

THE DUAL ROLE OF  
THE COOPERATIVE WHOLESALE ESTABLISHMENT:  
TO SERVE ONION PRODUCERS AND CONSUMERS

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This national seminar, true to its theme, focuses on onion production in Sri Lanka. The responsibility for dealing with onion consumption and demand appears to rest with this paper to be presented by an officer of the Cooperative Wholesale Establishment (CWE). On behalf of the CWE, I wish to tender, in advance, an apology to onion consumers if their case is not adequately represented in this paper.

#### SERVING ONION CONSUMERS

##### Consumer Needs

Onions, big or small, are such essential food items in every Sri Lankan household that even the slightest shortage or price increase provokes an uproar from the public and activates both journalists and politicians.

According to consumer finance surveys by the Central Bank of Sri Lanka, the annual consumption needs of the country is around 60,000 mt of red onions and 18,000-20,000 mt of big onions. If the total requirement of red onions is met by local production, then the big onion requirement will be only 1500 mt a month. If red onions are not available, the monthly requirement of big onions will be about 7500 mt.

Sri Lanka imports about 35,000 mt of big onions annually, i.e. nearly 3000 mt per month. This means that the country is not really self sufficient in red onions, but adjusts its demand by consuming big onions, a very close substitute. Big onion has its own demand pattern, independent of the supply of red onions.

Annual domestic production of big onions is insufficient to meet demand. As Sri Lanka imports almost no red onions,

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<sup>1</sup> The views expressed in this paper are not necessarily those of the CWE's Board of Management or the Ministry of Trade and Shipping. They reflect the writer's experience and thinking and will in no way affect the implementation of government policy.

this paper will concentrate on the subject of big onions, the importation of which is the responsibility of the CWE.

### Imports of Big Onions

The quantities of big onions imported and sold monthly for the period 1985-1989 is shown in Table 1. The sales figures do not show a significant cyclical consumption pattern. It is generally recognized, however, that onion consumption increases during festive periods. The monthly sales pattern is, therefore, indicative of the constant availability of local red onions and the CWE's practice of adjusting its purchasing and sales plan accordingly.

Table 1. Big onion purchases and sales (mt), 1985-1989.

Month	1985		1986		1987		1988		1989	
	Purch.	Sale	Purch.	Sale	Purch.	Sale	Purch.	Sale	Purch.	Sale
Jan.	546	423	4600	4562	3020	3258	2628	3077	5000	2560
Feb.	500	575	4538	3857	2249	1919	4900	2762	2515	2283
Mar.	600	654	6472	4525	3594	3905	1500	3286	3410	3054
Apr.	1498	1122	2575	4485	3750	3146	3180	3050	1700	3009
May	550	779	4698	4729	2000	2840	5220	3826	4700	3413
June	-	275	6100	5010	3475	3150	2550	3874	1028	1668
July	1750	1235	7656	5339	2700	2279	2350	2658	650	694
Aug.	3597	1666	1594	2924	3100	2377	3400	2416	1625	594
Sep.	1710	2985	2446	2040	2250	1664	3100	2325	650	520
Oct.	4977	3602	2130	2648	746	1623	1700	2634	-	598
Nov.	4978	4887	4652	3160	2254	2341	950	1242	-	10
Dec.	6032	5231	3794	3200	4490	2959	3164	2840	1672	1046
TOTAL	26738	23434	51255	46279	33628	31461	34642	33990	22950	19448

### Import Sources

Several countries produce onions but few have a surplus for export. The major suppliers of onions to Sri Lanka during the last two decades have been India, Pakistan, Holland and Hungary, whose cropping seasons are shown on the following page. India, which has the largest surplus for export, can supply onions throughout the year. For this reason, and because Indian onions meet most requirements of the CWE and Sri Lankan consumers, India is our major supplier. Total imports and the percentage imported from India and Pakistan from 1985 to 1988 are shown in Table 2.

### Cropping Seasons for Onion Production

Month	India	Pakistan	Holland	Hungary
January	x	x	x	
February	x	x		
March	x			
April	x			
May				
June				
July				
August				
September	x			
October	x		x	x
November	x	x	x	x
December	x	x	x	

Table 2. Quantity and percentage of big onions imported from India and Pakistan, 1985-1988.

Year	Total (mt)	Pakistan	India
1985	26,697	13.0	87.0
1986	51,254	24.0	76.0
1987	33,927	19.8	80.2
1988	34,642	22.9	77.1
Average		70.0	21.0

The CWE considers India and Pakistan to be the best sources of big onions for the following reasons:

- a) Onions from these two countries are less watery and more pungent than those from Hungary and Holland.
- b) Sri Lankans prefer the color and appearance of onions from Indian and Pakistan.
- c) Their keeping quality is better. Onions imported from Europe usually come from cold storage and deteriorate rapidly when exposed to Sri Lanka's high temperatures and humidities.

- d) Freight charges, damage and delay are less than for onions imported on freezer vessels from Europe.
- e) Imports from Europe must be paid for in hard currencies for which fluctuating exchange rates can increase costs.
- f) The cropping season is longer than in Europe.

In addition, India is favored to supply Sri Lanka with big onions (and small onions as well) because of the production, storage, transportation, handling and packaging techniques of Indian growers and marketers. These techniques, in conjunction with the CWE's activities, provide Sri Lankan consumers with a quality product.

### Onion Production in India

India produces 2.5 mt of onions annually or approximately 13 percent of world production. Onions, which account for about 70 percent of the vegetables exported from the country, earn more foreign exchange than any other vegetable. Exports, local sales and prices are co-ordinated by the National Agricultural Co-operative Marketing Federation of India Limited (NAFED). Exports to Sri Lanka are done exclusively through this organization.

Onions are cultivated as a rabi crop during October-April/May in the northern plains, namely Punjab, Uttar Pradesh and Bihar. Maharashtra produces three crops a year: a) a kharif crop during May/June-October/December, b) a rabi crop during October/November-April/May, and c) a summer crop from January to June. In the southern states of Tamil Nadu, Andrapradesh and Karanataka two crops, i.e rabi and kharif, are grown, while other states produce only one crop a year.

It is estimated that 30 percent of India's total production is lost during post-harvest and marketing. Domestic consumption and seed requirements account for 65 percent and the remaining 5 percent is exported.

The largest onion markets in India are at Lasalgaon and Nasik in Maharashtra. These markets receive more than 100,000 mt during the peak season, November-June. Supplies delivered here in November will not reach northern and eastern India until December. As these supplies increase and onions are harvested in other production areas, prices decline until they reach a low point from March to May.

NAFED's research on onion storage has developed facilities capable of storing onions for approximately 6 months under a continental climate with low humidity.

Special storage facilities which permit natural ventilation are available in the major growing areas in Punjab, Nasik and Poona.

Sri Lanka receives its onions from the Nasik area, which is about 175 miles from Bombay. They are transported by truck over a rugged mountainous road and are delivered to the harbor only after a vessel has taken on all other cargo. They are never kept more than a day in Bombay warehouses where the humidity is very high, as in Colombo.

Onions are packed for shipping in lightly woven 25 kg gunnies, which should not be stacked more than five deep. Dunnaging must be done carefully so that bags do not touch iron structures. A vessel carrying onions must be equipped with an electrical ventilation system to control temperature and moisture levels in the stowage area. Shipping time should be kept to a minimum.

Vessels which meet all these requirements are difficult to locate in this region, where shipping routes are served mostly by outdated liner vessels. The Ceylon Shipping Corporation and Ceylon Shipping Lines carry cargo for the CWE but if their schedules are not frequent enough outside vessels are used.

#### Quality Specifications (see Table 3)

Bombay onions (Nasik/Poona onions) belong to the PHOL group. They are graded on the basis of:

- a) Bottle-necks: bulbs with abnormally thick necks
- b) Damage: any injury or defect which materially affects the appearance of the lot, the edibility or shipping quality of individual onions, and includes one or more of the following:
  - i) dry unscaled - any injury which is more than slight and is easily apparent without peeling the onion
  - ii) mechanical injury - any cut extending deeper than two fleshy scales or cuts which seriously damage appearance
  - iii) seed stem - any stems which are tough, woody or more than 6 mm in diameter
  - iv) sprouting - development of visible sprouts on bulbs

- v) staining - any discoloration caused by weathering or other means which seriously affects the appearance of individual onions
  - vi) sunburn - any discoloration caused by weathering or other means which seriously affects the appearance of individual onions
  - vii) tops - onions which are trimmed to more than 5 cm. No more than 20 percent of such onions are allowed in a lot.
- c) Diameter: the greatest dimension of the onion bulb at right angles to the straight line running from stem to root end
  - d) Doubles: onions which have developed more than one distinct bulb, with or without its outer clinging stem joined only at the base
  - e) Mature bulbs: bulbs which have been harvested when all the tops are down to a stage of development at which onions are firm
  - f) Reasonably firm: onions may yield to moderate pressure but should not be tangibly soft or spongy

#### ONION STORAGE SYSTEMS

Appropriate storage is vital in the transfer of onions from producers to consumers. Onions are highly perishable because of their high water content, respiration, and vulnerability to bacteria and fungi. Ideal storage is that which provides very low relative humidity and temperature and sufficient air movement to displace excess moisture. Experience in India indicates that 0°C and 65 percent relative humidity are optimum for maintaining dormancy.

In India, onions can be stored for as long as 6 months, due mainly to proper management, which includes appropriate varieties, planting time, fertilizer, harvest, curing, and a proper storage environment. Storage facilities are located in areas of cool temperature and low humidity, quite similar to conditions in the Palugama - Keppetipola area of the Welimada District in Sri Lanka. Under such conditions, a storage system with good air circulation is adequate and is much cheaper to construct and maintain than one in which temperature and humidity have to be controlled artificially.

Table 3. Grade designation and definitions of quality of PHOL group of Nasik onions.

Grade	Color	Special characteristics		General characteristics
		Minimum diameter (mm)	Maximum % damaged bulbs (by weight)	
Extra	Light to deep red	60	10.0	Bulbs shall be: <ul style="list-style-type: none"> <li>- uniform in size, shape, color and characteristic of the variety</li> </ul>
Big	-do-	40	10.0	<ul style="list-style-type: none"> <li>- mature, solid and reasonably firm with tough, clinging skins</li> </ul>
Medium	-do-	30	10.0	
Small	-do-	20 mixed	10.0	<ul style="list-style-type: none"> <li>- thoroughly cured and dried</li> </ul>
General NS Grade	-do-	20	10.0	<ul style="list-style-type: none"> <li>- free from dirt and other foreign material</li> <li>- free from defective, diseased, decayed and damaged bulbs by seed stems, tops, roots, moisture, dry sun-scale, sunburn, sprouting, mechanical or other injuries and staining to the extent specified in Column 4</li> <li>- seed stems shall not exceed 20%</li> <li>- free from molds, soft rot, and insect damage</li> </ul>

## Import and Distribution - Logistics and Problems

### 1. Planning imports

The CWE must plan its import program for the entire supply season and enter into long term contracts with the selected supplier to ensure guaranteed supplies at agreed prices.

Execution of plans can be complicated by crop failures, export bans and sudden price increases by suppliers.

### 2. Shipment schedules

Shipment schedules are arranged on a monthly or fortnightly basis so that manageable quantities are imported and "bunching" of ships in the port is avoided. Shipping schedules can be disrupted by harbor congestion, port strikes and bad weather.

### 3. Selection of vessels

Vessels with proper ventilation and dunnage systems must be selected to ensure that cargo will not be damaged during transport.

There is no regular schedule of vessels to Indian ports and those available are old and do not have electrically ventilated holds. There is a limited number of vessels available for "break-bulk" cargo. Freight rates are very high because vessels often carry little cargo on the onward journey.

### 4. Cargo inspections

Load-port surveys are arranged to ensure that onions loaded on vessels by suppliers conform to CWE specifications.

Because independent survey reports tend to be unreliable the CWE is often compelled to send one or two officers from Colombo to inspect cargo before loading.

### 5. Port discharge arrangements

Detailed plans are required for the unloading and clearing of shipments arriving in the Colombo Port so delays are minimized and expenses due to damage and demurrage can be avoided.

Problems are encountered with arrangement of labor gangs, lorries, bad weather, strikes, curfews etc.

## 6. Distribution

Cargo should be distributed equitably to all parts of the country immediately after its arrival. This is sometimes difficult due to a shortage of lorries, breakdown in rail services, and some areas being unsafe.

## 7. Sales

Sales should be computed within 10 to days to avoid loss of product and to make way for the next consignment. It is not always easy to predict and plan sales for a pre-determined period.

## 8. Avoiding loss due to perishability

To avoid loss of onions in storage:

- i) Rotate stock by restacking in different locations in the storage facility
- ii) Transfer stocks from districts where sales are slow to areas where stock moves quickly
- iii) Remove damaged bulbs and fumigate remaining stock
- iv) Adjust prices to favor disposal of slow-moving or deteriorating stocks

The main problem is a lack of appropriate long-term storage for perishable commodities. While ambient conditions in the hill country are satisfactory for such storage, stocks for the entire country cannot be located there due to high transport costs. The high humidity prevailing in the rest of the country necessitates storage with temperature and humidity control, and modern rack systems to prevent damage due to weight and lack of aeration. These types of stores are very expensive to construct and maintain.

The CWE does not have funds to provide expensive storage facilities and the high cost of financing them by borrowing from banks cannot be absorbed in the selling price of onions. Storage for perishables such as onions will, therefore, have to be financed through government or foreign funding.

## OBJECTIVES OF THE CWE

Having reviewed the role of the CWE in serving consumers, and before discussing the important question of serving producers, let us look briefly at the traditional role of the CWE.

### Statutory Objectives of the CWE

The CWE was established by an Act of Parliament in 1949 for the primary purpose of serving consumers by importing supplies for co-operative societies. While the statutory obligation of the CWE has remained virtually unchanged, changes in government policy have broadened its operational base.

### The Changing Scenario

The role of the CWE altered as changes in government policy resulted in the removal of monopolies on a large number of subsidiary food items, of import licensing and quota systems, and the complete withdrawal of subsidies. This led to participation of private sector wholesalers and retailers in the market and the CWE was forced to base its activities on business and commercial considerations. Its "Main Mission" as stated in the Five Year Corporate Plan for 1985-1989 "is to serve the consumer with an uninterrupted supply of consumer commodities at reasonable prices and engage in any other activity to generate an adequate return on capital employed consistent with a reasonable rate of growth."

### The CWE's Responsibilities

The CWE, the only state institution that imports staple and subsidiary food stuffs, imports the country's entire requirements of rice, wheat, wheat flour, red lentils, chillies, onions, a substantial percentage of sugar, and a number of provision and grocery items. Its annual turnover, excluding that from rice and flour, is approximately Rs 5 billion.

The CWE is responsible for distribution of these commodities, maintenance of adequate stocks in regional wholesale and retail warehouses and of a buffer stock of essential commodities.

The CWE, which was capitalized in 1950 by a government contribution of Rs 1 million, fulfills its obligations with a minimum of assistance from the government or foreign funding agencies. It maintains a staff of 500 and a massive warehousing and transport infrastructure. The CWE is

required to pay customs duties, turnover taxes, normal income tax, commercial bank interest (nearly Rs 300 million annually), as well as a dividend to the Treasury. After financing all these activities, the CWE has a profit of less than 1 percent of its turnover. Massive losses were not uncommon in the recent past.

It is necessary to understand the CWE's problems in their proper perspective before attempts are made to solve them. In the meantime, I would like to discuss the CWE's role in serving producers.

### SERVING ONION PRODUCERS

Agricultural commodities for which the CWE has or has had an import monopoly are red onions, big onions, potatoes, red lentils and chillies. Red onions and potatoes are no longer imported because Sri Lanka has achieved virtual self sufficiency in these crops.

The CWE aided achievement of self sufficiency in potatoes and red onions by adjusting the volume and selling price of imports so as not to compete with local production, purchasing domestic produce in competition with private traders, and setting a guaranteed price for field purchases.

#### Import Policy

The CWE's policy is to protect local farmers by limiting its imports to meet shortfalls in production. Its annual import plan is based on local supply and demand conditions.

During most of the 1980s, local production of big onions was not sufficient to have a significant impact on the country's requirements. As local production and demand increased during the latter part of the 1980s, CWE faced problems in projecting needed imports. These difficulties were compounded by fluctuations in import supplies due to climatic, economic and political factors; exchange rate fluctuations; and the effect of government policy on imports. In order to stabilize the market, it was resolved that the CWE should also purchase domestic onions, although there was no declared government policy that it should be the purchasing arm of the government.

#### The 1989 Big Onion "Tragedy"

The unprecedented bumper crop of big onions in Yala 1989 led to a situation in which the CWE was criticized. I do not consider it proper at this symposium to defend the CWE or to attack any other institution for that unfortunate episode.

The following summary of the situation is an attempt to clarify the CWE's position and to ensure that such an episode will not recur:

- a) The CWE planned its 1989 onion imports carefully, including those for Yala season.
- b) Sales of imported onions during Yala 1989 were negligible and did not affect the market for local production.
- c) Onion prices were depressed due to an abundant local supply. Lack of storage facilities meant that this supply had to be sold and consumed during a very short period.
- d) Long-term storage of the onion harvest was impossible because appropriate facilities did not exist and improper pre-harvest and harvest handling jeopardized its keeping quality. Bacterial soft rot and black mould rot destroyed more than 15 percent (206 mt) of the total quantity purchased; driage and other shortages accounted for an additional 30 percent (422.8 mt).

The CWE purchased 1368.4 mt of onions for Rs 17.1 million, lost 629 mt (46 percent of the quantity purchased), and recovered only Rs 6.5 million in sales. Procurement and marketing costs brought CWE's total loss to Rs 13.5 million!

#### What the CWE Can Offer

The CWE will continue to pursue the following course of action but does not anticipate that it will have a significant impact on the marketing of large volumes of locally produced onions:

- a) Plan import quantities and arrivals in so far as timely and accurate information on local production permits such forward planning.
- b) Keep imported onion prices sufficiently high so as not to compete with local produce, subject to the limits of consumer and political resistance.
- c) Make more than 'token' appearance in the market by direct purchasing onions at a guaranteed price acceptable for farmers, consumers and the CWE.

For a "Shot-in-the-Arm" from CWE

If the CWE is to have a major impact on the marketing of big onions, the following issues should be addressed:

- a) A decision should be made on the advisability of appointing a government agency, similar to NAFED in India, to purchase big onions. If the CWE is appointed, its mission and management should be modified to accommodate the additional responsibilities.
- b) If a government purchasing arm is introduced, free market forces will cease to operate. This may lead to guaranteed purchase prices and purchase subsidies. If that occurs, careful consideration should be given to actual costs (transport; labor; packaging; storing; losses due to drilage, sprouting and rotting; financial expenses, overhead), and a reasonable margin of profit. In the event that production declines significantly, the organization's ability to recover fixed overhead expenses must be considered.
- c) To ensure an import and pricing policy favorable to local production, import monopolies should be continued. Liberalization of the import business could result in over importing and competitive pricing policies among importers.
- d) Import projections cannot be accurately derived unless a better system of estimating production is developed. The present practice of basing estimated production on proposed acreage is unsatisfactory. Field extension officers should provide weekly crop information.
- e) The purchasing organization should be in a position to reject produce that is below minimum quality standards. It would be preferable if purchasing was done through farmer organizations.
- f) Varieties with good storage qualities should be introduced, e.g. Pusa Red, N-241, and Nasik Red.
- g) Research should be done to identify varieties suited specifically to areas and seasons. Work done in India could be a valuable reference in this regard.
- h) Correct cultivation practices should be developed and recommended. Such practices as date of sowing

and proper timing of fertilizer can affect the quality and storability of onions, e.g. application of nitrogenous fertilizer during the maturing period results in low keeping quality.

- i) Better harvest and post-harvest practices should be followed.
- j) Production should not exceed the capability of available market support services.
- k) Onion storage technology and provision for construction of improved storage systems should be provided through government assistance or outside funds.
- l) If storage is located in areas of low temperature and low humidity, provision of cheaper transport methods must be considered.

If the above issues are not resolved, the government purchasing institution should be free to withdraw from the market.

## CONCLUSION

The 1989 Yala "big onion tragedy" should be viewed as a "teething problem" since it was the first time that local production made a significant impact on the market. While it was both a production and marketing failure, it generated a lot of "food for thought". The experience should lead to better planning, coordination and understanding at the national and institutional level.

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