

TANZANIA SISAL BOARD

A BRIEF INTRODUCTION TO SISAL

1.0 Origin of the Plant

Sisal Hemp (*Agave Sisalana*) is a plant belonging to the large family of *Amaryllidaceae*, which is indigenous to Central and South America. Its local name *Katani* is derived from a small port in the Yucatan peninsula of Mexico where it originated. It is one of the numbers of plants that produce hard fibres; the most important of others are Manila Hemp (known in USA as abaca) and henequen (*agave fourcroydes*), which is a variant of sisal. Other hard fibres include jute and of slight importance are Maguey and istle.

The plant reproduces itself vegetatively as suckers and bulbils i.e. bulbils develop from buds below the flowers on the branches of the sisal poles, while suckers develop at the end of underground stems (rhizomes) radiating from the base of the plants.

A fully-grown plant weighs about 135kgs and it grows up by a rapid process of photosynthesis. At the end of its life span of 10-15 years depending on the variety, two or three of the years being in the immature stage, the plant grows a pole in the middle, which can reach a height of 3.5 - 4.5 metres. Sisal is a unique plant in the fact that it can grow anywhere in the tropics and flourish in all weather conditions as the crop is drought resistant and very tolerant of a variety of soils, hence can enable even arid regions to be brought into productivity such as would not be possible with other crops. Also weeds do not affect it and its biological qualities give it a technical advantage over other natural fibres or synthetic substitutes.

2.0 Introduction of the Plant into Tanzania

The plant was introduced in the former German East Africa (later Tanganyika) now Tanzania in 1893 by a German agronomist called Dr. Richard Hindorf. He received 1000 seedlings in Hamburg from *Keasoner Bros* who were plant dealers in Florida. Only 200 seedlings survived while 800 died on the way. He repacked these 200 seedlings remaining and traveled with them hidden in an umbrella to Tanga only 62 plants arrived in good condition and he planted them at Kikokwe on the South side of the river at Pangani. Sisal was next planted at Bushiri. The 62 plants planted at Kikokwe which is part of the

present Mwera Estate founded the sisal industry in Tanzania and in actual fact the whole of Africa.

The industry grew consistently to become the most organized commercial agriculture in East Africa and a major economic force. Tanzania became the world leader in early 1960's followed by Brazil, Mexico and Kenya. In 1964 the country produced 240,000 tons from 487,000 hectares. The crop was the major foreign exchange earner for the economy; it was the largest single employer.

Up to 1967 the industry was totally in private sector. However with the proclamation of the famous Arusha Declaration, whereby all the major economic activities became under state control, over 50% of the industry was nationalized. The nationalized estates were first put under the Tanzania Sisal Corporation and later on in 1973 under the new Tanzania Sisal Authority, through the sisal industry Act of 1973. The Tanzania Sisal Authority, TSA also became the advisor to the government on all matter related to the promotion and development of the industry. Only three companies i.e. Amboni Limited, Ralli estates Limited and Karimjee Agriculture Limited were not nationalized and continued to contribute the balance 50% of the country's sisal production. However the marketing of sisal and products was conducted under single channel marketing under TSA until 1983 when the private estates were allowed to market their own production.

The Sisal industry experienced rapid decline in the 1970's and 80's when Tanzania's production suffered heavily from 240,000 tons in 1964 to the lowest figure of 20,485 tons in year 2000. The major reasons for the decline can be attributed to: -

- **Government Policy on Sisal**

About 70% of the Sisal Industry was nationalised in the 60's and suffered from the adverse effects of a Centrally Planned Economy. Sisal being an agricultural produce, all the problems, which are associated with the neglect of agriculture as an important sector in country's development have also affected the sisal industry. However, the situation have changed and now the industry is a 100 % privately owned.

- **Competition from Synthetics**
 In the 1970's the major sisal products consuming countries in Europe and North America introduced a number of highly subsidized synthetic substitutes, which took over 60% of the sisal products markets in less than 16 years. Sisal and other natural products faced a concerted push by the developed countries which produce and market synthetics. This eroded the market share of sisal in the world market. Such a situation had a negative effect on the sisal industry's financial position hence the development of the industry. However, to date synthetic fibres are no more a threat to sisal fibre.
- **Lack of Investment Capital**
 It has been difficult to obtain investment capital necessary for the development of the industry. This is given by the facts that, with low prices and high costs of production very low profit margin is available for investment. Secondly is the negative outlook of banking institutions in Tanzania to the farmers who see them as inherently high-risk clients. Even if such institutions provide credit, their conditions have always been prohibitive in such a way that they are not attractive to agricultural operations which requires a long-term credit.
- **Lack of Change and Low Utilization of the Sisal Plant**
 Over 100 years the industry has relied in the production of sisal fibre for manufacturing of agricultural twine for hay baling. Over 70% of sisal produced used to go to this market. Production of sisal is undertaken in the same manner and system which was put in place over 50 years ago, and utilizing only 2% of the sisal plant and throwing away 98% at high cost both financially and environmentally hence making the return per hectare to be very low. Furthermore sisal has continued to be regarded as a plantation crop requiring heavy capital outlays, and requiring imported labour force. This perception has continued to rob the competitiveness of the crop and have negative social connotations. Nevertheless, the utilization of sisal plant have been growing fast especially in the areas of construction, paper production, car industries, agriculture, power production and fertilizer production.
- **Cyclical Fluctuations of Sisal Prices in the World**
 In two and half decades world sisal prices have witnessed periods of decline, stagnation, and sometimes-erratic fluctuations. While costs are escalating prices have been stagnant in line with most other commodities.

Currently, the price of sisal fibre in the world market keep on the rise due to high demand of sisal in the world.

3.0 Advantages of Growing Sisal

- Sisal flourishes well in all weather conditions i.e. it is not easily affected by vagaries of weather, whether rain or drought conditions except water logging. In such a case then it can thrive well even in marginal land, semi-arid or arid areas. Although the crop is labour intensive however it is not a capital-intensive crop except in its initial stages only.
- Sisal is a natural and environmentally friendly renewable resource, which can serve mankind better than synthetic substitutes, which can damage the environment.
- Time for planting of the sisal crop is flexible hence can be planted any time of the year and once mature there is a flexibility of harvesting the sisal leaves any time of the year without any negative effects. Thus it can provide the farmer with regular income throughout the year.
- The crop is very resistant to crop diseases and is not easily affected by weeds and other hazards such as fire. Inputs such as fertilizers, herbicides and pesticides under normal conditions are not necessary although their use often results into higher yields and early harvesting. It is an easy crop to grow and maintain with no post-harvest losses and very minimal pre-harvest losses.
- The sisal crop can be interplant with other crops such as cowpeas, maize, beans, sunflower, green grams, ground nuts, etc. These provide the farmer with both food and cash crops. Thus this shows an added income from the same land area. Due to intercropping the farmer also minimizes the labour required to grow food and cash crops by using the same land area prepared for sisal growing. In actual fact productivity of food crops increases.
- Experience and expertise in crop management, processing and marketing sisal in Tanzania has been built up for over a hundred years and is abundantly available. At the same time research and extension services are readily available in Tanzania with Mlingano being the first sisal research institute in the world. Recently the Mlingano Agriculture Research Institute

has been equipped with an ultra-modern Meristematic Tissue Culture Laboratory for produced good quality sisal seedlings.

- No problem exists for planting materials, as these are readily available from suckers and nurseries and will soon become available from the MTC Laboratory at Mlingano. Once planted and becomes mature, the processing infrastructure in Tanzania is readily available up to finished products and these infrastructures are well connected to the national electricity grid and communication network.
- Its primary and secondary products can be stored in normal atmospheric conditions for over ten years without deteriorating.
- Has primary and secondary processing capacity in Tanzania to transform the whole crop into various applications and an assured market for the produce both locally and worldwide.
- Has a wide range of applications in industry, agriculture, energy, construction, mining, pharmaceuticals, motor vehicle, marine, home, office and the environment.
- The sisal plant has a life circle of 10-15 years thus assuring the farmer a regular and continuous income for those numbers of years.
- Sisal is the only crop where Tanzania once claimed world supremacy in quality and quantity.

SOURCE: TANZANIA SISAL BOARD