

INTRODUCTION

PRESENTED

by

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INTRODUCTION

PRESENTATION GOALS

**To review the history of crop diversification
in Barbados;**

and

To discuss a possible crop for the future.

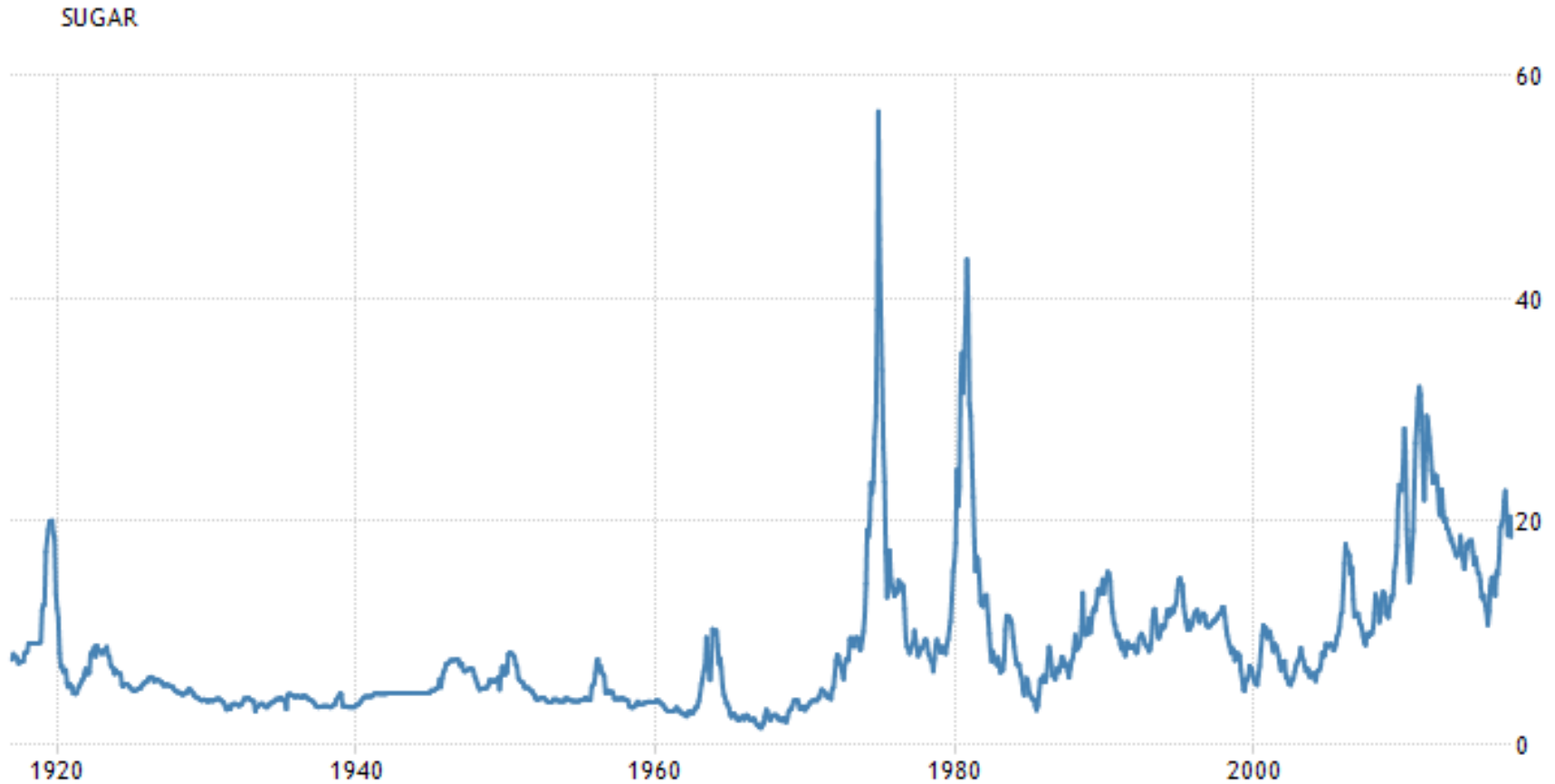
CROP DIVERSIFICATION

the addition and/or expansion of new crops or cropping systems to agricultural production.

BARBADOS AGRICULTURE 1966

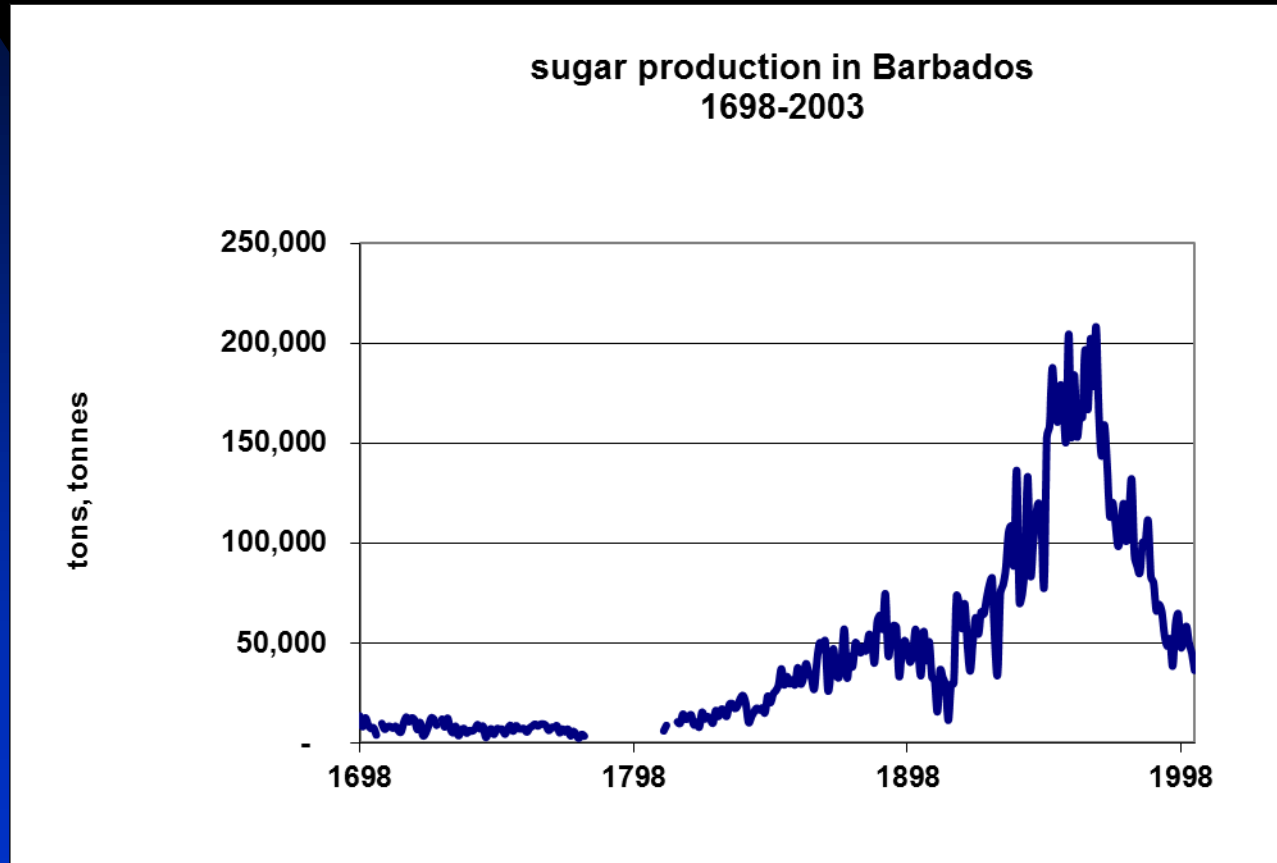
Category	Area (acres)
Arable land	65,000
Sugar Cane	45,000
Other Crops	20,000
Total crops	65,000

HISTORICAL SUGAR PRICES (US Cents per Lb.)



SOURCE: WWW.TRADINGECONOMICS.COM | OTC

SUGAR PRODUCTION IN BARBADOS



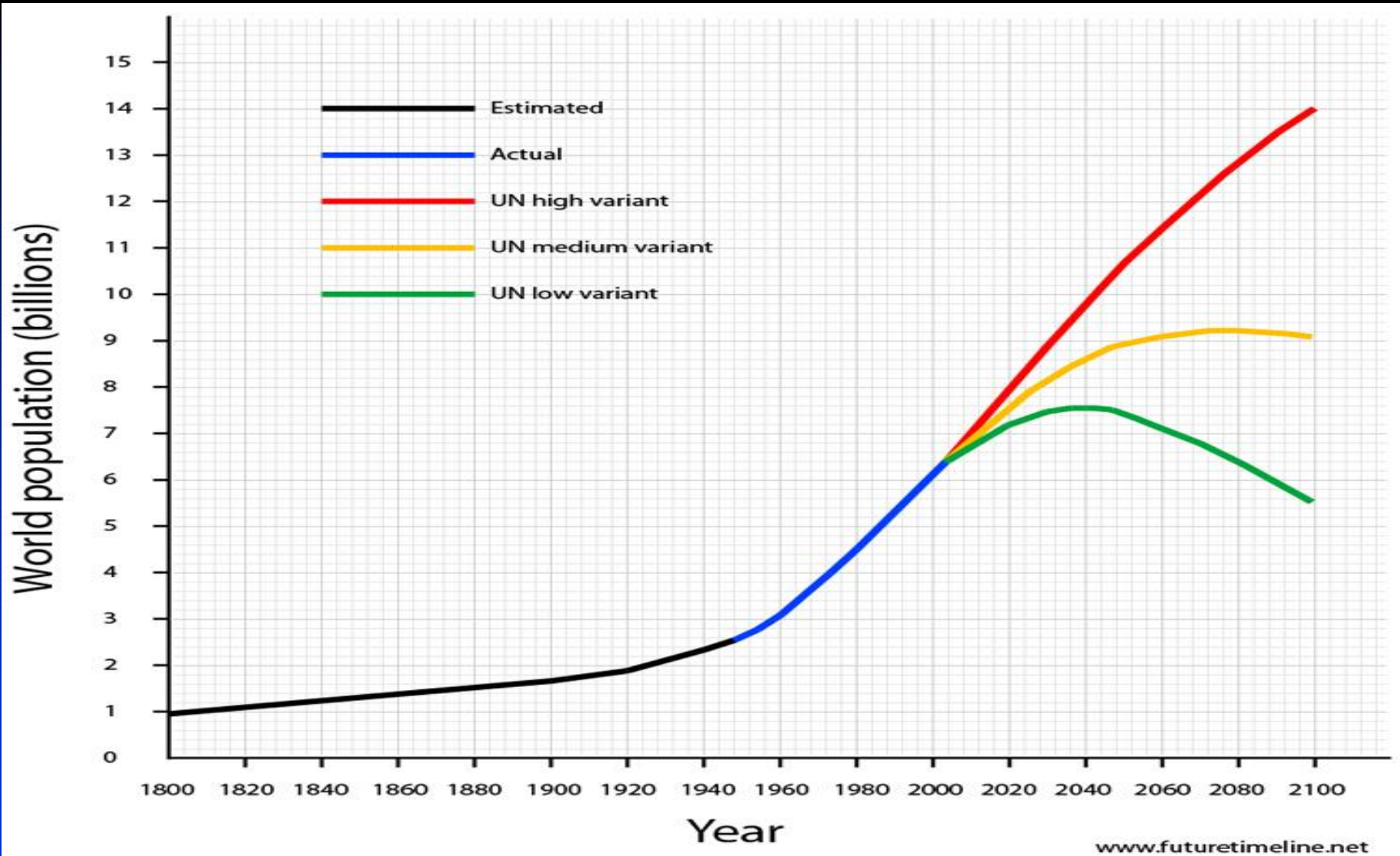
ECONOMIES OF SCALE

Economies of scale is the cost advantage that arises with increased output of a product.

Economies of scale arise because of the inverse relationship between the quantity produced and per-unit fixed costs;

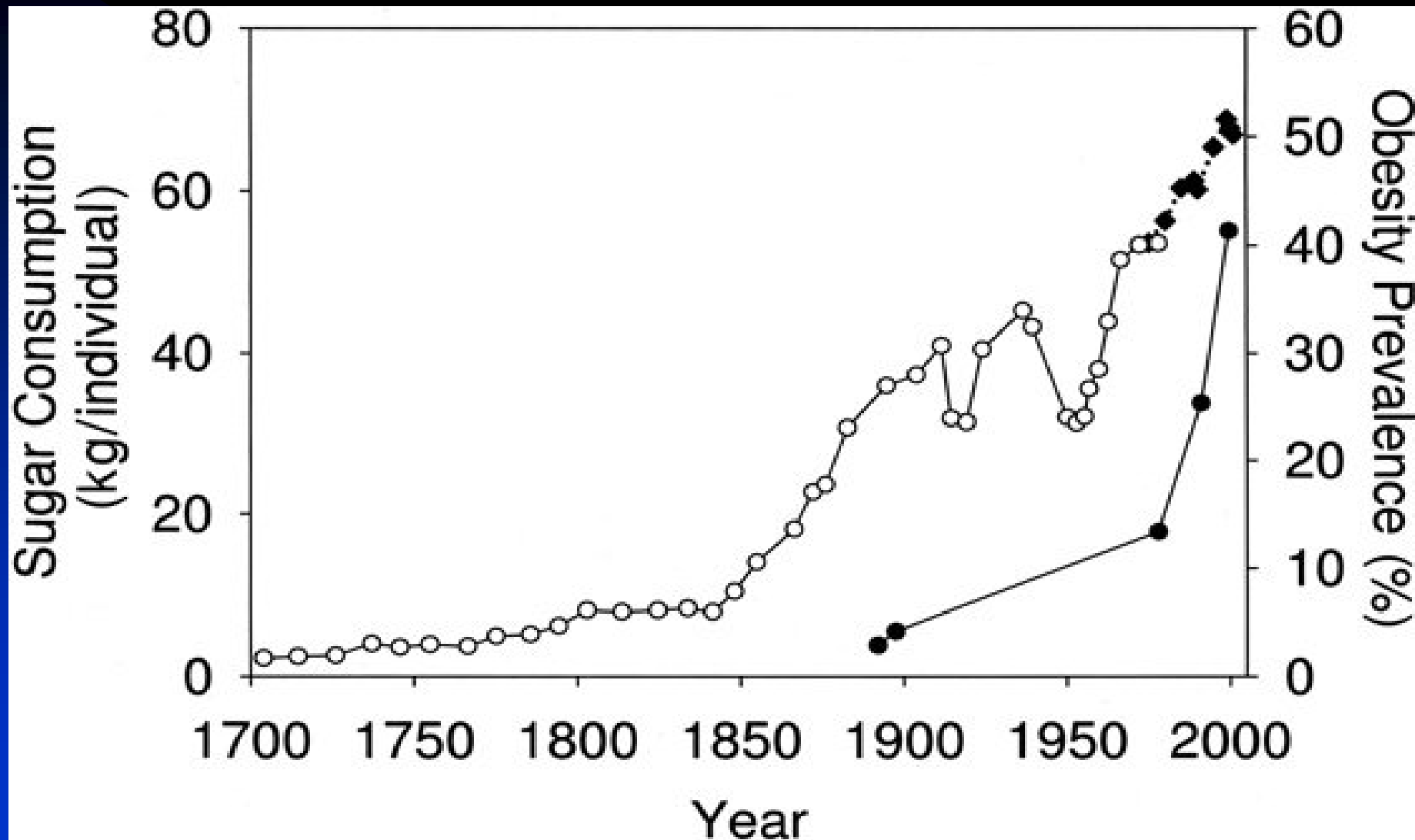
i.e. the greater the quantity of a good produced, the lower the per-unit fixed cost because these costs are spread out over a larger number of goods.

POPULATION GROWTH



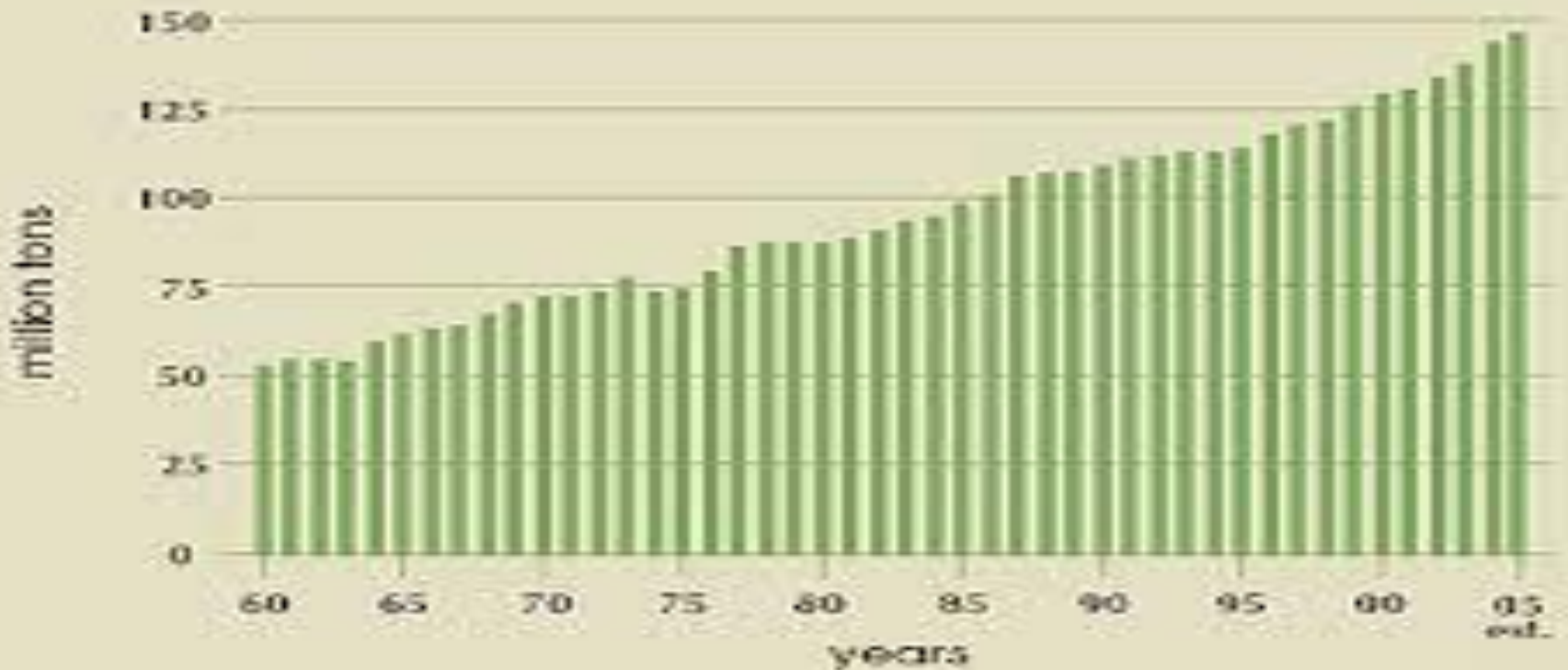
www.futuretimeline.net

SUGAR CONSUMPTION



WORLD SUGAR CONSUMPTION

WORLD SUGAR CONSUMPTION



BARBADOS FOOD CROP PRODUCTION

Crop	2010 (000 Kgs)	2011 (000 Kgs)	2012 (000 Kgs)	2013 (000 Kgs)	2014 (000 Kgs)
Bean	200.32	226.92	219.18	112.30	109.21
Beet	28.32	48.26	28.90	34.48	23.66
Cabbage	53.79	261.05	261.21	181.80	322.68
Carrot	225.83	145.66	244.48	295.48	310.24
Cassava	192.92	265.89	219.88	1,035.18	552.90
Cauliflower	0.67	0.71			14.29
Corn	86.54	22.61	80.96	17.55	81.79
Cucumber	1,061.48	1,102.83	816.3	823.89	994.26
Eddoe	26.95	18.89	65.27	175.60	74.61
Egg Plant	54.30	53.15	27.57	17.44	41.9
Lettuce	53.60	84.81	171.02	213.30	312.72
Okra	282.17	294.57	262.10	220.62	263.63
Onion	379.95	319.87	550.12	503.83	315.24

BARBADOS CROP PRODUCTION

Crop	2010 (000 Kgs)	2011 (000 Kgs)	2012 (000 Kgs)	2013 (000 Kgs)	2014 (000 Kgs)
Peas	57.90	19.43	20.30	58.36	25.29
Pepper (hot)	74.76	81.77	64.74	48.16	92.81
Pepper (sweet)	307.59	314.33	175.06	493.64	396.32
Potato (sweet)	774.37	341.65	1,202.46	1,220.11	1,231.89
Pumpkin	155.77	145.35	188.49	533.01	508.19
Squash	671.04	779.61	698.44	495.64	562.08
Tomato	691.69	809.63	1,050.35	989.26	781.03
Watermelon	220.61	132.83	191.14	381.63	318.84
Yam	453.41	196.19	348.05	748.91	567.13
Chive	92.44	22.70	721.67	564.89	159.66
Thyme	235.48	17488	277.37	122.18	59.90
Paw Paw	311.84	0.20	85.21	325.35	76.54
Chin Cabbage	9.78	147.41	63.60	72.27	91.52
Bananas	7.97	1.01	39.36	478.47	225.17
Plantain	11.61	0.11	6.94	518.69	435.45
TOTAL	6,891.11	6,413.05	11,470.15	11,250.51	9,197.63

VEGETABLE IMPORTS

Vegetable Crop	2008 (000'kg)	2009 (000'kg)	2010 (000'kg)	2011 (000'kg)	2012 (000'kg)	2015 (000'kg)
Bananas	?	?	?	?	?	3,170.25
Beans (string)	0.12	0.11	0.05	4.89	0.59	0.71
Beet	20.60	22.90	29.84	31.26	32.95	0.10
Cabbage	416.50	426.20	508.65	468.77	411.63	783.34
Carrots	444.90	898.70	707.04	679.87	629.85	625.73
Cucumber	9.80	45.50	48.84	100.06	30.96	13.19
Lettuce	305.30	470.50	548.81	576.98	606.01	304.80
Watermelons	445.40	473.20	664.77	617.69	543.24	426.48
Okra	0.01	0	0.13	0	0.07	0
Peppers (hot)	23.00	2.70	2.99	36.54	16.89	0
Peppers (sweet)	77.30	102.70	108.89	170.78	152.96	187.01
Plantains	?	?	?	?	?	1,374.50
Pumpkins	548.60	673.10	446.96	536.14	340.62	173.21
Tomato	138.60	91.90	240.85	181.31	163.08	245.58
Total Vegetables	2,430.13	3,207.51	3,307.82	3,404.29	2,928.85	7,304.90

ROOT CROP IMPORTS

Root Crop	2008 (000'kg)	2009 (000'kg)	2010 (000'kg)	2011 (000'kg)	2012 (000'kg)	2015 (000'kg)
Cassava	1.80	3.40	0.73	3.50	1.67	0
Eddoes	115.10	63.70	86.31	106.34	106.14	76.23
Sweet Potato	36.40	1.00	9.99	2.34	24.59	11.09
Yam	20.70	8.60	22.69	25.22	33.73	84.09
Onion	1,922.90	2,064.40	2,026.63	2,212.69	2,169.33	1,715.65
Peanut	71.40	41.50	61.19	111.05	9.03	0
Total Root Crops	2,168.30	2,182.60	2,207.44	2,461.14	2,344.49	1,887.06

COCONUT

The coconut tree (*Cocos nucifera*) is a member of the family *Arecaceae* (palm family) and the only species of the genus *Cocos*.

The term coconut can refer to the whole coconut palm or the seed, or the fruit, which, botanically, is a drupe, not a nut.

THE TREE OF LIFE



Coconut

NATURE'S MOST VALUABLE GIFT



The coconut provides a nutritious source of meat, juice, milk, and oil that has fed and nourished populations around the world for generations. On many islands coconut is a staple in the diet and provides the majority of the food eaten.

The scientific name for Coconut is **Cocos Nucifera**

Early Spanish explorers called it coco, which means "monkey face" because the three indentations (eyes) on the hairy nut resembles the head and face of a monkey.

Coconut Water Diet

Coconut water diet is low in fat content with just .5 grams per 240 grams, which makes it ideal for those struggling to lose weight.



1/3

Nearly one third of the world's population depends on coconut to some degree for their food and their economy.

Here are some facts based on 100ml of Coconut Water

- ✓ **Low in calories** (60)
- ✓ **Contains Lauric Acid** (it can basically double for breast milk)
- ✓ **A Universal Donor** (it can double for human blood plasma if the need arises)
- ✓ **A Natural Isotonic Beverage** (it can double for human blood plasma if the need arises)
- ✓ **No Cholesterol and Little Fat**
- ✓ **Contains more potassium** (294mg) than banana, that means much better then sports drinks and such)
- ✓ **Very Little Sodium** (25mg)
- ✓ **Very Low Natural Sugar Count** (5mg)
- ✓ **High in Chloride** (118mg)

Virgin coconut oil

Coconut oil is of special interest because it possesses healing properties far beyond that of any other dietary oil.

It will not only boost your digestion and give your foods a unique aroma, but massaged daily onto your skin it is worth its weight in gold.



COCONUT MEAT - COPRA



COCONUT OIL



COCONUT MILK



COCONUT BUTTER



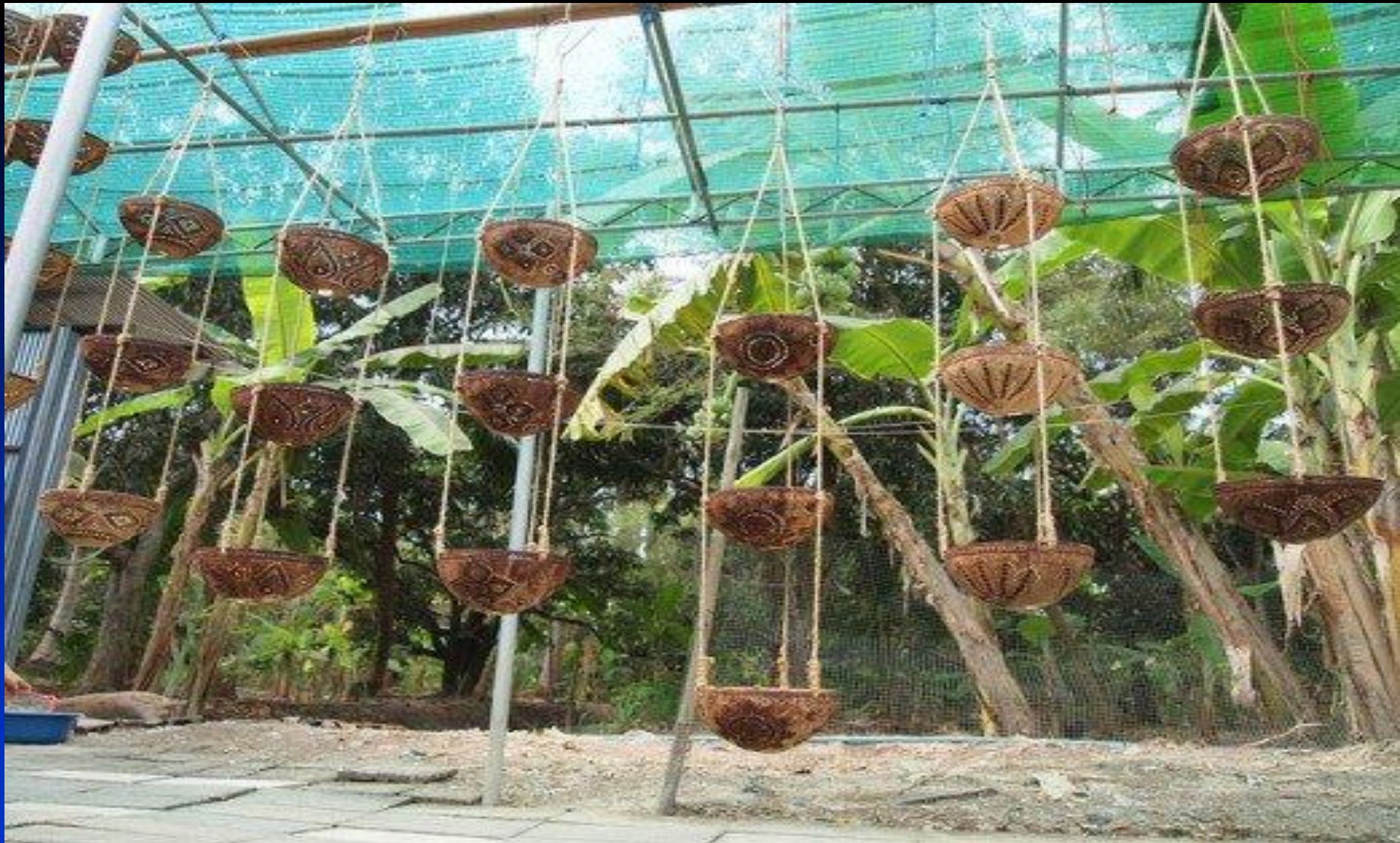
COCONUT WATER



COIR ROPE



SHELL BASKETS



ROOF THATCHING



ENERGY



COCONUT PRODUCTION (2014)

Country	Tons	Ranking	Average yield (Tons/acre)	Nuts per Tree
World	60,511,756		19.9	99
Indonesia	18,300,000	1	23.8	118
India	11,078,873	3	20.4	102
Brazil	2,919,110	^{Ss.} 4	45.9	228
Dominican Republic	333,630	16	26.8	133
Jamaica	240,111	21	23.5	116
Guyana	77,748	30	17.6	88
Cuba	63,261	36	15.8	79
Trinidad and Tobago	22,095	47	30.7	153
St. Lucia	13,010	55	19.4	97
Dominica	7,917	60	11.8	59
Grenada	6,260	65	14.2	71
Puerto Rico	4,745	68	61.5	306
St. Kitts and Nevis	2,852	74	19.3	96
Barbados	2,300	80	15.9	79
St. Vincent	2,259	81	14.7	73
Belize	904	85	9.2	46

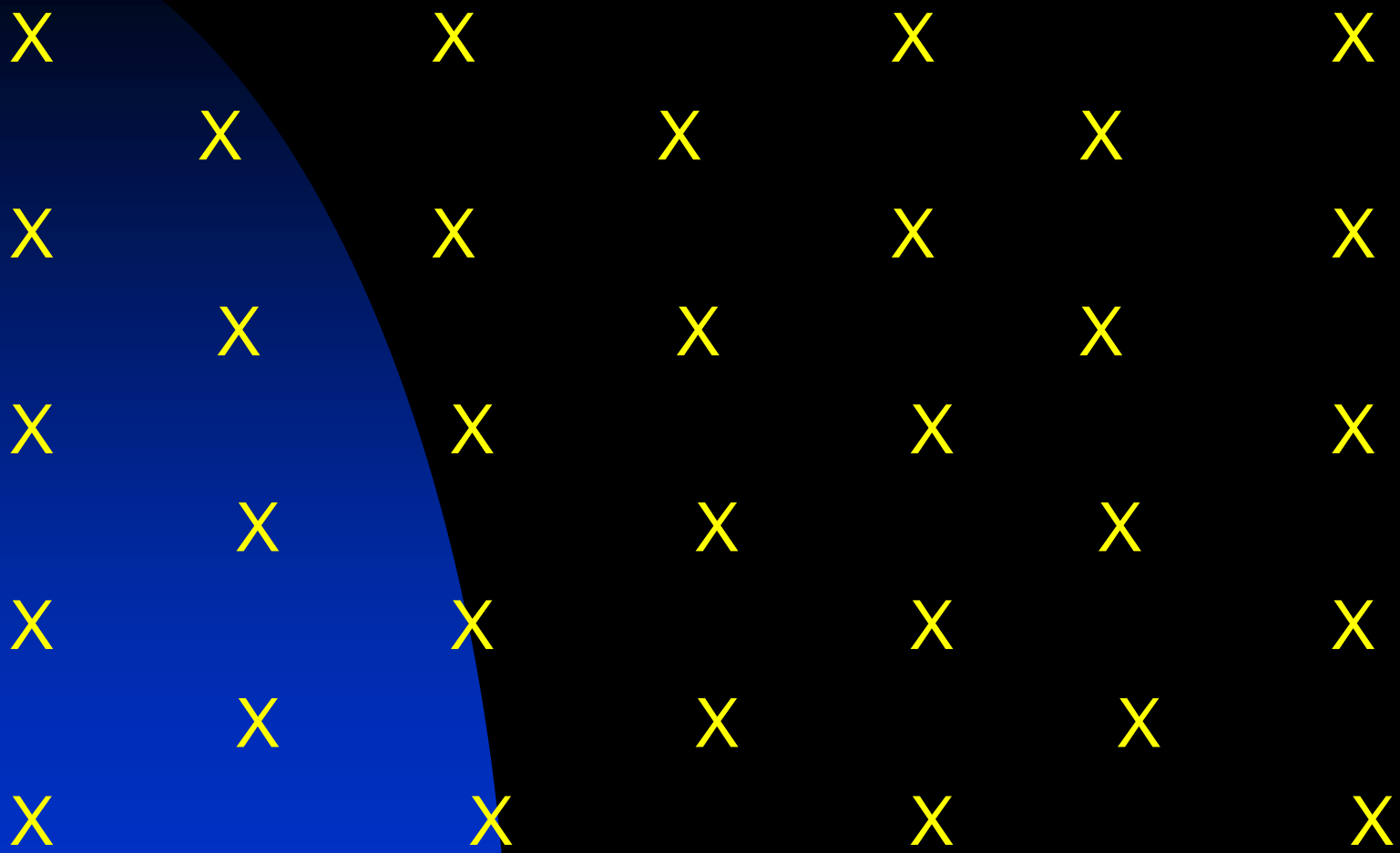
WORLD COCONUT OIL PRODUCTION ('000 metric tons)

Commodity	Attribute	Country	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
Oil, Coconut	Total Supply (1000 MT)	World	6,094	6,041	6,213	5,666	5,638	5,486	5,488

WORLD COCONUT OIL PRICES (US\$ per ton)



LAYOUT



BORON DEFICIENCY



BORON DEFICIENCY



BORON DEFICIENCY



SUMMARY ANALYSIS

Category	Value (Bd\$)
1. Total Variable cost	12,882.80
2. Total Fixed Cost	4,874.80
3. Total cost	17,756.80
4. Gross margin	30,243.20
5. Returns to management*	30,243.20
6. Cost of production/lb	0.37
7. Return to mangement/lb	0.63
8. Gross Return on Investment	170
* Plus the value of their own labour which has been costed	

THANK YOU

