

Logistics Project Outline Document

Southern African Citrus has been exported for over 100 years to global markets, from the first 3,000 cases of Oranges exported to the UK in 1907 to well over 90 million cases exported in recent years to almost every continent on the globe. Citrus Export logistics and infrastructure was largely managed and developed by the Citrus Exchange or more recently Outspan International, in 1998 the citrus export regulation act was amended and as a result Outspan International no longer managed the citrus export process. Since then citrus export logistics has been fragmented and is currently micro managed by a multitude of export agents, shippers and logistics agents that exist today. During this process logistics and infrastructure developments for citrus exports could be considered neglected and in recent years become somewhat destabilized and unsustainable, this due to a lack of infrastructural development or adaption to changes in the logistics environment. The Citrus Growers Association of Southern Africa have embarked on evaluating the logistics network through Logistics and Infrastructure projects with the objective of identifying those shortcomings deemed to prohibit long term stability and sustainability of citrus exports within the logistics context. CGA will work alongside industry bodies and representatives to address these issues.

Table 1: Southern African Citrus Export Key Statistics (Pallets Million: multiply by a ratio of 1.3 for metric tons)

	2005	2006	2007	2008	2009	2010 (e)	2011 (e)
Total Export Volume	1,195	1,091	1,330	1,351	1,226	1,466	1,490
Cape Town	0,215	0,247	0,239	0,288	0,214	0,304	0,310
Port Elizabeth	0,215	0,250	0,283	0,280	0,282	0,300	0,305
Durban / Maputo	0,765	0,594	0,808	0,783	0,730	0,861	0,874
Specialized Reefer Ship	0,737	0,544	0,563	0,520	0,403	0,513	0,447
Container Ship	0,459	0,547	0,766	0,831	0,823	0,953	1,043

(e) estimated based on tree census data and shipping trends from 2005

Data supplied by PPECB and Tree Census data

The Project Outline Document summarizes those key elements that are deemed critical in the short term with a long term view on addressing these problems presented to the Southern African Citrus Export industry.

Logistics by Definition: Logistics is the process of planning, organizing and executing the efficient / effective flow and storage of goods, services and related information, from the place of origin to the place of consumption, in a way that optimally satisfies consumer requirements and with the goal of maximizing the wealth of all the stakeholders. For the purpose of the Citrus export logistics projects, logistics will be looked at from farm gate through to final loading on ship.

Infrastructure by Definition: infrastructure can be defined as the basic services, physical structures and facilities needed for the operation of citrus exports. The term typically refers to the technical structures that are required such as roads, rail lines, facilities, ports and shipping and so forth.

Citrus Growers Association of Southern Africa

Logistics Project Outline Document

No	Project Description	Nature of the Project	Potential Impact	Stakeholders	Project Process Outline and Objectives	Progress Update
1.	Citrus Export Volume Review 2009	Through PPECB, obtain statistical information regarding citrus export volume loaded from each port and export method by market for the last 5 years. From tree census data forecast a further 5 years of regional export volume and project future export trends.	Without valid statistical information regarding citrus export volumes with a 10 year overview based on previous trends, a thorough evaluation of logistics infrastructure and demands cannot be ascertained.	PPECB, CGA	<ul style="list-style-type: none"> Obtain 5 years shipping data from PPECB Obtain tree census data from CRI. Draft data presentation 	<ul style="list-style-type: none"> Presentation is on the CGA website
2.	Citrus on Rail Volume Growth Initiative	Historically rail transportation was extensively utilized by the citrus industry to transport fruit from packhouse to port. This predominantly from the Eastern Cape, Limpopo and Mpumalanga provinces. Currently road transportation is the predominant method of transporting citrus to port, less than 5% of citrus fruit was transported to port by rail during the 2009 season. Road infrastructure is over utilized as most sectors have migrated from rail transport to road transport; this	Extended use of rail is strategically important for citrus exports, not only to reduce the carbon footprint of the supply chain but to offer stability in the transport chain as rail offers a seamless mode of transport from packhouse to port terminals. Containerized rail could be deemed the future of the logistics chain both for efficiency and potential cost benefits. A study undertaken by the Common Wealth Secretariat identified that South Africa has an advantage over competing citrus producing countries due to the vast	TFR, FPEF, CGA, Rail Stakeholders	<p>CGA will work alongside industry to identify the main constraints of utilizing rail for the citrus industry. Once the constraints have been identified it may be possible to propose innovative methods to transport citrus by rail.</p> <p>The objective is to transport at least 30% of citrus exports by means of rail by 2014.</p> <p>CGA will report to the Tonnage off tar initiative to</p>	<ul style="list-style-type: none"> Citrus on Rail Growth Strategy document has been drafted and is available on the CGA website. The CX container concept and inland cold store hubs have been

		<p>has negatively impacted the citrus industry due to bottlenecks and congestion costing the industry each year. Two methods of railing citrus to port currently exist that can be further explored to increase the use of rail:</p> <ol style="list-style-type: none"> 1. Break-bulk railed to port. 2. Containerization inland and railed to port. <p>This project is primarily focused at increasing the use of rail for citrus exports; this is considered a strategically important resource for citrus.</p>	<p>rail networks that exist in South Africa. Increasing the use of rail will reduce the no. Of trucks currently utilized on National and Secondary road networks thus reducing the congestive situations frequently experienced at port facilities. Rail by all means should provide a competitive transport cost for citrus growers, CGA will work with TFR and industry to ensure rail transportation offers an efficient and competitive service for the industry.</p>		<p>provide feedback.</p>	<p>identified to be of benefit to the citrus industry. CGA will work alongside TFR to develop these initiatives for the industry.</p>
3.	Maputo Port Citrus Volume Growth Initiative	<p>Maputo port is located in closer proximity to Mpumalanga, Limpopo and Swaziland citrus regions where some 50% of citrus is grown. The majority of citrus from these key regions is transported to Durban port. Maputo port historically exported some 100,000 pallets of citrus, in recent years this has decreased to below 60,000 pallets annually. This has resulted in high volume of citrus being exported through Durban, creating an unsustainable</p>	<p>Being the natural port for the Northern regions, operational and cost benefits should be offered by using Maputo. Transportation costs are one of the major costs in the supply chain, Maputo port is strategically important to ensure the transportation costs for these regions are reduced.</p>	<p>FPT, Exporters, Shipping Lines, MPDC, MIPS, FPEF, Producers, CGA</p>	<p>CGA proposes to liaise with industry in order to identify the Maputo constraints for citrus exports. A further understanding of the benefits of utilizing Maputo needs to be established. Once the ground work has been established CGA will work with the relevant industry sectors to ensure the constraints of Maputo are overcome thus increasing the volume throughput of</p>	<ul style="list-style-type: none"> • A project document has been drafted that highlights the Maputo port constraints. Available on the CGA website • CGA is a registered member of the MCLI.

		<p>situation. Transportation costs for the Mpumalanga, Limpopo and Swaziland regions are triple that of regions in closer proximity to ports. Maputo port being closer to these regions should offer a reduced transport cost compared to Durban.</p> <p>This project will be focused on reviving Maputo port as the port of choice for Mpumalanga, Limpopo and Swaziland regions where a better cost structure is achieved.</p>			<p>Maputo.</p> <p>The objective is to achieve a target of 100,000 pallets and higher to be shipped from Maputo from 2010.</p>	<ul style="list-style-type: none"> CGA will work alongside MCLI to ensure that Maputo port becomes the port of choice for Northern producing regions.
4.	Citrus High Cube Analysis	<p>To identify and analyse the pros and con's of the high cube pallet. High cube pallets are those pallets that are stacked with an extra layer of cartons specifically packed for high cube container packing.</p>	<p>On the surface high cube pallets reduce the cost chain, the risk and cost of quality deterioration in relation to the costs benefits needs to be determined.</p>	<p>PPECB, Transporters, Cold Stores, CRI, Producers, CGA.</p>	<p>CGA proposes to implement a case study of high cube pallets. The total Supply Chain should be analysed to identify the pros and con's of the high cube pallet and the benefit to the industry.</p> <p>The objective is to ensure high cube pallets offer a direct benefit to the industry.</p>	<ul style="list-style-type: none"> Project brief to be drafted before March 2010.
5.	Citrus Packhouse to Port Transportation Network	<p>Historically citrus was railed to port facilities with minimal volume sent by road. In recent years road transportation has become the predominant method of transporting citrus to ports. Citrus</p>	<p>The project outcome should propose the implementation of a systematic approach to managing the truck arrival and sequencing process along with the data information flow from packhouse to</p>	<p>Packhouses, Cold Stores, Terminals, Transporters, CGA</p>	<p>It has been determined that an outsourced consultancy firm should be contracted to evaluate the current method of operation and propose a creditable solution to the</p>	<ul style="list-style-type: none"> Project document to be drafted before March 2010.

		Export volume has increased resulting in a vast number of trucks which are sent to port facilities; it is estimated that some 300 trucks arrive in the Durban port daily during peak season. The lack of a systematic approach to managing truck flow and arrival sequencing has resulted in a large degree of inefficiency and cost to producers for delays. A study or project exercise should be undertaken to evaluate and propose a solution to the industry to better manage the process.	offloading facility. Other industries locally and abroad have implemented a systematic approach to create efficiency in the logistics process. This type of systematic approach to truck scheduling and data capturing could potentially alleviate the ongoing congestive and bottleneaking situations in port.		industry. The objective is to offer a seamless and efficiency flow of trucks from packhouse to offloading facility in the port.	
6.	2010 Impact on Citrus Exports	It has been identified that port facilities located in FIFA host cities will be unduly affected by the event which is scheduled to run concurrently with the 2010 citrus season. From road accessibility to floating hotels on port quays. A thorough impact assessment in the 3 main host port cities is urgently required to ascertain the impact on citrus exports.	Coordination is required to ensure the potential impact is limited by planning upfront. It has been identified that rail, inland containerization and Maputo port may potentially negate the foreseeable impact.	CGA, TFR, City officials, port managers, shipping lines, Exporters	CGA proposes to investigate the foreseeable constraints to the industry. This will be achieved through discussions with the various port and city officials in the 3 host port cities. Once data has been collected, industry awareness in the form of articles, workshops and media can be explored to inform the industry before the commencement of the 2010 citrus season.	<ul style="list-style-type: none"> • Meetings have been held with city officials at the 3 major ports. • An article will be published in the SAFJ as well as AgriTV. • Industry workshop planned for March in CPT.

7.	Citrus Export Logistics and Infrastructure Review	<p>Volume of Citrus exports has shown growth in each region, further growth is estimated in export volume and containerization volume. A Logistics and infrastructure review and assessment is required in each region to establish the availability of:</p> <ul style="list-style-type: none"> • Road and rail infrastructure • Cold store capacity (pallet capacity, high cube capacity, container bays, rail capacity and expansion capability) • Port container infrastructure (road infrastructure, reefer plug in points and rail capability). 	<p>A review of the citrus industries Logistics and Infrastructure developments will help identify how the industry has evolved and will develop in the future in which constraints and challenges should be identified and communicated to industry stakeholders to ensure logistics stability in each citrus export region. High volume growth has exceeded development and adaption (containers) in infrastructure in recent years; this has resulted in a destabilized logistics environment. Containerization volume is estimated to reach 70% of export volume by 2013, how will this affect the stability of citrus exports and what is required to ensure the industry and role players adapt?</p>	Regional stakeholders	<p>CGA proposes to assess the logistics and infrastructure capacity in each export region. Once the capacity has been established to identify shortfalls that require further development to ensure the long term sustainability of citrus exports in each region.</p> <p>The objective is to ascertain shortfalls in the logistics chain. These shortfalls need to be communicated with the industry along with development proposals.</p>	<ul style="list-style-type: none"> • Draft document brief. • Capacity Database
----	---	---	---	-----------------------	---	--

CGA Logistics Initiatives

No	Description	Nature and Objective of the Initiative
1	CGA Weekly Logistics Report	<p>The weekly logistics report was developed in order to highlight developments of citrus exports through the main export ports. Key citrus related statistics have been included in this report such as Shipped and Packed, Dwell time and Stock Age, Port and Market Shipped Volume, Shipping Mode Volume, Port Stock Levels, Rail Loading Volume, Port Statistics and BAF and Bunker Rates. This report has been well received by the industry, there is potential to expand the benefit of this report by accessing the industries centralized information database to obtain full access to stock levels country wide. Access to this information could enable the measurement of market stock levels at each port and cold store whereby this could be relayed back to the industry to determine where and when stock build up has occurred thus increasing the shipping opportunity to minimize stock build up and reduce dwell times. Paltrack administers at least 85% of the industries information systems, Paltrack have developed a data warehouse containing this information that could be accessed for this purpose. Paltrack have stipulated that the industry would need to be consulted and permissions granted before access to this information can be granted. CGA are proposing to address this with industry in order to gain access to this centralized database.</p>
2	Port Citrus Container Shipping Forums	<p>Citrus exported by containers has grown phenomenally in the last three years and now represents some 65% of exports (From a mere 30% in 2004). It is anticipated that volume of containerized exports will show continued growth to 70% of citrus exports. Containerized exports require far more coordination from various role players as well as a requiring specific infrastructure. The two fundamental factors attributing to the success and streamlined process is that of ensuring sufficient empty reefer container stock meeting with export demands and volume of all container kinds that are handled by a port container terminal. The latter can cause congestion and bottlenecking due to high volume fluctuations, therefore resulting in a cause and effect scenario for citrus exports and has the potential to severely constrain and restrict a seamless flow of citrus through the ports. Each port has encountered these scenarios as was the case during the 2009 citrus season when all three major exporting ports experienced either of these conditions which hampered the exporting of citrus containers. The CGA is proposing to formulate Port Citrus Container Shipping Forums at each of the main ports in order to monitor and address these issues that may develop and constrain the flow of citrus containers through the ports. Variables such as container terminal service levels, container terminal flow quantities, empty container stock, citrus reefer volume flow quantities, shipping schedules and intermodal logistics can be discussed at these forums. Information can be passed back to citrus logistics stakeholders whom can then be informed of developments and possible constraints. Stakeholders such as container lines, export agents, PPECB, container terminal managers, cold store managers and intermodal departments can be invited to participate at these forums.</p>

3	Citrus Season Logistics Review	<p>On completion of each citrus season, a report will be drafted that summarizes in short those logistics successes and constraints that are likely to positively or negatively contribute to the sustainability of citrus exports. From this exercise 5 strategic summary points should be highlighted that should be considered a priority for logistics stakeholders and the industry at large. These strategic summary points can be matter for discussion during preseason workshops and road shows. The CGA Logistics Review 2009 document is available on the CGA website.</p>
4	Citrus Export Resource Trend Analysis	<p>Two main resources are utilized almost the entire duration of the citrus supply chain namely Diesel Fuel and Electricity. Diesel Fuel during production and transportation (Land and Sea) and electricity during production and maintaining the cold chain. Other key resource trends are measured to determine the adjustment factor of resources utilized during the supply chain relevant to citrus exports. The analysis is completed on a quarterly basis and is available on the CGA website. The first edition has been updated and relevant for the last quarter of 2009 year.</p>