

**PPECB/INDUSTRY -
CITRUS WORKSHOPS
PLZ - Eastern Cape &
DBN and Inland
Region**

17 MARCH 2009

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PPECB

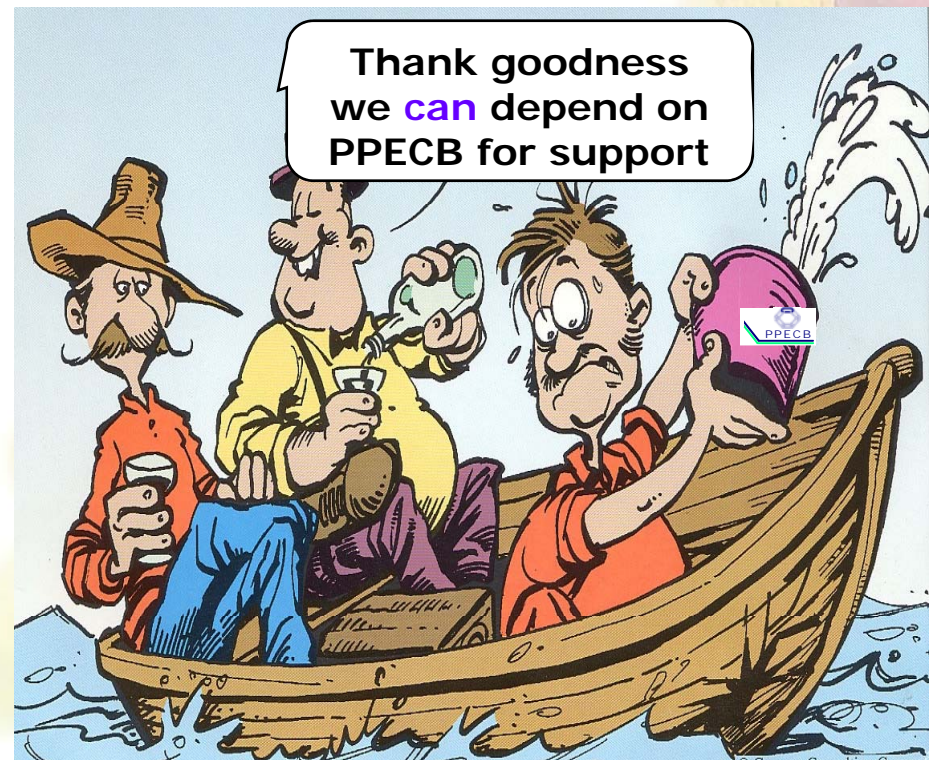
your passport to international trade

PPECB COLD CHAIN SERVICES

March 2009

INDEX:

- National Overview
- Cold Chain Trends
- Infrastructure
- National Statistics
- Handling Protocol – HP01 – 2009
- Challenges per mode



 **PPECB**
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GENERAL SHIPPING NEWS

- > 7% of world's container fleets are laying idle = 550,000 TEU's
- > Re-routing of vessels due to expensive Suez channel costs – using Southern African route
- > RSA Port developments
- > Tonnage of Tar project (ToT)
- > NRTF = Forum



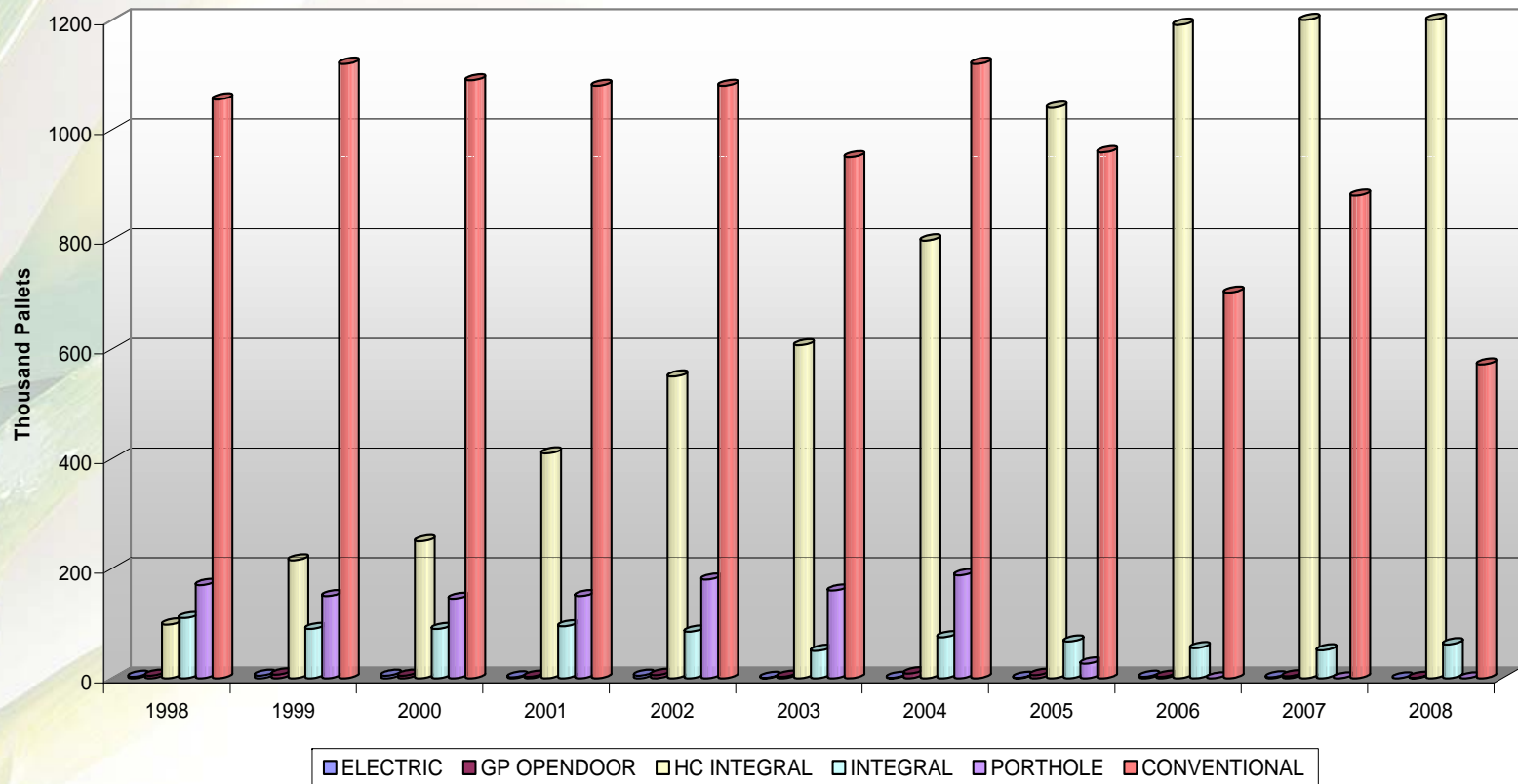
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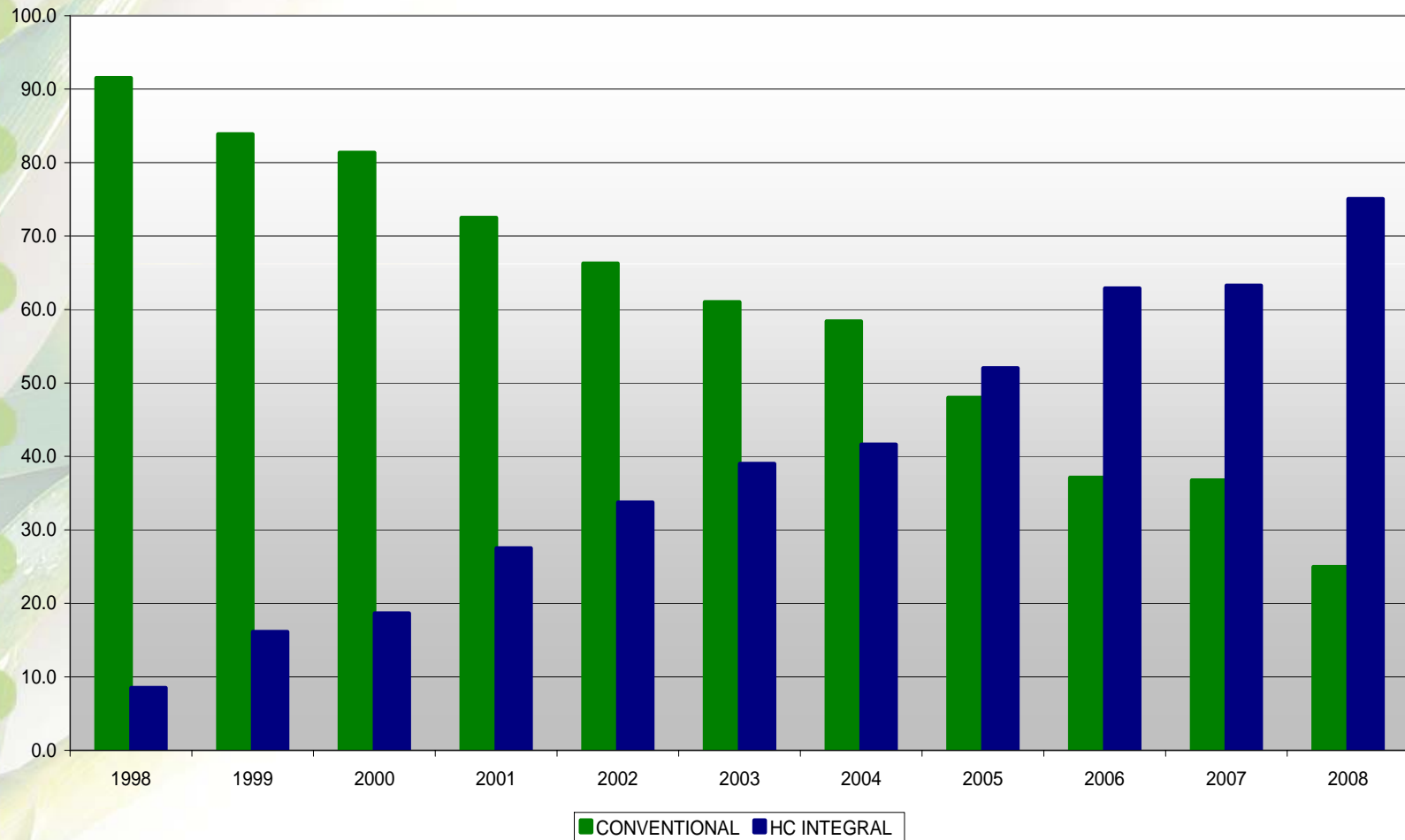
DIFFERENT SHIPPING MODES –

TRENDS

FRUIT ALL PORTS 1998 TO 2008
MODE OF TRANSPORT BY VOLUME (PALLETS)

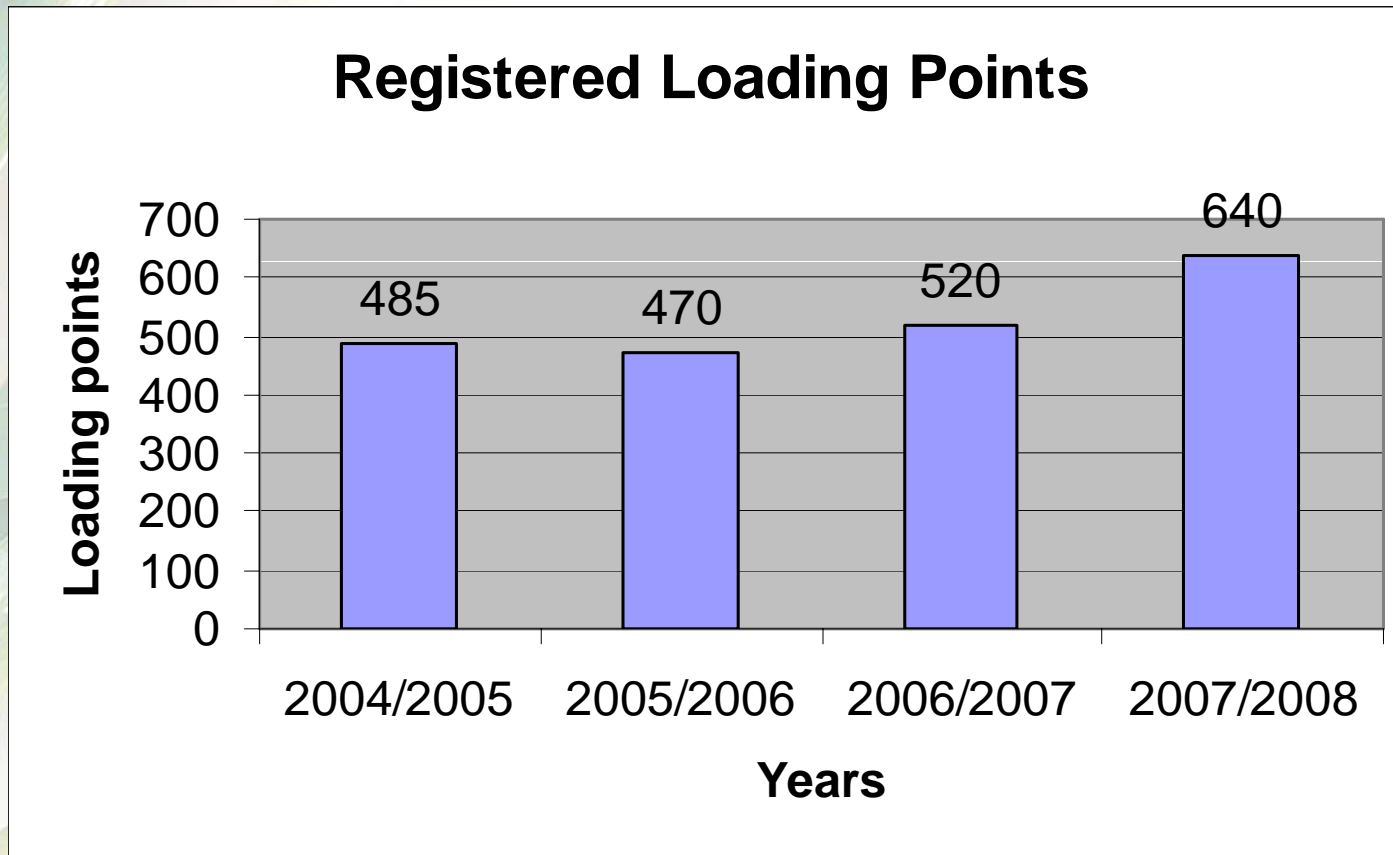


MODE COMPARISON – SPECIALIZE REEFERS & CONTAINER SHIPMENTS



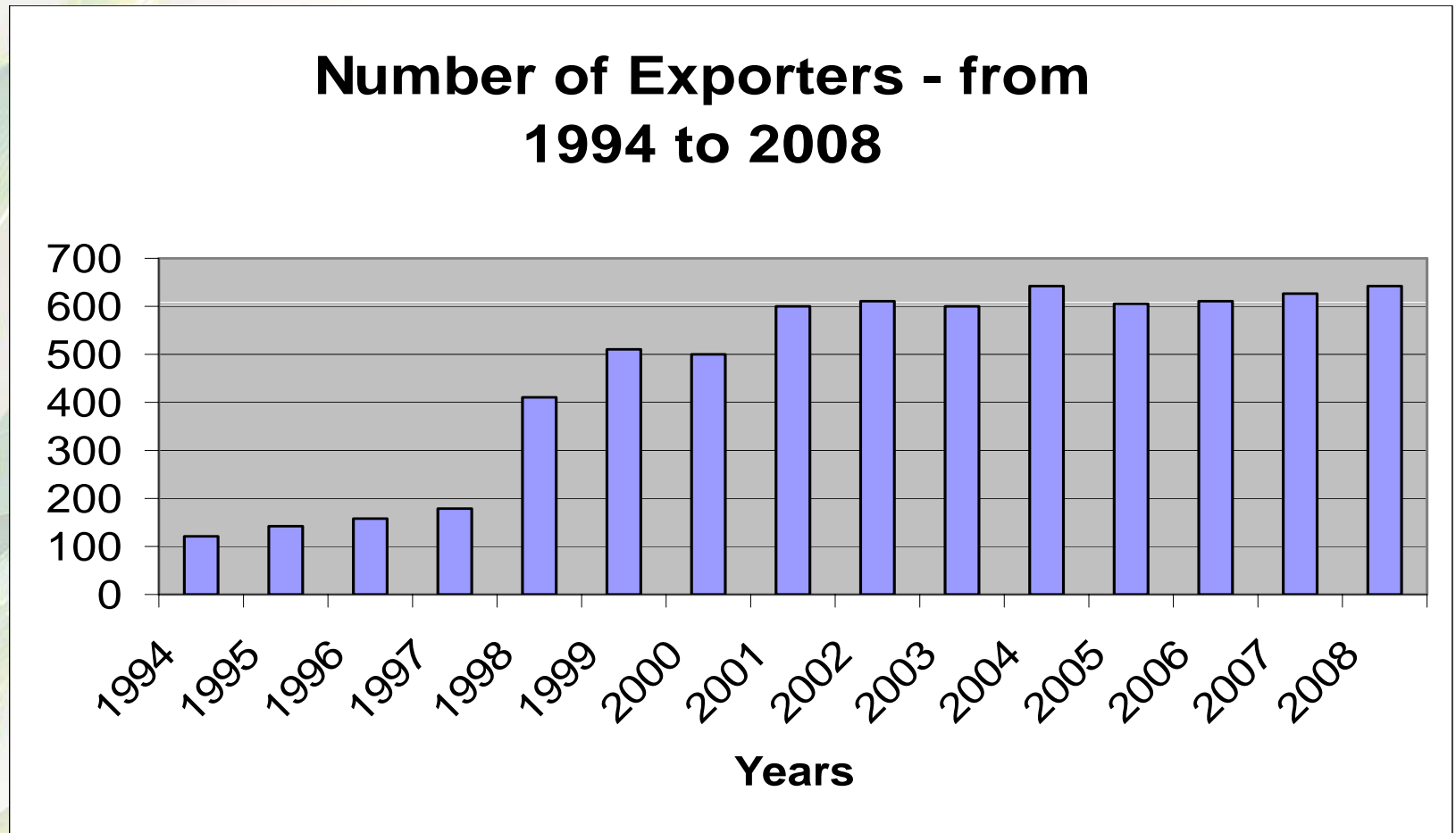
GROWTH IN LOADING POINTS

SWING FROM IN AND AROUND PORTS to INLAND- PORT CORRIDORS



CLIENT STATISTICS 1994 – 2008

ALL PRODUCTS



COLD STORE CAPACITY - ALL PORT REGIONS



AREA	TOTAL: CAPACITY	HIGH CUBE	%
E/CAPE	38,150 Pal	31,320 Pal	84%
W/CAPE	124,590 Pal	120,070 Pal	96%
KZN	70,864 Pal	21,080 Pal	30%
Maputo	5,000 Pal	3,200 Pal	64%

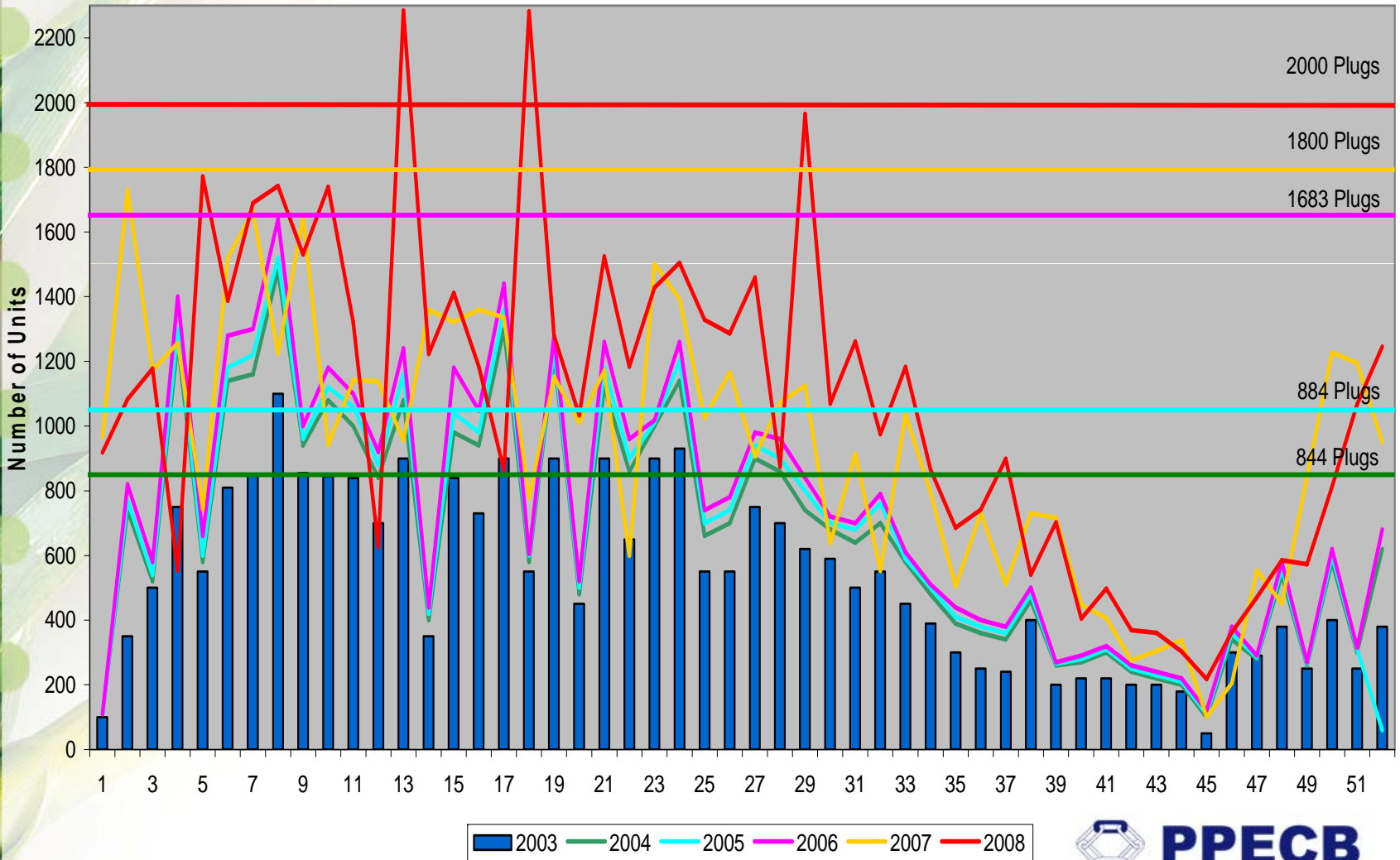
SHIPPING INCREASE/DECREASE COMPARISONS

PALLETS - CITRUS

	CPT	DBN	PLZ
2002	126,499	422,641	112,323
	149,202	422,812	154,138
	131,367	407,986	162,603
2005	94,561	443,619	118,280
	88,619	292,405	106,785
	63,154	338,435	96,232
2008	70,811	302,739	89,051
Conv.	724,227	2,630,637	839,412
2002	114,389	121,927	50,192
	102,064	146,035	68,842
	127,759	151,476	78,404
2005	123,585	237,018	97,830
	157,947	244,942	144,180
	176,209	404,030	186,789
2008	217,217	421,723	191,929
Cont.	1,019,170	1,727,151	818,166

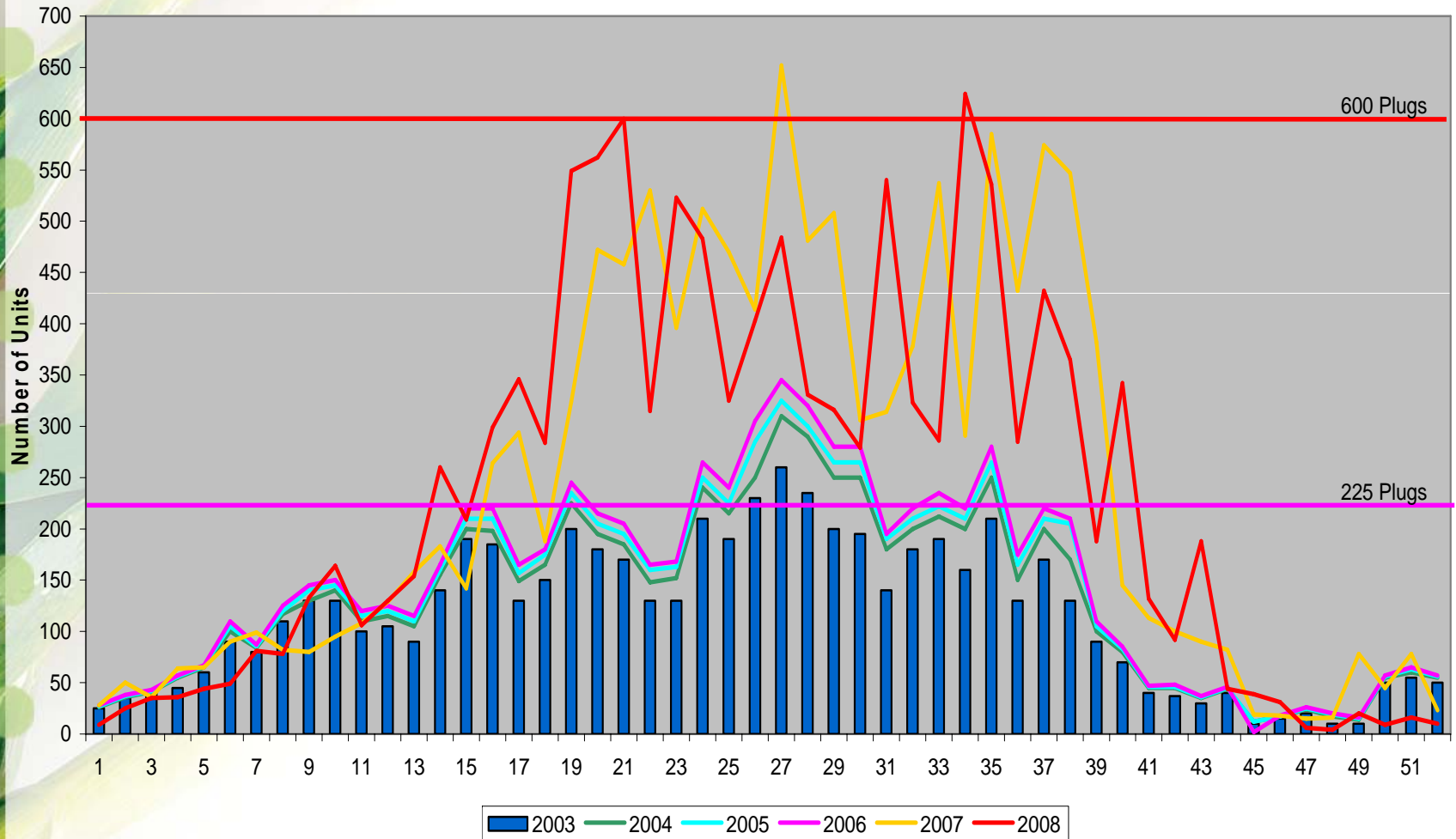
CAPE TOWN TERMINAL - CONTAINER PLUG-IN POINTS

ALL PERISHABLE PRODUCTS IN INTEGRAL CONTAINERS
CAPE TOWN - PLUG POINT REQUIREMENTS



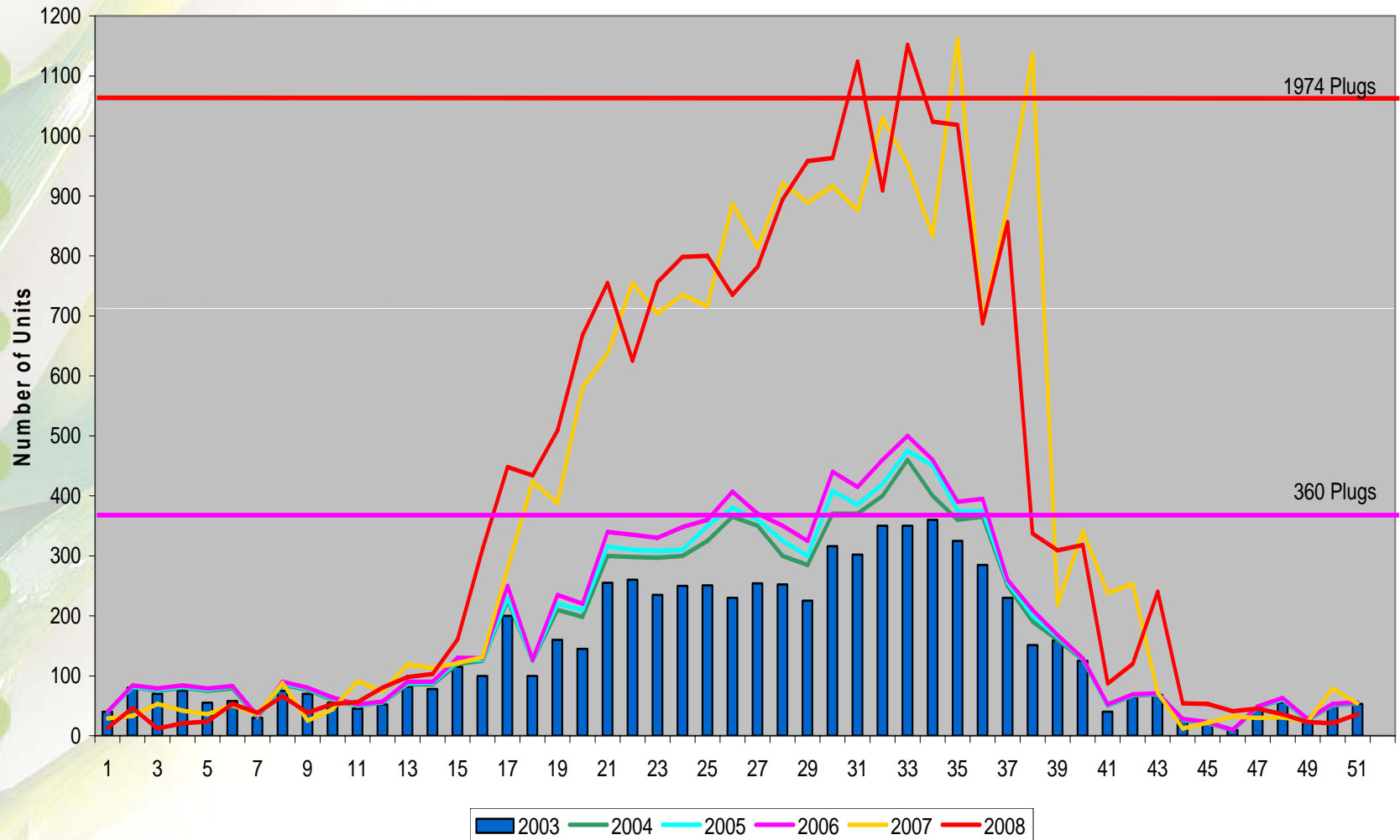
PORT ELIZABETH - CONTAINER PLUG-IN POINTS

ALL PERISHABLE PRODUCTS IN INTEGRAL CONTAINERS
PORT ELIZABETH - PLUG POINT REQUIREMENTS



DURBAN - CONTAINER PLUG-IN POINTS

ALL PERISHABLE PRODUCTS IN INTEGRAL CONTAINERS
DURBAN - PLUG POINT REQUIREMENTS



CITRUS STATISTIC COMPARISONS – 2007 & 2008 SEASONS

All PORTS

2007

132

412,336

61,041 (14.8%)

37,210

98,456

Seasons

Conventional Vessels

Total Pallets

Ambient

Containers

Special Shipments

2008

118 x V

410,616 x P

64,183(15.6%)

38,766 x C

103,493 x P

CITRUS SHIPMENTS ALL PORTS

CONTAINERS/CONVENTIONAL INCLUDED ALL SPECIAL AND ORDINARY SHIPMENTS

	MOZAMBIQUE	South African Ports			
YEAR	MAPUTO	CAPE TOWN	DURBAN	PORT ELIZABETH	GRAND TOTAL
2003	71 644	216 593	516 372	205 323	1 009 932
2004	86 974	259 126	559 462	241 007	1 146 569
2005	85 271	218 259	680 637	216 110	1 200 277
2006	56 502	246 566	537 347	250 965	1 091 380
2007	65 918	239 343	742 465	283 023	1 330 749
2008	58 361	288 028	724 462	280 980	1 351 831
AVERAGE	69,443	244,118	615,040	234,275	

Q55 - SUMMARY – 2008 SEASON

SPECIALISED REEFER SHIPMENTS ONLY - EXCLUDING STERI: (52% rating)

- Period : April – October – all Ports
- Total lifted - 410,616 Pallets
- Total Ambient - 61,041 (14.8%)

CAPE TOWN	PORT ELIZABETH	DURBAN	MAPUTO
38 144 Pallets	89 099 Pallets	225 745 Pallets	57 568 Pallets

➤ DIRECT % vs. TOTAL SAILINGS: 118

0 - 10%	=	50 Sailings	42.4%
11 - 20%	=	31 Sailings	26.0%
21 - 30%	=	22 Sailings	19.6%
31 - 43%	=	15 Sailings	12.0%

2008		CITRUS CONTAINERS PER "W" CARRYING REGIME : 2008													
2007		CITRUS CONTAINERS PER "W" CARRYING REGIME : 2007													
Structure		W05	W06	W07	W08	W09	W10	W11	W16	W35	W45	Tot Warm	All citrus	% Warm for area	% Warm of Total Warm
Citrusdal	32											0	698	0.00%	0.00%
Citrusdal	32										1	1	440	0.23%	0.04%
Paarl	36									2	7	9	2108	0.43%	0.17%
Paarl	36				2						7	9	1444	0.62%	0.33%
Worcester	37										5	5	540	0.93%	0.09%
Worcester	37										1	1	614	0.16%	0.04%
Ceres	41										4	4	187	2.14%	0.08%
Ceres	41				1							1	112	0.89%	0.04%
Grabouw	42											0	4	0.00%	0.00%
Grabouw	42		2									2	7	28.57%	0.07%
Gauteng	46			1						3	1	5	675	0.74%	0.09%
Gauteng	46											0	643	0.00%	0.00%
Nelspruit	51			8			18			7		33	91	36.26%	0.62%
Nelspruit	51											0	2	0.00%	0.00%
Tzaneen	52			19	9		308			130	379	845	893	94.62%	15.90%
Tzaneen	52		1	135	87		128			174	92	617	742	83.15%	22.81%
Cape Town	66			4			6			12	32	54	6048	0.89%	1.02%
Cape Town	66				2		1			19	54	76	5881	1.29%	2.81%
E. Cape	70	2	3	50	77		7	2		620	135	896	8959	10.00%	16.86%
E. Cape	70		1	26	59	2				371	303	762	8922	8.54%	28.17%
Durban	71	3	53	272	295	11	609	19	51	1119	1032	3464	18563	18.66%	65.17%
Durban	71	64	1	115	16	83	80	0	66	79	732	1236	18403	6.72%	45.69%
	Total	5	56	354	381	11	948	21	51	1893	1595	5315	38766	13.71%	100.00%
	Total	64	5	276	167	85	209	0	66	643	1190	2705	37210	7.27%	100.00%

CITRUS HANDLING PROTOCOLS & DOCUMENTS

- Ordinary Shipments - **HP01 Rev 09**
(All destinations excluding Special/Steri)
- Temperature recipes - **HP22 Rev 34**
- Record of all temperatures for conventional shipments - **Q55**

General:-

- Container dual loading guidelines
- List of all approved facilities
- Technical record list for all specialized reefers and containers

PPECB – OPTIMUM SHIPPING TEMPERATURES

A. OPTIMUM PULP TEMPERATURE:

	Well Coloured	Ventilation-Required	Poorly Coloured
Oranges	+ 3.5°C/C35	CO2 Levels Below 0.5% Conventional	+ 10°C/C10
Soft Citrus	+ 3.5°C/C35		+ 10°C/C10
Grapefruit	+ 7°C/C07 + 10°C/C10	15-20 M3 ph Settings in Containers	+ 10°C/C10 + 16°C/C16
Lemons	+ 7°C/C07		+ 10°C/C10
Limes	+ 7°C/C07		+ 10°C/C10

PPECB – INDUSTRY SHIPPING TEMPERATURE CODES

B. TEMPERATURE CODES:

C35	PLUS	3.5°C
C04		4.0°C
C45		4.5°C
C05		5.0°C
C55		5,5°C
C06	PLUS	6.0°C
C07		7.0°C
C08		8.0°C
C10		10.0°C
C11		11.0°C
C16	PLUS	16.0°C

Total Regimes = 17 + 1 + 3

COLOUR ENHANCEMENT and AMBIENT:

CD1 - Plus 10°C/5d. to 3.5°C

CD2 - Plus 10°C/10d. to 3.5°C

W - Ambient conditions only W07/W08 or

W10

CDX - Dispensation Code

SHIPPING ARRANGEMENTS 2009

1. CONTAINERS:

1.1 Normal pre-cooled conditions-

- Code arrangement – (i.e. C35 & C07)
- +3° C Tolerance allowed above setting - store
- +5° C During loading process - outside

- TTT - 16 Hours back under cooling rule
- Use of Generator units – to meet TTT
- Ventilation requirement – Open at 15 m³ per hour or as per specific arrangement

- T13 dispensation – outside official protocols

SHIPPING ARRANGEMENTS 2009

2. SPECIALISED REEFER VESSELS:

2.1 Standard & normal conditions-

- +3°C - Above carrying temperature - Store
- +5°C - During loading process
- If possible avoid mixed packaging (poor cooling rates)
- Vessel readiness -pre-cooling period (-0,5/48h/24/h)
- Compromise carrying temperature conditions in decks - carry at higher regimes
- 52% rating partly/ambient rule on all Vessels – 2009 season
- T13 arrangements – Involving all parties

SHIPPING ARRANGEMENTS 2009

CONTAINERS:

1.2 Ambient conditions- WHY?

Becoming a cost factor vs. infrastructure challenges

PROVISO's:

- Fresh fruit – Must be loaded > **10 days** after packing
- **Quality fruit – to dictate process**
- Quality reports to PPECB -
- No soft citrus & navels
- Hardy types **only** – Val/G.F/Lem – end Oct
- Pulp not to exceed **+22°C** prior loading

- Proper ventilation through all cartons/covers/bottom – **pin stripped**
- Lining of holes in base/cover – support air movement
- **Only make use of super vent/open display cartons**
- **Bins - Carton**
- Only 9 slat pallets – promote vertical air movement

- **W- booking arrangement informing all parties – “Hot stuffing” identification/clause bill of lading.**

- Do not mix different packs in a container
- Cover floor at door end (void plugs/cartons)

- Container under power within **16 hours** – after closing doors

SHIPPING ARRANGEMENTS 2009

SPECIALISED REEFERS:

2.2 Ambient conditions - WHY?

Ambient fruit – Lack of cooling time, cost saving, change of Vessel schedule – lack of infrastructure.....

- Fresh fruit – Must be shipped > **10 days** after packing
- Pulp not to exceed +22°C at time of shipping
- **Packaging criteria** – same as for containers
- Stay away from **no 1 hatch – broken stow**
- Load partly decks from the cooling end side
- Covering of floors in partly loaded decks
- **No soft citrus** may be loaded under these conditions
- Agree upfront to mix hardy citrus (Val/G/Fruit/Lem)
- Avoid mixing pre-cooled soft citrus with warm i.e. Valencia's
- Jumping of decks – covering issues in next port
- Closure and re-cooling of decks during process
- Cooling applied to completed decks
- Fully ventilated – maintaining CO2 levels 0,5%
- Constant en-route monitoring
- One more trial – quality permitted & **staging areas**
- Informing next port of loading (Q55 data)
- Quality outturn reports!



CONTAINER SHIPMENTS - DAILY CHALLENGES

Container inspections – **power outages**

Taint & Oxidation buildup

Wind delays – bottlenecks

Shortage of equipment

Wrong/incomplete documentation – **CTO /TPD**

Settings – Lack & wrong – **process of notification**

Missing container cables & plugs – CPT ruling

Condition of pallets – height & unstable

Overloading - Genset attached – **c/on vs. u/slung**

Genset not working – **container depot checks**

Transnet Terminal challenges – **no info to plan**

Transshipment challenges – local and en-route



SPECIALISED REEFERS – DAILY CHALLENGES

- **Weather delays**
- **Availability of correct fruit specs**
- **Shortage of fruit - delays**
- **Co-ordination of direct deliveries - delays**
- **Short notice to Vessel – state of readiness**

- **Height of pallets vs. deck limitations**
- **Gratings cannot stand total pallet & forklift weight**
- **Lack of handling gear**
- **Poor pallet base & condition in general**
- **Correctness of Mates receipt**
- **Dead freight due to shortage of product**
- **Accumulating ambient loads**

CITRUS - SEASON 2008

Final thought...

The most important factor and aspect must always be to do what is **best** for the product, **limit the risk** for all, while striving to find the **easiest, cheapest and legal** way to ship South African produce.

Last slide



PPECB

Product quality and food safety:

YOUR PASSPORT TO INTERNATIONAL TRADE



THANK YOU



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