South African Avocado Growers' Association Yearbook 1995. 18:23-30

An Overview of the Avocado Industry in South Africa

As requested by: Development Bank of Southern Africa

J.L. van Zyl and S.G. Ferreira
Agricultural Economic Consultant

INTRODUCTION

The Development Bank of Southern Africa (DBSA) identified the need to determine a perspective of the Avocado Industry in South Africa. Due to limited time allocated for this study, a detailed study was not possible. The most relevant aspects are however addressed in this report.

Aspects such as the current economic status of the industry in South Africa, institutional structures, production areas, production trends, application of products, international situation, producer prices and future marketing prospects are addressed.

The 1994 avocado tree census has been done but the results were not available. Statistics with respect to the current situation are therefore preliminary figures.

HISTORICAL BACKGROUND

The avocado originates from Mexico, Central America and northern parts of South America. Before the 16th century, the avocado was known only to the native inhabitants of these countries. The Spanish Conquistadors were the first foreign people to discover the avocado. Seed were distributed to other countries to gradually start a global avocado industry.

The avocado has been known in South Africa since the arrival of the Netherlands colonists. They imported it from the West Indian Islands and Netherlands Colonies. All the planting material initially originates from West India. At a later stage improved planting material were imported from Mexico, Guatemala and California. More cultivars, among others, Fuerte were imported during 1924 and 1927. During 1930 the total avocado population in South Africa was approximately 10 000 trees. The first commercial orchard was planted in KwaZulu/Natal near Durban. No attempts were made at that time to select trees with improved quality (Institute for Tropical and Subtropical Crops).

The South African Avocado Growers' Association was established in 1967 with the view to regulate avocado exports to Europe in order to stabilize prices. During 1973 a technical committee was established to investigate technical aspects of commercial avocado production and export of fruit (Partridge, Toerien). Production in the avocado industry increased rapidly since 1965 at an average growth rate of 8 per cent per annum. The total production for the 1993/94 season was approximately 38 000 tonnes of which 22 000 tonnes were exported and the balance was consumed locally. The total production value for the 1993/94 season was R 73 million (Directorate Economic Trends).

CURRENT ECONOMIC STATUS OF THE AVOCADO INDUSTRY

Information for the avocado industry is not readily available on a provincial basis. Economic parameters do not exist but an attempt was made to calculate an appropriate norm which is given in Table 1. Information in Table 1 is only applicable to avocado production and excludes marketing and processing.

Table 1
Economic parameters in the avocado industry, 1993/94

Area avocados (ha)	9 500
Production (tonnes)	37 748
Export	22 303
Local fresh	12 847
Processing	524
Other	2 074
Gross production value*	73,2
Number job opportunities	2 400
Fertilizer consumption*	7,6
Chemicals*	28,5
Contract transport*	8,8
Packing material*	12,3
Investment*	251,0
Land	142,0
Avocado establishment	38,0
Irrigation & equipment	71,0

*In R million
Source: Own calculations

The gross production value for 1993/94 season is shown as R 73, 2 million in Table 1. The value for exports for the 1994/95 season amounts to R 120 million (SAAGA).

PRODUCTION REGIONS[1]

South African production regions are mainly situated in the Lowveld areas of Northern and Eastern Transvaal.

It is estimated that a total area of 9 500 ha is planted to avocados. Approximately 75 per cent of this area is irrigated.

A total of approximately 550 farmers are involved in avocado production. Farming units vary in size and the typical farm could vary from 20 to 30 ha.

The different production regions and tree numbers for 1991 as well as the classification in climatic regions are as follows:

Region	*Climatic region*	*Tree numbers 1991*	*%*
Letaba	Warm	669 491	45
Nelspruit	Warm	381 759	26
Soutpansberg	Warm	264 534	18
KwaZulu/Natal	Cool	162 405	11
Rustenburg	Warm	7 440	—
Total		1 485 629	100

Tree numbers according to previous census surveys are as follows:

Year	*Tree numbers*
1973	473 528
1981	963 594
1987	1 089 082
1991	1 485 629

Trees increased at an average rate of 6,6 per cent per annum. New plantings have been made since 1991 and the industry expanded as a result of this.

CULTIVARS[1]

A number of avocado cultivars exist in South Africa. The most popular cultivars with an indication of its relative importance according to tree numbers during the 1991 census were as follows:

Cultivar	*Tree numbers*	*%*
Fuerte	645 292	44
Hass	521 284	35
Ryan	173 807	12
Pinkerton	64 915	4
Edranol	62 563	4
Other	17 768	1
TOTAL	1 485 629	100

Fuerte is currently the most popular cultivar, but an increased number of Hass cultivar trees were planted since 1991.Certain cultivars are regarded as being earlier than others. This phenomenon changes from season to season and region to region. Table 2 attempts to indicate when the cultivars are harvested according to climatic conditions.

Table 2
Estimated harvesting periods in South Africa according to cultivar and climatic regions, avocados.

Cultivar	*Climatic region*	*Nov*	*Dec*	*Jan*	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*
Fuerte	Warm					X	X	X	X	X	X		
	Cool	X						X	X	X	X	X	X
Edranol	Warm								X	X	X	X	
	Cool	X	X								X	X	X
Ryan	Warm	X	X									X	X
	Cool	X	X	X	X								
Hass	Warm						X	X	X				
	Cool									X	X	X	
Pinkerton	Warm								X	X			
	Cool										X	X	

Source: Compiled from information supplied by Institute for Tropical and Subtropical Crops, Nelspruit and SAAGA

A distinction must be made between dark and green skin cultivars, as the demand for these cultivars differs between the different importing countries. Hass is the only dark skin cultivar, while the rest of the cultivars as listed above, are green skinned.

[1]Partridge

PRODUCTION AND MARKETING CHANNELS

A break-down of the total avocado production for the past nine years is given in Table 3.

No official statistics are available with respect to the trade of avocados in the informal market and is therefore excluded from Table 3. Observations indicate that minor quantities of avocados are traded by hawkers.

Total production reached a maximum of 51 808 tonnes in 1989/90, thereafter it decreased to 37 748 tonnes in 1993/94 mainly due to drought and unfavourable climatic conditions. The majority of the fruit is exported for fresh consumption as 62 per cent of the total production is applied for this purpose.

Avocado supplies to the Fresh Produce Markets for the past three years according to market were as shown in Table 4 (Department of Agriculture).

Ninety per cent of the total supply on the Fresh Produce Markets is marketed in Johannesburg, Pretoria and Cape Town. Above mentioned figures do not correspond with those presented in Table 3 as different periods were applied.

The monthly supplies of fruit to all Fresh Produce markets for the past three years are shown in Table 5.

The yield per ha is in the vicinity of 6, 5 tonnes per bearing ha which is extremely low (Toerien). Factors contributing to this low yield are the following:

- A relative large area, 25 per cent of total area, is planted under dry land conditions with resultant lower yields.
- The low yields also indicate that many producers do not apply correct production practices, spraying programmes, planting material etc.
- The continuous drought conditions in avocado producing areas are also reflected in low yields.

Table 3
Total production[1] (in tonnes) according to marketing channel, avocados, 1984/85 to 1992/93[2]

Year	*Fresh Produce Markets*	*Export*	*Processing*	*Other outlets*	*Total*
1985/86	11 948	18 487	188	1 930	32 553
1986/87	12 862	23 087	826	1 495	38 270
1987/88	14 339	23 432	1 138	2 308	41 217
1988/89	11 097	28 114	—	1 793	41 004
1989/90	16 005	32 590	685	2 528	51 808
1990/91	13 158	32 355	1 000	2 052	48 565
1991/92	12 980	29 166	1 468	2 096	45 710
1992/93	11 583	22 814	654	1 870	36 921
1993/94	12 847	22 303	524	2 074	37 748
Average last 3 years	12 470	24 761	882	2 013	40 126
%	31	62	2	5	100

[1]Directorate Economic Trends
[1]Informal Market excluded
[2]July to June

Table 4
Avocado supplies (in tonnes) to fresh produce markets, 1991–1993

Market	*1991*	*1992*	*1993*	*Average*	*Percentage %*
Johannesburg	5 689	5 698	5 795	5 727	45
Pretoria	1 742	1 516	1 721	1 660	13
Cape Town	4 619	3 729	4 127	4 158	32
Durban	75	34	57	55	—
Other	1 536	1 111	1 161	1 269	10
TOTAL	13 661	12 088	12 861	12 870	100

Table 5
Monthly supply of avocados (in tonnes) to all fresh produce markets in South Africa

Month	*1991*	*1992*	*1993*	*Average*	%
Jan	194	164	121	160	1
Feb	288	408	133	276	2
March	885	923	724	844	7
April	1 960	1 352	1 191	1 501	12
May	1 992	1 485	1 653	1 710	13
June	1 538	1 785	1 748	1 692	13
July	1 816	1 797	1 806	1 807	14
August	1 675	1 586	1 822	1 694	13
Sept	1 287	1 084	1 447	1 273	10
Oct	1 071	835	917	941	7
Nov	638	425	785	616	5
Dec	316	244	514	358	3
TOTAL	13 662	12 088	12 861	12 870	100

Source: Directorate Economic Trends

Efficient farmers, however, achieve yields of 15 tonnes and more per ha. The level of management inputs plays a major role in this achievement.

Due to increased new plantings it is expected that avocado production in South Africa will double within the next five years. The Hass cultivar will become more important as increasing numbers of this cultivar have been planted (Partridge).

PRICES

General

An explanation of price terminology:

Gross price in importing country

Less marketing cost in importing

country

= Cost, insurance, freight price (c.i.f.)

Less freight and insurance cost

= Free on board price (f.o.b.)

Less local transport and marketing cost

= Free on rail price (f.o.r.)

Fresh produce markets

The average prices for avocados on all the Fresh Produce Markets are shown in Table 6.

Table 6
Average actual and real price on fresh produce markets, avocados, 1985/86 to 1993/94

Year	*Actual price*[1]	*Real price*[2] *(1994 price levels)*
	R per ton	
1985/86	839	2 250
1986/87	926	2 138
1987/88	990	2 027
1988/89	1 249	2 230
1989/90	1 237	1 930
1990/91	1 494	2 022
1991/92	1 675	1 991
1992/93	1 994	2 160
1993/94	2 129	2 129

[1]Source: Directorate Economic trend
[2]Own calculations

The real prices achieved and the volume of fruit marketed on the Fresh Produce Markets according to year, since 1965/66 are shown in Figure 1. The actual price, as shown in Table 6, inclined gradually since 1985/86 at an average annual rate of 12,3 per cent. The real prices at 1994 levels declined gradually from 1965/66 to 1993/94 at an average rate of 0,7 per cent per annum. The last 5 years from 1988/90 however tended to increase slightly.

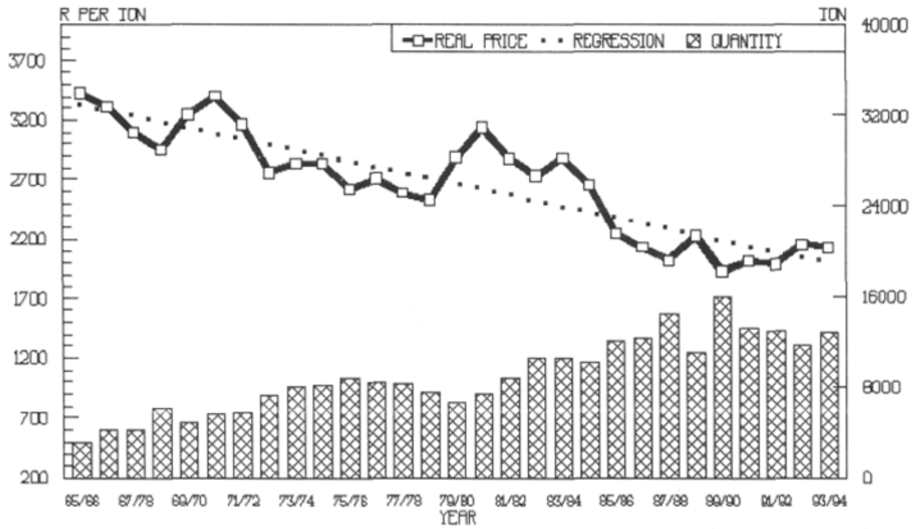

Figure 1
Prices and quantities per annum. All local fresh markets

The real avocado price and quantities according to month, since January 1990 is shown in Figure 2. The actual prices realized on the Fresh Produce Markets are presented in Table 7.

It is clear that avocado price is sensitive to supply on markets. The high prices during the off season are irrelevant as the supply on the markets is very low. During peak season, March to September, actual prices varied between R 1 150 and R 2 395 per ton, depending on supply of fruit.

Table 7
Actual monthly avocado prices at fresh produce markets

Month	1991	1992	1993
		R per ton	
Jan	2626	3334	3551
Feb	2513	2257	3978
March	1648	1830	2395
Apr	1173	1583	2239
May	1150	1441	1747
June	1239	1319	1784
July	1236	1377	1780
Aug	1365	1460	1832
Sept	1757	2203	2287
Oct	2403	2821	3044
Nov	2472	2819	2930
Dec	2879	3830	3052
Average	1535	1775	2169

Source: Directorate Economic Trends

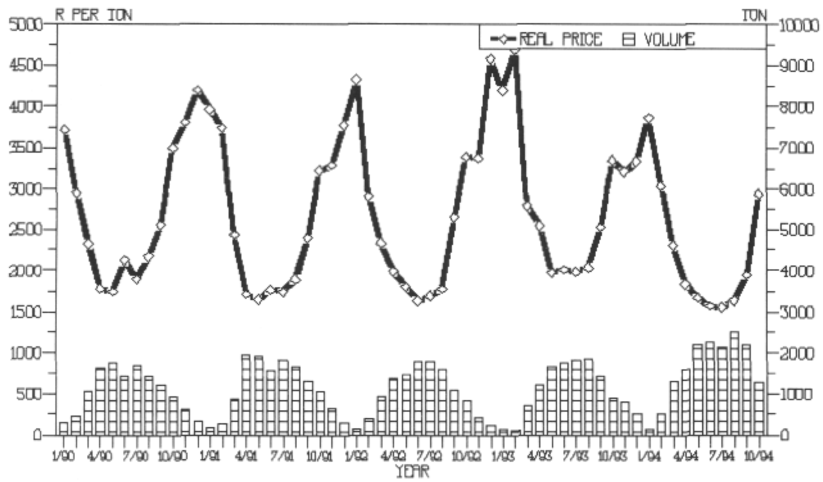

Figure 2
Prices and volumes per month. All local fresh markets

The average prices on Johannesburg, Pretoria and Cape Town markets were as follows:

Year	R per ton		
	Johannes-burg	Pretoria	Cape Town
1991	1 528	1 412	1 662
1992	1 688	1 666	1 982
1993	2 051	1 994	2 470

Prices realized on Johannesburg and Pretoria markets do not differ substantially. Prices realized on Cape Town markets are constantly higher than Johannesburg and Pretoria. The producers do not realize these higher prices as transport cost from production areas to Cape Town are in the vicinity of R 250 per ton.

Prices according to cultivar realized on the Johannesburg Fresh Produce Market are shown in Table 8.

Table 8

Prices for avocado cultivars Johannesburg fresh produce market (R per ton)

Cultivar	*1990/91*	*1991/92*	*1992/93*	*1993/94*	*Weighted average*
Hass	1 355	1 584	1 517	1 908	1 597
Fuerte	1 504	1 720	2 152	1 961	1 822
Edranol	1 563	1 414	1 878	2 171	1 735
Other	1 801	1 839	1 527	1 523	1 611

Source: Own calculations from information supplied by Johannesburg Fresh Produce Market

According to the 4 year weighted average price, Fuerte realized the highest price followed by Edranol, other cultivars and Haas.

EXPORT PRICES

Nett average f.o.b. price realized for all cultivars export fruit were as follows:

Year	*Actual price*[1]	*Real Price*[2]
	R per ton	
1978/79	657	4 579
1979/80	730	4 465
1980/81	769	4 084
1981/82	907	4 201
1982/83	960	3 983
1983/84	880	3 254
1984/85	1 097	3 487
1985/86	1 228	3 293
1986/87	1 246	2 876
1987/88	1 289	2 640
1988/89	1 440	2 572
1989/90	1 477	2 305
1990/91	1 510	2 044
1991/92	1 699	2 020
1992/93	1 891	2 049
1993/94	2 066	2 066

[1]Source: Directorate Economic Trends
[2]Own calculations

The real prices are shown graphically in Figure 3.

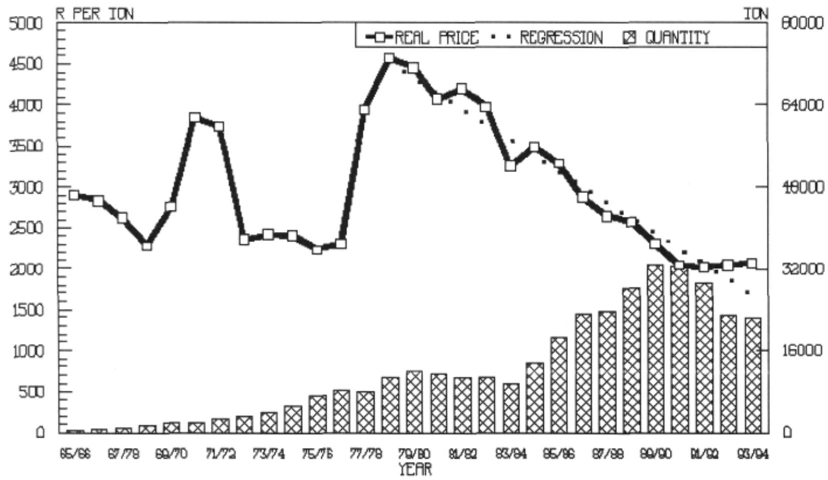

Figure 3
Prices and quantities per annum. Export fruit from South Africa

The real export prices show a constant downward trend at an average annual rate of 6 per cent. From Figure 3 it is concluded that reduced exports from South Africa since 1991/92 coincided with a side wards move in real export prices. It therefore seems that South African export fruit has an influence on export price levels. The expectation is that due to increasing future supply in the traditional import countries, existing price levels could further decrease if aggressive market development is not promoted.

Export f.o.b prices per cultivar are shown in Table 9. Data for only one year was available.

Table 9
Export f.o.b prices per cultivar, avocados

Cultivar	*1993/94* *R per ton*
Hass	2 777
Fuerte	3 555
Edranol	2 555
Pinkerton	2 333
Ryan	3 333
Rinton	2 222

Source: Export agents

The following factors influence South African export prices:

- Quantities of avocados from South Africa

- Quantities from competitor exporting countries
- General economic conditions in importing countries
- Cultivar
- Exchange rate
- Quality of fruit

Total gross value from the avocado industry is shown in Table 10.

Table 10

Gross value, avocado industry (R '000)[3]

Item	*1990/91*	*1991/92*	*1992/93*	*1993/94*
Fresh produce markets[1)]	16 708	18 668	19 833	23 481
Own consumption and direct sales[2)]	2 596	2 800	2 975	3 524
Processing	160	559	261	139
Export (f.o.b)	48 864	49 566	43 148	46 067
Gross value	68 328	71 593	66 217	73 211

[1]Official figures for Fresh Produce Markets is adjusted to provide for small markets not included in official statistics. Marketing commission is deducted from gross market price.
[2]Estimated figure
[3]All figures July to June

INTERNATIONAL TRADE

WORLD PRODUCING COUNTRIES[1]

The production of avocados according to country is shown in Table 11.

Table 11
World production of avocados according to country, 1989–1993 (tonnes '000)

Country	*1991*	*1992*	*1993*	*Avg./ year*	*%*
Exporting countries					
Mexico	302	688	866	619	36
Brazil	115	115	155	128	7
USA	120	130	130	127	7
Spain	46	45	45	45	3
Israel	20	48	45	38	2
South Africa	46	37	38	40	2
Chile	29	25	45	33	2
Ivory Coast	2	2	2	2	—
Non exporting countries	702	736	710	716	41
Total	1 382	1 826	2 036	1748	

Source: Frusal (Pty) Ltd

Mexico

Mexico is the largest producer of avocados in the world, accounting for approximately 36 per cent of world production. The main variety in Mexico is Haas. In 1993 approximately 95 000 hectares were planted to avocados of which 88 000 hectares were harvested. During 1993/94 domestic avocado consumption accounted for approximately 97 per cent of total production.

Brazil

Brazil is an important producer of avocados as seven per cent of world production is produced here. They are not a factor on the export market as cultivars in this country are not acceptable in importing countries.

USA

The USA is the third largest avocado producer in the world contributing 7 per cent of world production. In 1993 the area planted to avocados totalled 33 000 ha, of which 29 514 ha was planted in California.

Spain

Spain produced an average of 45 000 tonnes per annum during the past three years and supply three per cent of world production.

It has a comparative advantage due to its location with respect to European markets. Fruit can be transported within one day to European markets. Good quality fruit is produced in Spain.

Israel

Avocados were planted as an export crop and developed rapidly throughout 1960 to 1970. By 1983 planted area had reached 11 300 ha of which 4 200 ha were not yet of bearing age. The highest level of exports was attained in 1986 when almost 100 000 tonnes were exported. Avocado production in Israel declined in the latter half of the 1980's due to a series of financial and natural disasters. The introduction of the New Economic Policy of 1985 triggered an economic crisis throughout most of Israel's agriculture. Two or three years of consecutive natural disasters and a severe reduction in irrigation quotas at the end of the 1980's, resulted in several hundred hectares of bearing avocados being uprooted. Avocado exports decreased gradually to 45000 tonnes marketed during 1993. The main cultivars produced are Ettinger, the earliest ripening variety, Fuerte and Haas. The main thrust of Israel's avocado export has been consistently directed towards the French market. Israel supplies approximately two per cent of total imports to Europe.

A huge expansion in avocado production in Israel is not expected due to limited water resources.

South Africa

South Africa produced 2 per cent of world production during the past three years.

Chile

Chile produced approximately two per cent of world production. The total area planted to avocados expanded at an average rate of 4 per cent per annum as the area increased from 4 000 ha in 1973 to over 9 000 ha in 1993. Avocados are produced by 2 650 producers which means that the average area avocados per farmer is 3,4 ha. The two main cultivars are Hass and Fuerte, which account for 56 and 14 per cent of total trees, respectively. Hass production is projected to reach 51 000 tonnes during 1997.

[1]World Horticultural trade

AVOCADO IMPORTING COUNTRIES

The majority of the worlds exporting avocados are traded in Europe. Total imports in Europe according to country of destination are shown in Table 12. Imports to Europe increased by an average of 11 per cent per annum from 1988 to 1992. A forecast of future imports shows that total imports to Europe will increase from 136 000 tonnes in 1992 to 167 000 tonnes in 1998, representing an average increase of 3,5 per cent per annum. An increase in per capita consumption is still expected in most of the importing countries.

France is the most important avocado importing country. Sixty four per cent of all the avocados imported into Europe is traded in France. The per capita consumption of 1,1 kg is the highest in Europe, followed by Spain with 0,42 kg, UK 0,41 kg, Netherlands 0,2 kg and Germany 0,15 kg. Consumer preference is in favour of the dark skin Hass cultivar. Chain stores are an important marketing channel as approximately 60 per cent of avocados are traded by them. The market requires fruit of an average size.

Fifteen per cent of avocados exported to Europe are consumed in the UK. Consumers in the UK favour green skin cultivars but an increasing trend towards Hass is perceived.

Consumption in other European countries compares unfavourably with France and it is believed that these markets can be developed in future. It is foreseen that consumption in the Netherlands will increase at approximately 10 per cent. The rest of Europe currently has a preference for green skin cultivars. They prefer large to medium size fruit. The popularity, however, towards the dark skin cultivars seems to increase.

Table 12
European imports of avocados according to country of destination, 1988 To 1992

Country	*1988*	*1989*	*1990*	*1991*	*1992*	*3 year average*		*Projection: 1998*	
	tonnes('000)						*%*	*tonnes ('000)*	*%*
France	51,6	62,7	77,9	88,6	84,8	83,8	64	100,0	60
UK	13,1	14,4	14,3	15,6	16,0	15,3	12	20,0	12
Germany	6,0	6,7	8,4	9,4	10,0	9,3	7	12,0	7
Netherlands	3,9	4,9	6,1	6,7	7,9	6,9	5	12,0	7
Sweden	3,5	3,3	3,3	3,8	4,4	3,8	3	5,0	3
Denmark	1,5	1,5	2,1	2,8	2,8	2,6	2	3,0	2
Belgium	1,8	1,9	1,9	2,5	2,3	2,2	2	3,0	2
Switzerland	2,1	1,9	2,2	2,3	2,3	2,3	2	3,0	2
Others	5,7	4,4	3,0	3,4	5,5	4,0	3	9,0	5
TOTAL	89,2	101,7	119,2	135,1	136,0	130,1	100	167,0	100

Source: Frusal (Pty) Ltd

Japan also became an importing country since 1970 and avocados are in many ways still a very new produce. Only Hass cultivar is traded in Japan. Total imports in Japan are shown in Table 13.

Japan is considered by major world producers to be a premium market both for quality and prices. The Japanese trades prefer large size avocados as it is associated with quality. South Africa is currently experiencing problems with sanitation regulations in Japan. Negotiations and technical work need to be done to enter this market successfully.

Table 13
Imports of fresh avocados in Japan, 1989 to 1993 (tonnes)

Year	*Exporting country* *USA*	*Mexico*	*Total*
1989	1 684	1 009	2 693
1990	911	1 252	2 163
1991	1 019	1 645	2 664
1992	2 160	1 398	3 558
1993	3 163	309	3 472

Source: World Horticultural Trade & U.S. Export Opportunities, April 1994

Other countries such as Canada, Arabia and Singapore have potential as future consumers of avocados, but these markets must still be developed.

Eastern Europe is another potential consumer. Many inquiries are received from these countries, but it is doubtful if they could, under current circumstances, be developed profitably.

EXPORTING COUNTRIES AND MAIN COMPETITORS FOR SOUTH AFRICAN FRUIT

Imports to Europe according to country of origin are given in Table 14.

Israel is the major exporter of fresh avocados to Europe, supplying 29 per cent of total imports followed by South Africa with 21 per cent and Spain with 17 per cent.

The marketing of avocados in Europe according to marketing period and exporting country is shown in Table 14. South African avocados are available from March to October.

Table 14
Avocado imports (in tonnes) to Europe according to country of origin

Exporting Country	*1988*	*1989*	*1990*	*1991*	*1992*	*Average 90–92*	*% of total*
Israel	15,7	23,0	32,2	41,8	37,4	37,1	29
South Africa	19,0	31,8	25,4	28,6	26,6	26,9	21
Spain	14,6	6,5	17,8	21,6	25,9	21,8	17
Mexico	8,0	9,3	10,9	9,7	10,4	10,3	8
Kenya	3,2	2,9	2,8	4,0	6,6	4,5	3
Canaries	3,6	2,3	3,0	3,1	3,2	3,1	2
Chile	0,5	0,2	0,3	0,7	0,6	0,5	-
Others	24,6	25,7	26,8	25,6	25,3	25,9	20
TOTAL	89,2	101,7	119,2	135,1	136,0	130,1	100

Source: Frusal (Pty) Ltd

Table 15
Availability of avocados in Europe according to marketing period

Exporting country	*Jan*	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*
South Africa			X	X	X	X	X	X	X	X		
Israel	X	X	X	X						X	X	X
Spain	X	X	X	X	X				X	X	X	X
Mexico	X	X						X	X	X	X	X
Chile										X	X	

Source: Frusal (Pty) Ltd

The main competitors for South African fruit are Israel, Spain, Mexico, Chile and Kenya.

Israel is exporting avocados to France, UK, Germany, the Netherlands, Denmark and Switzerland. It is competing with South African fruit during March and April and the end of the South African season in October. Israel delivers Hass in France during March and April when no Hass is available from South Africa.

South Africa exports fruit to France, which absorbs approximately 50 per cent of the total South African exports, UK 25 per cent, the rest of Europe 20 per cent and Scandinavia 5 per cent.

Spain Hass is also marketed in France during March, April and May when no Hass is available from South Africa. Fruit from Spain also competes with South Africa at the end of the marketing season in August, September and October.

Mexico competes with South African fruit during August, September and October and their Hass is competing with South African Hass during August and September. A lack of technology limited exports in the past. Mexico exports approximately 20 per cent of its total exports to the USA, 40 per cent to France, 15 per cent to Canada and 25 per cent to other countries.

Kenya competes with South Africa during April through September. They do not market Hass cultivar. Small quantities are marketed by Kenya with the result that they do not currently effect South African prices.

Chile does not pose a threat to South Africa as they are marketing in the South African off-season. The USA remains an important market for avocados produced in Chile as 97 per cent of total export volume during 1992 was exported to the USA. Chile's longer term projections are to export more than 33 000 tonnes of avocados annually. They aim to exploit the Argentinean market and to increase their market share in the European market. Chile's avocado producers and exporters have agreed to contribute US $0, 10 per box of fruit exported towards foreign market campaigns, principally in the European market.

During 1992/93 the USA experienced a bumper crop and recaptured the European market. Their main export market remains Canada.

SHELF LIFE[1]

Shelf life is a factor of spraying programmes on farms, production practices in orchards, post-harvest treatment, stage of ripeness of fruit, quality of cold chain etc. The average period from harvest to consumer is approximately 38 days. Time involved in packing, transport to harbour and exporting countries is approximately 28 days. A maximum of 10 days are therefore left for distribution to consumer.

[1]Partridge

THREATS[2]

- Avocado trees need water at critical times to produce good yield and quality fruit. The avocado producing regions are threatened with scarcity of water due to drought conditions during the past number of years. It is expected that South African current population of approximately 40 million will increase to 80 million by 2020. The resultant increasing demand for water for human consumption will put a further burden on existing water resources. This aspect is most probably the most serious threat with respect to future avocado production.
- The constant long term downward trend in real export and local prices are an area of great concern. Due to the successes achieved with technical research, with respect to *Phytophthora,* post-harvest diseases, temperature control from harvesting to consumer, and improved planting material, the industry succeeded to survive economically.
- The production of quality fruit requires intensive management and technical skills. In order to produce quality fruit, management practices should therefore be sound. An intensive spraying programme is part of the production programme and should be implemented timeously and correctly. The water application is also critical with respect to time and quantity.

- The residues of spraying chemicals in fruit are monitored strictly in some importing countries and fruit may be rejected as a result of this.
- The unplanned plantings of wrong cultivars, inferior planting material and application of incorrect production techniques is an area of concern.
- A negative consumer perception exists with respect to avocados. Main areas of negativism are that avocado consumption promotes heart related diseases due to cholesterol and high calorie content.
- Fuerte cultivar represents the major portion of South African production. The demand in importing countries move towards the Hass cultivar. A problem is experienced with Hass production in South Africa as fruit tend to be too small as this cultivar is not optimally adopted to South African climatic conditions.
- The expected doubling of avocado production in South Africa within the next five years is an area of concern from a marketing viewpoint.
- The availability of detailed export and local marketing information is identified as a problem area. It is believed that the information could be made available. The analysis should however be done and applied for future marketing strategies.

[2]Compiled in cooperation with Toerien.

OPPORTUNITIES[3]

- Relative high prices are achieved for quality fruit. Efficient producers are therefore in a position to make sound profits.
- South Africa managed to overcome many of the technical problems associated with production and marketing of avocados. The result is that quality fruit is exported.
- The positive attitude of SAAGA towards continuous appropriate research programmes. SAAGA's attitude towards problems and their willingness to adjust timeously.
- The market in South Africa and foreign countries is not exploited to its full potential. It is believed that with the correct approach towards market development the demand for avocados will increase.
- The national yields of 6,5 tonnes per bearing hectare in South Africa are extremely low. Opportunities exist therefore at farm level to improve yields with the application of correct production practices, spraying programmes, planting material, irrigation practices, cultivars etc.
- The specific quality of avocados as a salad fruit and baby food.
- The nutritional content of the fruit.

[3]Compiled in cooperation with Toerien.

CONCLUDING REMARKS[1]

Although certain problem areas and opportunities are identified in the avocado industry, it is not the intention of this study to make firm recommendations with respect to solutions. Leaders in the industry are well aware of the problems and opportunities. A coordinated effort is however required to formulate a future strategy for the industry. Certain aspects to be considered are however discussed.

The availability of future irrigation water is a serious area of concern. A research programme towards efficient application and water saving methods as well as optimal exploitation of available resources should be considered.

The constant decreasing trend in real export and local prices is also an area of concern. The consistent and effective technical research programme introduced by SAAGA resulted in more effective farming practices and compensated for the decrease in real price. It is expected that the decrease in real price will continue due to the expected increase in production. This negative aspect should receive attention in future to assure the viability of the industry. In order to overcome this negative aspect SAAGA should in future become more marketing orientated. Appropriate research programmes must be introduced by SAAGA to address crucial market aspects.

The following aspects should receive attention:

The avocado industry in cooperation with other exporting countries, should promote the general consumption of avocados in importing countries. An effective advertising and education programme in existing and potential consumer countries should be introduced on a much larger scale than the present *ad hoc* promotions in Europe, to achieve this aim.

Promoting the good qualities of avocados. Aspects to be emphasized are the following:

-The nutritional value

-Suitability as a salad fruit

-Suitability as baby food

-Suitability as a ready-to-eat food

- Exporters and importers should coordinate and communicate their activities.
- Producers must increase their productivity and implement research results effectively.
- The technical research programmes must be continued.
- Planting of correct cultivars must be promoted to meet market demand.
- Market information should be gathered from export marketing agents and Fresh Produce Markets and kept at a central point without disclosing confidential data from agents. A need exists for the scientific analysis of information to be used for the formulation of marketing strategies.

[1]Compiled in cooperation with Toerien.

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