

Castor Cultivation in Swaziland

Field Management Techniques solely used for castor farming project

INTERNATIONAL

Linne
INTERNATIONAL

Linne International Trade Co. (Proprietary) Limited



Content

A

- **Introduction of Linne International Trade Co. (Proprietary) Limited**

B

- **Biomass Energy Market Development**

C

- **Financing**

A

**Introduction of Linne International Trade
Co. (Proprietary) Limited**

Introduction

Linne International Trade Co. (Proprietary) Limited, (Linne Co.), works with business related to **Organic Matter as a result of**

- 1. Limited agricultural resources**
- 2. Severe environmental pollution**
- 3. The future trend of green energy**
- 4. The era of safe, healthy and no contamination agriculture**
- 5. Job creation and poverty alleviation program execution**
- 6. Sustainable and booming industry**

Linne Co. has been officially authorized by a U.S. investment banking consultant to plan to go public in the U.S., and is expected to complete the IPO before the fourth quarter of 2016.

Agriculture Technical Team

Team	Experience
Professor Feng, Teng Yong 馮騰永	Ex- deputy director of Plant and Microbial Biology Institute in Academia Sinica, the most preeminent academic institution in Taiwan. Holding a successful project of anti-anthrax on banana in Africa countries.
Mr. Wu, Cui Gu 吳瑾谷	Agricultural improvement officer in Taiwan
Mr. Wu, Shu Zhong 伍蜀中	Castor cultivation expert Agricultural disease control and prevention expert Advanced invention of castor pollen and pollination techniques Master degree of National Tsing Hua University Ex- director of experimental farms of Tsing-Hua Foundation for Web Culture & Education
Mr. Chu, Li Heng 朱歷恒	Director of experimental farms of Tsing-Hua Foundation for Web Culture & Education
Michelle Hu	Palm organic fertilizer manufacturer of P.O.G from Malaysia

The Undertaking of Agriculture Technical Team in Swaziland

Team	Experience
Mr. Wu, Shu Zhong 伍蜀中	Castor cultivation expert Agricultural disease control and prevention expert Advanced invention of castor pollen and pollination techniques Master degree of National Tsing Hua University Ex- director of experimental farms of Tsing-Hua Foundation for Web Culture & Education
Happiness Munombo	Farmer expert
Samkel slwe Munombo	Farmer expert
Simphiwe Gamedge	Farmer expert

Linne's Mass Production Scale of Planting

Skills & Techniques

- 100% agricultural techniques from Taiwan to Africa.
- Obtain farming instruction from experts of Tsing-Hua Foundation for Web Culture & Education.
- Advanced invention of castor pollen and pollination techniques invented.
- Sustainable castor beans yields up to 7.5 tons per hectare per year by using the technique that can create new stems on castor plants.
- Our breed of castor beans (seeds) contain oil up to 47%.

Diversified products

- Castor leaves can support the production of castor silkworm cocoons and pupa.
- Castor silkworm cocoons can extract silk for the production of silk fabrics and other related silk products.
- Castor silkworm cocoons can extract cocoon silk protein for production of gauze used as a medical dressing, and beauty care products.
- Pupa can produce high-protein foods using biochemical techniques, such as Chinese cordyceps.

Support

- We are the only one that adopt "Field Management Techniques" for large-scale castor cultivation successfully.
- Obtained support and cooperation of agricultural division of Swaziland government.
- Obtained support and recognition of Taiwan Embassy of the Kingdom of Swaziland.

Marketing Channels List

1. Castor beans:

Chant Oil Co.,LTD (Taiwan Compnay)/

Nanjing Goldenhighway Int'l SCM Corp/

Tianxin Biotechnology Co., Ltd (Shandong province in China)

2. Castor crude oil: Wilmar International Co.

3. Castor cocoon: Japanese Mayuhana Co.

4. Castor pupa: Korean company in Africa

5. Castor silk: Merchants in Africa and China

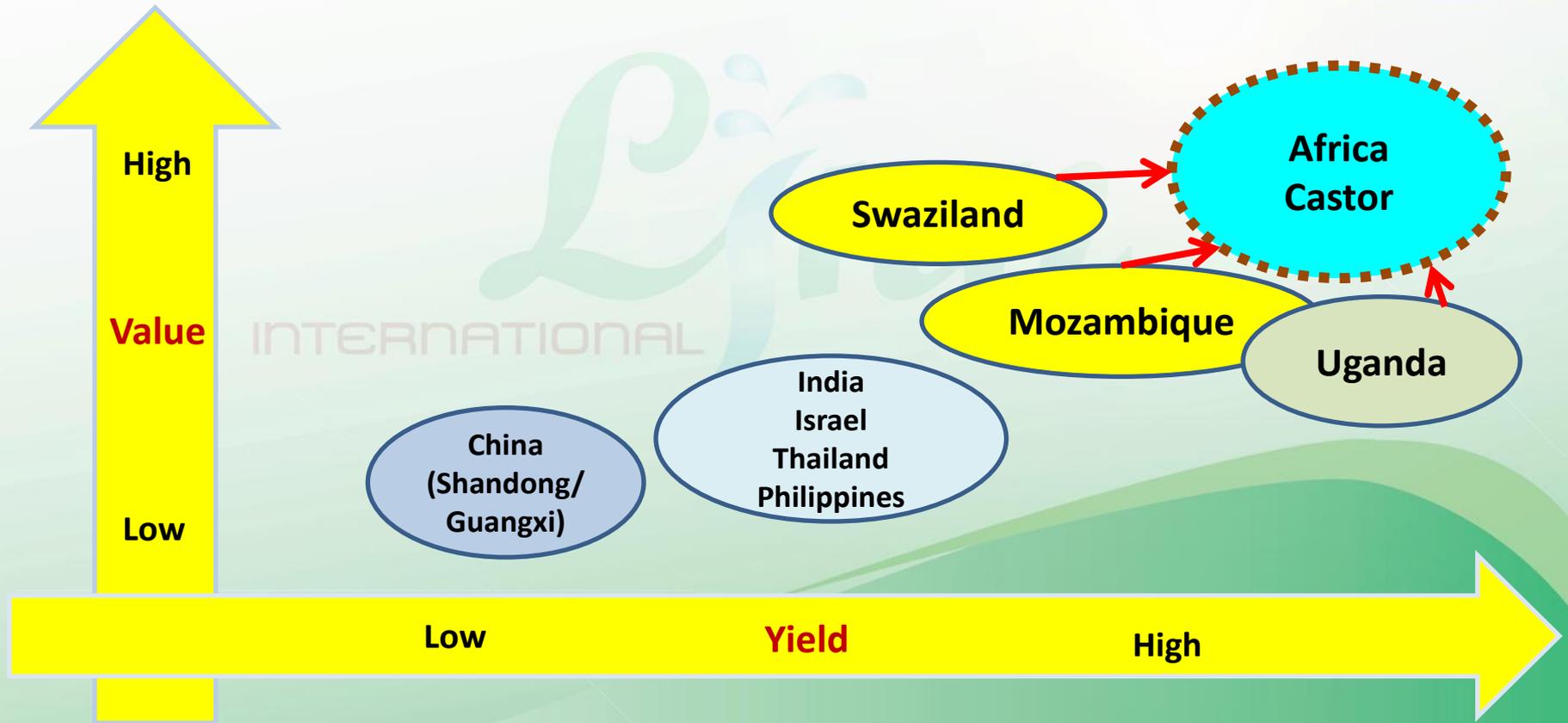
6. Castor silk protein: Cosmetic and gauze for medical dressing in Japan

7. Castor Cordyceps powder: Merchants in Africa and China

8. Others: Organic fertilizer for self uses and contract farming



Competition



Comparison Chart

Castor Cultivation suitable in tropical and sub tropical region between 0° to 25° North & South latitude

	Xinjiang (China)	Shandong (China)	Taiwan (R&D of Linne)	Swaziland	Mozambique	Uganda
Latitude	40.71° N	36.40° N	22.95° N	26.30° S	17.60° S	1.06° N
Days of suitable for culture of castor production	183-187 days	210 days	245 days (4 months of winter dormancy)	305 days (winter dormancy in June and July)		365 days
Number of times of annual harvest	1 time, and will diminish yields every year	1 time, and will diminish yields every year	Up to 3 times	More than 4 times		
The amount of annual harvest per one hectare of castor cultivation	1.5 tons	1.5 tons	4.5 tons	7.5 tons		
Remark	In order to boost yields of castor beans up to 1.5 tons, castor crops have been applied large amount of pesticide and fertilizer that can damage the soil structure, and decrease harvest efficiency.		No necessary using pesticide and fertilizer. We use our specialized “Field Management Techniques” to boost yields, but the yields will be limited by typhoon season.	Due to the most fertile soils in Africa countries, where are no pests, and our specialized “Field Management Techniques”, no pesticide, fertilizer, nor plant growth regulators (PGR) needed. Due to the weather in Africa countries is 50% less humidity than the weather in Taiwan, flower in bloom are earlier, more stamens are equal in proportion, and more fruit bearing, which in result of increasing 30% of the harvest efficiency than other countries, boosting yields, and containing high oil rate in castor beans.		

S.W.O.T

Strength

1. Our specialized “Field Management Techniques” suitable for large-scale of planting.
2. Advanced invention of pollen and pollination techniques.
3. Sustainable castor beans yields up to 7.5 tons per hectare per year by using the technique that can create new stems on castor plants.
4. Integration of agricultural techniques in Taiwan.
5. Desirable climate, the most fertile soils in Southern Africa.
6. Benefit from carbon tax revenue, and do not compete for land with food.

Weakness

1. The increased costs on transportation.
2. The issue of diversity of languages and communications.

Opportunities

1. Africa has the majority of cultivable land area, no industrial pollution.
2. Increased local employment opportunities.
3. Global demand for castor oil is great; China is the largest importer.

Threats

1. Mass production in India without using “Field Management Technique” in the market.
2. Due to global warming and climate change, yields will be reduced.

B

Biomass Energy Market Development

What is Castor Business

Carbon reduction

Biomass energy

Job creation

Material revolution

Farming to produce Industrial raw materials

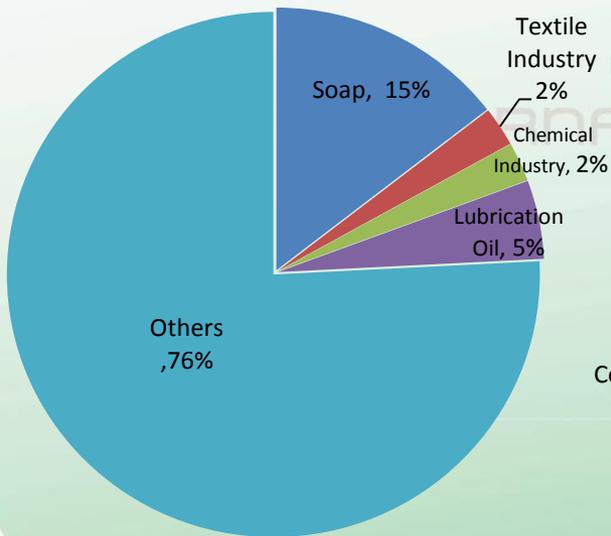
Insufficient castor oil supply up to 50%

High technique, low risk and high production

Commercial Markets

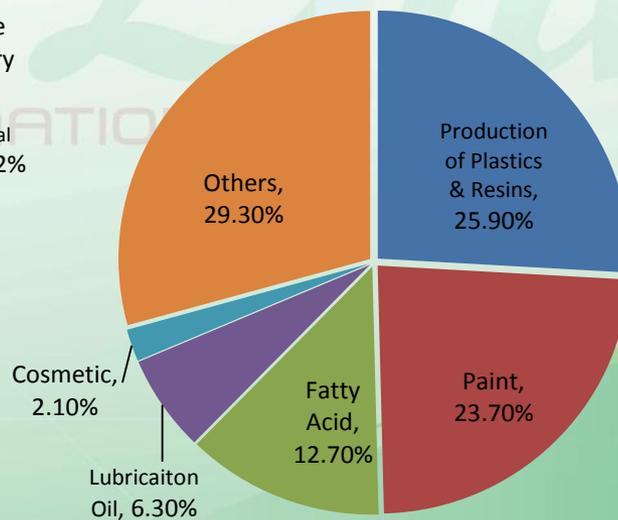
China

(the largest importer, accounted for 40% of global imports, yields up to 1.24 million tons.)



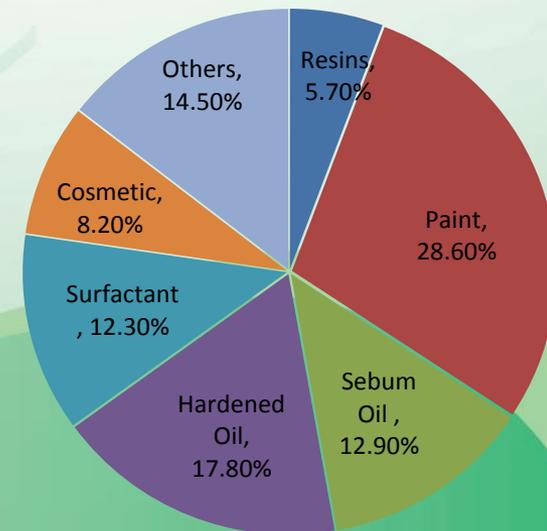
U.S.

(accounted for 11% of global imports, yields up to 0.34 million tons.)



Japan

(accounted for 9% of global imports, yields up to 0.28 million tons.)



Analysis of Global Demand for Castor

1. Castor meal: Required 50 thousand tons every year, and 30 thousand tons insufficient castor meal supply.
2. Nylon- 11: The main raw material of Nylon- 11 is castor oil; which required more than 50 thousand tons of castor oil every year.
3. Castor derived products: More than 3,000 variety in derived products with 2% - 3% of growth rate of castor oil.
4. The most growth potential of castor derived products: Lubrication oil, paints, cosmetic, cleaner, surfactants, and chemical oils; expected to have 6% of growth rate.
5. The historical price of castor oil: USD 700 per ton in 2006; USD 1,700 per ton in 2010; USD 2,200 per ton in 2013; castor oil has been growing up to 3 times.
6. The historical price of castor beans: USD 280 per ton in 2006; USD 860 per ton in 2010; USD 1,000 per ton in 2013.

Activities (1)



Activities (2)

Swazi Observer Thursday October 24, 2013

Taiwan company starts production of castor oil in Big Bend

By Teetee Zwane

A Taiwanese company based in Swaziland has imported castor oil seeds to be grown in Big Bend for the benefit of Swazis.

Linne International Trading Director Michelle Hu said the company imported subtropical perennial high-variety castor seeds to be planted at Matata in Big Bend. She said among four of the best varieties they selected and imported from Taiwan, (after winter and various environmental factors), they found only two species that were suitable to plant in the African region.

Hu said the castor oil plant suitable for production in Swaziland could be harvested at least twice a year, producing a minimum of five tons per hectare annually. She said while the plant took 80-85 days to flower in Taiwan, in

Swaziland it would only take 60 days because of good adaptability, which would lead to increased volumes of harvests.

"The maximum economic value of the castor oil plant lies in refining, producing lubricants, diesel fuel additives and ancillary products. The castor oil leaves can be used to rear silkworms, which also adds value by creating a silk production industry," she said. Hu said the international market was eagerly seeking and demanding biomass for green energy, so they believed mass production of the castor oil plant would bring enormous business opportunities, not only through job creation but also in enhancing the country's economic prosperity.

Any interested parties may visit the Agriculture Experimental Research Station at Matata or contact Jenny Chen at 7828 7237 or the office at 2364 6470.



CASTOR OIL: Linne International Trading Director Michelle Hu



- 館務資訊
- 最新消息
 - 駐地新聞
 - 臺灣政府新聞
 - 臺灣焦點新聞
- 關於臺灣
- 經濟商務
- 文化
- 新聞
- 僑務
- 觀光
- 領務
- 問答集
- 照片集錦
- 表格下載

駐地新聞

瀏覽路徑：首頁 > 最新消息 > 駐地新聞

分享轉貼 友善列印 轉寄文章 回上一頁

陳經銓大使應邀參加台商立恩公司栽種蓖麻成果發表會

張貼日期：2013/10/24



陳大使在會中致詞

駐館陳經銓大使曾曉峰秘書10月21日應台商立恩國際貿易公司董事長胡莉芸女士之邀請，參加該公司在東部Big Bend地區試種蓖麻種子之成果發表會。史瓦濟蘭農業部常務次長Bongani Masuku也應邀參加。

陳大使致詞表示，樂見台商在史國投資農作，創造就業機會，有助促進雙邊關係，並至農田目睹蓖麻成長情形，印象深刻，認為前景看好，鼓勵該公司持續擴展業務。M常次致詞表示，歡迎立恩公司在史投資蓖麻農作，相信將有助提升及促進史國就業機會及經濟發展。

立恩公司曾在3月間派人來史瓦濟蘭考察投資生產蓖麻子業務，認為史國氣候及環境適合蓖麻之生長，並於4月間與史國農業部簽署合作協定，初期由農部提供位於東部Big Bend地區4公頃農地試種。立恩公司並派技術專家進駐栽種自臺灣引進之種子，經過6個月之試種期，蓖麻成長良好，果子飽滿結實，質量均較此間野生蓖麻良佳。蓖麻子經加工可提煉成為生質柴油、潤滑油及機械與航太所需之應用化學材料等，具綠色農業特性；另蓖麻葉可供養蠶繭以製作蠶絲被。立恩公司擬推廣蓖麻農作及蠶絲被外銷之業務。

當日史國國營電視台Swazi TV等媒體至現場採訪。Swazi TV於當天晚間新聞報導上述成果發表會事；「史瓦濟蘭觀察家報」於10月24日也刊載介紹。

Castor Seeds (Beans)

Linne Co. uses these two kind of breed of Castor seeds (beans) in cultivation.



Original breed of castor seeds (beans) before the improvement.

After the improvement of castor seeds (beans) by Linne Co., the castor beans contain oil up to 47%.

Castor Cultivation Achievement by Linne Co.



**Castor plant
(Spine bulb is the bean)**



**Michelle Hu, the CEO of Linne Co. (L)
and Swaziland Agricultural sector (R)**

Castor Silkworm Cocoon Breeding Site in Linne Co.



Castor silkworm



Castor Silkworm cocoon



Moth cocoon

Castor Silkworm cocoon & Silk



Castor Silkworm cocoon



Silk

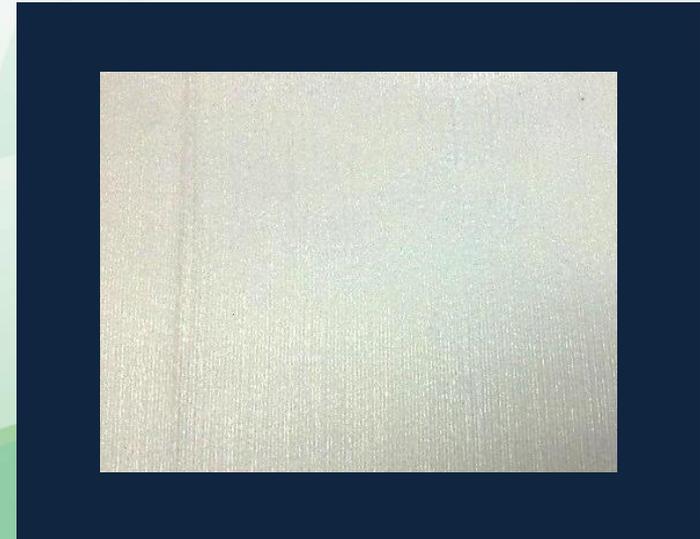
Cocoon silk protein for Health & Medical Supply



Castor cocoon silk protein extract



**Can apply in
cosmetic products**



Can be made as scald gauze

Linne Co.'s Castor Seeds Farming Site (1)



Linne Co.'s Castor Seeds Farming Site (2)



Linne Co.'s Castor Seeds Farming Team



2013 Castor Cultivation Achievement of Linne Co. in Swaziland



The King of the kingdom of Swaziland visit Linne Co.'s Castor Seeds Farming



Vision of Linne Co.

Always uphold the concepts of “professional, quality, novelty” of the business philosophy and enhance service quality and project.

Linne has based on Africa to think globally, to pursue growth and diversification of international business strategy, to market its products worldwide, and branched out into business territory on five continents.

Linne website: www.linnetrade.com