SILAGE PREPARATION

(T) compacting forage

(3) harvest

(2) drum liners

(4) tie up bags

(5) storage

I. INTRODUCTION

• Small ruminants, as a micro-credit mechanism, can help address some of the causes of food insecurity, being a valuable agricultural resource producing food, fibre and income.

• In St. Kitts and Nevis as in many Caribbean islands a major factor limiting productivity of sheep and goats is poor nutrition. Natural pastures cannot support the desired productivity and insufficient forage in the dry season is a major constraint.

• Given the continued high world grain prices, the focus on forage-based feeding systems is imperative.

• Alternative crops, such as Forage Sorghum which are drought tolerant, yet high yielding, are suitable for silage conservation.

• The silage technique which is aimed at transferring a high production of the forage during the wet season towards the dry season must also be developed.

II. OBJECTIVES

✓ To evaluate the establishment and production of both Mulato II grass and Forage Sorghum using adequate pasture management.

✓ To conserve both Mulato II grass and Forage Sorghum using the “drum silage” conservation technique for successful storage.

III. METHODOLOGY

Two hectares of Great Scott brown mid-rib Forage Sorghum (Sorghum bicolor) were seeded in March 2nd and November 2012, at a rate of 22.4 kg/ha in rows separated by 0.6 m. Fertilizer was applied only during growth 227 kg/ha (NPK 15:15:15) for the 1st cycle and incorporated March 2nd and April 20th, respectively.

Two hectares of Mulato II grass Brachiaria hybrid CIAT 36087 were seeded at 11 kg/ha in February 3rd; one ha was re-seeded in April 19th at 18 kg/ha. For the re-seeded area, 20:10:10 NPK kg/ha were incorporated at seeding with pre-emergent herbicide 7.7 mL/ha Pendimethalin.

IV. RESULTS: Establishment and Biomass

Figure 1. ESTABLISHMENT of Mulato II grass; March to October 2012

Table 1. ESTABLISHMENT of Forage Sorghum; December 2012 to February 2013

Table 2. BIOMASS production of FORAGE SORGHUM (kg dry matter DM/ha)

Figure 3. BIOMASS production of MULATO II grass (kg dry matter DM/ha)

V. CONCLUSIONS

Both Mulato II grass and Forage Sorghum were successfully established in the dry season and increased their yields 3 to 3.5 times in the wet season producing a surplus of forage that was successfully conserved using the silage technique for 6 months under optimal conditions of storage.

Mulato II grass yields for the wet season were comparable to results obtained in Research Stations in the Caribbean. However, only 23% of the potential of the Forage Sorghum variety was obtained, so there is still room to improve the management practices on this forage.