

The background of the slide is a light beige, textured surface, possibly paper or fabric, with subtle variations in tone and some faint, darker spots. On the left side, there is a vertical stem with a single, elongated, dried leaf that is brown and slightly curled. On the right side, there is another vertical stem with a similar dried leaf. The overall aesthetic is natural and organic.

GROWING ENERGY

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Finding an Alternative to Sugar Cane

- **Sugar in decline**
- **Alternative crop must suit local growing conditions**
- **Must have a market**
- **Be a suitable rotation crop for food crops grown on the farm**

A decorative graphic of a leafy branch is positioned on the left side of the slide, extending from the top to the bottom. The leaves are brown and green, and the branch is thin and dark.

Why King Grass?

(Slide 1 of 2)

- **A grass is best suited to our local conditions**
- **Drought tolerant**
- **Little or no pests and diseases**
- **Good ground cover**
- **Rotation ability**



Figure 1: King Grass



Why King Grass? (cont'd)

- Extensive root system
- Good competitor with weeds
- Fast growth
- Similar growing practices to sugar cane
- Fits with Barbados' alternative energy thrust



Some Characteristics of King Grass

- One acre of planting material can plant well over 20 acres
- The grass can get to 12ft plus in 6 months.
- A yield test done gave an average of 30TPA green.



Some Characteristics of King Grass (cont'd)

- Yields increase over the first 2 to 3 years
- Fertilizing is very important to support this extra growth.



High Fibre Cane

- Also undertaking trials with high fibre cane
- 50 varieties from the Cane Breeding Station & ARVTU
- Both these organizations assisting in selecting about 5 suitable varieties that could become part of the feed stock chain.



Figure 2: High Fibre Cane

Our Experience with King Grass

- We've been planting at 3ft & 5ft row spacing
- The 3ft spacing will help increase yield in the first year



Figure 3: Spacing Density

Our Experience with King Grass (cont'd)

- It appears as if the 5ft spacing will yield better in later ratoons
- The 3ft also has issues with mechanical weeding at planting



Figure 4: Planting Operations



Figure 5: King Grass Height



Harvesting

- Harvesting can take place every 6 to 7 months
- Pros & cons of harvesting using the forage type vs the baling type machines being considered
- Agronomic needs being balanced with the needs at the feedstock handling operation



Figure 6: Harvesting Operations



Post Harvest Handling for Gasification

- Prior to entering the gasifier the grass must be shredded, dried to 10% moisture & briquetted (densified)



Long Term Vision

- Individual farms or neighboring farms could produce the feedstock & set up a gasification plant on their farm
- They could generate & sell power to the grid. There would not be the need for hauling tons of material many miles along our road network as is an issue with the sugar industry



Long term Vision (cont'd)

- The grass or HFC provides a rotation crop for those wanting to plant food crops
- It looks really good & protects the soils from erosion



Long Term Vision (Cont'd)

- It fits right into the move towards renewable energy sources. In fact because it is base load generation it enhances the ability of the island to further push the wind & solar while not having to rely on fossils for back up

The End

- Thank you!