Forecasting Logistics

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Citrus Export Volume by Commodity by Load Port (Pallets)							
Exit Port	**Commodity**	**2015**	**2016**	**2017**	**2018**	**2019 Est. 1**	**Est. 2022**
Eastern Cape to PE & Coega Ports	Grapefruit	4 918	6 455	4 606	5 799	6 000	6 500
	Lemons	99 650	94 328	113 880	117 410	137 500	195 000
	Navels	126 958	138 206	82 435	111 352	135 000	152 000
	Soft Citrus	40 285	52 743	48 243	64 966	68 000	98 000
	Valencias	123 000	106 241	103 962	86 784	123 000	140 000
	Total	394 812	397 973	353 126	386 312	469 500	591 500
Northern Region to Durban Port (Incl. Zimbabwe & Swaziland)	Grapefruit	206 217	178 086	195 405	239 359	215 000	240 000
	Lemons	55 582	62 451	92 566	97 226	118 000	168 000
	Navels	96 679	105 840	113 287	146 943	115 000	145 000
	Soft Citrus	25 450	27 544	43 682	59 119	75 000	125 000
	Valencias	435 521	350 712	479 575	492 191	520 000	572 500
	Total	819 449	724 634	924 515	1 034 837	1 043 000	1 250 500
Western/Northern Cape to Cape Town Port	Grapefruit	10 952	17 598	21 648	19 704	20 500	22 000
	Lemons	28 555	26 392	29 050	28 253	33 500	52 000
	Navels	92 328	94 539	85 117	90 592	94 500	110 000
	Soft Citrus	78 467	91 543	100 762	104 126	128 000	180 000
	Valencias	75 051	60 303	70 853	61 359	76 000	86 000
	Total	285 352	290 374	307 430	304 033	352 500	450 000
Southern Africa (Incl. Swaziland & Zimbabwe	Grapefruit	222 087	202 139	221 659	264 861	241 500	268 500
	Lemons	183 787	183 171	235 496	242 889	289 000	415 000
	Navels	315 965	338 586	280 839	348 888	344 500	407 000
	Soft Citrus	144 202	171 830	192 686	228 211	271 000	403 000
	Valencias	633 573	517 255	654 390	640 334	719 000	798 500
	Total	1 499 613	1 412 981	1 585 070	1 725 182	1 865 000	2 292 000

Table 1 *Historical and Forecasted Citrus Export Volume by Commodity* (Source: CGA / PPECB)

Citrus Export Volume by Ship Mode by Load Port (Pallets)							
Departure Port	**Vessel Type**	**2015**	**2016**	**2017**	**2018**	**2019 Est.**	**Est. 2022**
PORT ELIZABETH/COEGA	Reefer Containers	366 607	374 104	346 516	373 213	459 500	581 500
	Reefer Vessel	28 205	23 869	6 610	13 099	10 000	10 000
	Total	394 812	397 973	353 126	386 312	469 500	591 500
DURBAN	Reefer Containers	690 875	617 179	806 900	924 382	943 000	1 150 500
	Reefer Vessel	128 574	107 455	117 615	110 455	100 000	100 000
	Total	819 449	724 634	924 515	1 034 837	1 043 000	1 250 500
CAPE TOWN	Reefer Containers	237 823	251 468	262 763	261 015	310 500	408 000
	Reefer Vessel	47 529	38 906	44 667	43 018	42 000	42 000
	Total	285 352	290 374	307 430	304 033	352 500	450 000
Southern Africa (Incl. Swaziland & Zimbabwe)	Reefer Containers	1 301 685	1 242 751	1 416 178	1 558 610	1 713 000	2 140 000
	Reefer Vessel	204 308	170 230	168 892	166 572	152 000	152 000
	Total	1 505 993	1 412 981	1 585 070	1 725 182	1 865 000	2 292 000

Table 2 *Historical and Forecasted Citrus Export Volume by Shipping Mode* (Source: CGA / PPECB)

Accurate forecasting is going to become critical to the sufficient supply of reefer equipment, in line with forecasted export volumes.

According to the 2019 citrus orchard registration process, 25% of the total 83,500 ha of citrus orchards in Southern Africa were planted in the last four years. This gives a clear indication of the level of growth in citrus export volume that can be expected in the 2022 citrus season.

The growth in export volume is directly linked to the demand for reefer containers. Therefore, the adequate supply of reefer containers is highly dependent on exporters' accurate and realistic shipping forecasts – a critical area of improvement.

During the 2016 season, 62,150 reefer container shipments of citrus were made from Southern Africa, which increased to 70,800 in 2017 and 77,900 in 2018.

The forecast in export volume shows that a potential 7,000 additional container shipments will potentially be done each year until 2022.

In the space of five years (2018-2022) this could mean a growth of 29,000 container shipments, translating into a growth rate of 37%. The projection shows a possible increase from an average of 4,000 weekly container shipments in 2018 to roughly 5,500 during peak export season in 2022.

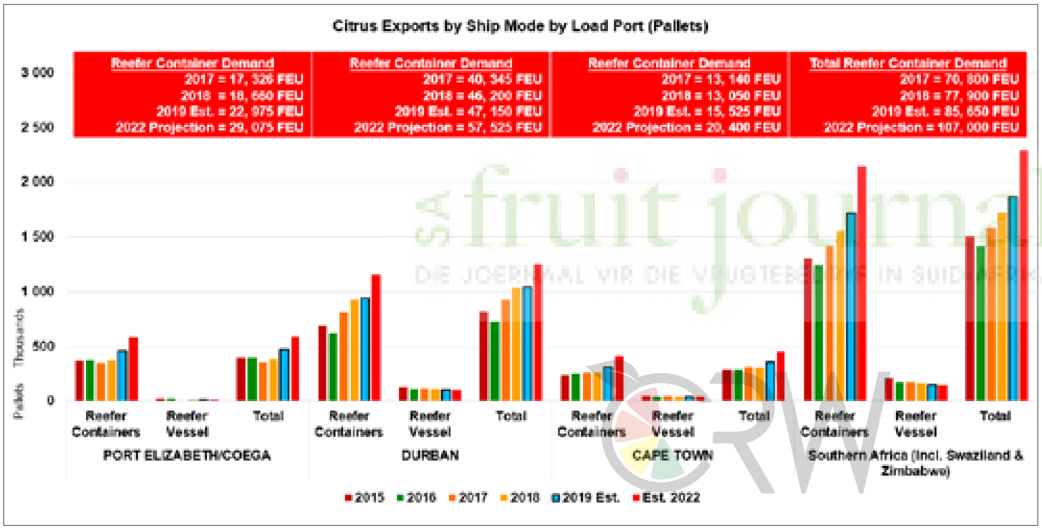

Chart 1: *Forecast Reefer Container Demand for Citrus Exports in 2022* (Source – CGA)

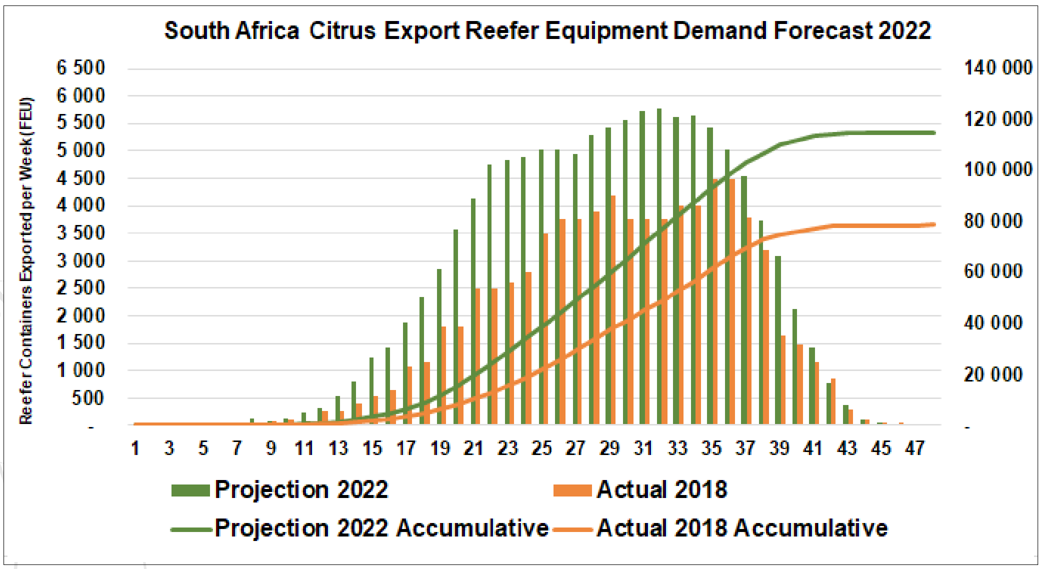

Chart 2: *Forecast Reefer Container Demand for Citrus Exports in 2022* (Source – CGA)

At this growth rate, it is imperative that accurate and timeous forecasts are given to the respective shipping lines, to ensure that the supply of reefer containers is matched to the season's export volume. Equally important is ensuring that reefer container supply is positioned at each port of loading, in accordance with regional production.

A few media articles have alluded to the fact that the International Maritime Organisations (IMO) requirement for sea vessels to convert to 0.5% Sulphur marine fuel could see many of the burgeoning reefer vessels being scrapped.

This as a result of the prohibitive cost required to operate profitably, or vessels being ill-equipped to convert to the low sulphur fuel requirement.

This could well add global pressure on an already strained reefer container supply. Some of the large commercial exporting companies are already contracting container lines, forgoing reefer vessel contracts.

At this rate, the demand for reefer containers could eventually outstrip supply wholesale.