

CARDAMOM SITUATION IN INDIA WITH REFERENCE TO WORLD TRADE*

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ABSTRACT

A review on the cardamom situation in India was made and it was observed that while the area under this crop has gone up by 62 per cent between 1960-'61 and 1979-'80, its production has fluctuated violently over these years. The extreme susceptibility to climatic influences and diseases and pests account for the wide variations in its yield. Current production of cardamom in India is estimated at around 4500 tonnes. Of this, about 1500 - 2000 tonnes are used for the internal consumption and the remaining for export. The unit value of cardamom per kg increased 1000 per cent during the last two decades from Rs. 18 in 1960-'61 to Rs. 199 in 1979-'80. Mainly because of this unprecedented increase in price, the realised export earnings has been pushed up to Rs. 534.7 million in 1979-'80 from a mere Rs. 36.7 million in 1960-'61. Even then, India has lost its near monopoly position in world production as well as export and has been replaced from some of the traditional markets through intensive competitions from Guatemala and Tanzania. However, the country has recently taken up some developmental programmes to boost up production and regain the established market and the outlook for the future seems to be bright.

INTRODUCTION

Cardamom of commerce is the dried capsule filled with tiny brown seeds of a herbaceous perennial plant *Elettaria cardamomum* Maton, which grows well in tropical rain forests with humus rich loamy soils at altitudes ranging from 600 m to 1500 m. The flavour of the seed is sweet and spicy with a camphoraceous note. Due to its delicate aroma, cardamom is one of the most expensive spices in the world and known as the 'queen' of spices. Taking into consideration the significant importance of cardamom to the economy of

the country, an attempt is made in this paper to assess the trend of the cardamom situation in India with reference to world trade.

PRODUCTION AND SUPPLY

Accurate figures on cardamom production in the world are difficult to obtain as related statistics in respect of some of the producing countries are not available. However, world production of cardamom has fluctuated between five thousand and eight thousand tonnes during the last two decades. Till late fifties, India was enjoying a near

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monopoly position in the world in respect of cardamom production and export. But the situation since then changed as the share of Indian cardamom in world trade has declined to 60 and 69 per cent during sixties and seventies and to 56 per cent during 1979-'80. Guatemala, Tanzania and Sri Lanka together constituted the remaining 31-44 per cent of world cardamom trade during this period (Table I).

Guatemala, the second largest producer and exporter of cardamom in the world, has made dramatic progress in recent years and it is believed that the country has achieved a production level of nearly 4500 tonnes in 1980 almost equal to that of India. Unlike India, where cardamom is grown largely as a small-holder crop (68% cardamom area is in the size group of less than 2 hectares), this crop is grown on plantation scale in Guatemala and one firm—Monte do Oro, controls nearly 80 per cent of production in the country. Moreover, the plantations in Guatemala are relatively young in age and disease is not a serious problem there.

Tanzania and Sri Lanka are the other two major producers of cardamom. While Tanzania's annual production varies from 400 to 600 tonnes, it is 300 to 500 tonnes in the case of Sri Lanka (Table I). Some of the Central American countries neighbouring Guatemala, viz., Honduras, Nicaragua, El-Salvador and Costa Rica have already initiated plantations on a small scale. Cardamom from these plantations is expected to arrive at the international market in the near future (Kulkarni, 1981).

While the area under cardamom in India has slowly gone up from 55,000 hectares in 1960-'61 to around 90,000 hectares in 1979-'80 (a rise by 62%), its production has fluctuated violently over these years. During sixties, the country's peak year of production was 1963 with the output of 4100 tonnes and the leanest year was 1965 when only 2000 tonnes were produced. Similarly, during seventies, the peak years were 1975 and 1979 with the levels of production ranging between 5203-5300 tonnes and the leanest year was 1972, the output being only 2900 tonnes (Table II).

Table I. *Country-wise world production of cardamom*

Country	Av. of 1960-'63		Av. of 1969-'72		Av. of 1975-'78		1979-'80	
	'000 tonnes	%	'000 tonnes	%	'000 tonnes	%	'000 tonnes	%
India	3.0	60	3.2	66	4.7	69	4.5	56
Guatemala	2.0	40	0.8	16	1.4	21	2.6	33
Tanzania			0.6	12	0.4	6	0.4	5
Sri Lanka			0.3	6	0.3	4	0.5	6
Total	5.0	100	4.9	100	6.8	100	8.0	100

Data sources: (1) Survey of India's Export Potential of Spices, (2) Cocoa, Arecanut and Spices Statistics for 1969-'80, (3) Cardamom Statistics.

Table II. *Area, production and yield of cardamom in India (Base year - 1960-61)*

Years	Area		Production		Yield	
	'000ha	Index No.	'000 tonnes	Index No.	Kg/ha	Index No.
1960-'61	55.0	100.0	3.3	100.0	60	100.0
1961-'62	55.0	100.0	3.2	97.0	58	97.0
1962-'63	55.0	100.0	3.4	103.0	62	103.0
1963-'64	60.7	110.4	4.1	124.2	68	112.5
1964-'65	72.8	132.4	2.2	66.7	30	50.3
1965-'66	73.1	132.9	2.0	60.6	27	45.7
1966-'67	73.1	132.9	2.7	81.8	37	61.5
1967-'68	75.0	136.4	2.4	72.7	32	53.3
1968-'69	75.0	136.4	3.0	90.9	40	66.7
1969-'70	74.4	135.3	3.0	90.9	40	66.7
1970-'71	75.4	137.1	3.1	93.9	41	68.3
1971-'72	76.8	139.6	3.6	109.1	47	78.3
1972-'73	75.9	138.0	2.9	87.9	38	63.3
1973-'74	75.9	138.0	3.2	97.0	42	70.0
1974-'75	89.2	162.2	4.8	145.5	54	90.0
1975-'76	89.9	163.5	5.2	157.6	52	86.7
1976-'77	96.9	176.2	4.4	133.3	45	75.0
1977-'78	95.6	173.8	4.5	136.4	47	78.3
1978-'79	96.2	174.9	4.6	139.4	48	80.0
1979-'80	89.0	161.8	5.3	160.6	60	100.0

Data sources: (1) Survey of India's Export Potential of Spices, (2) Cocoa, Arecanut and Spices Statistics for 1969-'80, (3) Cardamom Statistics.

The extreme susceptibility of this crop to climatic influences and pests and diseases accounts for the wide fluctuation in production. However, after 1973, there has been a sign of improvement in the production through better management including roguing of infected plants in cardamom plantations. Kerala, Karnataka and Tamil Nadu have 59 per cent, 31 per cent and 10 per cent of cardamom area in India, whereas in respect of production, Kerala, Karnataka and Tamil Nadu account for 75 per cent, 18 per cent and 7 per cent respectively. Thus, the productivity of cardamom is much lower in Karnataka and

Tamil Nadu as compared to Kerala. On the whole, the productivity of cardamom in India is the lowest in the world.

GROWTH RATES AND PROJECTIONS

Estimate of the compound growth rates per annum for the period 1970-'71 to 1979-'80 for area, production and yield are 3.05 per cent 6.10 per cent and 2.96 per cent respectively.

The projections for 1985 by using the estimated growth rates for area, production and yield are 11,7,300 ha, 7580 tonnes and 63.83 kg per ha respectively.

The trends in the area and production of cardamom in India for the period 1970-'71 to 1979-'80 are shown in Figs. 1 & 2, respectively.

UTILISATION AND DEMAND

Cardamom is added to both sweet and savoury Indian preparations to enhance their flavour. But because of its very high price, it is a most luxurious spice for Indians and the demand for India's internal consumption is therefore limited to around 1700 tonnes per capita and consumption in India is worked out at only 2.5 g per annum.

The major usage of cardamom is found in the Middle East as a blending agency for coffee. Cardamom-coffee or as it is called 'Gahwa' in the Middle East, is a symbol of Arab hospitality and customs. The amount of cardamom used in this most popular and delicious beverage varies from place to place and ranges from 5 per cent to 50 per cent. The financial position of the consumer has a lot to do with the percentage of use as it is the most expensive spice (Anonymous, 1968).

In Sweden and Finland and in other western countries like UK, cardamom finds use in confectionery items like cakes and pastries. The Americans use it in bakery, the Germans use it in the packaged food and the Japanese use it mainly as curry powder and partly in ham and sausage, drugs, liquors and tooth paste.

Per capita consumption of cardamom during the period 1963-'66 was 72 g for the Middle East, 35 g for

FIG. 1. TREND IN AREA UNDER CARDAMOM IN INDIA

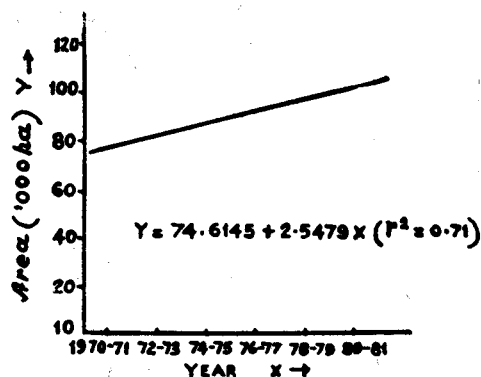
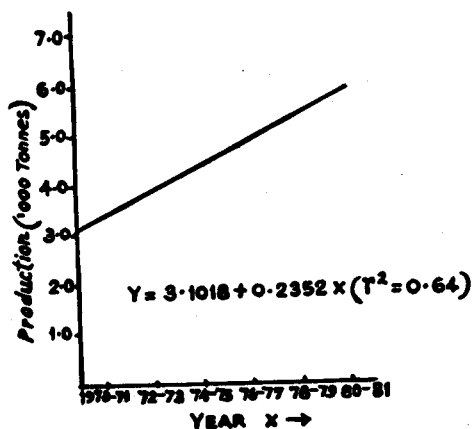


FIG. 2. TREND IN PRODUCTION OF CARDAMOM IN INDIA



Sweden, 26 g for Finland, 109 g for Norway and 7 g for Denmark (Anonymous, 1968). During the 1975-'78 period, per capita consumption of cardamom was found to be highest in Kuwait (698 g) followed by Saudi Arabia (168 g). Per capita consumption in countries like Finland (32 g), Sweden (19 g), Norway (9 g) and Denmark (5 g) was higher than that of India (Table III).

The apparent demand for cardamom from the important consuming countries can be estimated from the quantity imported to the respective countries during the past few years. It appears from the import statistics that Saudi Arabia ranks first with an average annual import of 1433 tonnes followed by Kuwait (1014 tonnes) and Bahrain (544 tonnes) (Table IV).

Table III. *Per capita consumption of cardamom in selected countries*

Country	Year	g	Country	Year	g
Kuwait	1978	698	Netherlands	1978	2
Saudi-Arabia	1976	168	Iran	1977	2
Finland	1978	32	USA	1978	1
Sweden	1978	19	UK	1978	1
Norway	1977	9	France	1978	1
Denmark	1978	5	Newzealand	1978	1
Germany, FR	1978	2	India	1978	2.5

Data source: Spice Import Statistics, ITC

Table IV. *Import of cardamom into major markets and India's share (in metric tonnes)*

Country	Average of 1971 - 1978		
	Annual import	India's share	India's share as % of total
Saudi Arabia	1433	470	33
Kuwait	1014	678	67
Bahrain	544	235	43
U. A. E.	218	110	50
Qatar	70	34	49
Iran	47	25	53
Sweden	276	13	5
Finland	151	17	11
Germany, FR	121	10	8
U. S. A.	103	10	10
Japan	110	73	66
U. S. S. R.	151	130	86
Jordan	51	3	16
Iraq	53	19	36
U. K.	76	20	26
Norway	40	5	13
Denmark	24	3	13
Netherlands	26	6	23

Data source: Cardamom Statistics

As regards the India's share in the import of cardamom into the individual major markets is concerned, it is seen that between 1971 and 1978, India could meet one-third of the total import to Saudi Arabia, two-thirds of the total imports to Kuwait and about two-fifths of the total import to Bahrain. India's share in other important Middle East market, such as the UAE, Qatar and Iran constituted about half of their total imports during the period under reference. The study further reveals that the supply from India to the USA and West European markets such as Sweden, Denmark, Norway, Finland and Federal Republic of Germany was also low as 5-13 per cent of their total imports, whereas India's supply to the UK and the Netherlands was nearly one-fourth of their total imports. However, India was the major source of cardamom for the USSR (86%) and Japan (66%) during the same period (Table IV).

IMPORT AND EXPORT EARNINGS

During 1975-'78, world export of cardamom averaged around 5270 tonnes. India has been the largest single exporter

of this spice. About 52 per cent of total world export came from India. Guatemala, Tanzania and Sri Lanka accounted for 33 per cent, 10 per cent and 5 per cent of world export, respectively (Table V). However, India and Guatemala shared 47 per cent and 45 per cent respectively of world export during 1979-'80.

India and Sri Lanka exported about two-fifths and two-thirds respectively of their production during most of the years and the rest of the outputs were devoted towards their internal consumption. In case of Guatemala and Tanzania, almost whole of their productions reached export markets as there was little internal consumption for them.

Prominent among buyers of Indian cardamom are countries in the Middle East which accounted for 51.4 per cent in 1960-'61 to 1963-'64 period and 84.8 per cent in 1975-'76 to 1978-'79 period. While there has been 56 per cent rise in India's export to the Middle East in between these periods, the country's exports to all other zones have declined considerably (Table VI). Even the

Table V. *Country-wise world export of cardamom*

Country	Av. of 1969-'72		Av. of 1975-'78		1979-'80	
	Tonnes	%	Tonnes	%	Tonnes	%
India	1757	56	2725	52	2700	47
Guatemala	889	28	1726	33	2570	45
Tanzania	304	10	540	10	250	5
Sri Lanka	197	6	279	5	180	3
Total	3147	100	5270	100	5700	100

Data sources : (1) Spice Import Statistics (2) Cardamom Statistics

Table VI. *Zone-wise export of cardamom from India*

Zone	Average for 1960-'61 to 1963-'64 (Period 1)		Average for 1975-'76 to 1978-'79 (Period 2)		Change in % between period 1 & 2
	Tonnes	(%)	Tonnes	(%)	
Middle East	1151	51.36	1797	84.84	(+) 56.07
East Asia	350	15.62	100	4.72	(-) 71.47
UK & ECM Countries	139	6.20	55	2.60	(-) 60.40
Other West European Countries	352	15.70	9	0.43	(-) 97.30
East European Countries	166	7.41	147	6.94	(-) 11.84
America	32	1.43	7	0.33	(-) 76.43
Australia & Oceanic	2	0.10	1	0.05	(-) 64.79
Others	25	1.12	Neg.	0.00	(-) 100.00
Total	2241	100.00	2118	100.00	(-) 5.47

Data sources: (1) Survey of India's Export Potential of Spices
(2) Cardamom Statistics

exports to East European countries have been reduced by 12 per cent in recent years, while the exports of all other major spices, particularly pepper have been considerably increased to this zone.

If we look to the situation since thirties, it will be seen that the direction of India's exports of cardamom has changed remarkably. During early thirties, the European countries and the USA constituted 69 per cent of India's export. This was reduced to only about 22 per cent in early sixties and further reduced to only 10 per cent in later seventies. The main reason for this shift is the sudden affluence in the Middle East. So long as petro-dollar continues to influence the economy of the Middle East, Indian cardamom would find a ready market there. Moreover, in the West European markets, India faces stiff competition from Guatemala and Tanzania. As cardamom finds its use in

the food industry in these countries, they are not that particular for the quality and colour of the capsules unlike the Arabs who are prepared to pay the 'premium' for the flavour and aroma of Indian cardamom as well as for its bold shape and green colour. It is, therefore, barring the Middle East, the demand for Indian cardamom is dependent on the relative prices offered by India *vis-a-vis* other competing countries. The fluctuations both in the production as well as export of Indian cardamom are very much distinct in the crop statistics (Table II and VII). It is all the same important to note that though the Middle East countries offer a strong base for Indian cardamom, India's share of about 84 per cent of the total imports to this zone in 1963-'67 has fallen to about 52 per cent during 1972-'76. Guatemala has, not only made an inroad to the Middle East, but has also emerged out as a strong competitor to India.

Cardamom being largely an export oriented commodity, the levels of its production and consequent supply from the competing countries influence the cardamom prices in India to a considerable extent. These factors explain the year to year variations in the unit value of cardamom (Table VII). However, there has been a noticeable growth in the unit value realisation and the resulted export value between 1960-'61 and 1979-'80 which suggests better future prospect for this luxurious spice. Some of the studies reveal that there is a supply gap of 1300-1700 tonnes of cardamom in the international market and this obviously reflected by an increase in the unit value to the extent of 1000 per cent in 1979-'80, considering 1960-'61 as the base year. The export value has also shot up by about 1360 per cent while the quantity exported rose only by nearly 40 per cent during the same period reflecting the significant growth in the unit value realisation (Table VII).

The trends in the volume of exports and the unit value of Indian cardamom for the period 1970-'71 to 1979-'80 are shown in Figs. 3 & 4, respectively. The estimated compound growth rates per

Table VII. *Export of cardamom from india (Base year - 1960-'61)*

Year	Quantity		Value		Unit value	
	Tonnes	Index No.	Rs. Million	Index No.	Rs./kg	Index No.
1960-'61	1920	100.0	36.7	100.0	18.06	100.0
1961-'62	2280	117.2	38.9	97.8	15.17	84.0
1962-'63	2390	124.5	26.7	72.8	11.82	65.5
1963-'64	2120	110.4	32.0	87.2	15.09	83.6
1964-'65	1760	91.7	28.4	77.4	16.14	89.4
1965-'66	1391	72.5	43.9	119.6	31.56	174.8
1966-'67	1723	89.7	81.3	221.5	45.60	252.5
1967-'68	1572	80.3	71.2	194.0	47.40	262.5
1968-'69	1450	75.5	68.7	187.2	47.38	262.4
1969-'70	1216	63.3	89.4	243.6	73.52	407.1
1970-'71	1705	88.8	112.2	305.7	65.78	364.2
1971-'72	2127	110.8	97.1	264.6	45.65	252.8
1972-'73	1840	95.8	73.1	199.2	39.71	219.9
1973-'74	1357	70.7	82.8	225.6	61.05	338.1
1974-'75	1814	94.5	136.5	371.9	75.27	416.8
1975-'76	1579	82.2	145.0	395.1	91.86	508.6
1976-'77	1420	74.0	164.2	447.4	115.65	640.4
1977-'78	2408	125.4	428.2	1166.8	117.85	652.6
1978-'79	2527	131.6	487.4	1328.1	192.85	1067.8
1979-'80	2685	139.8	534.7	1457.0	199.16	1102.8

Data sources: (1) Cocoa, Arecanut and Spices Statistics
(2) Cardamom Statistics

FIG. 3. TREND IN THE VOLUME OF CARDAMOM EXPORTED FROM INDIA

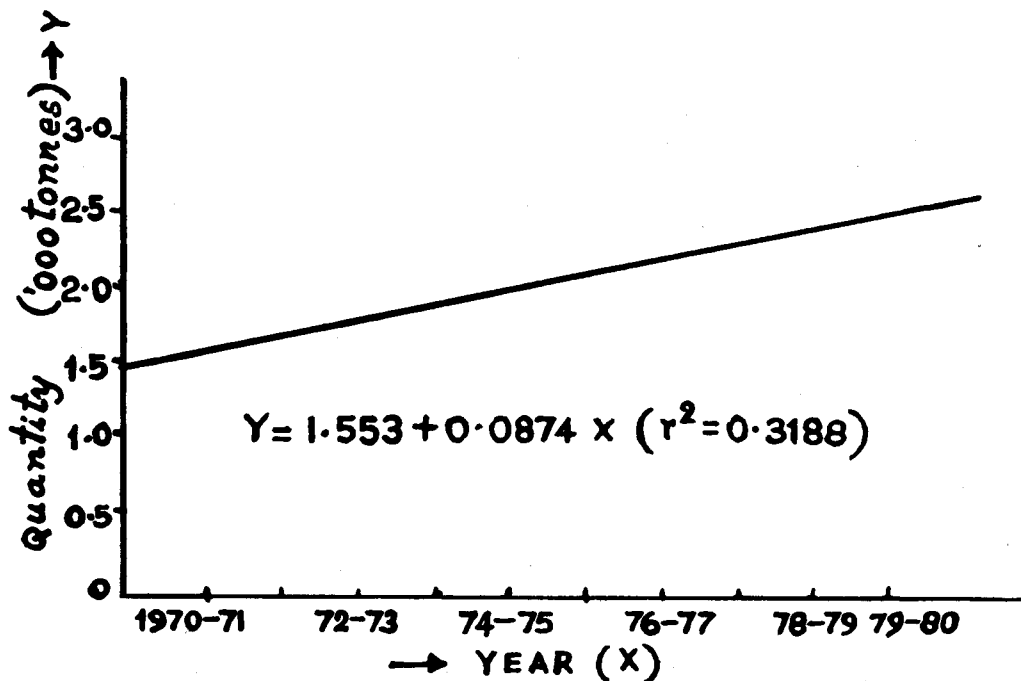
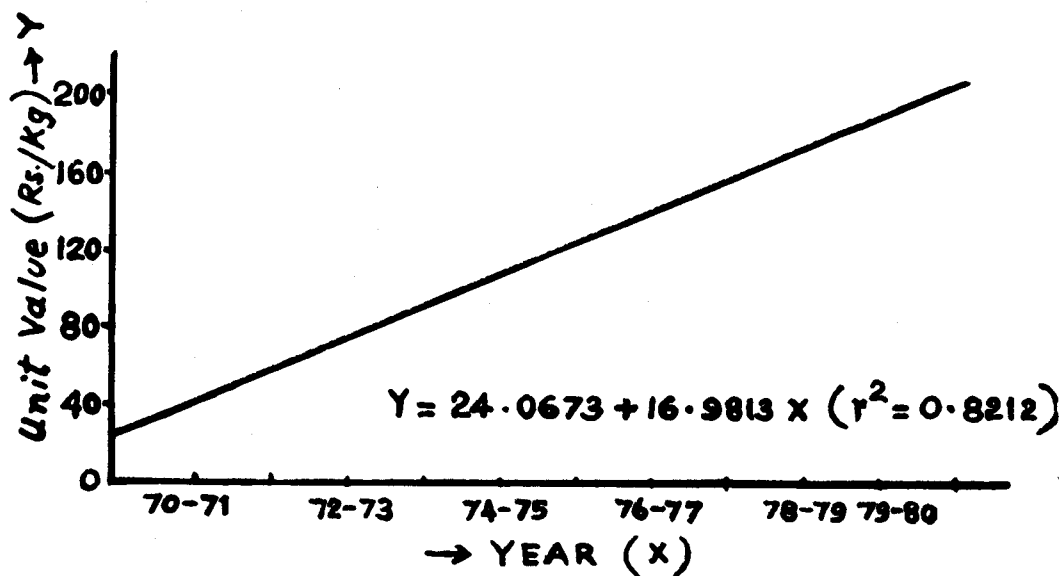


FIG. 4. TREND IN UNIT VALUE OF CARDAMOM EXPORTED FROM INDIA



annum for the quantity exported, export value and unit value of Indian cardamom for the period 1970-'71 to 1979-'80 are 4.1 per cent, 24.6 per cent and 18.2 per cent respectively.

The trend in the unit value realisation from the export of cardamom by the producing countries reveals that Indian cardamom by and large secures premium over the others (Table VIII)

East and some of the European countries will continue to increase. In view of the size of the market and the unprecedented growth in the unit value realisation, it is vital that India's cardamom industry is augmented. Under the circumstances the Cardamom Board of India has already launched some development programmes and by the end of eighties India's cardamom production is

Table VIII. *Unit value realisation from export of cardamom by the producing countries (Rs/Kg)*

Country	1971	1972	1973	1974	1975	1976	1977
India	45.65	39.71	61.05	75.27	91.86	115.65	177.85
Guatemala	42.15	31.16	34.24	46.89	52.65	72.84	106.38
Tanzania	N/A	21.20	23.76	26.78	25.13	N/A	N/A
Sri Lanka	43.49	37.21	63.13	61.00	53.01	104.86	188.83

Data source: Cardamom Statistics N/A - Not available

and it can be attributed to its superior quality. Some of the importing countries in the Middle East viz., Saudi Arabia and Kuwait prefer the dark green colour of the capsule which is seldom found in the non-Indian cardamom. The superiority of Indian processing is thus certainly rewarding, so long as the premium is realised and the Middle East market is secured on this score.

OUTLOOK

Consumption trends indicate that the imports of cardamom to the Middle

East expected to be of the order of 6750 tonnes (Anonymous, 1980). Even though it is not easy to face the challenges of the competitors, India's economic compulsions make it necessary to retain the established markets through continued efforts in all directions.

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