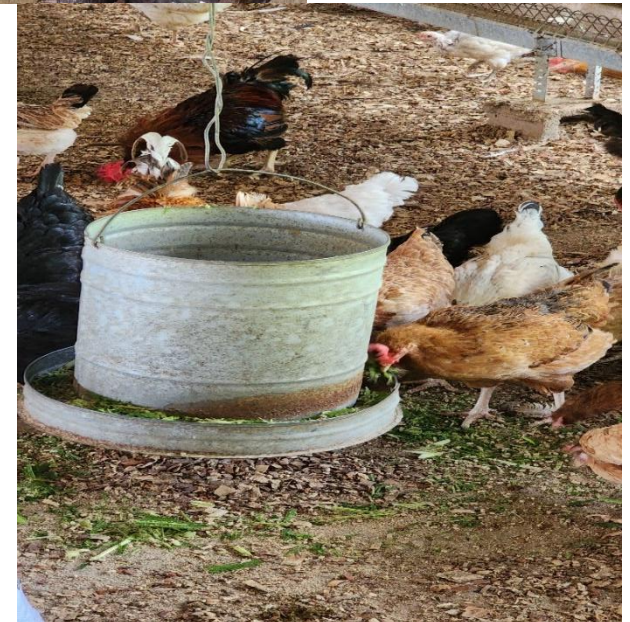


Juncao Based Feeding in Goats

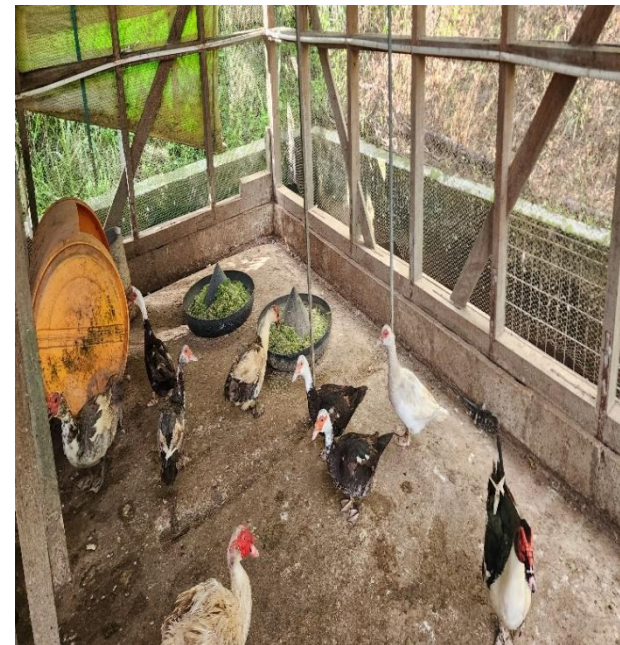


Juncao Grass as Feed for Poultry

- Feed dilution -Young Chaffed Juncao [0.5m height] is mixed with processed feed [40% Juncao & 60% processed feed]
- Good source of fiber & Protein
- Feed to our Indigenous and Crosses of indigenous & Cobb 500
- Also feed to Muscovy & Khaki Campbell ducks
- Reduced feed bill



Juncao Grass base Feeding on Poultry



Juncao Grass as Feed for Beef Cattle

- Used as supplementary feeding specially during weaning, flushing, Embryo Transfer, AI & Semen Harvesting
- A good fodder supplement especially during dry spells when pasture growth are low
- Supplement used for feeding adult breeding stocks are:

Ingredients	Amount
Freshly Cut & Chaffed Juncao Grass	100 kg
Mill Mix	50 kg
Coconut Meal	50 kg
Molasses	20 L

- Freshly cut Juncao mixed slightly with molasses is also feed to donor bulls for better uptake of Juncao

Juncao Grass Base Feeding on Beef Cattle





**Juncao Grass
Fed as
supplement to
Newly
Introduced Beef
Breed - Senepol**

Way Forward

- Reduce feed bill through robust R&D on Juncao Technology in Fiji targeting the Livestock Feed aspect, apart from its other uses.
- Ensuring adoption of large scale Juncao grass cultivation to sustain livestock farmers, and intensive systems.
- Address the challenge of harvesting & processing through availability of small machinery to support Juncao Technology as a livestock feed in Fiji.
- Continued collaboration with regional & international partners
- Explore ecological use of Juncao Technology in Fiji

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Thank you so much!