

Domestic Wholesale Markets for Fresh Vegetables in Sri Lanka

Technical Report No. 11



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by

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EXECUTIVE SUMMARY

SETTING

Sri Lanka, a small island nation located in the Indian Ocean off the southeast tip of India, has a population of more than 17.4 million. Sri Lanka's agricultural sector has thrived on very diverse agro-ecological zones, large irrigation projects, and abundant talented labor but struggles with the curtailed use and public ownership of much of its arable land and relatively expensive capital. The vegetable subsector is considered an important supplier of food for domestic consumers and as a potential source of expanded export earnings. However, vegetable production is reportedly declining while traders throughout the country struggle to do business without proper marketing guidance from the public sector and inadequate market facilities.

PURPOSE AND APPROACH

The purpose of this study was modified during the initial stages of the research process because of the limited amount of written information available, several misunderstandings encountered, and the breadth of geographic coverage. Thus, the final purpose became twofold, namely:

- Assess and describe the structure, behavior, and performance of the emerging national market network for vegetables; and
- Determine and present practical intervention strategies in terms of an agenda for action and research.

A small study team used the commodity system's framework and rapid appraisal techniques while traveling to many outstation sites of vegetable consumption and production, interviewing more than 100 respondents, and observing the conditions under which exotic (highland temperate climate) and lowland vegetables are retailed, marketed, and grown. The two visits to the Manning Market (or Pettah Market) in Colombo were insufficient to determine the many causes of its serious problems and the complications of resolving them.

A debriefing at the mid-term point and a seminar at the end of this study clarified the basic nature of the market transition taking place while raising several questions and issues that will require substantial follow-up data collection and analysis. Unfortunately, no agricultural marketing institution could be found to follow up on the recommended marketing research, training, and extension activities needed.

OVERALL SITUATION

The vegetable subsector is currently in a state of transition as the structure of the national market network struggles to accommodate the shift from the former, more centralized system, coordinated from the large markets in Colombo and Kandy, to today's parallel and more decentralized system. The earlier vision of a centralized marketing network, with an array of dispersed rural polas (periodic markets where

local retailers and itinerant traders meet in a designated place one to three times a week) in the lowlands linked to the wholesale/retail marketplace for each major town, is changing.

The nation's largest wholesale marketplace for fresh vegetables, the Manning Market in Colombo, is still "temporarily" housed in an abandoned, dilapidated sugar warehouse complex and is performing poorly. After 12 years of confinement in the inappropriate facility, the number of traders has become bloated, prices fluctuate unpredictably from day to day, and the overall quality of its vegetables is steadily declining. Its reference prices no longer help coordinate the national network. In fact, during lean months, traders throughout the countryside strive to avoid sending their precious vegetables to this market, whereas during the peak harvest months they flood it with excess vegetables.

Traders in southern towns, formerly supplied by the Manning Market, have broken that linkage and formed their own distribution channels by procuring vegetables directly from the major supply areas and distributing them to neighboring towns.

Highland production areas that were formerly merely assembly points linked to the Colombo market have now emerged as regional assembly markets. They include Nuwara Eliya/Kandapola, Bandarawela/Welimada, and Hanguuranketa and vicinity.

Since 1990, the Dambulla Market Center has expanded to service much of the vegetable consumption needs to its north and east while the dynamic pola in Kegalle supplies places to the west of it. Meanwhile, lowland polas have increased their role in the distribution of fresh, less-expensive vegetables.

Market transactions based on the traditional commission approach (at a rate of 10 percent), that is, a supply disposal orientation, has been giving way to more wholesale forms of market transactions whereby traders take possession of the vegetables in response to market demand conditions. This transition results in price discovery at the assembly markets that are much closer to farmers and more stable prices as traders around the country arrive to buy vegetables.

For a variety of reasons, the overall marketing network has become more decentralized while the public sector's frame of reference may still be set on the way things were formerly. The new reality has emerged through private sector efforts that have left the public sector far behind in terms of needed technical advice, informed local and national policies, and basic infrastructural support. In fact, not since the mid-1970s has any retail marketplace been constructed in the more than 18 towns visited during this study.

Meanwhile, statistics suggest a trend of decreasing area in vegetable production, consistently high retail prices in off-season months, comparatively high production costs, and a limited genetic base relative to what is available from international sources. Likewise, many wholesale and retail facilities for vegetable marketing steadily deteriorate while given minimal public sector attention and investment.

Unfortunately, local government authorities in most cities, towns, and assembly areas seem unaware of these changes and neglect even the basics of maintaining local market facilities to service the food needs of their consumers. Kurunegala and Anuradhapura are exceptions with reasonably well-maintained and well-managed retail market and pola facilities. Their example should provide inspiration to other towns throughout the country, including Colombo and Kandy.

No institutional base exists to provide technical guidance for solving the interrelated marketing system problems. Because most government officials and their technical staffs were educated in the "production-oriented" school of thought, the present condition is understandable. However, without a "market-led orientation," it is unlikely that vegetables can both supply adequate quality and volumes for the domestic market while making inroads into the export market for fresh vegetables.

KEY FINDINGS

The following key findings from this field-oriented assessment of the vegetable subsector are presented according to systemwide concerns, consumption aspects, marketing dimension, and production considerations.

Systemwide Concerns

- Historically consistent patterns of vegetable shortages and surpluses remain unresolved and problematic for farmers, consumers, and public officials alike.
- In the lean months, key informants in the industry estimate less than 10 percent of vegetables go unsold to consumers (losses low), whereas during the peak season higher losses occur as a result of gluts.
- Sri Lanka's substantial agricultural and marketing diversity requires case-by-case, not generalized, attention and action.
- Inadequate local expertise in agricultural marketing research, development, and extension is seriously hampering agricultural development plans and programs.

Consumption Aspects

- The strong consumer preference for highland (exotic) vegetables (lowland vegetables are perceived as too ordinary) has adverse implications for substituting lowland vegetables during periods of shortage.
- Consumer willingness to buy more vegetables is reduced because of poor shopping conditions in many wet (retail) markets and pola facilities.

Marketing Dimension

- Community-based knowledge is very important within the business community, especially when retailing vegetables or when credit is involved.
- In general, the outstation wholesale marketing system provides better quality (fresher) vegetables to consumers, compared with vegetables handled through the Manning (Pettah) Market where they are sent late in the day; stored on lorries until 6 a.m. the following

morning; handled roughly during unloading, hauling to shops, selling, again hauling to and loaded onto lorries; and then sent to retail outlets throughout Colombo and beyond.

- There are adequate numbers of retailers, wholesalers, transporters, and collectors at outstation sites but market facilities are old and in poor condition with little or no management and maintenance, or overbuilt supermarket facilities that force vegetable retailing onto the roadside, sidewalks, or streets.
- Multiple buying and selling options with minimal restrictions on entry are the norm — except for certain accepted, localized norms regarding purchases through broker-farmer contacts.
- Cases exist where daily urban polas threaten the viability of retail marketplaces, especially in Matara.
- Poor postharvest handling is understandable because vegetables are consumed mostly in curries where freshness, not appearance, is critical, and most freight rates are set per piece rather than per kilogram, thus the incentive is for the shipper to use larger containers.
- The vegetable trading system still runs on credit, especially on the buyer side of the transaction, but it is evolving slowly toward a more cash basis.
- Outstation marketing systems are based on wholesaler transactions (more demand driven), rather than commission agent transactions (more supply disposal oriented) common in terminal markets.
- The cost structure/margin of wholesale to retail price spread at outstations is relatively small and explainable, but at Colombo it is still not explainable.
- The role of the Manning Market in the national marketing system for vegetables has been substantially reduced since the early 1980s, but the market could serve in a vital coordination and information role if reorganized and given appropriate facilities.
- There is widespread recognition in the vegetable industry outside of Colombo that trading and transport margins for vegetables (compared with other agricultural products) are narrow, and a less profitable choice for many; however, there remains an opposite perception in the public sector!
- Except for special cases, there is a widespread absence of market management and poor maintenance within retail, wholesale, and terminal markets.
- Three to four large, upcountry assembly market centers supply most exotic vegetables, whereas lowland vegetable production is dispersed and assembled from scattered rural polas.
- Results of the trend of local public authorities submitting for private tender the fee collection function for polas are very promising.
- Long distance transportation and wholesaling of vegetables during the night time should increase marketing efficiency while reducing postharvest losses.

- Local politics adversely affects the desired performance of several local market outlets for vegetables.
- Price movements of green beans serve as a barometer of market surplus or deficit conditions for vegetables throughout much of the country.

Production Considerations

- Nuwara Eliya's excellent vegetable growers can become a valuable resource for extension services and testing crops/technologies that are promising, especially if quality is required.
- Except for the Kalpitiya Belt, lowland production systems are much less well-supported than production systems in the highlands.

AGENDA FOR ACTION AND RESEARCH

The agenda for action and research provides two main goals:

- A series of positive, discrete near-term activities that enhance awareness of the breadth and depth of the problems within the vegetable subsector, and
- A strategic process for instituting and using a local capability to address current and future agricultural marketing plans and problems.

The strategic process provides an opportunity for substantive and long-term improvements from both a national and a local perspective. The series of discrete action and research products builds an information base from which to devise a long-term plan of action and research while gaining experience with the participatory approach in resolving priority local market problems.

SECTION ONE

INTRODUCTION

The horticultural sector in Sri Lanka is important for providing additional income-earning opportunities for farmers, feeding the rural and urban populations, and earning valuable foreign exchange. Although export earnings remain relatively small, the sector's potential has been at the center of several projects. A key ingredient for accomplishing those three types of results is an effective and ever-improving marketing system that:

- Provides the best available seed varieties and agro-chemicals;
- Teaches growers improved methods of cultivation;
- Ensures alternative reliable outlets for vegetables and fruits;
- Supplies adequate amounts of reasonably priced fresh and processed food to consumers;
- Enables marketers to become innovative and more efficient over time; and
- Responds to new domestic and export market opportunities.

Unfortunately, the marketing system is improving within a constrained environment.

USAID's Regional Agribusiness Project (RAP) for Asia, based in Washington, D.C., has been looking at cross-country, Asian problem areas that warrant attention, resources, and development efforts. Within the horticultural sector, the plight of the urban wholesale markets, whether in Dacca, Jakarta, Manila, or Colombo, has come to RAP's attention. A series of case studies and lessons learned on wholesale marketplace development in the more prosperous cities of the Far East has been one approach to addressing that plight.

RAP also recently designed a practical, marketing systems research approach to analyzing urban wholesale marketplaces within the context of local urban development planning, health and environmental considerations, and import/export trading patterns. This study on Sri Lanka is based on a modification and adaptation of that research approach to fit Sri Lanka's current information needs regarding wholesale/retail marketing systems for vegetable commodities, both with respect to assembly and distribution markets in the countryside and the terminal market in Colombo.

The Terms of Reference for this study centered on two key interrelated subjects:

- Assessment of the terminal market for fruits and vegetables within Colombo; and
- Examination of the linkages within the national market network, especially relative to the terminal market.

Because the urban wholesale market is only one part of the national market network that supplies the terminal market, provides commodities for export, and often distributes a large share of horticultural commodity

imports, the understanding of the overall market network provides the context for improvements to the urban wholesale market.

In Asia, the main urban wholesale marketplace in the national capital, the terminal market, is critical as the pivotal point or hub around which the national market network has traditionally been organized and coordinated. However, today several national market networks are in a state of transition while their terminal markets atrophy! In fact, in some countries, the expectation that supermarkets will soon dominate the marketing channels has inhibited rehabilitation or improvement of urban terminal markets.

Although the efficient distribution of fruits and vegetables to retail outlets is the main role for urban terminal markets, conditioning factors and opportunities for progressive change are also crucial. Factors include the following:

- Environmental and food safety issues, such as sanitation, consumer health (pesticide residues, Hong Kong case), employment generated through use of wastes as commercial by-products (cases of Jakarta and Bandung);
- Effective management arrangements, such as wholesale facilities managed by a private sector management company rather than a government agency (cases of Singapore and Taiwan);
- Critical services for farmers, such as introduction of postharvest technologies (case of Taiwan), source of frequent market price information (cases of Taiwan, Korea, and Japan), and training activities (case of Taiwan);
- Potential market entry point for farmers' organizations (cases of Taiwan, Korea, and Japan); and
- Reference pricing for the national market network, whether related to the procurement price offered by supermarkets, considered in the price discovery process in assembly markets in distant supply areas, or price/quality referred to by exporters and importers who normally bypass the terminal market, yet dump excesses into it whenever they have problems with trade agreements.

In preparing this study, it was found that the Manning Market in Colombo warrants an urgent, careful, and systematic assessment of its function within the context of the entire marketing system for vegetables in Sri Lanka. In other words, that context would be the national market network, which includes the Manning Market as linked to traditional supply areas while competing for vegetables with emerging regional markets; growing prominence of assembly markets in the highlands; complex patterns of forward and backhaul arrangements to move commodities to and from outstation areas; emergence of distribution market centers at key logistical sites; trading practices based on ownership versus commission forms of transactions; and diverse forms of marketing channels.

After the initial week of review of previous marketing studies, interviews with the Wholesalers Union in the Manning Market, and a field trip to several urban and assembly markets in the southern and central parts of Sri Lanka, it became evident that the national market network is in a state of transition and is not well understood. This is especially true in terms of what is happening outside of Colombo. Likewise, the complexity and diversity found in the horticultural sector required us to focus the study on the more critical component of that sector, namely the vegetable subsector.

Also, given limited time and resources, it was necessary to further restrict our focus on the outstation component of the national market network, in order to understand the Manning Market. The team anticipated a later opportunity to examine the Manning Market as part of its future rehabilitation program. At that time, the participation and role of the trading community in such a program would be better understood, whether in selecting a suitable location, advising on appropriate layout, or suggesting effective management arrangements to ensure the smooth transition from the existing to new facilities.

In brief, the main objectives of this study were to:

- Assess and describe the structure, behavior, and performance of the emerging national market network for vegetables; and
- Determine and present practical intervention strategies in terms of an agenda for action and research.

There is now a strong demand from both the public and private sectors for an effective resolution to the many problems and marketing constraints imposed by the crowded and dilapidated Manning Market. However, a broad overview of the current situation had to be conducted first as a context for the needed change. That arduous task required all the time that was available.

The following sections include the approach used, country setting, consumption and production situations, marketing system in transition, market organization, market operations, findings, and an agenda for action and research.

SECTION TWO

APPROACH

The team found few marketing studies of the vegetable subsector, especially on the distribution and assembly components of the market organization; whether marketplaces and marketing channels are well organized and how they function and are linked; and how the vegetable marketing system responds to the promotion of new crops, especially crops for export. Most previous marketing studies of the vegetable subsector of Sri Lanka focused on either collecting primary data from selected locations, such as the Kurunegala, Nuwara Eliya, or Badulla districts, or analyzing available secondary data. No one examined the vegetable marketing system as a national marketing network.

However, in studies of the vegetable subsector, marketing problems were cited frequently, along with remarks about the poor condition of the country's main terminal market, the Manning Market, housed in a "temporary" facility for more than a decade.

STUDY PURPOSES

The initial three purposes for this study were to:

- Identify appropriate strategies for effective marketing interventions within the horticultural marketing sector, especially at the wholesale level;
- Identify specific opportunities for progressive change within the distribution system; and
- Recommend an action and research agenda for existing and future projects.

However, those purposes were modified during the course of the study because of the lack of written information on the vegetable markets, the complexities observed during field work, and limited time and manpower available.

The approach to this study was based on a series of technical elements with activities organized into four phases. The technical elements included:

- Team composition;
- Analytical approach;
- Area of coverage;
- Commodity coverage;
- Scheduling;
- Sites;
- Prevailing market condition; and
- Terminology and concepts.

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TECHNICAL ELEMENTS

Team Composition

The team consisted of three-persons, two of whom were local analysts familiar with the methods and conditions of crop cultivation, and one a foreign agricultural marketing specialist experienced in horticultural crop marketing in Asia. The two local analysts worked on a part-time basis.

Analytical Approach

A demand-driven orientation, commodity systems framework, and rapid marketing appraisal techniques were applied by the team during an intensive set of interviews throughout the countryside. Emphasis was given to the less-well-understood linkages of the "distribution wholesaler (or commission agent) to assembler wholesaler" and "distribution wholesaler (or commission agent) to retailer" parts of the marketing channels.

This required almost 115 interviews with retailers; wholesalers (commission agents) who distribute vegetables to retailers, wholesalers/collectors who assemble vegetables from farmers, brokers and collectors in the production areas, itinerant traders with lorries, farmers, officials, project staff, and the like as found at marketplace stalls, boutique shops, roadside stands, polas, farms, and offices. The team's intent was to analyze the organization, operations, and problems of the vegetable marketing systems as a basis for determining strategic interventions.

Area of Coverage

The study covered the emerging regional markets along with several adjacent towns, major highland and lowland production areas, and, finally, the Manning Market in the national capital of Colombo (Map 1).

Commodity Coverage

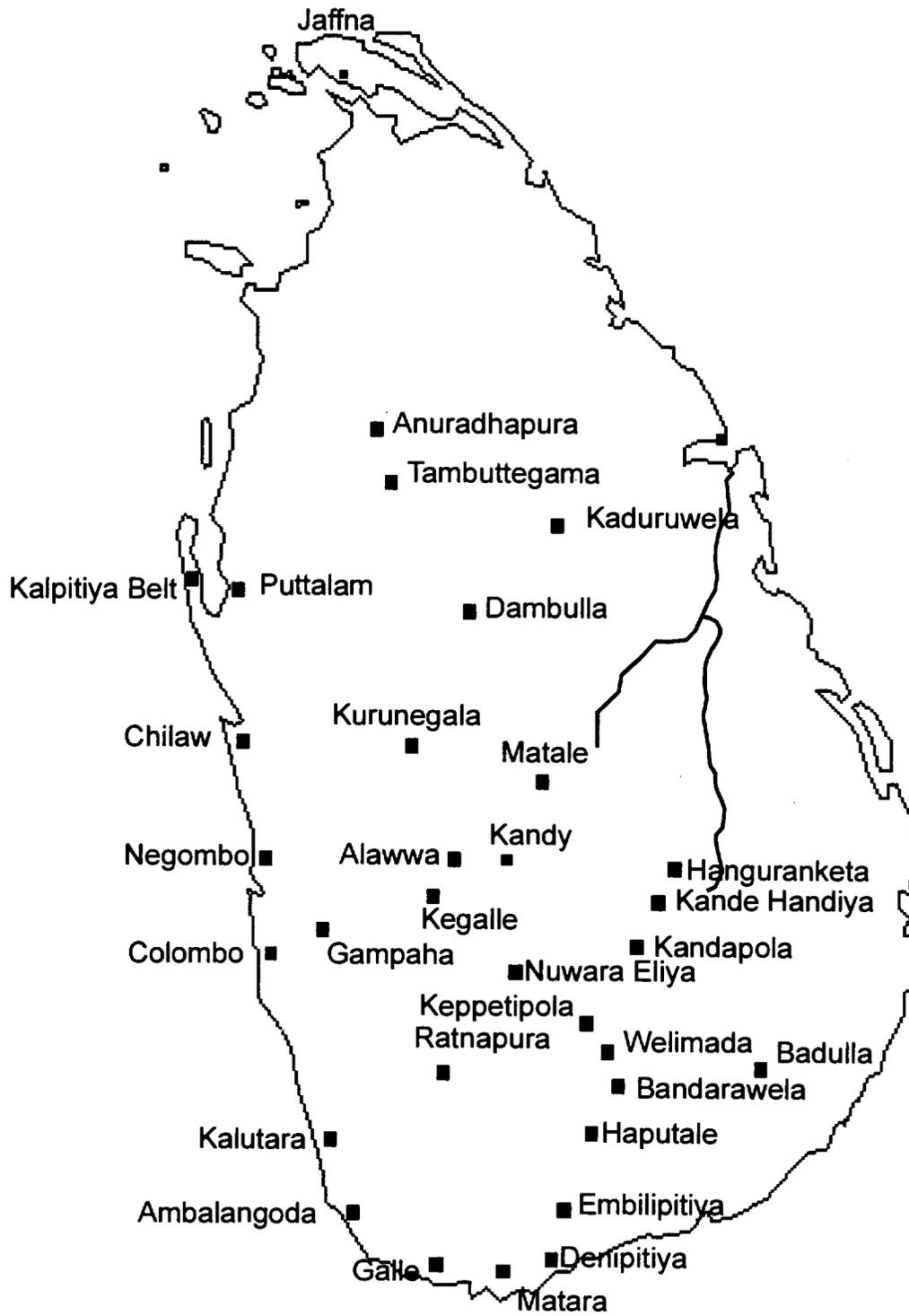
Following the recommendations of an informal advisory group composed of representatives from government agencies and several USAID projects, a subset of vegetables, termed "reference vegetables," was selected to collect more detailed information on a manageable number of commodities while fitting together the larger picture of the overall vegetable sector. They included:

- Highland vegetables (exotics) — green beans and tomatoes; and
- Lowland vegetables — green chilies, brinjals, and bitter gourd.

Green beans and tomatoes are also produced in the lowlands, but the bulk of both vegetables are produced in the highlands. In the locations visited, potatoes were also given attention.

MAP 1⁷

STUDY SITES



Scheduling

The four phases of activities were scheduled as follows:

- Phase One: Conduct field trip to towns and production areas in the south-central section of the country;
- Phase Two: Write up field notes, present preliminary findings, and interview members of the Wholesalers Union in the Manning Market;
- Phase Three: Continue field trip to towns and production areas in the northwestern-central part of the country; and
- Phase Four: Write up field notes, prepare for a final presentation, and present findings.

Sites

The sites covered by Phases One and Three included:

Phase One sites: Urban/town areas (retail markets, wholesale markets, and urban polas) — Kalutara, Ambalangoda, Galle, Matara, Ratnapura, Badulla, and Nuwara Eliya (city).

Rural towns with wholesale assembly markets, rural polas, and/or farms — Denipitiya, Embilipitiya, Haputale, Bandarawela, Welimada, Keppetipola, Kandapola, Hawaeliya, Meepilipona, and so forth.

Phase Three sites: Urban/town areas (retail markets, wholesale markets, and urban polas) — Negombo, Chilaw, Puttalam, Anuradhapura, Dambulla, Kaduruwela, Matale, Kandy, Kegalle, Kurunegala, and Gampaha;

Rural towns with wholesale assembly markets, rural polas, and/or farms — Kalpitiya Belt, Tambuttegama, System H and System B in Mahaweli Irrigation Areas, Hanguranketa, Kande Handiya, Alawwa, and so forth.

Prevailing Market Condition

During the study, the marketing condition was a "sellers market" for vegetables, meaning that June and July are known as a scarcity period, or off-season, having limited commercial volume of many vegetables. The shortage was exceptionally bad during 1995. Another off-season, but with somewhat less scarcity, generally occurs from January to February.

However, to obtain a more complete and balanced picture, questions were also asked about differences in marketing practices in a scarcity period and the peak harvest months, usually September to October. Several differences were mentioned.

Terminology and Concepts

Key terms used in the local marketing system include the following:

Boutique	Small store selling a variety of consumer goods, such as sugar, matches, cigarettes, and fruits and vegetables, or a small store that specializes in fruits or vegetables, similar to a "sari sari" shop common in the Philippines.
Exotic vegetables	Temperate climate vegetables grown in the highlands, such as cabbage, carrots, beetroots, and leek.
Key money	Lump sum of cash paid up-front for the user rights to a building or structure for a designated period. Funds earned from this practice gives the public sector sufficient funds to pay for the construction costs of new buildings.
K.P.	Person who manages the day-to-day transactions for large vegetable trading companies located in the Nuwara Eliya area where several larger traders already have expanded into other enterprises.
Lowland vegetables	Tropical or semitropical vegetables grown in lower elevations, such as okra, cucumber, chilies, onions, and bitter gourd.
Market center	Group of shops or stands that are not within any designated facility, such as the series of shops on both sides of the road in the center of Dambulla.
Marketplace	Group of shops, stalls, or stands in a facility where buying and selling takes place, such as in the Galle retail marketplace or Kandy wholesale/retail marketplace.
Natami	Loading/unloading and portage laborer.
Outstations	Locations beyond the main urban areas that are located mostly along the coast.
Pola	Periodic market in which one to three times a week itinerant traders and local retailers gather in a designated place, such as an open field or area with rows of open-sided, temporary, or permanent structures, where farmers can sell their produce early in the morning and where local residents can buy less-expensive goods.
Wayside market	Group of shops with open space between them and the main road so that lorries can pull off the road and park in front of shops to load or unload goods before continuing their trips without leaving the main road (minimum turnaround time).

In addition to the concepts and analytical approach noted above, team members argued different points of view, debated unexplored options, and thought of ways to help create the needed changes. The team recognized that by viewing things differently, previously overlooked options could be seen.

Although the original intention was to build on previous work, improve communications between the trading community and public officials, involve more local analysts to ensure institutional memory, and help form a critical mass of opinion to promote the needed changes, time and personnel did not allow this option.

SECTION THREE

SETTING

Sri Lanka, formerly known as Ceylon, is a small island nation located in the Indian Ocean off the southeast tip of India. Its position is at the center of the traditional trade routes bridging the East and West. In fact, Sri Lanka is located about midway between Japan and Europe.

The tropical climate is hot and humid most of the year, with temperatures averaging about 27 degrees Celsius. The heaviest rains fall during the northeastern monsoon season, from November to January, and the southwestern monsoon season, from May to July.

COUNTRY CHARACTERISTICS

In 1992, the population of Sri Lanka was 17.4 million with a growth rate of about 1 percent, 21.8 percent designated as urban population, and density of population per square kilometer of 259 persons in 1990. The population distribution pattern has heavy density in the midwestern and southwestern sections and areas in the Central Highlands, with moderate to light population density in the rest of the country.

Sri Lanka's per capita GNP in 1992 was \$553, which was higher than in Pakistan, India, and Bangladesh but lower than in most countries in Southeast Asia. The country is richly endowed with a diverse resource base, rich soils, well-developed highway infrastructure, skilled work force, and one of the highest literacy rates in Asia.

Its diverse cultural heritage consists of several ethnic groups, primarily Sinhalese (74 percent in 1981), with a substantial proportion of Sri Lankan Tamils and Indian Tamils and Moors, and a small presence of Burghers and Malays. This diversity means several opinions will be expressed within the political arena and contributes to the recent history of political unrest.

Sri Lanka has a total land area of 62,336.5 square kilometers, which includes 2,905.2 square kilometers of large inland bodies of water and 17,598.4 square kilometers of forest. The major crop is paddy, followed by major export crops of tea, rubber, and coconut and minor export crops of cocoa, cinnamon, pepper, and cardamom. Tea plantations are in the central highlands; tea has historically been an important crop and major source of export earnings. Other prominent crops with more than 20,000 hectares in planted area in 1992 included manioc, chillies, maize, green gram, and cowpea.

Cattle, buffalo, and goats are the main types of livestock, and there are abundant amounts of poultry. Fisheries production had steadily increased to reach an estimated total production of about 185,000 metric tons by 1992 but recently the security situation, inadequate equipment to access deep sea fish, and overfishing of reef stock have contributed to a dwindling supply in the market.

Sri Lanka has a wide range of agro-ecological environments and mountainous areas within the central highlands. The highlands are where most tea is grown on plantations, in addition to a wide variety of vegetables, depending on the elevation and extent of access to irrigation water. Likewise, there are extensive irrigation facilities in the Mahaweli Region.

The extensive road network is better developed and maintained in the highlands because those are the sites of historically important tea plantations. The roads are less well maintained in lowland areas, especially areas furthest from Colombo. A large number and variety of cargo and passenger vehicles are on the roads, reportedly expanded by the investments of returning overseas workers.

Land use is non-uniform and ranges from over-use of some productive highland areas to vast expanses of uncultivated lowland areas, especially in the dry zone and in national parks or wild animal reserves.

PROMINENT ISSUES

Problems of land ownership continue, because the government maintains ownership of the majority of land while there are increasing pressures for more productive crops to be grown on the limited land belonging to the private sector. This has affected the vegetable subsector in several ways, including limiting opportunities for converting additional highland areas into vegetable production and causing a scarcity of local property on which to construct markets.

Among the prominent issues that have influenced the vegetable subsector, the continuing ethnic and political violence, including recent assassinations of high-level officials, has created an environment of uncertainty. For instance, commercial trading companies that had recently established a presence in the Mahaweli region to buy higher-valued crops from local farmers withdrew when the fighting increased. The northern section of the country, which formerly supplied substantial amounts of vegetables to the national market network, has not been able to continue providing such supplies for several years.

Inconsistency in policy reforms constrains progress in economic growth relative to the agricultural sector, although recent relaxations on imports of seed material have been a positive sign of improvement. However, the recent tradition of government responsibility for many aspects of the economy and daily life of citizens has caused some hesitation of individuals willing and able to invest savings/earnings in individual activities.

This brief synopsis of the setting provides a context within which to judge the findings of this study relative to conditions found in vegetable subsectors in other Asian countries.

SECTION FOUR

VEGETABLE CONSUMPTION

The demand for fresh vegetables grown in Sri Lanka comes from both the domestic and foreign markets. However, because the largest share of production is consumed domestically and other studies already have focused on export markets, this study emphasizes the domestic market, while explaining export considerations whenever they arise in specific cases.

Among the main factors influencing domestic demand for fresh vegetables, tastes and preferences are particularly critical because of the distinctive dietary patterns of Sri Lankans. For instance, one needs to know the ways that vegetables are most commonly prepared — whether an integrated part of different dishes, alone in salads (as sold in fast food restaurants), cooked as a side dish with rice and meat, or cooked as curries with small portions of vegetables covered in sauces.

Another critical factor is shopping patterns or practices that affect the quantities and qualities purchased rather than harvested in one's garden. Income levels and distribution are important in terms of effective demand for what is available within the commercial marketing system.

The main intention of this section is to present several often overlooked factors of vegetable consumption along with their implications for the marketing system. Our information is derived primarily from observations and interviews with key informants because little detailed or in-depth information on vegetable consumption is available. First, types of consumers, prominent uses of vegetables, and consumption patterns will be discussed. Then, common shopping practices and patterns, and conditions in the shopping environment will be examined, especially in relation to the marketing system. Hopefully, several points will warrant follow-up research by the appropriate institutions.

CONSUMPTION PATTERNS OF CONSUMERS

From the national perspective, an important feature of vegetable consumption is that the volume of consumption is highest for lowland vegetables, yet there is more commercial marketing of exotic (or highland, temperate climate) vegetables. This assertion takes into account production statistics, lowland location of the vast majority of the population, likely consumption of vegetables from home gardens, perception that lowland vegetables are more "common place," and study team observations during visits to several lowland polas. Studies documenting consumption patterns could not be found to support or disprove these observations.

According to the local conventional wisdom, that is, opinions expressed by many people, lowland vegetables are less nutritious and more easily spoiled compared with highland vegetables. Likewise, exotic vegetables reportedly reflect the consumption style of the higher-status persons, thus they are more regularly used in curries for large meals at weddings or other celebrations.

On the one hand, interviews with traders and data of monitored volume flows through the Manning Market in Colombo support the contention that exotic vegetables dominate commercial marketing channels. In fact, most indications are that the marketing system for procuring and distributing exotic vegetables is far more responsive to changing demand and supply conditions than for most lowland vegetables. On the other hand, lowland polas are a major outlet for vegetables and clearly supply a large amount of lowland vegetables,

a fact for which no monitoring could be found. A monthly monitoring of sampled polas and retail markets is necessary to document which type of vegetable is fundamental to the Sri Lankan diet by location, season, and income level.

As in the case of vegetable farmers, there are several types of consumers, each with its own eating habits, preferences for particular vegetables, and ways of obtaining them. Likewise, in some locations there are many price-conscious consumers who willingly pay less for vegetables with a somewhat damaged appearance or slightly lower quality rather than pay more for similar freshness with superior appearance. One indication is the increasing popularity of urban polas that are a less-expensive source of lower-quality vegetables than the local retail marketplaces.

Vegetable consumers should be viewed in terms of the rural/urban distribution of population because urban consumers tend to rely more heavily on vegetables delivered from outside production areas or peri-urban sites. In other words, they depend more on the performance of a commercial marketing system rather than on what is grown in a their own home gardens. The large majority of Sri Lankan households are distributed around towns in dwellings with small plots of land available for growing vegetables and fruits. Many household members commute to towns for work rather than live in high-rise buildings concentrated in congested towns. In other words, one might describe Sri Lanka's densely populated areas as rural suburban rather than rural interior, as found in many other Asian countries.

Food Combinations

The most popular food combination in Sri Lankan households is rice and curry, that is, rice on a plate with three to six different bowls of assorted curries. Vegetable curry preparations include sliced, diced, or smashed vegetables covered with a rich, spicy sauce. Similarly, fish or meat curries include slices or pieces covered with other spicy sauces. In practice, one fish or meat curry is combined with a couple of vegetable curries for a meal. Given the strong preference for variety or a wide selection, there may be three or more vegetables at each meal rather than different treatments of the same vegetable. However, the quantity of each portion is small. Each week a family member selects a different combination of vegetables for curries to go with rice, which is the main course.

For most Sri Lankan consumers, taste rather than appearance is the critical criteria for each dish. Choices or selections of vegetables are important, not eating the same curry day after day. Consequently, when shopping one must select small quantities of several vegetables. Although the local salad, a shredded vegetable such as carrots, is used as a side dish, it is not eaten as frequently as curries.

Ethnic and Local Consumption Patterns

Ethnic and local consumption patterns also influence the amount, form, type, and timing of vegetable consumption with direct implications for seasonal demand and the prominence of certain popular vegetables. For example, Tamil workers in the highland tea and rubber plantations are said to have a preference for such vegetables as pumpkin, long beans, brinjals, and ash plantains, whereas others in the highland areas prefer the standard highland vegetables of carrot, cabbage, beetroot, leeks, and potato, although most people like green beans.

Food Preferences of Tourists and Foreign Residents

Tourists and foreign residents comprise another type of consumer group with varied eating habits. Many western tourists prefer fresh salads, sliced vegetables, sandwiches, and the like, whereas others prefer various forms of cooked vegetables, especially with sauces. Consequently, the market must provide some vegetables with especially good appearance, as in the case of top retailers in the Kollupitiya retail market in Colombo.

Some retailers receive regular supplies of perishable vegetables in green plastic containers delivered by an exporter who has a market channel to certain production sites. Thus, foreign consumers come from many parts of Colombo to purchase from these retailers, especially on the weekend. Likewise, two specialty fruit and vegetable shops, called "Vegetable Basket," began operations in Colombo in July 1995 to service this small, elite clientele.

Vegetable Demand by Restaurants

Types of restaurants will also influence vegetable demand. As more and more households have members returning from work overseas, the demand will grow for restaurants that serve the foreign foods to which they had become accustomed. Again, the ingredients for such specialty dishes will require improved handling for available vegetables or specialty vegetables to ensure the required appearance and acceptable taste. The opening of more Korean and Middle East restaurants in Colombo illustrates this point. But again this is a relatively new situation.

The prominence of fast-food restaurants exerts pressure on the vegetable marketing system to supply vegetables with features not commonly regarded as important in the domestic market — for instance, French fried potatoes are processed from a variety of potatoes with a particular shape and taste. Unfortunately, when suitable local varieties are not readily available, imports are required.

Preferences of Commercial Markets

Preferred quality traits of vegetables traded in commercial markets can also differ depending on how vegetables are prepared. For example, in five star hotels, tourists prefer to eat fresh vegetables sliced into salads, thus, appearance and freshness are both important marketing traits. Whereas for most Sri Lankan consumers who prefer vegetables in curries, freshness remains the primary quality trait.

Likewise, consumers' preference for different forms of vegetables, such as fresh vegetables rather than processed or frozen vegetables, can affect the nature and functioning of the marketing system. However, because limited demand exists for highly processed vegetables, except perhaps for tomato catsup, large supermarkets are able to supply them mostly from imports. Unless a household is in the higher income group, a foreign household, or celebrating a special occasion, highly processed vegetables are consumed in limited amounts.

The variety of a vegetable also influences its use. For instance, the large yellowish/green cucumber is cooked, whereas the smaller, slender green cucumber is sliced into western salads. The former has a shorter shelf life than the latter but is more commonly consumed. Similarly, fresh green chilies are used in one set of dishes, whereas dried red chilies are preferred for another type. Although, the latter can be made by leaving the green chilies on the plant for a longer period of time and drying them, some varieties are better suited for one use than the other.

Implications

The key point is that the performance of the marketing system should be judged by its ability to satisfy each preference in the most efficient and effective manner possible. From a national perspective — innovations in response to upscale marketing preferences are less problematic because profits can be earned to offset costs. However, servicing the consumption preferences of middle income households is more difficult because they may compete more directly with traditional distribution methods.

Better hotels and restaurants already catering to high-income consumers have established special procurement arrangements to obtain the necessary choices and quality. For example, tourist hotels along the southern coast contract the services of a company that personally chooses the best quality from highland areas. Other hotels and restaurants around and near Colombo deal with a few specific suppliers still active in the Manning Market. Likewise, within Colombo's higher-income suburbs, Vegetable Basket outlets and export channels service the quality demanded by top Kollupitiya retailers. In the town of Nuwara Eliya, one large trader is reputed to handle hard-to-find specialty vegetables, such as celery and bell peppers, just for that special clientele throughout the country.

Because the vast majority of vegetables are consumed in curries, the traditional marketing channels focus on rapidly moving the commodity from the field to the retailer's stand and consumer's table rather than maintaining appearance. Consequently, the damaged appearance, caused by the overloaded bags or the rough method of handling, become secondary to the speed of handling. However, the wholesaler system has developed new channels and somewhat better handling practices with more attention to quality considerations. Also, recent exporters servicing the higher end of the foreign market have established their own marketing channels that have higher costs than the traditional channels but provide less-damaged goods.

Compared with several other Asian countries, the per capita consumption of vegetables is reportedly low, although a well-documented consumption study could not be found. From a nutritional standpoint, vegetable consumption could be improved markedly given an effective set of policies and incentives both at the consumption and production sides of the vegetable subsector.

SHOPPING PRACTICES AND PATTERNS

The observed shopping practices of consumers included consumers inspecting vegetables piece by piece and then haggling about the price. Consumers prefer to select their own pieces (although few retailers seem willing to allow that) and buy small amounts (about 100 gm or 250 gm/vegetable rather than on a kilogram basis). Consumers select a mix of several vegetables rather than a single vegetable, and choose the types that suit the occasion — for ordinary household consumption or for a celebration. Most shopping is done by women although male commuters also frequented retail markets from 4 to 6 p.m. on the way home after office hours. Whenever there is a special celebration, such as a wedding or a holiday, consumers generally buy larger quantities and more exotic vegetables.

In retail marketplaces, retailers occasionally call out prices and selection to get the attention of consumers. However, in most polas, several retailers constantly shout out prices, quality traits, and selection in an effort to attract the attention of customers. Of course, at polas the number of vegetable sellers ranges from scores to hundreds of persons. And during the weekend, there seems to be more of a carnival atmosphere in the pola, whereas in retail markets there are far fewer retailers and there is a more subdued, serious atmosphere.

Different sets of consumers shop at different times of the day. For example, most women from local households shop in the early morning up to 10:00 or 11:00 a.m. However, commuters, that is, men and women who commute to offices and jobs in town, buy some vegetables on their way home from between 4 to 6 p.m. Also, the proliferation of roadside stands along some roads suggests that people who travel in rural areas look for fresh vegetables and bargains in the countryside.

Because most households have no refrigeration, some member of the household must shop at regular intervals. Freshness is an important concern because the older the vegetable when purchased, the sooner it must be used and the sooner someone must again go shopping. Stored vegetables are more problematic for consumers and earn a substantially lower price.

Choice of Market

Many factors influence the choice between polas and retail markets — among them, location, time of day, and the number of itinerant traders present at polas. Most consumers, however, believe vegetables are much cheaper at polas than at retail markets, although of somewhat lower quality. Field observations and price comparisons found that prices are similar for the same quality commodities, but that polas also offer lower-quality, less costly vegetables and larger quantities. The shopping environment at polas, which rely on ground-level display and are often characterized by a carnival atmosphere, is generally poor in inclement weather.

Retail markets, however, usually offer a wider selection of vegetables, especially the more scarce vegetables such as off-season tomatoes; easier inspection given waist-high stands; and a place sheltered from adverse weather. In other words, the differences between retail markets and polas include not only differences in vegetables and their value but a very different shopping experience.

A common practice is for urban polas to have one or two days of their twice weekly schedule during the weekend when the entire family can shop for personal and household items in addition to vegetables. This provides a social activity for many families.

In this research, the team confirmed from wholesale distributors at various junctures within the marketing system that itinerant traders buying for the polas commonly search for bargains, or cheaper vegetables, and are more likely to choose the poorer quality when a choice is offered. However, traders who supply or operate within retail markets or boutiques select a larger share of better-quality vegetables, including a larger volume of exotic vegetables. These observations from marketers confirmed consumers' perceptions of the situation.

Implications

Unfortunately, most municipal and other local officials, based on their inaction, adverse reactions, or general neglect regarding the local market environment, did not exhibit any understanding of the foregoing distinctive features of alternative types of consumers and markets. Local political expediency dominated their decisions rather than any form of commonly accepted code of conduct or criteria for market performance. Improvements could be expected if the performance of the vegetable marketing system were judged on its ability to service the consumption and shopping requirements of each segment of the population — consumers who are price-conscious; consumers who prefer better quality with wider selections; and consumers with special consumption needs, such as for weddings or holidays.

The basics of such performance criteria would be a balance between the twice weekly urban pola and daily retail marketplace. For adequate market performance, each municipality should provide strategically and conveniently located, moderately priced, and sheltered shopping places and adhere to a reasonable code of conduct for the sales of fresh vegetables. This would mean reducing the impediments to orderly, safe, and sanitary shopping conditions while enhancing opportunities to purchase healthy foods. Likewise, not allowing the sale of fresh vegetable outside of the designated places and facilities would provide a fair, competitive, and manageable marketing environment for all parties concerned.

There is also a need to monitor and modify vegetable marketing services at a pace in keeping with the shifts in consumer shopping patterns and requirements, whether by endorsing an increase in the number of trading licenses, identifying new retail sites in expanding housing areas, or supporting part-time management of existing facilities. At the same time, municipalities need to charge realistic rental rates to cover all costs incurred for maintaining, repairing, and managing such facilities. These rates would be increased over time rather than be frozen in time, a practice that is currently common.

SECTION FIVE

VEGETABLE PRODUCTION

Because this assessment of the vegetable marketing system applied the commodity systems framework, the team identified factors that influence vegetable marketing practices. The fact that Sri Lanka's agricultural sector is production-oriented helps explain current constraints to developing an adequate market system caused by a lack of adequate public sector support.

The production-oriented school of thought within the agricultural development community contends that research should focus on increasing production and productivity because as output expands, the markets will naturally follow. However, that assertion has repeatedly proven false in Sri Lanka and in many other countries. The market-oriented school of thought, however, proposes that improvements in the organization and operations of the market system accelerates both productivity and production. This viewpoint has proven successful in most cases, such as in the exemplary case of Taiwan.

The reason is simple — market signals, combined with the incentives and motivation to sell what end-users really need, guide the major production decisions within commercial agriculture. Meanwhile, the public sector reinforces those developments with appropriate policy and infrastructural support.

This section discusses vegetable producers, their production environment and patterns, and production problems. A key point that will be repeated is that analysts should avoid broad generalizations because of the high degree of diversity observed in vegetable production in Sri Lanka.

VEGETABLE PRODUCERS

No one can realistically attempt to analyze and propose broad-based improvements to the livelihood of the vegetable grower because there is no single all-inclusive pattern of vegetable production. Although useful generalizations have been applied to rice farmers or tea estates, few would apply to vegetable growers given the agro-ecological diversity of Sri Lanka and the multiple scenarios depicting conditions in which vegetables are being cultivated.

Several types of vegetable growers were met or observed, including the coastal farmer with his small sandy field of newly planted brinjals; highland farmer using a hoe to form rows to plant tomatoes in irregularly shaped, former paddy plots; highland farmer watching preparations to plant potatoes in recently cultivated narrow terraces; laborers using a pumpset and long hose to spray long raised beds of leeks intercropped with carrots with a single row of lettuce planted along one side of each bed; or farmer on a broad lowland field weeding a plot of newly planted chilies and onions. Vegetable growers in each agro-ecological zone had varied incentives for planting, grew a wide range of vegetable crops, relied on different cultivation methods, and used different marketing practices to sell their crops.

There were differences in the varieties of vegetable, cropping patterns, agro-climatic conditions, production terrain and elevation, seasons/location, absence or presence of production support systems, extent of cultivation experience and farm resources, accessibility and distance to market outlets, and degrees of uncertainties regarding price and the like. In other words, diversity was at the heart of the vegetable production sector in Sri Lanka.

At least four elements must be treated separately when attempting to develop meaningful groupings of growers:

- Type of vegetable selected for cultivation;
- Production environment — elevation of field relative to high, middle, or lowland cultivation; soil fertility; and source of water, whether rainfed during Maha or Yala season or irrigated;
- Market environment in terms of proximity, access to affordable and timely transportation, and nature of competitive outlets; and
- Personal characteristics of growers in terms of resources; motivation (whether a major source of income or just additional cash); and experience, including the historical prominence of vegetables within this farmer's cropping patterns.

Because a complete classification of the major types of vegetable producers could not be accomplished during this assessment, following are insights gained from our interviews and observations.

In the literature, the most frequently cited distinction of vegetable grower is whether a highland grower of exotic (temperate climate) vegetables or lowland grower of tropical vegetables. Yet, as heat tolerant varieties of highland vegetables (such as tomatoes and cabbage) become more popular, they will be grown under both low and highland conditions with some differences in quality and cultivation practices. This complicates the original grower distinction based on elevation.

Full-time, professional vegetable growers produce vegetables year round as their main source of income and usually grow vegetables in different amounts and qualities, compared with the part-time growers who produce seasonally as a supplementary source of family income. An important characteristic of the full-time vegetable grower is the experience and skill to take into account price movements and uncertainties when deciding what vegetables to plant and when. Without such an ability to accommodate market risks, this type of farmer would not recover from debt problems because of large expenditures on cash inputs. This type of farmer was found primarily in the highland areas of Nuwara Eliya and Kandapola and the lowland areas along the Kalpitiya Belt. Pumpset irrigation was a common feature for most of these farmers and sites.

Full-time vegetable growers in the Kandapola area were reportedly very skilled and prosperous as confirmed by the number of their vehicles and the size and good appearance of their homes. Farmers in other areas, however, who produced a single season of vegetables, seemed less prosperous with living conditions varying from place to place. However, few had homes in very poor condition, unless they recently moved into a particular area.

The part-time grower has a tendency to select crops that will grow well in his field during the growing season without a great deal of cash inputs or care. In irrigation projects with a limited amount of water during the dry season, vegetables following rice can be a profitable choice. However, in Chena cultivation (that is, slash and burn agriculture), farmers will grow vegetables during the rainy season, assuming rain comes as expected. Appropriateness to the local agro-climatic conditions, rather than any market signal, is a primary reason for selecting the particular vegetable planted. Consequently, this group of growers is most likely to become a major source of market gluts. Intensive extension efforts to explain how to include market behavior and pricing patterns into crop selection decisions can best be directed at this type of farmer.

Poor productivity and diversity of crops per field planted also originate from the critical inputs used, especially seed material. Except for imported seed material for such crops as cabbage, beetroot, capsicum,

onions, radish, and potato, most vegetable growers tend to save seed from their previous crops, particularly for the lowland vegetables. This practice should be a major cause for the reportedly low productivity for many crops within the vegetable sector. Given the resulting low yields, the costs per unit of output are reported to be high relative to costs in most countries in Southeast Asia. Likewise, if one takes into account the lost investment in planted seed beds and/or recently planted fields that were heavily damaged by unexpectedly high winds and heavy rains, particularly during the May to June period, replanting costs will add substantially to those reportedly high costs of production.

A critical distinction is between vegetable growers who have access to water — whether irrigation canals, sprinklers, or water pumps with a hose — and those who depend entirely on irregular rainfall. The uncertainty associated with inadequate rainfall usually affects the amount of cash inputs the farmer applies. When this criterion is overlaid with elevation, one can identify the range of conditions, from the rainfed situation of the highland Chena farmers (those practicing slash and burn agriculture), relative to the irrigation channels of Bandarawela farmers, compared with the pumpset and hose methods in Kandapola. Productive capacity is highest under the Kandapola conditions and lowest under most Chena situations.

However, growers in Kandapola expressed concern about decreasing yields relative to the former productivity of their fields, given similar levels of input use. Likewise, the ever-increasing construction of houses and shops on formerly productive fields is steadily diminishing the volume of vegetables shipped from this small valley.

Seasonal vegetable growers in Bandarawela explained that one season of rice production is required by the terms of water use in their irrigation association. Rice is also preferred for reasons of family food security, as rice is the essential staple in their diets. Consequently, given the institutional and personal considerations, there is limited flexibility to grow vegetables during the off-season in their irrigated fields. Such cases support the likelihood that new production areas rather than improved productivity in traditional sites will be the main source of increased supply in the future.

Local seasonality is always important, especially in terms of off-season cultivation with the risks of bad weather, unfavorable climate, and more insect and disease damage compared with in-season when weather conditions are most favorable and more conducive to large yields and high quality. Unfortunately, the most favorable season for vegetable production usually has the lowest prices because abundant vegetables cause gluts whereas scarcity earns high prices even if quality is not good. This phenomena often seemed to confound part-time vegetable growers and was often at the root of disagreements between farmers and traders.

Vegetable growers who are often overlooked but who are a steady supplier of exotic vegetables are the tea plantation workers who regularly grow vegetables in plots near their rooms. They provide vegetables to various highland markets, depending on the routes of the lorries transporting tea.

PRODUCTION ENVIRONMENT AND PATTERNS

Production environments indicate the agro-climatic conditions within which vegetable cultivation occurs. For instance, an important pattern is the distinct production seasonality beyond the cases of year-round production in Nuwara Eliya and Kandapola highland areas on the Kalpitiya Belt for the lowlands. The two key seasons are the July to September "Kandy Season," referring to production around Matale, Hanguranketa, Marassana, and vicinity, and the September to December peak season for Bandarawela, Welimada, and Haputale farmers (Map 2). Production environments are also classified according to elevation.

The input and output support system of the production environment is often overlooked, especially in places where there has been a long history of successful vegetable cultivation. For instance, farmers with decades of year-round vegetable cultivation experience in the Kandapola valley near Nuwara Eliya grow high-yielding, quality vegetables within a complete input and output support system. There is ready access to imported seed, pumpsets for irrigation, asphalted road network, and arrangements for buying fresh compost by the lorry load. There also is familiarity with seasonal and soil responses to individual vegetables, and there are tested intercropping schemes to fully use the scarce land throughout the year.

Likewise, there are resident traders and buyers who come regularly from outside. There are Transport Union lorries to pick up and deliver vegetables to commission agents in Colombo. However, in most locations around the country there are limited support systems in place for crops other than for major crops, such as rice or tea. Likewise, where farmers are only beginning to grow vegetables, only parts or none of those support systems are in place.

The terrain on which vegetables are grown varies from sloping fields on mountainsides to mountain terraces to the bottom of valleys to broad level lowland fields to rice paddy plots in the off-season. Each has different implications for its production environment.

Highlands

Vegetables grown at high altitudes, such as in the Nuwara Eliya area, reportedly have extended shelf life in comparison with the same vegetables grown in mid-altitude locations, such as in Bandarawela. This helps to explain price differences for an identical commodity grown at a different altitude. Given delays in moving the commodity from the farmgate to the consumer's table, the longer shelf life is a strong selling point. However, because such a qualitative difference cannot be seen after the vegetable is marketed, the need to purchase near the production site to validate its origin helps to explain why retailers/wholesalers travel to production area markets to purchase fresh vegetables rather than wait for another trader to bring vegetables from those places.

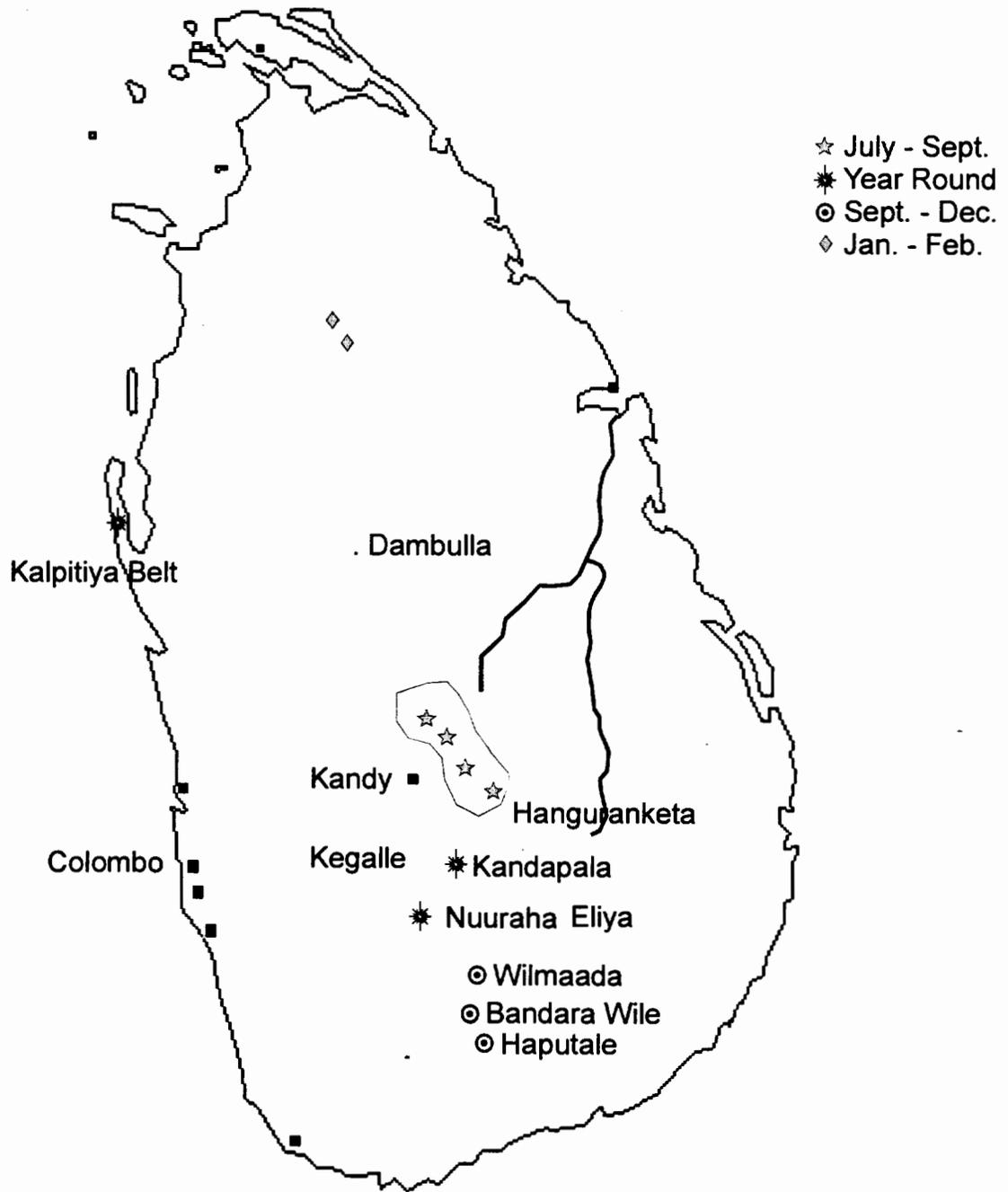
At the opposite end of production environments are the interior, highland production sites where farmers use Chena cultivation techniques on freshly cleared forest area during the rainy season to grow small fields of vegetables. For an in-depth understanding of the vegetable sector, one must understand each production situation and its impact on the market. Unfortunately, that is beyond the team's current mandate.

As noted above, many production patterns revolve around rice production seasons. In fact, the peak vegetable production seasons are often opposite the main rice production season for a given location. Growing vegetables or other field crops in the season following the rice crop is a common pattern in rainfed areas and in several irrigated areas. Likewise, most farmers observed were growing more than one type of vegetable per field, except potato cultivators. Another concern expressed by farmers is the seasonal winds that damage several types of vegetables.

The final production consideration is the distance of the production site to alternative market outlets, and accessibility (position along the main road or far interior in mountainous terrain) to and availability of affordable transportation. These considerations are also relevant to procuring agro-chemical inputs for each crop.

MAP²³
2

MAIN HARVEST SEASONS IN
KEY VEGETABLE PRODUCTION AREAS



Lowlands

The three main production areas of the lowlands are along the coast in the Kalpitiya Belt near the town of Puttalam, extensive areas in chilies and onions in the Mahaweli areas, and scattered crops in fields along the roads. As in the specialized highland vegetable production areas, full-time vegetable farmers in the Kalpitiya Belt have access to a reliable production support system. They apply sizable amounts of dry compost to their sandy fields, dig shallow wells from which a pumpset draws water for irrigating their fields, and purchase seeds from small shops. Also, a sizeable local assembly market recently began to operate at one of the two major intersections.

In the paddy fields in the Mahaweli irrigation project, farmers plant a portion of their fields to small plots of vegetables during the dry season. Vegetables are usually planted on their higher fields. Because several farmers within a given location plant these vegetables, there is access to lorries to haul the harvests to nearby markets, especially to Dambulla. Onions and chilies are the most popular crops in this area.

While traveling along interior roads, the team observed scattered small fields of a wide assortment of vegetables, but no specific pattern was observed.

Related Factors

Off-season production of vegetables is particularly difficult. During the study period of June and July 1995, the severe shortage of exotic vegetables was reportedly caused by early harsh winds and unanticipated, excessive rainfall in the special production areas during May, whereas in other places there were drought conditions.

The minimum distance to the nearest market outlet or the density of production that would warrant the presence of several itinerant traders on a regular basis are also important factors, but the team had no opportunity to examine them. For the planner, these determinations are essential before proposing programs to manage or increase the production of vegetables during particular seasons.

The common and varied micro climate patterns often illustrated in climate maps indicate the likelihood of finding sufficient production sites to reduce the extent of the vegetable scarcity during the off-season months. However, a concerted effort to identify acceptable sites, to orchestrate the transfer of production technologies, and to establish the basic support systems while competing with other uses for that land still need careful analysis.

PRODUCTION PROBLEMS

At the production level, different reports expressed concerns about the availability and viability of imported seed material, the excessive use of pesticides in some locations (especially during the off-season), and the high costs of chemical inputs. Although a few farmers complained about the lack of access to imported seeds (such as Denipitiya farmers' difficulty in accessing imported radish seed), traders and farmers in the highlands seemed to think this situation has improved, including imports of potato seed material. Likewise, during visits to seed shops, several imported varieties were available and no one mentioned this as a serious problem because the Ministry lifted former constraints to imports. In fact, some traders mentioned their intention to enter that type of business.

Although extensionists mentioned the heavy applications of pesticides, and the incident where a farmer had to sell his crop too soon in order to pay for his brother's hospitalization caused by a pesticide-related accident, the team did not observe or hear much about this problem at the farm level. However, vegetable farmers, like farmers the world over, were concerned about the increasing cost of agro-chemical inputs.

The most frequently mentioned problems were associated with marketing vegetables during the peak harvest season when prices were very low. Also, some farmers in Hanguranketa were concerned about the increasing presence of brokers in their area where previously there were none. Previously they just sent their harvests to the Colombo commission agents through the Transport Union. There was no need for brokers before the increasing presence of itinerant traders at the farm level. Likewise, when asked why they did not also enter that type of business, they said that they earned more as farmers.

Practices at the production level that adversely affected the quality of vegetables at the other end of the marketing system include farmers overloading bags. For example, in the Nuwara Eliya area, farmers tried to load as much as 80 kilograms of vegetables into a single bag because of their savings in local loading and unloading charges and in the weight discounts imposed on a per-bag basis. However, whenever sending vegetables through the local Transport Union to Colombo, only 50 kilograms were allowed per bag.

Local farmers also are not willing to sort under-sized vegetables from the harvest because traders pay lower prices for them. This problem of sorting vegetables according to size or other characteristics was also expressed by traders and farmers dealing with exporters who accept only a portion of each delivery as acceptable for export. When the rejected vegetables are sold locally, buyers discount the price substantially claiming inferior quality. Similarly, whenever a farmer delivers vegetables to itinerant traders who do not like the quality, the rejection often draws a negative reaction from farmers. This behavior needs further analysis to determine long-term corrective action.

In the highlands, heavy rains and strong winds are a serious seasonal problem and limiting factor in cultivating certain vegetables. However, the team did not notice many alternative types of windbreaks or cropping arrangements to minimize wind damage. This problem warrants further attention.

Another possible future problem in the highland production areas is the reported seasonal shortage of laborers willing to work in the harvest loading crews hired by the large Nuwara Eliya traders. If this condition persists, the price for these highland vegetables will increase.

The localized approach to many aspects of life also extends to vegetable cultivation. For instance, in the Nuwara Eliya area the team noticed several forms of intercropping arrangements but seldom found much intercropping in other locations. Could there be an exchange of ideas across locations, such as alternative forms of intercropping and use of compost, which would sharply increase productivity? Could those growers and their next generation become a resource for a private sector extension service or serve as trainers for such a service?

In other Asian countries, local traders often competed among themselves by offering farmers inputs and used the provision of key inputs, especially seed, to influence what and how much per crop was actually grown in a given locality. This influence could reduce excesses of one crop yet ensure sufficient harvest volume to fill a lorry for long-distance transportation to large markets. However, in Sri Lanka, such backward integration seems to apply mainly to large farmers, whereas most input suppliers are different businessmen than the traders who buy the commodities at the harvest time.

The key point in designing and implementing corrective action to increase the productivity of vegetable farmers is a season- and location-specific viewpoint at the production level and a marketing frame of reference in the selection of crops to grow. The historical, seasonal pattern of excess production with market gluts and low prices and deficit production with market scarcity and high prices must be corrected at both the production and market levels. Farmers who harvest appropriate vegetables in the lean months should have few marketing problems and will earn acceptable incomes.

SECTION SIX

MARKETING SYSTEM IN TRANSITION

The central focus of this study is the transition of the organization and operation of the national marketing network for the vegetable subsector, as assessed from studies and observed through extensive field work done in June and July 1995. This section addresses the marketing system, bridging the points discussed in the previous sections on vegetable consumption and production. It presents the larger perspective as well as specific examples to illustrate key points.

In addition, this section raises an alert — there is a steady and serious pattern of deterioration in several marketplaces and absence of market management skills, both in the main terminal market, the Manning (Pettah) Market in Colombo, and in several smaller retail and wholesale markets throughout the country. Although two major wholesale facilities are being constructed with funding from the Asian Development Bank, the information on which they were designed is clearly inadequate and the resulting designs have serious flaws.

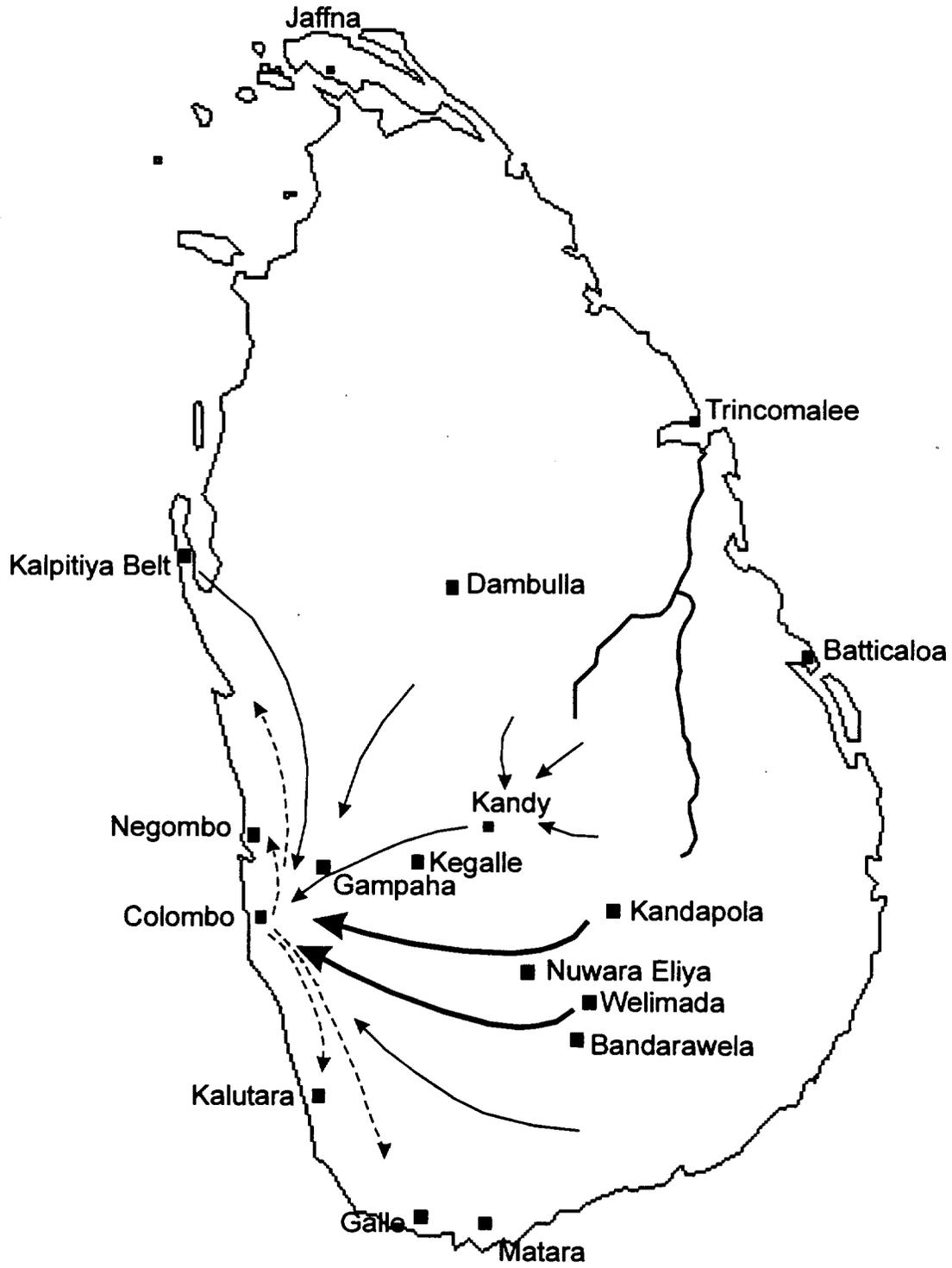
The following three sections attempt to sort out the relevant factors, specific situations, and basic relationships while depicting the assorted conditions found within the unique "outstation" sites and the national capital of Colombo. This section includes an historical perspective, develops a frame of reference with which to examine the marketing system, highlights key points to keep in mind, and identifies pertinent problems. The following sections cover market organization and operations.

HISTORICAL PERSPECTIVE

The challenge of this study was documenting the transition away from the former more centralized, vegetable marketing network as orchestrated by commission agents in the Colombo and Kandy wholesale markets, then trying to outline the movement toward today's more decentralized, vigorous marketing network that includes emerging regional assembly and distribution market centers. Most market changes were accomplished in spite of neglect by the public sector.

Decades ago, large commission agents, primarily in Colombo and secondarily in Kandy, established an integrated system where transport unions in the traditional highland production areas were responsible for traveling specified, scheduled routes along interior mountain roads to collect the vegetables placed at the roadside by farmers. The bags or other containers had the mark of the farmer and symbol of the designated commission agent; thus, the lorry operator could load and transport them to the specific market and consignee. After the commission agent sold the vegetables, he paid the freight fee and sent the balance to the farmer, after deducting all costs and a 10 percent commission. In some locations, resident traders became the local agents for these large commission agents who used selective loans and the provision of other incentives to manage this network of highland suppliers. This pattern is depicted on Map 3.

TRADITIONAL VEGETABLE MARKETING NETWORK, 1970s



In the meantime, in the mid-1980s, assembly market centers began to emerge gradually as resident traders began business and bought vegetables on their own account rather than only on a commission basis. In major highland production areas resident traders competed with the commission agents' system which was linked to transport unions. Locations, such as Nuwara Eliya, Bandarawela, Welimada, Hanguranketa, and Haputale began growing into vibrant regional assembly markets in which resident wholesalers bought vegetables from farmers, brokers, or collectors and sold primarily to itinerant traders and regional traders who came to their areas regularly.

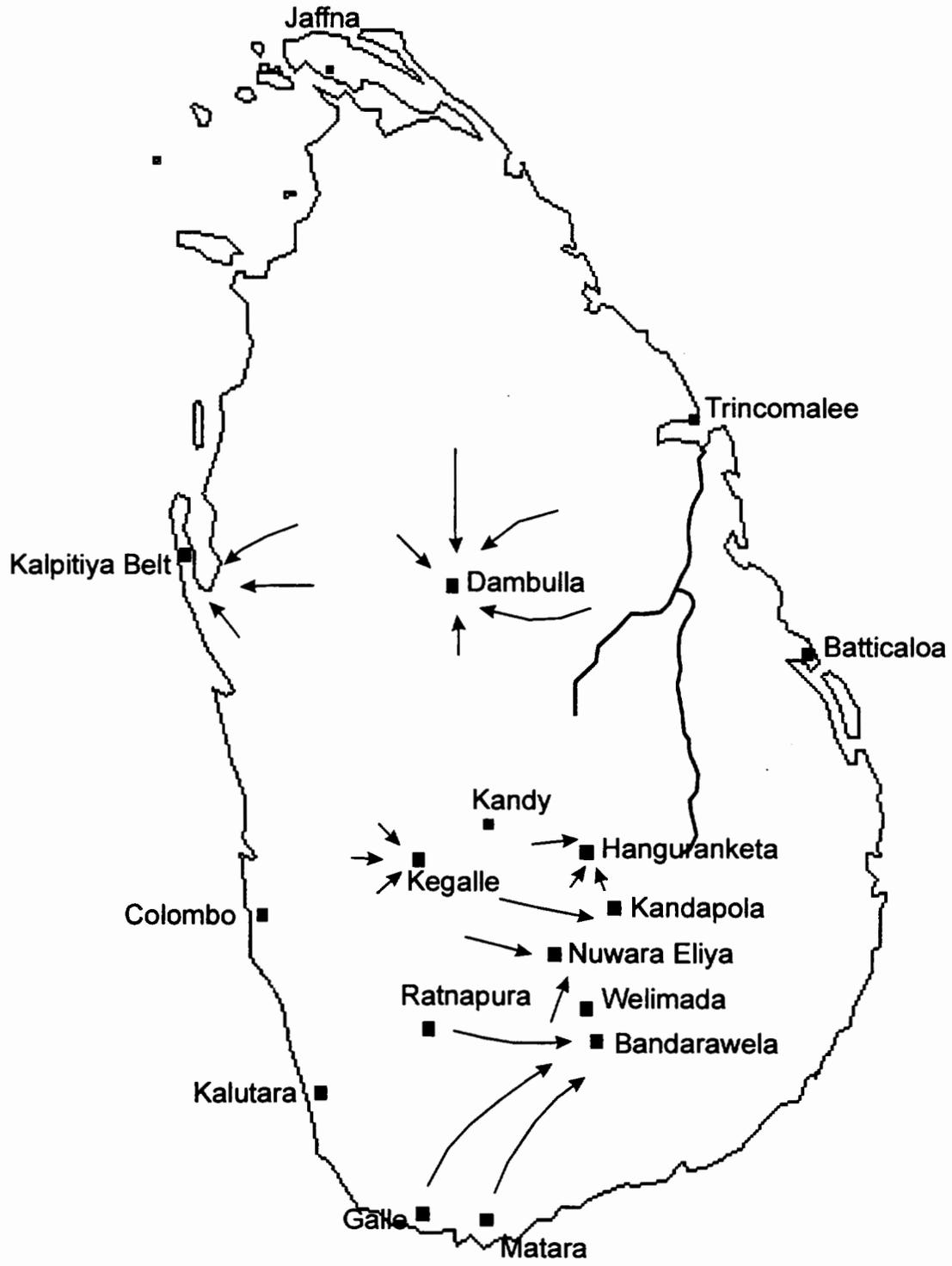
This situation, as depicted in Map 4, signifies a critical transition. First, there was the structural change of the "outstation" marketing system — a transition from a centralized system orchestrated from Colombo and Kandy to decentralized and independent market centers networking with traders from many towns and cities throughout the country. Second, there was the emergence of wholesalers who take possession of the vegetables and sell them according to their expectations of demand requirements rather than the former surplus disposal approach of commission agents who received whatever was shipped from the supply areas. Today traders in both the traditional and emerging vegetable marketing networks compete for the farmers' production.

Consequently, during lean months the commission agents now often receive insufficient amounts of quality vegetables because wholesalers have already purchased them, whereas during peak harvest periods commission agents are flooded with excess vegetables. In fact, this occurs to such an extent that during the 1995 June-July period of scarcity, the price discovery process in highland assembly market centers became so strong that traders no longer even referred to the Colombo reference prices as they had in the past. However, the new assembly market centers need practical support from the public sector to fully perform their potential role and to educate farmers in making informed marketing decisions.

In summary, a few benefits of this marketing system in transition are:

- A market nearer to the farm level helps farmers to better understand marketing;
- Local traders often charge 5 percent commission or a similar amount rather than the standard commission in Colombo and Kandy markets of 10 percent;
- Buyers coming into an area actively looking for vegetables provide multiple choices for farmers;
- Market competition has increased;
- There is a reduced time-lag between harvest and when payment is received; and
- Formerly in the highlands, mostly large farmers were given attention, loans, and services in exchange for their harvests, but now small farmers in some locations receive market information in addition to harvesting and hauling services from some brokers and collectors.

EMERGING VEGETABLE MARKETING NETWORK, 1990s



FRAME OF REFERENCE

A basic understanding of the complexity and dynamics of this evolving marketing system requires a frame of reference around which to organize and present the information and insights gathered. This frame of reference proposes meaningful categorizations that can be used to further explain, interpret, and analyze the overall market organization and operations within the vegetable subsector. However, because there are so many unique location-by-location features in the Sri Lankan marketing system, the team has only begun the process of understanding underlying motives and fundamental cause and effect relationships.

It is important to clarify an expression frequently referred to during discussions and interviews but never clearly defined. That term is "regional markets." A regional market is a market where extensive vegetable trading occurs in the process of supporting demand and/or supply requirements beyond the local district in which it is located. Thus, for a market to be "regional" means that a large share of vegetables arrive from and/or are shipped to distant locations. Three main types of regional markets were identified:

- **Assembly market centers:** these are in a supply area and consist of a group of wholesalers' shops in close proximity to one another from which local vegetables are taken to several distant markets. Their relative importance depends on the size of local volumes handled, number of months of active trading, number of commodities traded, and number of buyers coming from distant markets. Examples include the year-round assembly market center in Nuwara Eliya and seasonal markets to its southeast (such as Welimada and Bandarawela), to its north (Kande Handiya, Hanguranketa, and Marassana), or to its northwest (the Kalpitiya Belt). Although a few large-scale polas handle large volumes of a particular crop, such as banana, they are usually not referred to as regional markets.
- **Distribution markets or market centers:** these are located in a demand, supply, or transshipment areas, where many commodities traded come from and go to several distant outlets, as compared with a local assembly market (rural) or consumption area market (urban). The importance of distribution markets or market centers depends on the volumes traded and number of buyers serviced. These factors and the distances that local traders travel to procure vegetables and distances buyers travel to purchase at this market indicate the market's role in the national network. The Dambulla market center is an important example of this type of market; Kegalle's pola, although of lesser importance, is also an example of this type of market. In the past, the Colombo and Kandy markets served as market centers because they redistributed a large share of whatever was sent to them.
- **Consumption area markets:** the importance of these markets depends on the number of local consumers serviced and the factors cited above for assembly markets. Consumption area markets have two subgroups — the terminal markets, as found in Colombo and Kandy; and smaller urban markets that service both the local population and surrounding towns, such as found in Galle, Matara, and Anuradhapura.

In addition to the types of markets listed above, the frame of reference builds on the "market clearing" concept underlying the dynamics of the free market economy — buyers and sellers interacting to clear the market of commodities demanded and supplied. One also needs to understand how market seasonality causes scarcity or gluts and the implications on the time period within which the market for each commodity system (or all commodities in aggregate) functions. Basic concepts useful in understanding the organization and operations of the vegetable marketing system include:

- **Market clearing:** whatever quantities of vegetables are offered for sale are bought within the time allotted per market. Timing is important for market performance, and allows for varied quality traits within the lots of goods offered and thus a range of buying prices as long as everything moves through the market.

Given the perishability, or very short shelf life, of fresh vegetables in the tropical climate of Sri Lanka, freshness is required to maintain value and food safety. Consequently, each day's delivery of vegetables to a market must immediately clear that market through the pricing mechanism, because quantity is already determined. That volume is then dispersed rapidly through the marketing system to the end users.

Implications:

- Delayed sales after harvest (holding out for a better price) can sharply increase losses whenever a buyers' market condition prevails;
 - Depending on the length of the marketing channel, several markets may have to be cleared before vegetables finally reach consumers;
 - Badly damaged vegetables after long distance shipment will be sorted at the retail level, seldom at the wholesale level; thus whenever quality losses are high, price spread at the retail level will be highest in a competitive system; and
 - Early in the day prices are generally higher and gradually decline throughout the day as vegetables deteriorate; this has implications as to when meaningful market information should be collected and disseminated.
- **Buyers' market:** buyers (consumers, retailers, and on backwards in the system) are in a better position to delay purchases and exert downward pressure on prices given impending gluts during peak harvest seasons, thus sellers (growers or traders in supply areas) vigorously search for someone to buy their commodities.

Implications:

- Market prices decline because of the large quantities usually generated during this main harvest period;
- Farmers are under pressure to improve the presentation of goods (better quality) so that it is not difficult to find interested buyers;
- Farmer-trader tie-up, meaning that farmers will accept traders providing production inputs in exchange for lower prices paid at harvest time as long as the entire harvest is purchased. Although the provision of inputs is useful at planting time, the farmers' major concern is to ensure that someone will buy the entire crop. Of course the trader who provides farmers with fertilizer, pesticides, cash advances, and so forth must purchase the crop in order to recover his investment;

- Quality (in general) entering the market is better given both this favorable cultivation season (such as less insects, fewer diseases, better rainfall, favorable climate) and market pressures to purchase the best quality first; and
- Marketable yield at harvest time is higher in absolute terms but lower in percentage terms, compared with off-season yields (even though quality is better, prices are often lower — a very hard reality for farmers to understand!).
- **Seller's market:** sellers (growers, traders in supply areas, and on forward in the system) are in a better position to exert upward pressures on prices during this period of relative scarcity; in fact, during this period buyers will usually travel to production areas in search of scarce vegetables.

Implications:

- Market prices increase because of shortages, unless sufficient quantities of suitable substitutes are available;
- Farmers can sell whatever quality they harvest, depending on the severity of the scarcity and the alternative uses for this commodity;
- Poorer quality (in general) enters the market during this off-season as compared with during the peak season because of a higher incidence of insects, more virulent diseases, less favorable rainfall, poorer climate, and so forth, and traders need to provide some of the product demanded by consumers; and
- Marketable yield (lower in absolute terms but higher in percentage terms) means most qualities will be sold at differential prices, which may even be higher than during the peak season (another difficult reality for farmers to understand).

The team repeatedly observed a “localized mindset” which affected ways of conducting business. Key informants explained it as the need for “community-based knowledge” to do business within a particular area. If a person came from Matara, he would be in a strong position to retail vegetables in Matara, but not in Nuwara Eliya. Whereas if he were a wholesaler from Nuwara Eliya, there reportedly would be few ways he could deliver vegetables and compete with local wholesalers and retailers in Matara. In other words, known and trusted insiders have a stronger position in the mind of local people than outsiders, at least in the short run.

One innovative trading family from Ambalangoda was trying to break that pattern by providing wholesale delivery services of high-quality vegetables to retailers in towns along the southern coast. The supplier's success, beyond supplying its five star hotels along the coast, is still uncertain. In similar marketing studies in other Asian countries, this localized phenomena was not observed as prominently as in Sri Lanka.

A previous marketing study suggested that before the colonial period people did not travel widely around the country but stayed in their own communities. This lack of mobility caused the gradual formation of small close-knit, village communities that are suspicious of outsiders. Consequently, people prefer to deal with those they know than with outsiders. It would be interesting to evaluate whether this localized mindset is becoming more or less important over time.

KEY POINTS

Key points derived from the team's observations in the field include:

- The vegetable marketing system is organized to deliver fresh vegetables quickly to retail markets. The system is not sensitive, however, to maintaining unblemished appearance (quality) because the most popular local uses for vegetables (curries and salads of shredded vegetables) do not require good appearance and most consumers cannot afford the higher prices of "carefully handled" goods. In fact, when considering the nation as a whole, there seems to be fewer sales at the high end of the market.
- Upcountry (exotic) vegetables have the largest share of the commercial vegetable market whereas lowland vegetables maintain a smaller share, often because they are perceived more as a secondary type of vegetable and are easily grown by households in the lowlands. This has substantial implications for programs designed to increase vegetable consumption, improve farmers income, and stabilize retail and farmgate prices.
- Consumers purchasing fresh vegetables from wet markets often endure adverse shopping conditions including overcrowding, rainfall, mud, dust, and poor sanitary conditions that may adversely affect the level of vegetable purchases. Meanwhile, supermarkets provide a "consumer friendly" environment and are becoming popular for the more prosperous consumers.
- The role of polas in the distribution of vegetables to consumers in the lowland areas, and to retailers in some marketplaces, seems to be increasing over time whereas the prominence of retail marketplaces has declined markedly. Although a balance of both types of market outlets improves market performance, in some towns several factors have created a serious imbalance.
- It is difficult to form generalizations about the vegetable marketing and production system because of so many unique features that vary from place to place within such short distances. The prominent role of local politics and close-knit communities with distinct ways of doing things has directly affected the organization and operations of local markets.
- The concept of "economies of scope," that is, increased profits by spreading resources and costs across mixed lots of goods, functions, or enterprises rather than specialization, seems to prevail within many segments of the economy, including the vegetable marketing system. However, in most marketing textbooks, specialization and economies of scale or size are the prescriptions for improvement.

In general, industries and enterprises in Sri Lanka seem to favor diversification with "economies of scope" rather than specialization with "economies of scale," perhaps because of the political uncertainties and limitations in business volume within any industry, especially in comparison with similar industries in neighboring countries.

For instance, a lorry company does not specialize in the handling of only flour or coconut products but also handles backhauls of vegetables and other local products from the points of destination in order to earn the best returns. A farmer will diversify his crop mix as much as possible to hedge against losses caused by weather or low market prices. Retailers handle a wide range of vegetables to respond to the consumer's need for variety and freshness (not hold large day-to-day inventories) and because of the possibility of gluts

of one particular commodity. Also, wealthy businessmen usually diversify into other non-related industries rather than build large-scale, specialized companies.

PROBLEMS

Just as the performance of a coastal harbor is constrained by the shallow depth of water and the number and size of piers, the performance of the public sector relative to agricultural development is constrained by the minimal understanding of agricultural marketing and absence of an effective, well-funded local institution to provide such an understanding. Although the apparent lack of understanding for a "market-orientation" is understandable for public officials with training in the biological sciences, the more serious constraint is the absence of an appropriate and well-financed institution to inform the leadership of effective policies and programs to strengthen the agricultural marketing systems. Progress for the agricultural community will remain slow until this fundamental constraint is removed.

For significant progress in the vegetable subsector, government action in terms of informed policies and adequate market infrastructure are necessary. But without removing the aforementioned constraint, only outside expertise can be called upon to provide policy guidelines and insights on infrastructural design and placement. However, given the numerous unique local "ways of doing things" and priorities, it would be wise for local expertise and judgment to become intimately involved in all stages of future improvements.

Many traders in outstation markets repeatedly expressed dissatisfaction with the conditions and selling arrangements within the Manning Market. The unfortunate physical and institutional conditions surrounding the Manning Market help explain why its business has continued to decline. Consequently, the main losers are the consumers in Colombo and nearby areas who contend with the results of the poor performance.

The rationale for the decline of the Kandy Market is less clear because it has a fairly good facility. Like the Manning Market, it uses the commission agent form of transactions. Thus, further analysis is needed to determine whether the commission agent form of transactions or the municipal government's method of resolving internal strife among those working at the market is the fundamental flaw.

SECTION SEVEN

MARKET ORGANIZATION

This section outlines the basic features of the market organization of the vegetable subsector primarily for exotic vegetables. The team did not find significant variations from the traditional marketing pattern for lowland vegetables where rural polas still assemble lowland vegetables and urban polas distribute all types of vegetables. This section includes an overview and a discussion of market participants, marketing channels, infrastructure, and problems.

OVERVIEW

The foregoing section described the transition and ongoing competition between the traditional system established by large commission agents located in Colombo and Kandy and the emerging pattern of wholesalers doing business in the outstation areas, especially in assembly markets in the main highland production areas. Both systems are vigorously competing for larger shares of farmers' vegetable production.

The locational pattern of wholesalers is as follows:

- Three large upcountry assembly market areas used exclusively for exotic vegetables;
- Two medium- to large-scale lowland market centers for both exotic and lowland vegetables; and
- Many rural polas for assembling and channeling lowland vegetables to consumers.

The location and main type of trader for the three main upcountry assembly market areas are:

- Nuwara Eliya city market area receiving year-round harvests of exotic vegetables from the highest elevations; resident traders handle the largest share of vegetables sold to outside buyers, except perhaps Kandapola, which still sends large amounts of vegetables to commission agents in Colombo;
- To the south of Nuwara Eliya, the adjacent markets of Welimada, Bandarawela, and Haputale with their similar seasonality for mid-elevation production areas but differences in types of traders (resident traders in Bandarawela and Haputale, but in Welimada more brokers/collectors supply itinerant traders although many large farmers still ship vegetables to commission agents in Colombo); and
- To the north of Nuwara Eliya, the mid-elevation areas near Kandy City, such as Hanguranketa, Kande Handiya, and Marassana, which service primarily itinerant traders through a few resident traders and many brokers/collectors.

Another way to describe these sites is in terms of the types of traders:

- Places with mostly local resident traders who handle a large share of the assembly, such as Nuwara Eliya, Bandarawela, and Haputale;

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- Locations with many collectors and/or brokers dealing with mostly itinerant traders, including Welimada, Hanguranketa, and surrounding areas; and
- Sites where many larger farmers, collectors, and traders remain aligned primarily with the Colombo market, including Kandapola, Kepettipola, and Matale, as well as some interior Welimada areas, although local marketing opportunities are steadily gaining a larger market share.

In other words, each area has somewhat varied patterns of vegetable assembly, whether one or two particular assembly sites or marketplaces where buyers and growers haggle over prices or a web of lorry routes divided among local transporters through their association.

Harvest periods at Nuwara Eliya and Kandapola, at high elevations, have year-round cultivation although the others at lower elevations were seasonal in nature; for instance, July through September is termed the "Kandy season," meaning peak harvest period for sites in the vicinity of Kandy. It is important to note that most resident traders in the highlands received telephoned orders each day from buyers, procured vegetables locally, and waited for buyers to pick up their vegetables. Except for a couple of traders in the Kandy market, traders seldom delivered vegetables to buyers.

The major active distribution markets are the Dambulla market center and Kegalle's pola where the largest share of produce moves through on its way to other destinations. Around 1990, many traders moved from several parts of Sri Lanka to reside in Dambulla and Kegalle and made these markets into rapidly expanding regional distribution markets located in the lowlands. Dambulla services the purchase needs of markets to the northern and eastern parts of the country. Their regional traders procure vegetables from several parts of the country — weekly from highland assembly markets and seasonally from local farmers — and in the peak season periodically send their lorries throughout the country to buy lowland vegetables from rural polas. However, they also wait for buyers to come to them.

Likewise, regional consumption area markets, such as Galle, Matara, and Ratnapura, procure vegetables from the aforementioned assembly markets and polas and then distribute them to surrounding towns in addition to their own retail markets. Although they previously relied on the Colombo market for vegetable supplies, that arrangement no longer exists to any extent.

Local wholesale/retail markets operate on a daily basis whereas urban polas provide vegetables once or twice a week at lower or similar prices for local consumers. For example, Negombo, Anuradhapura, and Badulla have such retail markets along with periodic polas. Urban polas are serviced by itinerant traders who go to select upcountry markets or other polas to bring vegetables to wherever prices are higher. These traders schedule their procurement and deliveries according to pola schedules within a particular location.

Meanwhile, the performance of the Colombo and Kandy terminal markets, where most vegetables are consumed locally, continues to deteriorate. Whether the deterioration is caused by intense competition from the new and vibrant regional markets or whether their poor performance instigated the formation and expansion of the new markets remains unclear.

Although the two older markets still use the same 10 percent commission form of transaction, their other differences offer important lessons in contrast. Kandy's wholesale/retail market is housed in an appropriate facility, has a stable number of traders, employs a large management staff (paid by the city government), maintains a strict set of market entry rules, and yet has severely reduced its role as a regional distribution center.

Although Colombo's Manning Market is housed in a temporary, ill-suited facility (former dilapidated sugar warehouse complex), it experienced an explosion in the number of its traders from 301 in 1983 to more than 1,200 today; has few management staff employed by the city; has relatively open access rules; and is also losing its role as the major regional distributor center. Although a new facility is under construction in Kandy, Colombo's situation remains uncertain with its many needed improvements and limited progress, as well as many disagreements on how to proceed.

For lowland vegetables, rural polas are the primary place for bringing vegetables for sale to traders with lorries, whether for assembling shipment to particular urban polas, to town/urban retail markets, or along the route to the Manning Market in Colombo. According to retailers in upcountry markets, limited amounts of lowland vegetables move from rural polas into upcountry towns or cities because of strong consumer preference for exotic vegetables.

In Sri Lanka, dynamic assembly markets often form along the roadside, such as in Haputale where progressive traders moved out of the marketplace located off the main road and into former tea shops positioned along the road so lorries and buses can stop to off-load or load and then continue directly on their way. Likewise, the market center in Dambulla is only a series of shops positioned along the main street so lorries pull in front of a shop, load or unload, and then proceed with a minimum of time spent on loading and unloading. Also, scores of lorries park along the roadside in Welimada, Hanguranketa, Kande Handiya, and Kandapola to load vegetables rather than pull into a separate facility. Traders contend that wayside wholesale markets are a "natural phenomenon."

MARKET PARTICIPANTS

This subsection identifies the different types of marketing participants found within the vegetable subsector, from the consumption end of the marketing system back to the production end. The prominent types of marketers were identified as:

- Retailers;
- Retailer/wholesalers;
- Wholesale distributors (and commission agents);
- Itinerant traders (supplying polas);
- Wholesale assemblers (and commission agents);
- Collectors;
- Brokers; and
- Farmers.

Unfortunately, local terminology commonly used in the trading sector was often ambiguous and did not indicate what type of trading business an individual actually operated. For instance, in Bandarawela wholesalers referred to their customers as "buyers from Matara" regardless of whether they do mostly retailing or wholesaling in Matara itself, or wholesaling or retailing in polas within the general area of Matara.

The meaning of marketing terms also varies by location. For instance, in Welimada a person referred to as a "broker" does marketing activities similar to those of a trader called "collector" in Nuwara Eliya. Or, in Welimada a particular trader did multiple types of business depending on available opportunities — today a broker, tomorrow a wholesaler, and the next day a commission agent for old clients.

Retailers

In Sri Lanka, as in several Asian countries, substantial employment is generated within the food marketing system, particularly whenever there is substantial unemployment or under-employment in the economy. For instance, whenever there is a substantial supply of vegetables in a particular location, many people arrange a delayed payment agreement with vegetable wholesalers in order to provide a wide variety of retailing services — selling from vendor carts, stands at crossroads, near bus or railway stations, and the like. This arrangement appears to be common in more densely populated locations, such as in Galle, but not in others, such as in sparsely populated Kaduruwela, near Polonnaruwa.

Vegetable retailers are classified into three categories: (1) resident retailer in a retail marketplace, (2) retailer in a pola, and (3) retailer at a roadside stand or in a boutique shop. In the marketplace of most large towns, resident retailers sell vegetables from stalls from early morning until evening. Depending on the location of the marketplace, the two busiest periods each day are early to late morning and again after offices close, from about 4 to 6 p.m. Again, depending on location, a subset of larger retailers also became wholesale suppliers for their particular marketplace, such as in Galle and Matara. They send a lorry to buy vegetables from supply areas, sell the bulk to other retailers during the peak season, and retail the balance. In the off-season, these wholesale suppliers are likely to retail a larger portion of their procurement.

It is important to understand that this latter type of retailer is often a "family business," especially in the southern towns. A small team of family members carry out several marketing activities. For example, on a given day, one brother travels to highland supply areas to buy vegetables, another person cleans and displays vegetables from the previous day, while another family member answers questions of consumers while selling the vegetables. Consequently, earnings from a stall support several working family members rather than one. Thus, the marketing margin has to be wider to support so many persons on a full-time basis. In Kegalle, Anuradhapura, and Kurunegala, however, we met resident retailers who are single-person operations with wholesalers supplying their daily requirements.

Types of retailers found in the pola usually depend on whether the pola serves primarily as a consumer pola or rural assembly pola. In the urban area consumer pola, which generally is open for business two or three days per week, much of the town's population comes to buy several kinds of consumer goods. There are more full-time vegetable retailers here who travel from pola to pola to sell vegetables. Some people from this immediate area retail his or her own production or sell part of the in-season vegetables from this locality. Both types of retailers are almost all males, except for a few females who sell herbs. Exceptional cases are the several female retailers from the fishing community of Chilaw or the small groups of women who sell a variety of vegetables in polas near or in the settlement areas.

Retailers at roadside stands live nearby but otherwise their characteristics vary widely from place to place and season to season. Whenever they are found along the main routes to and from the highlands, they tend to have a wider variety of fresh upcountry vegetables in combination with whatever is grown locally. Otherwise, their main vegetables are produced by local farmers in that particular season. The team found such stands in varied locations, from the main road coming down from Kandy to roads within System H of the Mahaweli.

The other types of retailers observed are operators of boutique shops and vendors who sell vegetables from a bicycle, cart, or basket carried on their head. Boutiques are the small shops common to most villages that carry a limited quantity of several goods. In some locations these boutiques specialize in vegetables. The vendors, however, are very mobile and were only observed in the early morning hours procuring that day's supply from a wholesaler within a retail market.

A comparison of resident retailers and pola retailers showed that the resident retailer in the retail marketplace generally sells a wider choice of vegetables (15 or more vegetables), sells substantial volumes each day, displays vegetables on stands at about waist level for easy inspection, sells mostly upcountry vegetables, and has a higher quality of each comparable type. Often this family of retailers views retailing as a full-time occupation that involves considerable knowledge of consumers' needs and shopping habits. They also emphasized the amount of taxes and fees that they contribute to the local municipal authorities. There were relatively few such retailers per location, often between 8 and 25 per marketplace.

Retailers in the pola, however, usually sell fewer choices of vegetables per stand, sell moderate volumes each day, display the vegetables on a low surface or at ground level, sell both lowland and exotic vegetables, offer lower prices with somewhat lower quality (especially during the off-season), and sometimes view this as only a periodic way of earning a living.

Their numbers range from 30 to hundreds, depending on the location and size of the pola, such as the huge pola in Anuradhapura or small one in Tambuttegama. During the in-season for vegetables, their numbers reportedly swell substantially. Select experiences with "daily" polas in some urban areas, such as Galle, Matara, and Ratnapura, have created a hybrid form of retailer whose characteristics and role are more difficult to understand without more information.

The part-time retailers who buy from producers and/or wholesalers and sell at the retail level whenever there is a large amount of vegetables available can be found both in the retail marketplaces and polas. Selling vegetables is generally considered by these retailers only as a way to supplement family income.

Wholesalers

The three main types of wholesalers are: (1) wholesale distributors (and commission agents), (2) wholesale assemblers (and commission agents), and (3) itinerant traders who regularly supply retailers in polas.

Wholesale Distributors

In the regional distribution markets and small towns, wholesale distributors purchase vegetables from select supply areas and use their own or hired lorries to bring vegetables to their market for distribution to other retailers, boutique operators, or institutional buyers including army camps. In fact, wholesale distributors do not expect outside traders to bring the vegetables to their market but go and personally select and buy their own requirements. In addition to a few in the Colombo and Kandy markets, several distributors were found in the towns and regional consumption areas.

Wholesale Assemblers

There are two main types of wholesale assemblers — resident local traders and regional traders.

Resident Local Traders. The resident local traders sell mainly the vegetables grown in the immediate vicinity by local farmers, as in the cases of Nuwara Eliya, Bandarawela, and Welimada. Whenever production is low, their business is slow. Thus, from late in the day until the next morning this wholesaler receives telephone calls from buyers placing orders and negotiating prices. They note the buyer's name and amount ordered in a notebook; total the amount by mid-morning; and begin arranging for farmers' deliveries or send harvest crews with a lorry to harvest, pack, and load the farmer's crop or make an agreement with collectors.

By the early or mid-afternoon, the buyers arrive and finalize their purchases based on prevailing prices. The important difference between these wholesalers and commission agents is that they take ownership of and responsibility for vegetables, to the ultimate advantage of consumers, traders, and farmers.

Again, this pattern varies somewhat from location to location. For instance, in Matale and Keppetipola some older resident local traders act as local buying agents and send a large portion of their procurement directly to the big commission agents in the Manning Market because of their long-time working arrangement and/or credit still outstanding. However, this pattern is much less common in other places.

In Nuwara Eliya, the team found traders who specialize in only one commodity, such as potatoes. In fact, several potato traders serve as branch buying stations for Colombo-based traders who want to ensure an adequate supply. However, this type of trader made it clear that they first try to profit from conditions in the Nuwara Eliya market, then whenever possible send potatoes to Colombo, rather than serve exclusively as a buying center for the Colombo outlet. Traders who deal in other vegetables cover the full range of locally produced vegetables, such as beetroot, cabbage, leeks, and carrots.

Several wholesalers in Bandarawela, Welimada, and Nuwara Eliya referred to the Manning Market as the market for excess inventory as if it were a "market of last resort" (the market to which extras are sent), rather than responding to the vegetable demand of consumers. This is reportedly a crucial difference from the early 1980s when Colombo was the preferred market outlet.

Market entry of new wholesalers comes mainly from the ranks of former assistants or the K.P. managing an established trading company. Learning-by-doing is an apprenticeship approach and helps ensure a common set of informal rules of trading. If new traders are needed in new vegetable production areas, this hands-on training is compatible with the local way of doing things.

Regional Traders. The regional traders, however, especially in the distribution market centers of Dambulla and Kegalle, serve as both resident traders and itinerant buyers. During the peak harvest season, they sell the harvests of local farmers on a commission basis or purchase the harvests, depending on the farmers' decision. During other seasons and sometimes simultaneously, the regional traders send their lorries to the main highland production areas for exotic vegetables and to polas in distant production areas for lowland surplus vegetables. Because buyers seldom fill their lorries with a single type of vegetable, they are able to sell a wider selection of vegetables. These traders seldom send vegetables to the Manning Market during the lean months.

The crucial skill of regional traders is knowing what they can sell within a day or so at a given price range before going in search of sale opportunities at polas or at the farm level. In fact, this form of arbitrage — purchase of goods in one market for immediate sale in another in order to profit from the price discrepancy — benefits farmers because local market gluts are cleared at better prices.

Itinerant Traders

The full-time itinerant trader/wholesaler uses his lorry to procure vegetables from several supply areas to resell at a circuit of polas within a well-defined area. As a group, they supply retailers in polas throughout the country but especially in the more populated areas of the western and southern parts of the country. Just before the pola day, these itinerant traders take their lorries to the main supply areas, according to the season and cycle of harvest months. Depending on the marketing practices in that location, they buy specific amounts of vegetables which they believe will sell and deliver them to a set of retailers in that morning pola. As polas rotate from place to place in a regular pattern, so do these itinerant traders.

The presence of itinerant traders provides farmers with a timely and flexible sales outlet because if the highland farmer does not agree to their buying price, the crop is not harvested until later when prices improve. Because no harvest or hauling costs are spent and there is a week or two of leeway time before some crops must be harvested (varied by crop), there is flexibility for better marketing options. Likewise, if local prices remain unacceptably low, the crop can be plowed into the soil as compost, which still provides some benefit. However, if the farmer relies on selling at a pola, he must usually harvest the previous day or very early that day and take it to the pola. Even if prices are low, farmers have few alternatives but to sell because costs are incurred and storage may further decrease its value.

Procurement practices of itinerant traders are simple. For instance, in Hanguranketa itinerant traders usually give their empty bags to local "brokers" who in turn find farmers willing and able to sell at the "going price" and haul the vegetables back to the waiting lorry for inspection and payment. Whereas in Nuwara Eliya, it is more common for them to buy from resident wholesalers or certain collectors rather than from farmers or brokers. In Welimada there is a better chance to deal directly with individual farmers. In other words, marketing practices vary markedly from location to location and even at times from commodity to commodity for these itinerant traders.

Wholesalers and Commission Agents

It is important to distinguish between wholesalers and commission agents as discussed in this study. Technically the term "wholesaling" refers to selling something for resale. Even though most people think that large volumes are involved, that is not a necessary condition for wholesaling. In our use of the term, the ownership of the commodity sold is implied in the term "wholesaler." With that ownership comes many forms of marketing risk, including losses from spoilage, pilferage, sudden drop in price, and the like.

In contrast, although a commission agent may be dealing with large quantities for resale, he handles the sale of another person's goods in exchange for a percentage of the value while not taking ownership. There is minimal risk involved in terms of value changes, physical losses, damage, and the like. Usually this form of sale is prevalent when market prices are extremely volatile and unpredictable.

An important difference between the commission agent's and wholesaler's ways of doing business needs to be clarified. Because wholesalers own the commodity by agreeing to the value before taking possession, they bear the risk of loss as well as benefits from profits. Knowledge of their buyers' requirements, sufficient capital to give credit, insights into when and where to locate less expensive and better quality supply, understanding of how to entice buyers who pay higher prices, ways to carefully handle vegetables to reduce damage or reduction in value, sense of price movements given daily demand/supply conditions, and so forth are important for a wholesaler's survival and growth. New ways of doing business, different clientele, and a variety of changes can benefit the progressive wholesaler. An appreciation of different buyers' requirements soon becomes a necessity.

By comparison, the commission agent may learn some of those skills through years of experience; however, he accepts little risk for physical or financial loss, unless he overextends his credit. Consequently, except for competition from others who want to also become commission agents, he can live with the "status quo" within the commodity system while abiding by its traditional, informal rules. In fact, the ability to give more credit is an effective way the commission agent can build a bigger business and compete with other commission agents.

In other words, wholesalers must thoroughly understand and work to service their buyers' requirements in order to grow and prosper. Ultimately, the needs of consumers become better represented. Thus, the

emergence of wholesalers at both the demand and supply ends of the marketing system is a positive sign for its growth and development.

Other Assemblers

The terms "brokers" and "collectors" sometime differ from location to location. Likewise, as assembly markets emerge, the roles of new traders change over time. In a technical sense, brokers should not take ownership but rather provide information. For instance, in most cases a "broker" is a young local man who keeps track of the growth and harvest of local vegetable crops in particular villages and surrounding areas. Then, near harvest time, he acts as an information intermediary or "matchmaker" between the smaller, more isolated farmers and outside buyers, especially itinerant traders.

In Welimada, brokers attempt to bring farmers and buyers together to negotiate a sale, and the buyer provides a "tip" for the services rendered. Whereas in Hanguranketa, the newly emerging service of brokers means actively searching for farmers in interior areas on behalf of buyers, bringing the harvest to the buyer, and returning payment to the farmers. Again, the buyer usually provides money for this service and sometimes farmers do also.

It is important to point out that most brokers do not come from outside this rural area or from families within the local elite (powerful and influential persons). Key informants and some farmers said that the earnings of brokers were relatively minimal — thus, is this a symptom of underemployment or indicator of the market in transition from the former pre-arranged shipment (through a local transporters union) to distant markets to the active formation of local markets?

However, in the more established supply areas, the collector is a small trader, with or without a shop, who usually deals with smaller and less-accessible farmers. His practice is to go to a resident wholesaler and ask if he can deliver the vegetables for which the wholesaler has orders but insufficient supplies. If the wholesaler agrees to buy a set amount of a commodity at a stated price, the collector searches for agreeable farmers, sometimes assisting in harvesting, hauling, and delivering the vegetables to the wholesaler for payment. Then, he returns to pay the farmer the agreed price. To earn the regular patronage of farmers, some collectors provide special services, such as harvest labor, timely price information, short-distance hauling, or limited financing, whereas others depend on personal relationships. There are many variations of this role depending on the local marketing practices, competition among alternative types of traders, and location of production.

In other words, the role of collectors and/or "brokers" is to serve the marketing needs and interests of smaller farmers, especially those at a greater distance from the road/market. To accomplish this they compete with resident traders and the traditional marketing channel to the Colombo Market.

Farmers

Although people often think of farmers as first in the marketing chain, they are often last in terms of current market information and payment for the crops they harvest. Although that was the usual case with the old "commission agent" network as linked to the terminal markets in Colombo and Kandy, the emerging regional assembly markets have changed that situation. Given vibrant local markets with less volatile price movements, farmers in upcountry production areas are in a better position than they were previously. In the lowland assembly polas, their situation has changed little.

In Sri Lanka, many upcountry farmers do not harvest their crop until after agreeing on the price, except when they ship to Colombo where commission agents manage the price discovery process on a day-to-day basis. During interviews in the off-season and at several places, itinerant traders explained how they distribute sacks and wait for farmers to harvest and deliver the agreed-upon crop for the stated price. Likewise, resident wholesalers in Nuwara Eliya negotiate a price with farmers who then return home to harvest the crop. In fact, some wholesalers even send their own lorry with a harvest gang to harvest, pack, and bring the crop to the trader's shop. In other words, farmers have several options and know the price before harvesting their crop.

This practice of negotiating the price before harvest is unlike that in many other Asian countries where farmers harvest their vegetables and take them to sell in the market, with a general understanding of the previous day's price. Perhaps this method of sales was more common during the off-season period when the "sellers' market" condition prevailed. It would be worthwhile to determine why this practice is common in the highlands of Sri Lanka but not prevalent elsewhere.

In addition to local sales, highland vegetable growers have the "fall-back" sales opportunity of the traditional commission agent system whereby lorries arrange to pick-up the harvest and deliver it to a designated commission agent in Colombo (or Kandy). After being sold there, the commission agent sends the payment to the individual farmers, minus the costs incurred and a commission. Again, such a parallel set of major sales options at the farm level is not common in other Asian countries.

Most vegetable producers in the highlands grow more than a single crop, except for potato, in order to reduce their production and market risks. In lowland areas, especially those with irrigation, growers either plant larger fields with a single vegetable, such as chilies or onions, or plant several small plots of gourds, cucumber, chilies, and the like. Farmers expressed their concern for both production and marketing risks that cause them to plant several rather than only one type of vegetable. This common practice illustrates their inherent need for having several choices.

During the May-June planting season in the highlands, there are substantial production risks because of heavy rainfall and high wind conditions. These conditions were especially bad during June-July 1995 and caused unusually severe shortages.

A revealing explanation of farmer behavior in reaction to poor market conditions during a production period was given by highland traders. Whenever prices steadily decline during the initial months of crop cultivation, several vegetable growers discontinue caring for their crop, especially not using pesticides. They anticipate that the price will not cover the costs of the additional cash inputs. Unfortunately, by the time the local harvest period arrives for their location, yields are poor and overall production is low. In such a case, the opposite result is high prices.

A crucial point mentioned by highland traders was that the wholesale approach to buying vegetables means that now farmers make more marketing decisions whereas before the commission agents handled those decisions. Now when itinerant traders or resident traders discuss price with a farmer, he can accept or reject their bid price, not just wait to see what price is given.

MARKETING CHANNELS

Without a detailed survey there was no way to determine the percentage of highland and lowland vegetables flowing through the identified marketing channels. Likewise, this market transition has made it

difficult to accurately analyze market channels for exotic vegetables. The following is our best effort at this time.

Channels for Highland Vegetables

The traditional commission agent channel, orchestrated from Colombo and Kandy to bring supplies from the upcountry areas, is as follows:

Farmers -> (and/or resident wholesalers or collectors) -> transport union -> commission agents (Manning or Kandy Market) -> local wholesaler/retailers or out-of-town buyers or retailers -> consumers.

Formerly a large market share flowed from the Colombo Market through out-of-town buyers to numerous, distant retail marketplaces in small towns and suburbs, particularly those located along the coastal roads. However, now a relatively small market share is flowing through that part of the channel as more regional consumption area markets have emerged.

Likewise, the channel managed by the itinerant traders who supply lowland polas and some retail markets is as follows:

Farmers -> (and/or brokers or collectors) -> itinerant traders -> retailers in polas and retail marketplaces -> consumers

The channel managed by the resident local trader (wholesaler) in regional production areas is as follows:

Farmers -> (and/or collectors or brokers) -> resident local trader -> regional wholesale distributor or itinerant trader -> boutique operators, restaurant owners, pola retailers, and/or retailers in retail marketplace -> consumers.

A new channel formed by progressive traders who service the tourist hotels and exporters with higher quality vegetables is as follows:

Select farmers -> (and/or selective resident local traders) -> specialized itinerant traders -> important tourist hotels, exporters, specialty outlets -> importers, and/or consumers.

Because our team interviewed only a couple of respondents regarding this type of channel, it appears to be the exceptional case. These channels are also illustrated in Figures 1-4.

Lowland Vegetables

The channels for lowland vegetables seem to flow either through a local individual who will retail the goods on behalf of farmers or mostly through the network of polas within a supply area. In other words, these basic patterns are:

- 1) Farmers -> resident local trader -> outside buyers -> retailers -> consumers.
- 2) Farmers -> local pola retailer -> local consumers.

FIGURE 1
TRADITIONAL MARKETING CHANNELS FROM THE HIGHLANDS

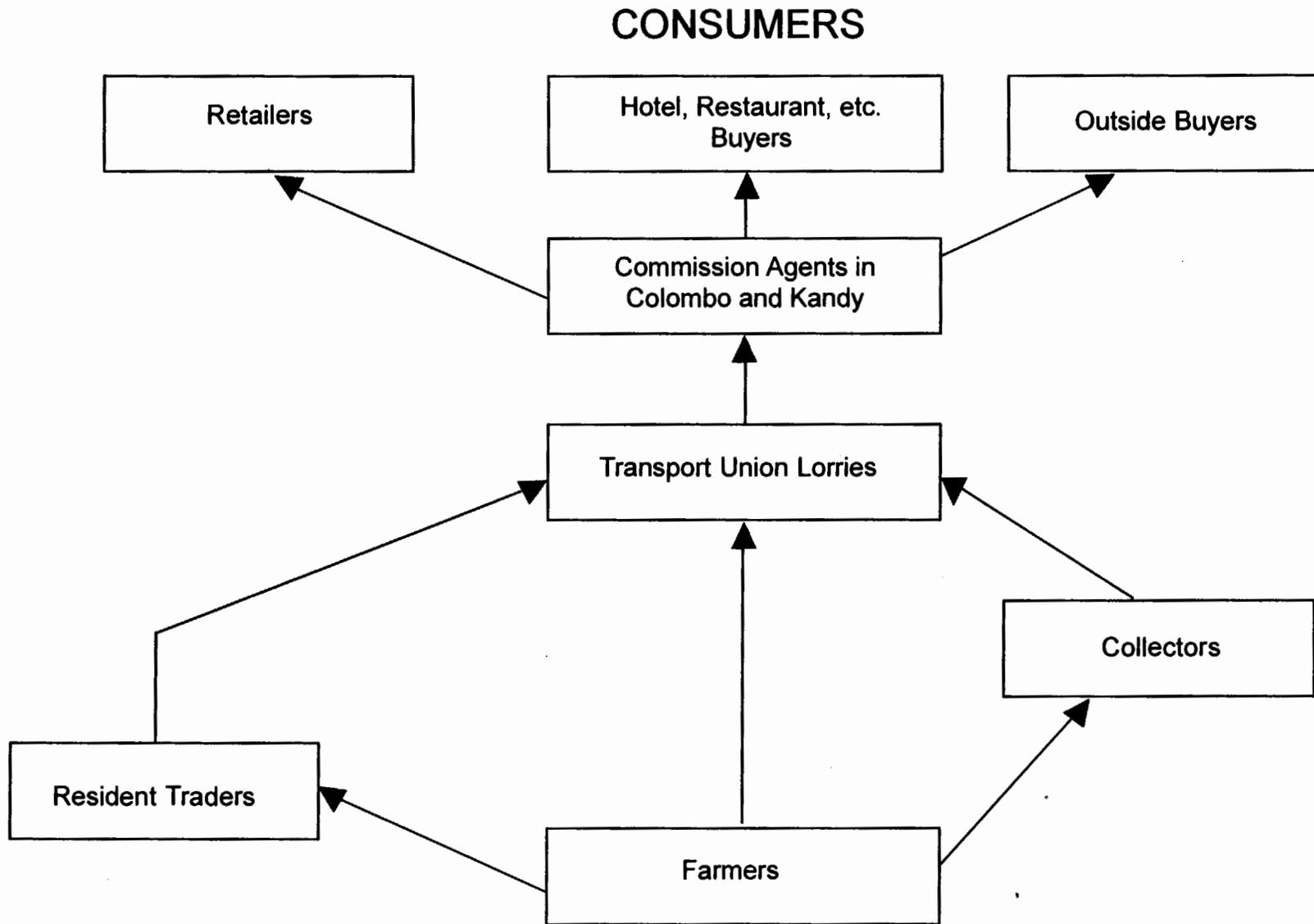
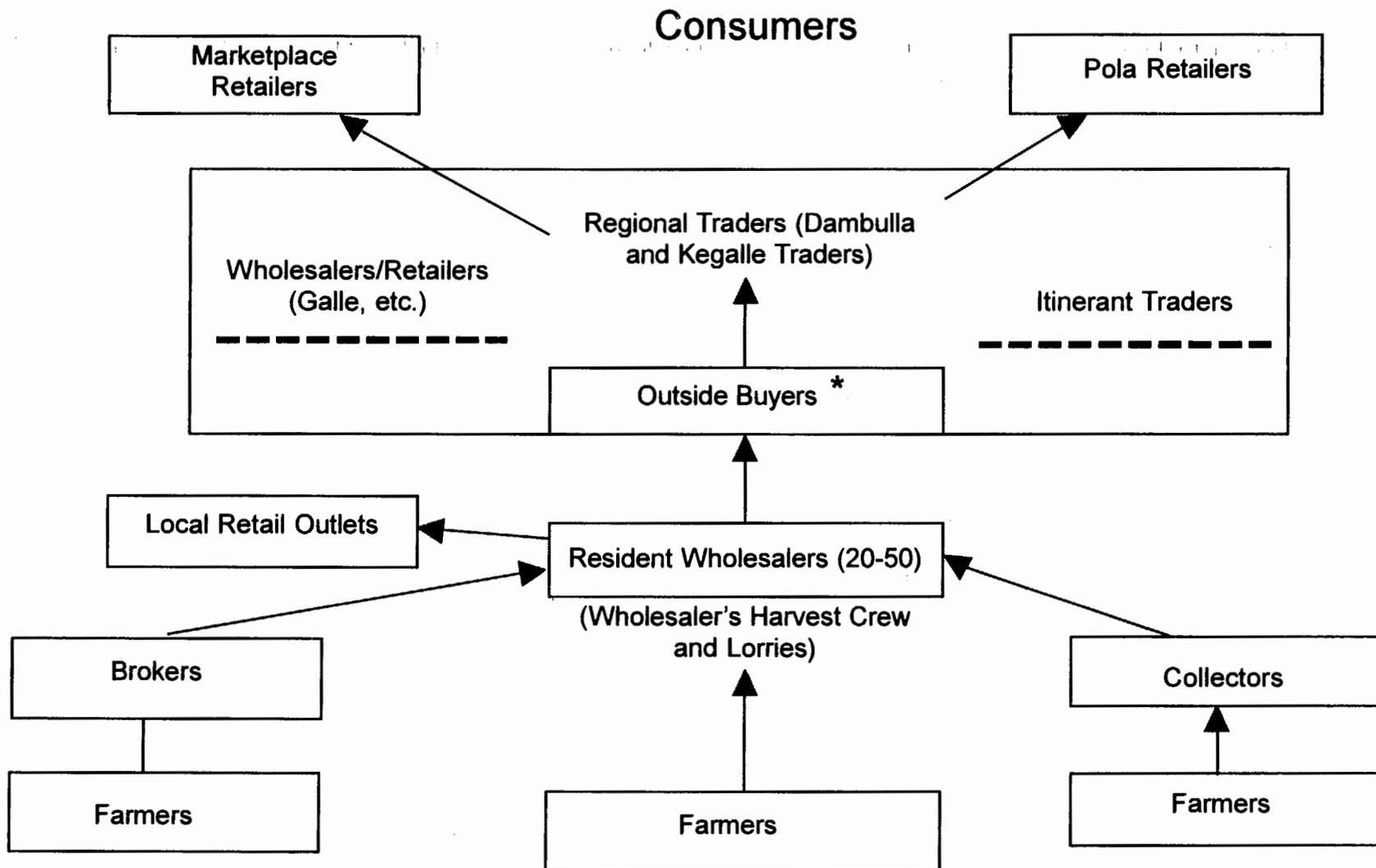


FIGURE 2
TYPICAL MARKETING CHANNELS IN NUWARA ELIYA AND BANDARAWELA



* = Advance orders placed by telephone or upon arrival; wide array of sales options depending on trader type and home base.

FIGURE 3

TYPICAL "SPOT MARKET" MARKETING CHANNELS IN WELIMADA AND HANGURANKETA

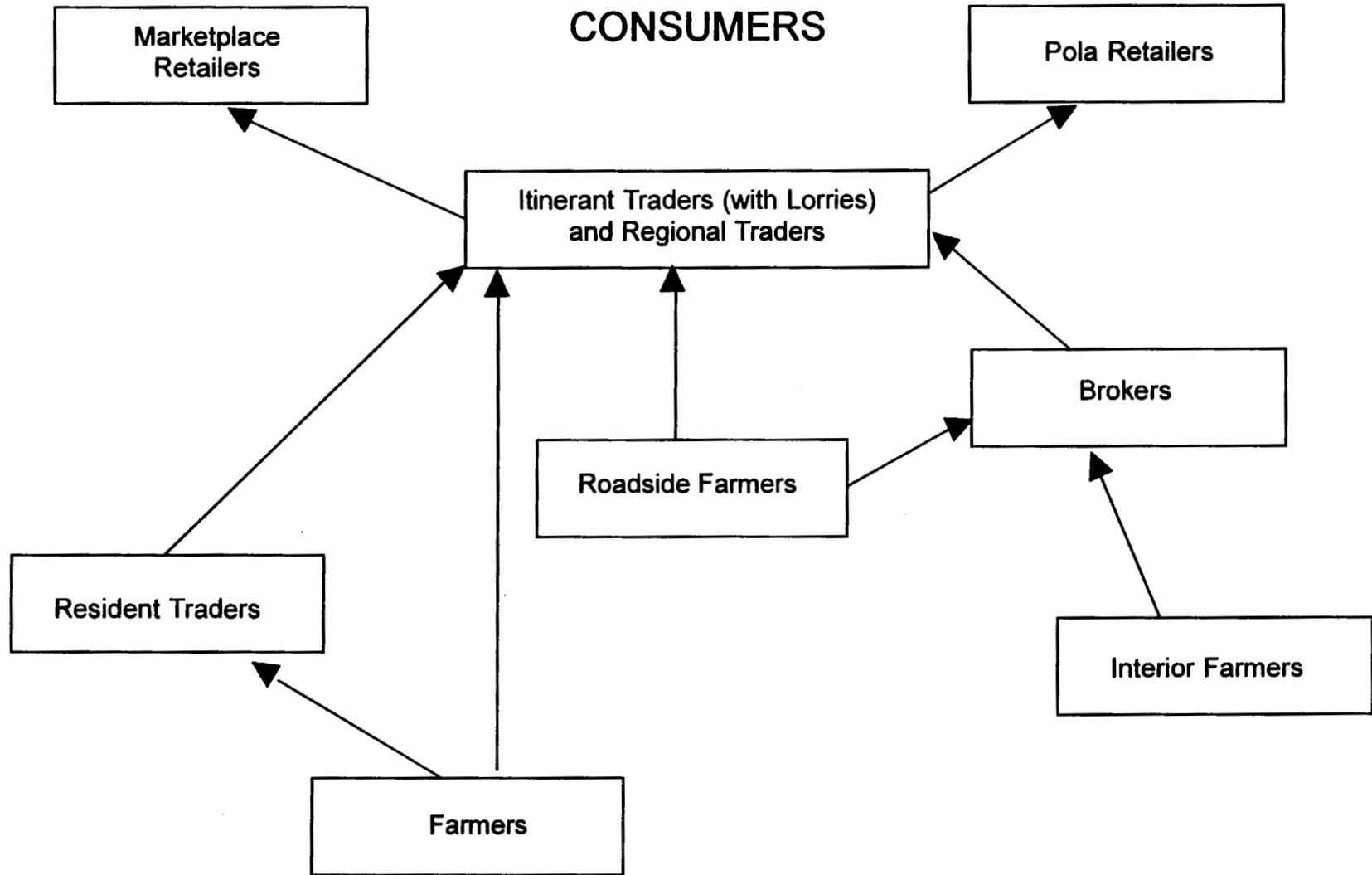
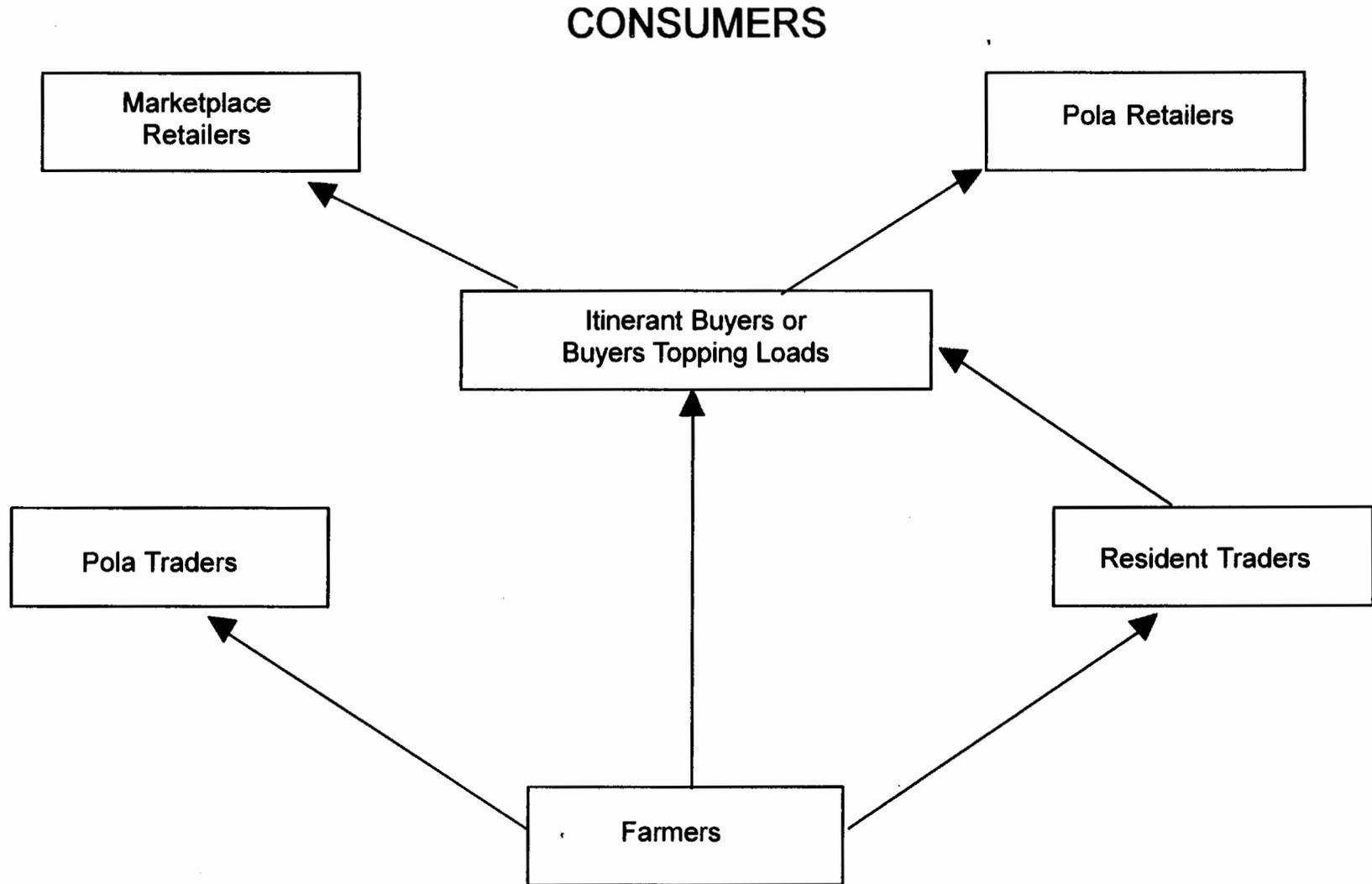


FIGURE 4

TYPICAL "SPOT MARKET" MARKETING CHANNELS FOR RURAL ASSEMBLY POLAS



- 3) Farmers -> regional trader, wholesale distributor, itinerant trader, and so forth, or retailers at the pola
-> retailers in other polas or in retail markets -> consumers

As with highland vegetables, progressive exporters are gradually forming separate marketing channels to handle the better quality lowland vegetables that enter the higher end of the export market. Meanwhile, other exporters service the less discriminating importers, require a wide variety but small amounts of each vegetable, and still prefer to buy from commission agents with the best quality of vegetables entering the Manning Market. In other words, depending on their particular buyers' requirements — ordinary or better quality — exporters buy from different marketing channels.

MARKET INFRASTRUCTURE

This analysis includes both the locational patterns of market infrastructure and the physical facilities of the marketplaces. The locational pattern of market infrastructure is critical to both new production sites and expansion of urban areas into nearby suburbs. Examples include suburbs or housing projects without access to fresh produce, farmers growing vegetables in new production areas but with no access to buyers, new road construction or irrigation projects that promote increased production which is stifled when no markets are readily accessible, rapid migration to new settlement areas without plans for the associated marketing infrastructure, and the like. The study team observed several problems regarding the location of marketplaces, both with respect to the consumption and production ends of the marketing channels.

Locational Patterns

At the top of the list of problematic locational patterns is the Manning Market, that is, the nation's largest terminal market, which is located within a central site but housed in temporary, inappropriate facilities. This situation has adversely affected the coordination role of this critical marketplace.

Likewise, housing and recreational uses of land in traditional production areas of highland vegetables have driven production further into the interior, thus additional roads and assembly marketplaces are urgently needed. Towns nestled in steep terrain have little space for the assembly of farmers' vegetables and fail to even provide the basic necessities, such as in Welimada.

Although many highland areas have the roads and trails established by estates to move their tea, production areas in many lowland areas remain isolated without access to the main road network. These situations seriously affect the efficiency of the marketing network and should be reviewed regularly by the relevant authorities.

Examples of locational patterns by which certain marketplaces have emerged more prominently than others merit an explanation. For example, buyers from southern and southwestern towns consider Bandarawela as a natural trading "hub" for many common highland vegetables. Unlike the similarly endowed production areas of Welimada and Haputale, Bandarawela offers more accommodations for overnight stays in addition to its wide mix and substantial quantity of vegetables, especially during the in-season period. Resident local traders have working arrangements with Nuwara Eliya traders who send traders items that are not available in Bandarawela.

This combination of central location at a lower elevation, mix of commodities, access to shops of many traders, and availability of lorries and friendly services are not only convenient but reduce the search costs for southern buyers. These forms of non-price competition with other supply areas has earned Bandarawela a strong position in this industry. Although Kandy may have offered a similar arrangement in the past, tourism and recreational uses of land along with costly marketing practices no longer offer a comparable situation for buyers from the north of Nuwara Eliya.

Marketplaces

A “vegetable marketplace” is a single facility where several individuals come to buy and sell vegetables. This is sometimes referred to as a “wet market” because of the general dampness when traders sprinkle water on vegetables to give a “fresh” appearance. The main types of marketplaces identified include:

- Consumer pola
- Retail marketplace
- Supermarket
- Terminal market or wholesale distribution center
- Collection of neighborhood boutiques
- Wholesale assembly market and
- Assembly pola.

The individual roadside stand will not be treated as a marketplace.

Consumer Pola

Polas, that is, periodic markets, operate from one to three days per week. Consumer polas, especially within an urban setting, vary considerably in terms of size, number of days in session, condition of physical facilities, presence or absence of management staff, presence of permanent versus temporary structures, method of collecting fees — public sector staff versus private fee collectors within a tendering arrangement — and the like. Polas are noted for their lower prices for a range of various household items and food products as well as a somewhat lower quality of items.

The size of the pola grounds generally corresponds with the size of the town and number of people attending it. Pola structures are inexpensive to build, manage, and maintain; however, they cover sizeable land area which is in short supply for most municipalities. The pola in Anuradhapura is one of the largest in the country with thousands of consumers coming to buy from a wide variety of low-cost food and non-food items, whereas a couple of hundred persons come to the Badulla pola, which is spread along the side of a narrow park.

Although the common practice is to operate the pola on a weekend day and once in mid-week, the team found that Galle, Matara, and Ratnapura operate daily urban polas in direct competition with the local retail markets. These situations need a closer examination to evaluate their consequences.

Retail Marketplace

Retail market structures in small and large towns represent an entirely different kind of daily shopping experience compared with the twice-weekly pola. These permanent facilities are of a couple of basic styles:

- Large block-like buildings of one or two stories with sloped roof, surround walls, an open courtyard in the center, sometimes including a well and containers in which to wash the vegetables, as in the cases of Matara, Ambalangoda, Ratnapura, Puttalam, Kurunegala, and Gampaha. Along each side is a row of shops (about three square meters of space surrounded by three walls and the open side facing inward, and which can be closed with boards in the evening), and a pathway in front for consumers to view the vegetables displayed on waist-high platforms. Sometimes these facilities are only for vegetables, others also handle meat and fish, and some even accommodate dry goods and clothing. Also, some structures have only two sides in an "L" shape (Anuradhapura), others have a curved wall (Kalutara), and others have a hodgepodge of stands of mixed configuration (Negombo public market). Most of these "heavy structures" (often with thick walls and reinforced concrete) have poor air circulation and are more suited to dry goods than to vegetables.
- Medium-sized, adaptation or modification of the open-air structure is long and narrow with a peaked roof under which two or more parallel rows of stalls extend from one end to the other with retailers stacking vegetables on platforms for the consumers to inspect as they walk down the center aisle. Although air circulation and temperature are good, there is no security or ability to pack away the vegetables (Galle Market). Traders suggested placing a surrounding wall at some distance because of problems with pilferage.
- A simple structure, consisting of a large, square space with a series of sloped steep asbestos roofs supported by light steel girders, several rows of open-sided stalls (some at floor level and others raised a couple of feet), with two open ends and two sides walls (Negombo) combines several favorable features of the other styles, including air circulation and can be closed at night. It needs to be determined whether this privately designed, constructed, and managed facility should be a model for other locations.

The absence of a resident manager is uncommon for most wet markets in other Asian countries. In most retail/wholesale marketplaces, such as in Kalutara, Ambalangoda, Galle, Matara, and Badulla, the team found only fee collectors and cleaners but no market manager was present during the active periods. The opposite was true in the Kandy Market, which had several supervisors, and the Nuwara Eliya and Kurunegala markets each had one supervisor.

The general pattern in the larger towns or cities was for the local retail/wholesale marketplace to provide the bulk of vegetables on weekdays, and the polas selling vegetables on the weekends and one day during the week. Because they have limited refrigeration, commuters to offices in urban areas need to buy perishables three or more times per week. They visit the retail market for small purchases on the way home from work, and shop at polas for bargains on the weekend and in mid-week.

The fees charged for stalls in most retail markets are low, some less than Rs 100/month whereas others are Rs 400-500/month. Although several resident retailers complained that they receive no services for the fees paid, the amounts paid were evidently below a reasonable subsistence level for facility maintenance and staff, let alone improvements. These fee structures and collection practices result in several problems.

Although the age of the retail marketplaces varies substantially from location to location (those along the southern coast are the oldest), for the past 20 to 25 years, they have received little attention and suffer from a pattern of serious neglect. For example, the original Galle marketplace, said to be more than 100 years old, received a new roof in the 1950s; Matara's market was constructed in 1935; Kalutara's market was constructed in the 1950s; and Ambalangoda's market was constructed in 1975. Negombo's original market was built in the 1940s and got a new roof in 1959; Chilaw's market was constructed in the 1960s; Gampaha's market was

built in 1969; Puttalam's market was built in 1977; Kurunegala's market was built in 1967; Kegalle's market was built in 1976; Ratnapura's market was built in 1976; Nuwara Eliya's market was built in the 1960s; and Matale's market was built in 1973.

A new form of retail outlet, called Vegetable Basket, opened in Colombo in July 1995. It consists of a small cool shop on a busy street with two clerks and a stock person to bring the vegetables and fruits from the back. The local foreign community and higher-income population of that area are its target clientele. It may be difficult for such a specialized outlet with only fruits and vegetables to compete with either low-cost boutique stands or higher-cost supermarkets that have many other items to offer consumers.

Supermarkets

Supermarkets, or several shops and stores within one physical structure of two or more floors, are becoming a popular trend and way for the municipal councils to establish retail outlets for dry goods, fresh fruits and vegetables, meats, fish, and variety of textiles and consumer items in addition to other types of business. However, these structures have serious design limitations in terms of access, ventilation, and floor space, and have comparatively high rental fees when used for retailing vegetables. Because these supermarkets tend to be large concrete structures, they are costly to build. The public sector recovers those costs ("key money") through costly rental/lease arrangements with their occupants.

For items such as fresh vegetables where the marketing margins are narrow and competition is stiff, returns are usually insufficient to cover the high rental fees. And whenever they are paid, there is a corresponding increase in vegetable retail prices or vegetable quality is lower in order to compete with the prices in the pola or at street stands. Thus, as the rates for space in the supermarket increase over time, vegetable retailers are eventually forced out of these facilities and back into the streets or along the roadside.

This situation was found in Bandarawela where retailers were gradually moved into temporary stands attached to the back of the supermarket and along the pathway leading to the supermarket. Likewise, in the town of Nuwara Eliya, only six to eight vegetable retailers remain in the Central Market, which formerly housed more than 20 vegetable retailers, many of whom now have stands along the streets.

In Badulla, a major controversy has erupted between the Traders Association of Vegetable Retailers (103 members) and the municipal authorities, who reportedly want them to pay in excess of Rs 600,000 in key money for a few ground floor shops (cir. 3-meter square space) in the newly constructed "supermarket." Other spaces would be made available on the second floor of the structure for a couple of hundred thousand rupees each. Because these rates are far beyond what vegetable retailers currently pay in their "temporary market" located next to the supermarket, and far exceeds what they could afford and still remain competitive, the court battle may cause retailers to move back onto the city streets. Although the retailers' proposal of a low-cost, "light" structure attached to the back of the supermarket would resolve the issue, the municipal authorities have not yet accepted that idea. Similar cases can be expected in other locations in the future.

Terminal Market or Wholesale Distribution Center

Terminal vegetable markets, or wholesale distribution markets, should have the best location, most-efficient layout, and highly effective management organization of all markets in the country because they should help coordinate the entire national marketing network. However, that is not the situation in Colombo.

Because production patterns for newer imported varieties with some heat tolerance are not well documented, the pattern of sourcing only locally or from highland lorries could not be documented in detail. Only in a few locations where several stands were situated next to each other could they be considered a market.

Wholesale Assembly Markets

Wholesale assembly markets are of two major types, the local assembly market and regional market. The former refers to the markets where vegetables from surrounding areas are brought together for sale on an order or spot-market basis, whereas at the regional market substantial quantities are also brought from widely dispersed production sites, lowland and highland, for sale to buyers from distant sites.

Local assembly markets have emerged recently in highland areas and have no common structure or layout, especially the large-scale ones. For example, in the early 1980s there were only two wholesaler shops in Nuwara Eliya. However, the team identified 10 to 12 larger wholesalers with as many as 53 shops scattered in this area. The larger ones are located along both sides of St. Andrew Street outside of the town. The two main types of shops are the wholesalers who specialize in potatoes (whether a branch of a Colombo company or independent) and the wholesalers of the 4 to 5 main vegetables produced within the surrounding highlands.

As the number and size of these shops increases along St. Andrews Street, the numerous lorries delivering and picking up vegetables clog the traffic. Following vigorous complaints about the traffic congestion from a renowned tourist hotel at the far end of the street, the Ministry of Housing has requested the Pradeshiya Shaba to relocate this collection of wholesaler shops. However, there are no guidelines or materials to guide the Pradeshiya Shaba in selecting a site, laying out an appropriate facility, and dealing with related management considerations. This case offers an important opportunity for building a well-planned and inexpensive assembly marketplace in collaboration with the traders and thus becoming a model for the nation.

Regional markets are exemplified by the markets in Dambulla and Kegalle, where traders actively search out distant supply sites during peak harvest months and sell a larger percentage of their commodities to buyers who again sell to retailers in distant markets or polas. Yet, because Kegalle traders are established within a pola facility that is located in a more populated section of the country, this market has substantial retailing activities; whereas the more sparsely populated areas around Dambulla have buyers from very distant places to the north and east who buy on a wholesale basis. Likewise, it takes on some assembly market characteristics by serving the marketing needs of local farmers during the in-season for onions and chilies.

The ever growing and changing Dambulla market center consists of shops arranged along each side of road near the main intersection in Dambulla. Fortunately, each shop is situated well back from the road so that one or two lorries can easily park parallel to the road in front of each shop to load or unload vegetables. This feature and its 24 hours of operation are key features of this market's success because they allow the short turnaround time that is so important to most lorry operators stopping to buy vegetables on their way to or from other destinations. These features are important in designing a market facility that proposes to improve the performance of traders, especially the feature of much space for lorry entry, movement, and parking near the individual shops allowing for quickly unloading and loading.

Unfortunately, the new high-cost structure, supported through Asian Development Bank funds and intended to replace this working arrangement, may have been ill conceived. The design does not adequately take the features of success into account as it forces the new market into a relatively small space near the pola. In addition, the substantial key money and higher operating costs for the new facility may endanger the successes of this vibrant wholesale market. Yet, because the Pradeshiya Shaba that supports this initiative did not have access to the technical marketing expertise needed, how could one expect any different result?

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Assembly Polas

Sellers and buyers come together one or two days a week at assembly polas in rural production areas. Assembly polas are popular, particularly in the lowland areas, and are the primary area where commercial lowland vegetables are assembled. Generally, the assembly trading is active early in the morning until about 8 to 10 a.m. Then the lorries loaded with vegetables travel to their destinations while local consumers come to buy goods on a retail basis. Places such as Embilipitiya and Suriyawewa are noted as sources of large supplies of banana and other commodities, depending on the season.

In several locations, more permanent structures with asbestos roofing have been constructed. In several cases, functions such as fee collection have been tendered out to private entrepreneurs, resulting in substantially improved performance that pays for pola improvements.

The aforementioned classification of markets and marketplaces provides an initial understanding of the diversity and mixed condition of the outlets and facilities currently operating in Sri Lanka. However, the diverse and irregular conditions in so many marketplaces reportedly reflects the public sector's general disregard for the services provided through such facilities. This attitude is said to be ingrained from both an historical and cultural perspective.

It is important to review anthropological and sociological studies to determine whether that assertion is an underlying truth or not. If it is dominant in the majority of society, then the present condition is more explainable and one can begin a course of corrective action, including awareness training and educational activities. Action is needed to mitigate the immediate, negative consequences of such a situation.

PROBLEMS

Market entry was not a serious problem as many traders have recently entered this business at all levels of the marketing network. However, the basic infrastructural support to the marketing system is now needed. The following examples of problems present opportunities for progressive change.

Several infrastructure-related problems were found at the assembly market level but the problems varied by location. For example, in Welimada the main problem is the absence of a central place for local traders to establish shops and for itinerant traders and farmers to gather to estimate that day's vegetable requirements by observing the arrivals of outside lorries.

The absence of basic market guidelines and experienced local expertise as a source of timely advisory services for Municipal Councils and Pradeshiya Shaba is a serious problem needing immediate attention. In Nuwara Eliya, leaders have no access to technical expertise to help judge the new location, efficient market layout, and effective management procedures for the informal assembly market, that is, group of wholesalers along St. Andrew's Street. Expertise to judge the optimum site would reinforce marketing dynamics rather than cause business failures or restrict competitive entry into the wholesaling business.

In Kegalle the confined and insufficient space in the pola facility urgently needs modification to effectively accommodate the potential for further large-scale wholesaling activities as proposed by local wholesalers. Yet, where will the expertise for these modifications be found? Meanwhile, the layout and basic design of a new Dambulla wholesale marketplace clearly illustrates the lack of understanding of the appropriate location, layout, and operations of an assembly/distribution market tailored to Sri Lanka's unique

requirements. Jurisdictional constraints on the availability of adequate land area for market facilities must be resolved.

A related problem encountered in most countries and evident in the designs for the new facilities proposed for Dambulla and Kandy is the tendency to spend larger sums of money than necessary for market facilities. Given the dynamics of changing production patterns and future developments in the transportation sector, it is important to construct flexible, "light," and less-costly facilities. In fact, the unique features of "natural wayside markets" in Sri Lanka should provide market analysts with adequate insights into the basic features of such low-cost and flexible market facilities.

In other words, there are costly "mistakes in the making" in both Dambulla and Kandy where new wholesale markets are being constructed without adequate technical expertise. In both cases there are serious but fundamental problems with the design relative to the ultimate purpose proposed, that is, wholesaling of fresh vegetables. These "Mercedes Benz" versions of marketplaces are too expensive for the wholesaling of fresh vegetables because vegetable wholesalers cannot recover sufficient margins unless they increase substantially their rates, which must compete with less-expensive sources of vegetables.

The current low rates in Dambulla are an important major attraction for buyers. Likely scenarios for opening such high-cost structures include:

- Emergence of a different market center in another location where rates will be substantially less; and
- Conversion of these facilities into wholesale outlets for a variety of non-vegetable commodities. This phenomenon should not be repeated in the Nuwara Eliya or Welimada marketplaces.

SECTION EIGHT

MARKETING OPERATIONS

Marketing operations are functions necessary for moving commodities through the marketing systems, and include the provision of inputs. This section briefly examines trading practices, transportation and handling arrangements, terms of trade, marketing margins, pricing patterns, and problems.

TRADING PRACTICES

The common trading practices mentioned frequently by traders relate to who seeks the commodities, credit arrangements, and methods of deducting value or weight to compensate for the costs of bags, shrinkage, or services.

The search process varies by season. During scarcity, or "sellers' market," traders are more active in searching out farmers with crops ready to harvest. Although the volume sold is less per trader, this is their most profitable business period, whereas during the peak harvest months, or "buyers' market," farmers seek traders willing to buy their crop rather than crops of other farmers.

Retailers/wholesalers in regional consumption areas (such as Ambalangoda, Galle, and Matara) usually personally search for commodities in production areas to select the appropriate quality and volume for their respective markets and to facilitate the market clearing process. The scale of purchases varies markedly by market condition. For instance, during a sellers' market, 5 to 15 retailers or wholesalers will come with one lorry to buy vegetables in Bandarawela. However, during the buyers' market, each trader comes to purchase one lorry or more of vegetables — a big difference in terms of volume. Few commission agents in Colombo or Kandy reported searching for vegetable supplies as a common practice.

As noted later, the vegetable marketing system still runs on several forms of credit. For instance, the resident trader agrees with his steady buyer on a price per vegetable and then usually offers a certain amount on a delayed-payment basis. Some suppliers have a rule of thumb to lend only up to a set amount, such as Rs 25,000 per client, and the balance of purchases are on a cash basis. When that buyer returns for his next load, usually in a week or so, the balance due is paid and he again receives an agreement for another amount.

The amount of credit given depends on trustworthiness and the buyers' ability to repay — thus a Dambulla trader will allow Rs 25,000-30,000 to buyers servicing retail markets but only Rs 5,000-10,000 for those selling to retailers in a pola. Thus, such buyers often have more than one supplier in order to obtain adequate volumes mostly on a credit basis.

Credit is a risky part of business. Although several large traders expressed their concern for the Rs 200,000 to millions of rupees outstanding, only a few could cite individuals who went out of business because of credit problems. However, in Kandapola a large trading company incurred such a large debt from one big buyer that it shifted to other types of business and discontinued vegetable trading except to sell potatoes, which are storable and have a more stable market.

Often such a delayed payment or "loan" is passed on to the retailers who ultimately sell those goods. In other words, the wholesaler receives a week's worth of money by delaying payment to his suppliers in order

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to cover the cash flow and/or to expand his market share. Then, the wholesaler offers his group of retailers a week in which to repay him for the vegetables that he supplied on credit. After they pay him, he repays his suppliers.

One important rationale for this credit arrangement is the client-patron relationship that develops between the lender and lendee, a relationship that is particularly crucial at the retail end of the marketing system where everyone knows everyone else. For instance, some retailer/wholesalers in Kalutara and Gampaha continue to buy vegetables from Colombo because of the credit traditionally available from traders in the Manning Market. Whereas, other large retailers have been able to discontinue the credit relationship and buy from alternative sources of vegetables.

During the sellers' market period, itinerant traders are often required to pay cash for the limited supply of vegetables. New entrants to each area must also pay cash until they earn the trust of specific farmers or resident traders. In some locations, such as Haputale, where there are as many as 32 resident traders, the five largest traders have begun to pay cash on delivery. These terms of trade have taken business away from other traders whose limited capital means they delay payments to farmers until after they sell the vegetables. Although highland farmers strongly favor cash payments, they should recognize that this practice will change the competitive structure in the assembly market.

The practice of deducting from 1 kg per bag of vegetables is common in several highland areas. For instance, in Haputale traders regularly deduct 1 kg per bag of most vegetables sold on a commission basis of about Rs 1/kg. And in Welimada, traders commonly deduct as many as 4 kg per bag for potatoes that are harvested early. Nuwara Eliya traders also mentioned such deductions as the standard practice.

Farmers strongly prefer to sell the entire amount harvested to a specific buyer rather than sort and sell different qualities to different buyers. In locations such as Hanguranketa, itinerant traders said they prefer not to deal directly with farmers but to deal with local "brokers or collectors" because it is easier to reject some vegetables and buy the remaining amount. Some farmers do not accept such rejection and threaten to not sell anything to such a buyer.

The negative reaction of farmers to rejection of some of the harvested vegetables was cited on different occasions and under various conditions. An example was of a Haputale trader who could no longer deal with exporters because they agreed to buy only 25 percent or less (acceptable quality) of a given delivery — his farmers did not accept this idea. Does such a situation suggest that some farmers have little comprehension of how markets actually work, why quality makes a difference, and how to match market requirements? Would site-specific educational efforts for the newer growers have substantial benefits for farmers and traders alike?

The growing trend in select production areas such as Hanguranketa for outside buyers to deal with local "brokers" as intermediaries between farmers and itinerant traders adds another layer to the marketing channel and more costs to the marketing process. Thus, its causes should be determined as soon as possible. Such a trend warrants careful examination because it may indicate the need for a place, such as a roadside assembly market or similar opportunity, for farmers to meet regularly with prospective buyers and negotiate prices. Or it may indicate the need to broadcast more widely daily price information to interior production locations. Or this practice may signal a production shift to more interior and less accessible areas, thus requiring the time and effort for others to arrange sales and to haul the vegetables over long distances with rugged terrain. These possible explanations may vary from location to location.

TRANSPORTATION AND HANDLING ARRANGEMENTS

Transportation patterns are clearly a key element of any marketing system. In Sri Lanka, transportation is complicated given the varied competing patterns that have emerged in different locations. However, a consistent preference is to employ outstation lorries to haul goods from Colombo to outstation sites rather than use Colombo-based lorries. Other common patterns of vegetable shipments, particularly in the off-season, include:

- Secondary or backhaul loads — long distance lorries returning to their "home-base" either after delivering their goods (cement, flour, fertilizer, coconut products, and so forth) or going to pick up dry goods (large number of lorries but with widely varying volumes per load);
- Designated or primary loads — lorries going to specific places for loads of vegetables, whether owned and operated by a vegetable wholesaler/retailer, transport company, or transport union, such as:
 - Outside lorries operated by regional or itinerant traders that come to the production areas empty and haul purchases back to polas, retail markets, or assembly markets;
 - Local lorries that belong to the local transport union, are responsible for assembling regularly farmers' produce, and shipping it to commission agents in the Colombo or Kandy markets (returning with backhaul loads when possible);
 - Local lorries owned or operated by regional or resident traders or transport companies that haul local vegetables to distant markets, especially Colombo, and return with backhauls of goods; and
 - Local lorries or small cargo vans operated by resident traders or collectors that haul farmers' harvests to nearby markets or shops.

NOTE: The first pattern above (secondary or backhaul loads) and the second and third elements of the second pattern (local lorries belong to the local transport union or owned or operated by regional or resident traders or transport companies) are likely to earn freight from forward and backhauls, whereas the others' earnings were for hauling in one direction. Also, few Colombo-based lorries will haul designated loads of vegetables because their charges are higher than similar-sized lorries based in outstation sites.

The value of backhaul options was mentioned. For example, a trader hired a lorry to haul his vegetables from Welimada to the nearby pola at Nuwara Eliya at a cost of Rs 25 per bag for less than a one-hour trip. Although the charge for shipping those same vegetables from Welimada to Colombo, a trip of several hours, could be as low as Rs 30 per piece. The critical point was that the return trip from Nuwara Eliya was empty whereas from Colombo a valuable backhaul was likely.

The practice of backhauling has spawned several types of business. For example, in the mountains of Kandapola, the team observed the arrival of small lorries loaded with onions, fish, garlic, dhal, and cattle feed which they distributed to local boutiques. Then, they loaded their lorries with vegetables for the trip to their home base. Given the high vegetable prices during these lean months, this arrangement would be profitable; however, whether this pattern remains viable when much larger lorries would be plying those routes during the peak harvest months is unknown.

Except for high volume vegetables, such as chilies, onions, and potatoes, lorries that haul vegetables seldom handle only a single type per trip but haul mixed loads. In backhaul situations this practice is especially common. One implication is the likelihood of damage to whatever vegetable is obtained earliest and placed on the bottom of the pile. Older covered lorries haul bags of vegetables stacked six to eight high, whereas the newer Elf lorries have shallower beds that accommodate three to four bags in a pile.

Another feature of vegetable transport is the practice of "topping loads." For instance, a lorry from Kandy will deliver exotic vegetables to the Dambulla market center, load lowland vegetables there, and on the way back to Kandy it will stop in Matale to add a few bags of beans or crates of tomato to the top of the load. This practice illustrates the practicality of "wayside markets" and traders' thorough knowledge of prominent crops and seasonality by location as well as expectations about the demand for various commodities within their own market.

The common practice for charging freight was on the per piece basis, such as Rs 25-35 per piece from the highlands to Colombo and Rs 30 per piece from the Kalpitiya Belt to Colombo. This practice results in a range of weights per bag as farmers struggle to cram as much into each bag as possible to reduce their costs. However, transport unions accept only 50 kg per bag, whereas local markets sometimes receive as much as 80 kgs per piece. The overloaded bags are particularly difficult on laborers who would just drop them from their back instead of carefully lowering them.

In Nuwara Eliya, traders and lorry operators have begun to charge on a kilogram basis to encourage the use of smaller bags and bundles. However, the charge for loading and unloading is still per piece, commonly ranging from Rs 2 per piece to Rs 4 per piece with urban areas paying more and interior areas paying less per bag. Likewise, any weight deductions are on a per-bag basis. Thus, farmers chose to save money by using larger bags and filling them with more.

In summary, the larger and often older lorries are used mostly for long distance transport, whereas the smaller lorries are used for shorter distances. In several highland areas, such as Badulla, Bandarawela, and Haputale, older passenger vans were converted into cargo vehicles for assembling farmers harvests or for hauling short distances. Two-wheel tractors commonly haul people and sometimes vegetables from the less accessible places.

Now the Elf #250 (cir. 2.5 m.t. load or 50 to 75 sacks) and Elf #350 (cir. 3.5 m.t. load) have become popular with those entering the lorry cargo business. In fact, it was reported that persons returning to Sri Lanka from overseas work and investing in a local enterprise favored this size of vehicle. Observations from the field found every type of vehicle hauling vegetables on occasion.

The costs of hiring a lorry varied by location and destination in addition to the backhaul option. Galle and Matara traders quoted the cost of Rs 5,500-6,000 for the two or more days of lorry rental from Galle or Matara to purchase vegetables in Bandarawela, including a stopover at a pola on the return trip to top the load with lowland vegetables. The trip from Dambulla to Kandapola, however, costs about Rs 3,500 per round trip. The one-way trip from Bandarawela to Colombo reportedly costs about Rs 4,000.

There was no mention of a shortage of lorries, except perhaps in some Mahaweli irrigation areas where government lorries are active. In fact, during the lean months in the Kalutara area, some lorry owners had idle vehicles even though local lorries were given priority for hauling local goods.

The distribution of lorries between locations varies widely with over 100 in Welimada. How such a small mountainous town can support such a large fleet of lorries was explained in terms of the large vegetable farmers (two to three acres per farmer) having their own means of transportation for inputs and outputs. In

fact, this can be taken as an indicator of the potential profitability associated with this type of full-time agricultural enterprise.

When evaluating the efficiency of lorry transport, it is worth noting that lorry loads are sensitive to the ratio of "volume to weight," thus, gunny bags of very dense and heavy vegetables, such as potatoes, may not completely fill the lorry before reaching its rated capacity. Thus, when estimating the economic threshold for a transportation vehicle to a particular area during the harvest season, that ratio should be considered relative to crop selection and area cultivated.

Also, when exploring other options for transporting vegetables, the team learned that trains previously handled the delivery of large amounts of vegetables from the highlands to various southern coastal towns. However, in recent years the unreliability of train service makes such shipments no longer feasible.

An important feature of Sri Lanka's transportation system is the comparatively high costs of using Colombo-based lorries compared with the same type of lorries based at outstations. Reportedly, traders who plan to transport goods to outstation areas prefer lorries from that location. As a result, outstation lorry operators sometimes haul agricultural commodities to Colombo as backhaul while the Colombo goods taken back to their location are really the forward haul. It was not learned whether differential rates are charged depending on forward or backhaul. Further inquiry is needed to document the causes and determine the implications of such a pattern.

A related point is the issue of unwarranted lorry layovers in Colombo. Most distances in Sri Lanka are a matter of hours, consequently a night trip to Colombo from upcountry leaves sufficient time for the return trip in the dark when traffic is less and travel time is considerably faster. However, quick turnaround requires that vegetables should be unloaded at the traders' stalls immediately upon arrival rather than held overnight on the lorry. Unfortunately, when outstation lorries are forced to wait overnight to unload their vegetables in the Manning Market before loading and returning to their outstation site, this adds unwarranted costs. The 24-hour-per-day operations in the Dambulla market center make it much preferred by lorry operators as compared with the Manning and Kandy markets which restrict entry until about 6 a.m.

Transportation unions still have a strong role in certain upcountry locations, such as Kandapola, Welimada, and areas around Kandy, which have a long tradition of supplying vegetables to the Colombo or Kandy markets. However, within today's more competitive environment, it is unclear whether these unions still maintain the same level of control over transport as before. Likewise, are they contributing to more efficient transportation practices or inhibiting them? It would be worth investigating whether the transport unions still haul the bulk of vegetables and, if so, how their rates compare with the charges per kilometer charged by non-union transporters.

Heavy duty motorcycles, commonly used in the Anuradhapura area, are a little-recognized but effective marketing tool. The small collector will carry three bags of vegetables (cir. 150 kg) per trip to sell in the pola or retail market. Such motorcycles are ideal for settlement areas during the transition from only rice or grain production to small-scale vegetable production. Given the initial years of limited volume of daily harvests, relatively short distance to nearby polas and retail markets, and minimal capital investment, the motorcycle is the ideal tool. However, it was reported that the duty charged for motorcycles of 125 cc and below are so high that their costs exceed those in many Asian countries. Would it be beneficial to develop a program for importing or manufacturing them locally, to serve as the "work horses" in settlement areas?

Other than transportation, important insights were gained on handling practices for fresh vegetables. The process of handling vegetables is made easier or more difficult depending on the form in which they are sold. For example, several vegetables were commonly sold with their leaves and stems still attached, such as,

carrots, beetroot, radish, and knolkhol. The rationale for this handling practice was reportedly that their shelf life is extended, this form of packaging reduced damage during transit, and the stems/leaves could be cooked and eaten as well.

The extent that the stems and leaves were actually used by consumers was not observed by the team. However, one implication is that the quoted price is for total weight so the additional weight of stems and leaves means that the actual price for roots/tubers is higher. The team did not determine whether prices reported by the market reporting service included the value of the stems and leaves.

Another aspect of handling is the packaging of vegetables. A strong synthetic bag is reportedly manufactured primarily for use in vegetable trading because several traders use scale hooks instead of platform scales to weigh the contents, whereas for potatoes it is more common to use gunny bags and platform scales. Leek is usually tied in a big bundle which can weigh as much as 50 kgs. Tomatoes are commonly shipped in wooden crates totaling about 30 kgs. Bamboo baskets are not as common in Sri Lanka as in other Asian countries.

A consequence of handling vegetables in one way versus another is the extent of shrinkage. The industry knows the expected conversion rates for distant shipments from production areas to Colombo. Shrinkage varies widely by commodity. For instance, shipments of snake gourd could undergo about 20 percent shrinkage per day whereas potato might shrink less than 10 percent during that period. Likewise, some vegetables have a higher degree of perishability, such as tomatoes when shipped ripe versus green. All these factors were taken into account when computing wholesale price adjustments from the supply site to the distant demand site given overnight shipment. These considerations add to the complexity of analyzing secondary data.

TERMS OF TRADE

A major difference between the trading practices found in outstation areas and the major city markets, such as in Colombo and Kandy, is the wholesale transaction approach versus commission transaction approach for the goods being traded. In the more vigorous and dynamic market centers, or regional markets, ownership of goods by wholesalers has become more prominent. In other words, wholesalers depend on their expertise and experience to know how much of several commodities they can sell on a given day, thus they search for or buy only the amounts and types of vegetables that are marketable. The commission agents, however, sell whatever vegetables arrive on a particular day.

However, given the long history of the commission approach and the more recent presence of resident traders who are trusted by many farmers, the acceptance of one versus the other approach differs by location and season. Even in the dynamic market center of Dambulla or the traditional production area of Nuwara Eliya, local farmers can choose whether to sell outright to a trader or give it to him to sell on a commission basis.

Traders throughout the marketing system usually make the most profit in the lean season with limited volume (and costs) and highest returns per sale. For instance, commission agents sell whatever arrives and earn 10 percent regardless of the price; thus when the price is Rs 15 per kg they earn three times more than when the price is Rs 5 per kg. During the scarcity period wholesalers can withhold supply in the search for buyers bidding the highest price and earn whatever the market will bear instead of a fixed percentage.

Likewise, for the same capital outlay (say Rs 15,000) the buyer will purchase less volume, that is, 1,000 kg @ Rs 15 per kg compared with 3,000 kg @ Rs 5 per kg in the foregoing example. This constrains the amount moving through the marketing system. Given higher prices consumers buy much less, thus possibly causing expensive and unsold inventories if wholesalers handle too much volume.

A standard trading practice is the buyer's provision of bags for whatever vegetables are purchased, beginning at the production level. Because a bag in Dambulla costs Rs 10 per bag used versus Rs 15 per bag new, a farmer delivering 100 bags would consider the cost as very substantial. Consequently, whenever itinerant traders buy vegetables directly from farmers, their first task is to provide the empty sacks after the transaction is negotiated.

MARKETING MARGINS

Costs and profit margins associated with the sale of vegetables during the lean season in 1995 are estimated for three scenarios:

- Wholesalers channel to Galle and Matara;
- Wholesalers channel through the Colombo commission agents in the Manning Market, and
- Itinerant traders channel to polas on the outskirts of Colombo, as illustrated in Figures 5, 6, and 7, respectively. The time period of data collection was similar for the first two scenarios but somewhat later for the third case.

As explained in detail elsewhere, the wholesaler/retailers from Galle and Matara go to selected highlands, buy their vegetable requirements, and take them back to their respective markets. In this channel, there are three main types of traders — namely the assembly wholesaler as in Bandarawela, distribution wholesaler from Galle or Matara as the one who buys and brings the vegetables back to these towns, and the local retailer. Their respective costs and profit margins are identified in Figure 5.

Because farmers earn more than Rs 28 per kg, the spread from the buying price at the farmgate to the consumers price is about Rs 12 per kg or 30 percent of the retail price. All profit margins are less than Rs 2 per kg, weight losses amount to less than 10 percent, and total marketing costs incurred are about Rs 7 per kg. However, when compared with a similar starting situation for sales to Colombo, the structure of costs and margins changes substantially, as displayed in Figure 6.

At the Colombo market, farmers earn about Rs 29 per kg with a spread of about Rs 19 per kg or 40 percent of the consumers' purchase price. Again, there are three major types of traders within the marketing channel but much higher margins of Rs 3 or more per kg. The particularly large retail margin cannot be fully explained for this less-perishable commodity of green beans.

FIGURE 5
MARKETING COSTS AND MARGINS OF GREEN BEANS
IN GALLE AND MATARA (July 1995)

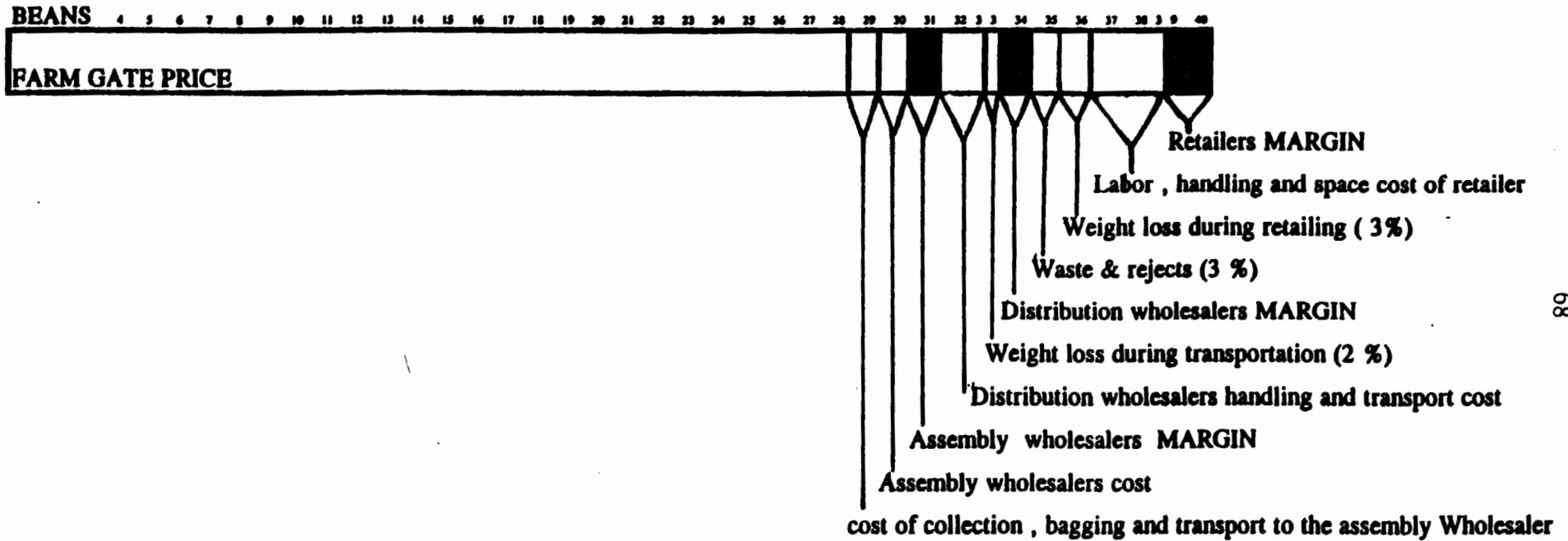


FIGURE 6
MARKETING COSTS AND MARGINS OF GREEN BEANS
IN COLOMBO (July 1995)

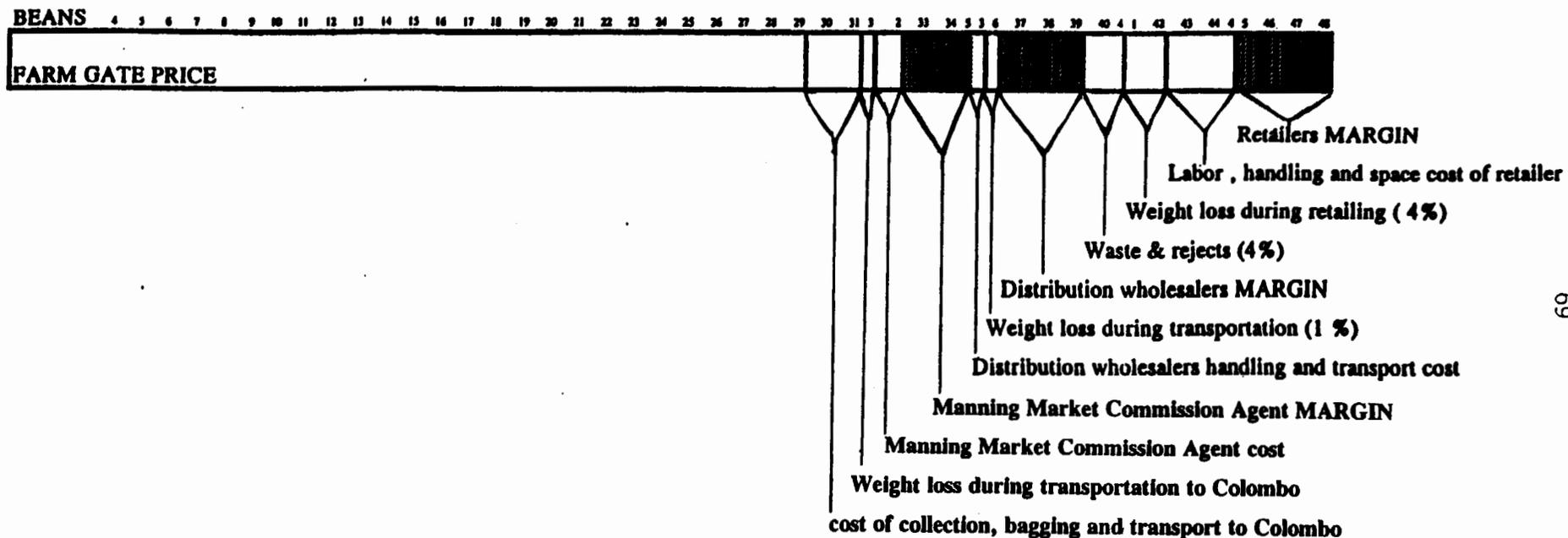
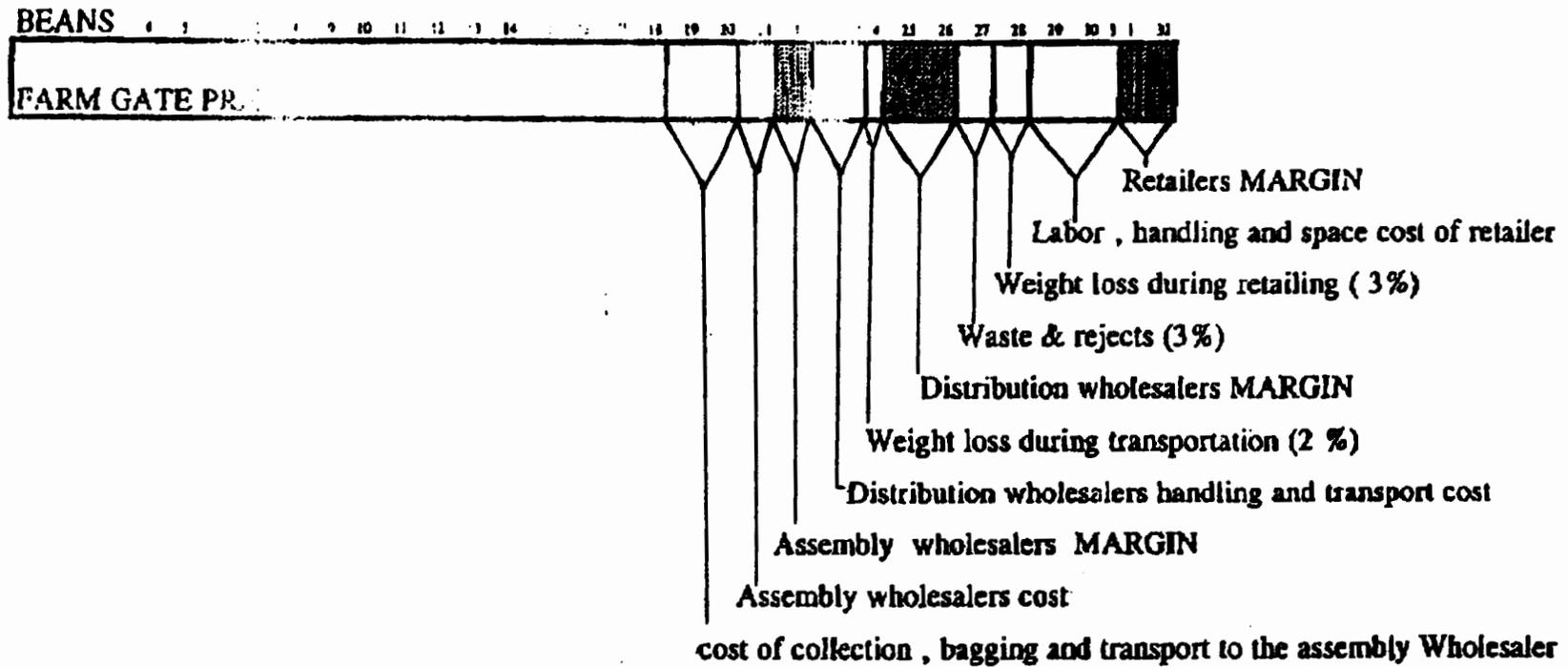


FIGURE 7
MARKETING COSTS AND MARGINS OF GREEN BEANS
IN NUGEGODA AND MAHARAGAMA POLAS (July 1995)



Because data for the polas were collected later in the season, supply was much greater and farm prices were lower — about Rs 18 per kg. The price spread was quite wide at Rs 14 per kg or 44 percent of the retail price (Figure 7). The margin for the local assembler wholesaler is low at about Rs 1 per kg, whereas the itinerant trader earns about twice that amount in bringing the vegetables to the pola and distributing them to retailers. Likewise, retailers in these polas keep their margins relatively low although in percentage terms their margin exceeds those of retailers in Galle and Matara.

The real concern is apparently with the Colombo channel. Key informants suggested that a lower quality (freshness) of beans was sold through the Manning Market channel as compared with the Galle or Matara markets. In general, for each day that vegetables are displayed at retail stands, there will be additional shrinkage and deterioration. That condition causes them to be sold at progressively lower prices in order to recover some of the procurement costs. Perhaps, the margin on that lower price results in a similar average margin for the total originally purchased.

It would be useful to determine whether physical deterioration is substantially faster within the urban environment of Colombo and, if so, whether it is caused by damage during transport or while sitting overnight waiting for the market to open, by difficulties within the Manning Market, or by a combination of causes.

Also, the wider spread between buying and selling prices found in the Colombo channel compared with outstation markets is related to the Colombo trader's higher costs of doing business as well as making a living for his family. One Anuradhapura retailer who previously worked in Colombo noted that the costs of living in Colombo are so high that it is difficult to make a living there, whereas his competitive vegetable retailing business in Anuradhapura allows him a better livelihood even with a lower level of earnings. This factor needs to be documented when designing the new wholesale market in Colombo. However, these explanations are speculations that need detailed field work to substantiate for accuracy and implications.

PRICING PATTERNS

There are several ways to examine the pricing practices found in the study areas, including the identification of the green bean as the price barometer for the vegetable market, reference pricing, price discovery, and price stability.

The price of green beans rises and falls according to the overall supply and demand situation for vegetables within the market from day to day. During the team's travels, the retail price of green beans was about Rs 40 per kg, regardless of the market visited. No other commodity had such a similar price regardless of locations. Beans are reported to be a widely accepted vegetable and several popular curry dishes include beans. Also, green beans are grown in many locations over different time periods and harvested every four days to once a week for four to six weeks. This allows farmers to delay harvest until the prices and/or demand has improved. In other words, if the volume of other vegetables is abundant, less beans would enter the market and vice versa during scarcity periods.

Reference price is the price that is "discovered" each day during the peak trading hours in the major marketplace. It is the price used when negotiating prices in other linked-markets for that day or the next morning's trade. This assumes that there is a certain degree of market integration within the country and the ability to move commodities to the market that offers the highest price (arbitrage). Usually the main marketplace in the national capital generates reference prices; however, key informants did not agree about the current situation for Colombo.

Opinions varied by location. During interviews in the southern part of the country and along the coast north of Colombo (locations currently or formerly supplied from Colombo), several traders said that the prices determined in the Manning Market are frequently cited as "reference prices" relative to price formation in their markets. However, the opposite reaction came from traders in the Kegalle market, Dambulla market center, and highland assembly market areas, especially Nuwara Eliya. In fact, the traders in the Nuwara Eliya, Bandarawela, Welimada, and Dambulla markets contended that during the lean months their daily prices could exceed or equal the Colombo price for a given trading day. They asserted that the Manning Market no longer reflects the national supply and demand situation for exotic vegetables. Considering that unsold inventories in the upcountry markets on a given day would be shipped to Colombo that evening for the next day's sale, the prices upcountry could influence the Colombo price rather than vice versa.

In the upcountry markets, the traders estimate the demand/supply conditions based on their number of orders each morning and degree of success in searching for available supply. Then, they "discover" market clearing prices for that day. Usually whenever there is any unsold inventory of vegetables at the end of a particular day, they ship it to the Manning Market that evening. Given the practice of buyers making orders and coming from the demand areas to the highlands, demand area response to prices is based on sensing what is saleable given "upcountry offer prices." This varies from the commission agent approach of accepting whatever amounts of vegetables arrive and then conferring to achieve a market clearing price. The inability to predict or determine beforehand each day's arrivals could be a major cause of the sizeable day-to-day price fluctuations experienced in the Manning Market.

Another important point about the dynamics of prices is the impact of rainy days on retail prices. For instance, on rainy days the prices in the Kandy Market drop dramatically to avoid inventories because fewer consumers come to the market. This phenomenon with respect to retail sales patterns should receive further attention, particularly to better understand the situation during the May to July period of consistent shortages.

Price instability, that is, daily price fluctuation rather than averaged over a week or month, is important for most suppliers. In the highland areas, traders repeatedly said that prices in their markets are more stable than those in the Manning Market. Basically, the commission agent approach means telephoning requests for supply and waiting for whatever is shipped rather than physically collecting whatever is required. Likewise, the very large number of traders within the Manning Market plus the emerging competition from traders with lorries who go to the supply areas make it especially difficult to accurately estimate daily arrivals of each vegetable.

Thus, irregular arrivals contribute to radical price fluctuations following gluts or scarcity per individual vegetable; whereas the amounts flowing to other regional consumption area markets more closely correspond to daily requirements because those traders go to the supply areas to select the quality and amount demanded locally. Consequently prices in supply areas and other consumption areas fluctuate less dramatically.

The daily prices discovered in the emerging assembly markets enables farmers to know what prices will be paid, whereas when vegetables are sent to distant commission agents in Colombo, the previous day's price is the only indication of price expected. In other words, farmgate price determination has become closer to the producer level and more transparent with assembly markets.

PROBLEMS

The operations of the marketing system had a few problems that warrant action. Several poor postharvest practices include rough loading and unloading practices, causal arrangement of the loads in the lorry that cause damage in transit, and increasing weight/size of containers. However, the gradual evolution of the wholesale form of transactions should provide incentives for change. Yet, as long as fresh vegetables can reach consumer tables rapidly, improved practices will mean only minor savings.

A more pressing type of problem is the inability to integrate new production areas into the national market network after having introduced improved vegetable cultivation technologies. In fact, farmers in a new Mahaweli irrigation project area cited the absence of regional traders as a major impediment to increased production of vegetables within their area. Without the presence of enough traders to bid up local prices at the pola, farmers arrive with their harvest, find few buyers, and sell at such low prices that they become discouraged and discontinue vegetable cultivation. Outside itinerant traders are extremely important for such markets.

The absence of an active public price information in major production areas and the lack of any marketing training at the farm level to interpret price information will slow the progress being realized by the evolution of the wholesale transaction approach. In the past, vegetable farmers sent their vegetables to Colombo or Kandy for the commission agents to sell on their behalf but now more farmers sell their own vegetables near the farmgate. However, they have only "trial and error" to train them in how to understand markets and marketing.

Another problem is the pervasive role of local politics in decisions that directly influence the effectiveness of markets and the marketing system. Although there may not be any malicious intention with such political decisions, the negative repercussions are far reaching. For instance, retailing vegetables means jobs — jobs are rewards for political support. The opportunity to reward one's constituency with employment, such as selling vegetables outside facilities established for that purpose, might be very attractive for some politicians. Five of the many cases encountered will illustrate the disruptive role of local politics.

In 1983, there was the political decision to move the traditional Denipitiya pola from its historical site to a different village because of the supposed benefits of that new area having a pola. Within three years the pola had to be moved back to the original site because of poor results. In other words, the dynamics of polas and market economics combine to make it successful, rather than an arbitrary decision that it should be so!

In Matara, local politics is credited with allowing traders to settle along the path leading to the site of the twice-a-week pola facility and sell vegetables every day in direct competition with the retail market. A result is a marked reduction in the use of existing retail facilities while consumers endure the squalid conditions at that site in order to buy cheaper vegetables. If there is a need for additional market outlets, why are the original retail markets so underutilized?

In Nuwara Eliya, the new administration allowed several vegetable retailers to leave their stalls in the Central Market and sell vegetables along the sidewalks while pesticide dealers moved into their former stalls beside the remaining food stalls, including those selling fresh fruits and vegetables. Selling chemicals beside fresh vegetables clearly has the potential of being a serious health hazard.

In Chilaw, the retail marketplace has been moved five times in recent years (whenever a new mayor was elected). In the most recent instance, the retail market, in an ideal location near the bus stand where office commuters can easily purchase vegetables, was moved to a more distant fish market. Then, the former facility was converted into an children's playground that appeared to be seldom used.

In Kaduruwela, local authorities allowed select traders to set up their large stands along the street leading to the pola, but without paying the usual fees paid by those inside the pola. This was one of many similar cases reportedly condoned by influential parties but judged as "unfair competition" by most retailers.

Local political decisions need to be better informed in order to service the needs of the local community. Workshop sessions for municipal officials, informative materials, and effective legislative guidelines could help resolve this problem area.

SECTION NINE

FINDINGS

To understand the current vegetable marketing system, it is important to understand the underlying forces at work within the marketing systems of Sri Lanka, as well as specific conditions. The points presented below under Systemwide Concerns provide the former, with the following subsections covering more specific points. The points presented may not be findings or discoveries to the most knowledgeable Sri Lankan analysts, but they are relevant to most people trying to understand the vegetable marketing system in Sri Lanka which, compared with systems in other Asian countries, has several unique features.

Findings, meaning something not previously known, depend on one's prior knowledge and understanding. It is difficult to differentiate what one person considers a finding from what another with far more understanding of the topic views as common knowledge. Thus, this section has three parts, beginning with Key Observations from the Field. Observations are organized according to four main topics:

- Systemwide concerns;
- Consumption aspects;
- Marketing dimension; and
- Production considerations.

A few comments are then provided under each observation to either elaborate on it or provide implications. And finally, examples are provided to illustrate the constrained marketing environment on the public sector side with its underlying causes and uncertain resolution.

Key issues expressed by public officials include:

- Indications of a declining trend in vegetable production;
- Estimations of up to 35 percent postharvest losses within the vegetable system;
- Experiences of an inability to integrate new production sites in irrigation project into the national market network;
- Concerns about increased imports of vegetables over time; and
- Limited success in promoting further exports of vegetables.

A few key issues expressed by the private sector include:

- Trading problems arising from rapid and unanticipated changes in the government rules and regulations — thus requesting consistency versus ad hoc changes in policies;
- Assertion that the Cooperative Wholesale Establishment (CWE) is a source of market instability rather than a solution to it, noting that importers are a different set of traders than those active in the assembly area; and

- Inaccurate information on production and harvested quantities of major vegetables.

SUMMARY OF KEY OBSERVATIONS FROM THE FIELD

Systemwide Concerns

1. Historically consistent patterns of vegetable shortages and surpluses remain unresolved and problematic for farmers, consumers, and public officials alike.
2. In the lean months, key informants in the industry estimate less than 10 percent of vegetables goes unsold to consumers (losses low), whereas during the peak season, higher losses occur because of gluts.
3. Sri Lanka's substantial agricultural and marketing diversity requires case-by-case, not generalized, attention and action.
4. Inadequate local expertise in agricultural marketing research, development, and extension is seriously hampering agricultural development plans and programs.

Consumption Aspects

5. The strong consumer preference for exotic vegetables (lowland vegetables are perceived as too ordinary) has adverse implications for substituting lowland vegetables during periods of shortage.
6. Consumer willingness to buy more vegetables is reduced because of poor shopping conditions in many wet (retail) markets and pola facilities.

Marketing Dimensions

7. Community-based knowledge is very important within the business community, especially when retailing vegetables or when credit is involved.
8. In general, the outstation wholesale marketing system provides better quality (fresher) vegetables to consumers, compared with vegetables handled through the Manning (Pettah) Market where they are sent late in the day; stored on lorries until 6 a.m. the following morning; handled roughly during unloading, hauling to shops, selling, and again hauled to and loaded onto lorries; and sent to retail outlets throughout Colombo and beyond.
9. There are adequate numbers of retailers, wholesalers, transporters, and collectors at outstation sites but market facilities are old and in poor condition with little or no management and maintenance, or overbuilt supermarket facilities that force vegetable retailing onto the roadside, sidewalks, or streets.

10. Multiple buying and selling options with minimal restrictions on entry are the norm — except for certain accepted, localized norms regarding purchases through broker-farmer contacts.
11. Cases exist where daily urban polas threaten the viability of retail marketplaces, especially in Matara.
12. Poor postharvest handling is understandable because vegetables are consumed mostly in curries where freshness, not appearance, is critical, and most freight rates are set per piece rather than per kilogram, thus the incentive is for the shipper to use larger containers.
13. The vegetable trading system still runs on credit, especially on the buyer side of the transaction, but the trading system is evolving slowly toward a more cash basis.
14. Outstation marketing systems are based on wholesaler transactions (more demand driven) rather than on commission agent transactions (more supply disposal oriented) common in terminal markets.
15. Cost structure/margin of wholesale to retail price spread at outstations is relatively small and explainable but at Colombo it is still not explainable.
16. The role of the Manning Market in the national marketing system for vegetables has been substantially reduced since the early 1980s, but it could serve in a vital coordination and information role if reorganized and given appropriate facilities.
17. There is widespread recognition within the vegetable industry outside of Colombo that trading and transport margins for vegetables (compared with other agricultural products) are narrow — that is, a less-profitable choice for many — but there remains an opposite perception in the public sector!
18. Except for special cases there is a widespread absence of market management and poor maintenance within retail, wholesale, and terminal markets, except for special cases.
19. Three or four large, upcountry assembly market centers supply most exotic vegetables, whereas lowland vegetable production is dispersed and assembled from scattered rural polas.
20. The trend of local public authorities submitting for private tender the fee collection function for polas has very promising results.
21. Long distance transportation and wholesaling of vegetables during the night should increase marketing efficiency while reducing postharvest losses.
22. Local politics adversely affects the desired performance of several local market outlets for vegetables.
23. Price movements of green beans serve as a barometer of market surplus or deficit for vegetables throughout much of the country.

Production Considerations

24. Nuwara Eliya's **excellent vegetable growers** can become a valuable resource for extension services and testing promising crops/technologies that are promising, especially if quality is required.

25. Except for the Kalpitiya Belt, lowland production systems are much less well-supported than production systems in the highlands.

Specific observations noted above are elaborated on below and a synthesis of problems is provided. In some cases, implications of the observation will be explained, especially if not in the foregoing text. However, one important point needs clarification. Given the small size of the team, our limited time, and the apparent complexity of this marketing system in transition, our focus was on understanding and describing the basics of the countryside — the outstation marketing system — with only minimal and preliminary insights into the Manning Market and Colombo situation.

SYSTEMWIDE CONCERNS

1. *Historically consistent patterns of vegetable shortages and surpluses remain unresolved and problematic for farmers, consumers, and public officials alike.*

This condition need not persist with the development of a practical plan of action, including assistance with good agro-economic technical support, identification of additional suitable highland and lowland production sites, evaluation of location-by-location constraints and implementation of location-specific solutions, reevaluation of rice cropping patterns in upland and lowland irrigated areas, and encouragement for creative marketing arrangements by the private sector. Resolution of this long-term problem is feasible, if done gradually from a market-led perspective that includes adequate consultation with and involvement of the private sector. A working relationship between both the public and private sectors is essential.

2. *In the lean months, key informants in the industry estimate less than 10 percent of vegetables goes unsold to consumers (losses low), whereas during the peak season, higher losses occur because of gluts.*

The commonly accepted estimate of physical losses in the fruit and vegetable sector is said to be in the range of 30 to 40 percent; however, it is not clear whether this is of the total quantity grown, harvested, marketed, or what, or whether that is a seasonal figure or yearly estimate. Likewise, it may include wholesalers' or retailers' rejection of very poor quality that should never have left the farmers' field in the first place. Also, some postharvest loss computations mistakenly include the outside leaves of cabbage and beetroot leaves, which are a form of protective packaging during shipment. Although one anticipates that a higher percentage goes unsold in a period of market gluts, the issue is whether a portion of market gluts has value in terms of its capacity to clear the market.

During the scarcity period, the team observed and several key informants confirmed that less than 10 percent of marketed vegetables are classified as an economic loss. Poorer consumers cannot afford the seasonally high prices, so fresh vegetables with poor or damaged appearance are sold at a low price. This issue should be examined more carefully in light of these and other findings.

The issue is not how to reduce losses caused by market gluts because of excess production — by increasing storage, finding viable outside markets, or converting some quantity into processed form — but to shift the excess production capacity to the scarcity period.

3. *Sri Lanka's substantial agricultural and marketing diversity requires case-by-case, not generalized, attention and action.*

After reviewing studies displaying diverse agro-ecological zones; reading about and listening to accounts of the diversity of interest groups; conducting interviews with urban and rural traders and transporters of all types; and traveling hundreds of kilometers along coasts, flat lands, jungles, narrow mountain roads, and congested urban streets, the diversity of the demand and supply dimensions of the vegetable sector in Sri Lanka became self-evident.

Production, consumption, and marketing conditions vary by season, location, and persons involved. Consequently, when this field assessment searched for patterns according to season, location, and market participants involved, the result was a conviction that vegetable marketing and production improvements should be addressed with a location-by-location approach with strong local participation to accommodate such real diversity.

4. *Inadequate local expertise in agricultural marketing research, development, and extension is seriously hampering agricultural development plans and programs.*

Although the team found some expertise in market information, it found no institution with practical, professional expertise in agricultural marketing systems analysis along with general marketing research/development (R&D) and extension services. Consequently, provincial and municipal councils as well as Pradeshiya Shaba's have had no alternative but to refer to the historical patterns of construction or guess what retail or wholesale marketing facilities and management practices are needed for buying and selling vegetables. Uninformed decisions have caused problems in the nature of the facilities planned and in the limited, if any, management of those facilities. Although other Asian countries have embraced the market-led approach to accelerating their agricultural development, Sri Lanka still holds on to the production-oriented frame of reference.

CONSUMPTION ASPECTS

5. *The strong consumer preference for exotic vegetables (lowland vegetables are perceived as too ordinary) has adverse implications for substituting lowland vegetables during periods of vegetable shortage.*

Exotic vegetables — temperate climate vegetables grown in highland areas — dominate the commercial vegetable markets, whereas lowland vegetables are more prominent in lowland polas. During several visits to retail markets in highland areas, the team found relatively small quantities and few choices of lowland vegetables. When asked, retailers said it is easy to get lowland vegetables but consumers buy little of them. However, during similar visits to markets in lowland areas, there was a much larger selection and volume of lowland vegetables being sold.

This finding signifies an underlying consumer preference that will inhibit any planned one-to-one substitution of lowland for highland vegetables even when severe shortages of exotics drive up vegetable prices. In fact, some traders contended that the price levels for lowland vegetables rise and fall relative to the supply of exotics and are not based on only their own supply situation. This price relationship and the potential for cross substitution needs to be carefully evaluated.

6. *Consumer willingness to buy vegetables is reduced because of poor shopping conditions in many wet (retail) markets and pola facilities.*

The effective demand for vegetables — the ability and willingness to buy more vegetables — may be reduced by the adverse conditions observed in many markets and polas as consumers rush to finish shopping in order to get away from the rain, heat, and/or unpleasant conditions. This assertion warrants comparative analysis because policy makers need to know all of the factors causing the low level of per capita consumption of vegetables in Sri Lanka relative to Southeast Asian countries, especially given the nutritional implications for children.

MARKETING DIMENSIONS.

7. *Community-based knowledge is very important within the business community, especially when retailing in vegetables or whenever credit is involved.*

The vegetable trading community places considerable emphasis on knowing how to do business locally — community-based knowledge. The common pattern is for wholesalers and retailers in a town or city market to make a telephone order, go to assembly markets or production areas to purchase their own vegetables, and take them back to their home market. A resident trader in a supply area seldom goes to and distributes vegetables to buyers in consumption areas, a common practice in other Asian countries.

For instance, retailer/wholesalers in Galle, Matara, and Badulla prefer to form groups of 5 to 10 retailers to go regularly to highland supply areas to buy vegetables rather than wait for traders from those areas to bring a lorry load to their marketplace where they can buy from him. And certainly outside traders will not consider setting up a retail outlet in those markets in competition with local retailers.

This attitude of placing a high value on a localized viewpoint or community-based knowledge indicates behavioral traits that may hinder the formation of a more integrated marketing system. In agricultural marketing logic, both specialization and system integration are important ways to improve market performance and gain economies of size and scale. However, except for some forms of specialization within the Manning Market and branch buying stations in Nuwara Eliya for Colombo potato traders, diversification and localization of trading seem very prevalent in Sri Lanka's vegetable marketing system. Few wholesalers, whether operating in an assembly market or urban distribution market, have integrated businesses with a branch outlet or buying station at the other end of the marketing chain. This practice varies from that observed in other Asian countries.

8. *In general, the outstation wholesale marketing system provides better quality (fresher) vegetables to consumers, compared with vegetables handled through the Manning (Pettah) Market where they are sent late in the day; stored on lorries until 6 a.m. the following morning; handled roughly during off-loading, hauling to shops, selling, and again hauled to and loaded onto lorries; and sent to retail outlets throughout Colombo and beyond.*

According to interviews and observations, in most cases the outstation wholesale system provides more appropriate quantity and quality vegetables to consumers in many towns and cities throughout the country compared with the quality of vegetables reaching Colombo consumers that are handled through the commission agent system of the Manning Market.

Two important considerations are;

- Wholesalers risk personal financial losses based on the management of purchasing and sales decisions but commission agents do not. Wholesalers must accurately estimate demand for their products (quality and quantity) before buying vegetables, or incur losses as a result of unsold inventories. Whereas commission agents receive whatever quantity (quality) arrives and sell by agreeing to market clearing prices, taking a fixed commission, and letting farmers take the consequences.
- Wholesalers are concerned with maintaining quality to avoid adverse effects on their business, but maintaining quality is not an essential consideration for commission agents.

In short, most wholesalers go to production sites to select the quality required by their clientele and carefully handle the vegetables until they reach their buyers, whereas most commission agents accept whatever arrives, although a few try to deal with only experienced growers who send consistently good quality.

9. *There are adequate numbers of retailers, wholesalers, transporters, and collectors at outstation sites but market facilities are old and in poor condition with little or no management and maintenance, or overbuilt supermarket facilities that force vegetable retailing onto the roadside, sidewalks, or streets.*

All observations and enquiries indicate that there are sufficient numbers of retailers, wholesalers, brokers, transporters, collectors, and the like in the outstation areas visited, including new entrants as well as established traders. No one in the marketing system complained about having no one to sell to, except for the settlement farmers in System B of the Mahaweli area. In that area, the irregularity and limited amount of vegetable production have not enticed many itinerant traders to attend their polas. However, the poor condition and absence of any form of management were noted in several markets.

Alternatively, there were a few sites, such as the supermarket facility being built in Badulla or as constructed in Bandarawela and Nuwara Eliya city, where space-related costs in "overbuilt facilities" were forcing vegetable retailers out onto the roadside. Although supermarkets may be very appropriate for retailing a variety of commodities, stiff competition with the resulting narrow margins for fresh vegetables means retailers cannot afford such costly accommodations.

10. *Multiple buying and selling options with minimal restrictions on market entry are the norm — except for certain accepted, localized norms regarding purchases through broker-farmer contacts.*

In most urban areas there are many vegetable retailers in polas competing with those in retail markets; distribution markets accommodate several wholesaler/retailers; assembly markets include lowland polas and highland resident traders, collectors, and brokers from the town to farm levels, plus the traditional collection scheme of lorries of the transport unions picking up farmers' vegetables and sending them directly to designated commission agents in terminal markets. The relationship between farmers and their local brokers was described in Section Six.

11. *Cases exist where daily urban polas threaten the viability of retail marketplaces, especially in Matara.*

Overall, there appears to be a beneficial balance between the slightly more expensive and wide selection of vegetables supplied through the daily retail marketplaces and the lower quality but less-expensive vegetables sold during the twice-weekly urban polas. Competition from urban pola places downward pressure

on prices, whereas the stable presence of credible and experienced retailers in the retail market ensures the quality, quantity, and selection required by the cross-section of households unique to each location.

However, in Matara and Ratnapura, as well as in Galle and Puttalam to a lesser extent, the urban pola has been allowed to remain open on a daily basis in continuous competition with local retail marketplaces. The imbalance between cheaper vegetables in the pola that should complement higher quality and wider selection in the daily retail market can prove very detrimental to the stability and diversity of vegetable supply. It can also result in the loss of experience and expertise of the traditional trading families in the wholesale/retail market.

Traditional retailers argued that they are fee- and tax-paying residents as well as experienced, dedicated vegetable providers, whereas many traders in the polas are temporary traders who pay small fees and generate limited local revenue. In some situations, consumers are relegated to a very difficult shopping environment, including questionable sanitation conditions, such as the case where a pola site was placed beside the town's garbage dump.

The real issues are:

- The increased costs to the municipality for managing and maintaining two uneconomic units;
- The loss in the dynamics of a pola when it becomes an alternative marketplace; and
- The longer-term implications for the appearance and revenue of the town, consumer demand, health and welfare, and producers' income. Traders in polas generally pay their suppliers or farmers lower prices for vegetables. The full consequences of this form of competition between a daily urban pola and daily retail market needs to be carefully examined.

12. *Poor postharvest handling is understandable because vegetables are consumed mostly in curries where freshness, not appearance, is critical, and most freight rates are set per piece rather than per kilogram, thus the incentive is for shippers to use larger containers.*

Poor postharvest handling practices may be tolerated by the vegetable industry because vegetables are consumed mainly in curries, which means they are cut into small pieces and sometimes smashed into a paste, thus a good appearance is not essential. However, freshness is important to avoid spoilage which adversely affects the good flavor.

From a commodity handling perspective, the common method of charging portage fees for loading and unloading and for lorry freight on a per-piece basis, rather than on a weight basis, is an incentive for shippers to send oversized bags or bundles that are too heavy to handle with care. However, in Nuwara Eliya it was reported that local lorry operators are now charging on the kilogram basis. Perhaps this practice should be encouraged to spread.

Also, unlike the transport patterns in several Southeast Asian countries where a lorry is often loaded with a single commodity, such as cabbage, brinjals, or tomatoes, Sri Lankan traders and transporters prefer handling and shipping very mixed lots. Except perhaps for lorry loads of potato, onions, or dry chilies, it was common for long distance transport to include mixed lots of vegetables — a combination of a few bags, containers, or bundles of each of several types of vegetables. This practice makes it difficult to develop any systematic, less-damaging method for loading, arranging containers, and unloading fresh vegetables.

13. *The vegetable trading system still runs on credit, especially on the buyer side of the transaction, but the trading system is slowly evolving toward a more cash basis.*

The vegetable marketing system has traditionally run on credit but a cash basis is becoming more important, especially during a "sellers market" condition with a scarcity of vegetables and buyers bidding for them. Credit extends mostly from the wholesaler or commission agent level in terms of:

- Resident local traders and/or regional traders receive delayed payment from their regular buyers who in turn delay payment from their established buyers right up to selected retailers; and
- Commission agents delay payments from their established buyers and may delay paying farmers or other suppliers, depending on the season. Unknown outsiders or new market entrants, whether retailer, trader, or commission agent, pay cash for most transactions.

For example, known buyers pick up vegetables from resident traders in the supply areas and pay for the purchase of the previous few days or week. Similarly, those buyers sell their load by giving known buyers, such as retailers, the next day or week to pay for the current purchase of vegetables. When the retailers sell the vegetables, they repay their supplier who in turn repays the wholesalers in the supply area. That wholesaler may or may not have paid the farmer by that time.

Consequently, the resident and regional traders require sufficient working capital to manage their cash flow with many accounts outstanding. Extending credit is a primary strategy for increasing one's market share. But defaults become the major reason for many traders going out of business. In general, the longer the business relationship and/or the larger the share of purchases, the longer the allowable repayment period, assuming sufficient resources. Interestingly, most resident traders said they expect their buyers with credit outstanding, even those who defaulted long ago, to eventually repay whatever debt remains outstanding. Cited defaults ranged from a couple hundred thousand rupees to millions — of course in the latter case the trader went out of business.

In general, credit to farmers or supply-side traders seems less risky than credit to outside buyers who are more difficult to catch up with than farmers. Although supply side credit reportedly is less problematic, it is not frequently provided to vegetable growers. On the demand side, excessive competition at the retail levels can make credit recovery difficult, especially when excessive competition drives margins to a level too thin to pay off debts.

The well-established commission agents in Colombo have a network of loyal larger farmers and suppliers to whom they loan money over time in exchange for a regular supply of vegetables, especially during lean months. Although there is limited information on the extent of this practice, there are indications that many such suppliers prefer to sell a substantial part of their vegetables in local market centers and then to ship the balance to their Colombo patron.

14. *Outstation marketing systems are based on wholesaler transactions (more demand driven) rather than on commission agent transactions (more supply disposal oriented) common in terminal markets.*

This observation is described in detail in Section Seven; however, its implications need further elaboration. As a marketing system matures, coordination improves, and demand/supply relationships become more transparent, price stability should improve on a day-to-day basis. The volatility and instability of a daily market for perishable commodities is a primary reason for allowing the commission form of transaction which transfers most price risk back to the farmer end of the marketing system.

15. *Cost structure/margin of wholesale to retail price spread at outstations is relatively small and explainable but at Colombo it is still not explainable.*

In outstation areas, the large numbers, dispersed sales locations, and ease of entering the trading business as well as fluctuating prices lead to a very competitive retailing business with relatively narrow margins. The result, narrow margins, helps explain why so few vegetable retailers have managed to afford shops in high cost supermarkets or retain them in central markets, such as in the case of Nuwara Eliya's Central Market.

From the data collected in the field through interviews and observations and presented in Section Eight, the cost structure/margin of wholesale-to-retail price spread in the outstation conditions is fairly explainable. However, given the limited information about and complexity of the Manning Market situation along with wide variations in retail prices around Colombo, those spreads cannot be adequately explained at this time. This sensitive issue requires further in-depth analysis because of all the complaints regarding high prices for the irregular quality reaching the Colombo consumer.

16. *The role of the Manning Market in the national marketing system for vegetables has been substantially reduced since the early 1980s, but it could serve in a vital coordination and information role if reorganized and given appropriate facilities.*

Formerly the national market coordination function was managed by traders in the Colombo Market but it can no longer be found there. The explosion of traders, emergence of regional markets, and inappropriate facility explain part of Colombo's loss of the coordination role. It has been partially acquired by such market centers as Dambulla and assembly markets in Nuwara Eliya, Bandarawela, and Welimada. However, now the question is how to take the progress gained by the emerging regional markets and their form of wholesale transactions and resurrect a more vibrant set of terminal and assembly markets based on those gains. It is more than a question of building appropriate facilities.

From the supply side, some upcountry traders argue that the Nuwara Eliya market price has become the national reference price for key exotic vegetables, such as leeks, potato, cabbage, carrot, and beetroot. Meanwhile, the Welimada and Bandarawela prices have become particularly important for the consumption centers in the south and in some central towns. Although some reference is made to the Colombo price, its relevance to regional market prices, particularly during the lean months, appears marginal.

Likewise, the commission agents in both the Manning and Kandy markets contend that their business profits have steadily eroded over time. Besides being a sign of diminishing role, could this also be a sign of the gradual demise of the commission form of transaction or a major shift in the locational aspect of market structure? In response to the first point, some large commission agents in Kandy recently mentioned using wholesale transactions, such as buying vegetables from Nuwara Eliya to sell during the lean season while doing commission agent business with the delivery of local vegetables during the peak season.

From the demand perspective, several former buyers from nearby towns have learned that vegetables sold from the Manning Market generally have limited shelf life and thus they now go directly to the main production areas for their supply. Wholesalers/retailers in towns south of Colombo, especially Galle and Matara, as well as some in towns along the coast north of Colombo have broken their traditional ties to the commission agents in the Manning Market. Likewise, within retail markets surrounding or near Colombo, local traders are bringing exotic vegetables directly from production areas to compete with Manning Market supplies.

17. *There is widespread recognition within the vegetable industry outside of Colombo that trading and transport margins for vegetables (compared with other agricultural products) are narrow — that is, a less-profitable choice for many — but there remains an opposite perception in the public sector!*

Outstation transporters report hauling vegetables, compared with other agricultural and nonagricultural commodities, is not a profitable business for transportation given the intense competition in the vegetable sector. Whenever transporters have a choice between vegetables and other commodities, they usually prefer something else. However, this assertion requires additional data to confirm its validity.

18. *Except for special cases there is a widespread absence of market management and poor maintenance within retail, wholesale, and terminal markets.*

Most marketplaces, whether polas, retail markets, or assembly markets, had no resident market manager, not even on a part-time basis. The main exceptions found by the team were in Nuwara Eliya town (Central Market), Kurunegala (retail market and pola), and Kandy (wholesale/retail market). Exemplifying the extremes, the Kandy Market had a set of offices and an extraordinary number of market officers, including a superintendent, four supervisors, and two junior supervisors as well as fee collectors, cleaners, and watchers. Meanwhile, in a market with several times the number of traders, lorries, and volume, such as the Manning Market in Colombo, we did not find any similar office or staff present. Except in line with the rationale that each place does things differently, we cannot explain such a difference for terminal markets.

Also, most public retail markets charge such unrealistically low fees for stall space that the maintenance and repairs on the facilities, drainage channels, parking area, and so forth have to deteriorate over time given the lack of funds and drain on local budgets. One large retail market charges only Rs 250/month for six square feet of retailing space, that is, less than Rs 10/day, an amount far below realistic costs.

19. *Three to four large, upcountry assembly market centers supply most exotic vegetables whereas lowland vegetable production is dispersed and assembled from scattered rural polas.*

Nuwara Eliya and Kandapola form the largest year-round assembly center for the best quality exotic vegetables. To the south, Bandarawela, Welimada, and Haputale service many buyers from the south and southeastern part of the country with a wide range of exotic vegetables. To the north, Hanguranketa, Matale, and neighboring places are locations within the "Kandy season" assembly area supplying buyers to the west and northwest. Meanwhile, the Dambulla market center has replaced Kandy Market in servicing a wide range of buyers from the northern and eastern part of the country with exotic and lowland vegetables. Kegalle is reportedly serving a similar, though smaller, role in several densely populated areas around it.

Rural polas, especially in the southern, western, and northwestern areas have become the main source of lowland vegetables on a season-by-season basis.

20. *The trend of local public authorities submitting for private tender the fee collection function for polas has very promising results.*

Public sector polas are now being tendered out to private fee collectors in more and more places. The amount of fees collected are far higher than the amount collected by public fee collectors. In fact, in Anuradhapura fee collection has been improved to such an extent that local authorities have made investments in new stalls, with a solid wall in the front and improved drainage. Other very noteworthy cases include Kurunegala and Tambuttegama where facilities and operations are said to have improved markedly after the transition to private tender. This new trend should illustrate the benefits from effective private sector

participation in market management. However, there are also less noteworthy cases, such as in Puttalam where the facilities remain minimal.

21. *Long distance transportation and wholesaling of vegetables at night should increase marketing efficiency while reducing postharvest losses.*

Traders and transporters reported that long distance shipment of vegetables from outstation areas to Colombo is best done at night when traffic congestion on the narrow roads and inside Colombo is less, travel time is quicker, and cooler temperatures mean reduced spoilage. However, upon arrival at the wholesale markets in Colombo and Kandy, the lorries must wait several hours until the market opens. This means the vegetables remain stacked on top of each other, deterioration is accelerated because of heat built up in the confined space, and drivers incur additional costs for accommodations.

In the meantime, the emerging market centers of Dambulla and Kegalle are open 24 hours, thereby allowing for the rapid unloading and loading of lorries so they can continue their travel to distant destinations and/or find their backhaul. This efficient practice would have considerable merit for other key markets.

22. *Local politics adversely affects the desired performance of several local market outlets for vegetables.*

Local politics has had difficult and disruptive influences on the location and operations of wet markets, almost as if there were no guidelines or basic Standard Operating Procedures (SOPs) for such markets. For instance, in Chilaw there have been five changes in the site of the wet market within a 30-year period — usually after a new mayor takes office. Now vegetable retailers are sharing space in the distant fish market and dealing with lower sales because of not being close to the bus stand and other key facilities.

In Matara, as a result of political disagreements, some traders are reportedly allowed to sell vegetables daily along the muddy pathway leading to the new pola facility, taking customers away from the large retail market. In Galle, food sellers have their stands spread over a wide area along various streets even though the appearance, traffic movement, and sanitary conditions are adversely affected, again reportedly as a result of political favors. These examples are a few of the situations noted during the field observations.

23. *Price movements of green beans serve as a barometer of market surplus or deficit for vegetables throughout much of the country.*

Green beans serve as the national price (demand/supply) barometer for the vegetable market as a whole. This finding emerged after several interviews and observations in many markets. Although the prices of other vegetables varies considerably from market to market, the price of green beans remains relatively steady. The team found unexpectedly consistent prices across locations even when the types of beans varied, whether butter bean, green bean, or the like.

A key informant explained that whenever the local market is glutted with vegetables, the price of beans tended to drop quite low. Whenever there was a scarcity of vegetables in general, the price of beans continued to rise. Because beans can be grown in both highland and intermediate elevations (some in lowland areas), are available in every market, and are included in so many curries, they naturally are a popular and preferred vegetable. This phenomena had also been explained during a 1991 project evaluation study. As a barometer, it can be very useful to those interested in monitoring vegetable markets.

PRODUCTION CONSIDERATIONS

24. *Nuwara Eliya's excellent vegetable growers can become a valuable resource for extension services and testing promising crops/technologies that are promising, especially if quality is required.*

Excellent vegetable growers found in the traditional growing areas of Nuwara Eliya represent a valuable national resource for the extension services in newly irrigated areas and for the testing of promising crops/technologies. The key is families that grow vegetables commercially, families in which the father can leave the routine cultivation to the younger generation while devoting time to help in transferring crop cultivation and marketing techniques to farmers in irrigation projects on a trial and error basis.

However, it is important to emphasize that integral parts of this highly productive production environment are the well-developed input and market support systems. For instance, at a key crossroad small lorries loaded with fresh compost wait for farmers to purchase and apply compost to their plowed fields, seed and fertilizer shops readily provide other inputs, and outlets for pumpsets and related tools are also available. Likewise, resident traders, collectors, and brokers as well as Transport Union lorries service farmers' marketing requirements. In other words, extension expertise is only one part of the complete package for a highly productive production environment.

25. *Except for the Kalpitiya Belt, lowland production systems are much less well-supported than production systems in the highlands.*

The prior point explains the degree of support systems in the most productive highland production sites. The farmers in the Kalpitiya Belt have similar levels of support along with a long-term pattern of intense vegetable cultivation. In most other sites, farmers cultivate commercial vegetables on a seasonal basis, either on assorted small plots within a general area or on diverse, scattered plots.

In the northwestern area, several farmers within adjacent fields grow onions and/or chilies at a similar time on irrigated rice paddy plots, whereas in the southern areas a wide variety of lowland vegetables are grown under assorted conditions, rainfed and irrigated. In this latter situation, input and market support systems for vegetables are not well established.

CONSTRAINED MARKETING ENVIRONMENT

In addition to the specific problems noted in the observations above, this section brings together information on the nature of the market environment as constrained by the actions or inaction of the public sector. Other problems have already been discussed above. This subsection focuses on the underlying forces and common features of the current constrained marketing environment.

A major constraint to the performance of marketing systems is the limited understanding of the dynamics of marketing or a market-led approach to agricultural development. This attitude or perception needs immediate and consistent attention at all levels for an extended period of time. However, public sector institutions and organizations active in agricultural development and planning are said to be production oriented. A consequence of such a mind set is the inability to effectively envision and support the development of needed markets and marketing systems. Even in this constrained environment, private traders continue to make slow progress.

The absence of any institutional base for practical expertise in agricultural marketing seems to originate from local priorities that historically have overlooked the value of this subject matter. In fact, in a wide range of situations the attitude appears to be that marketing is irrelevant and not of consequence. Even when considered important, there is nowhere to go to find experiential marketing training, practical advice, and in-depth analysis. A sample of situations that illustrate that attitude or lack of expertise include:

- In Nuwara Eliya, when officials were faced with relocating traders' shops along St. Andrews Street because their deliveries interfered with traffic patterns in front of a popular tourist hotel, the question was how to get them out of the way. The question should have been how to find a better location with adequate space, orderly arrangement of shops, and improved support (access to telephones, garbage removal, drainage facilities, market information, and so forth) to form a more effective market that benefits nearby farmers, local traders, and the business environment in general.
- In Galle, vendors congesting traffic flow along the street, standing water near vegetable stands, fish vendors selling on the stairs leading to the pola, refuse accumulating at various places, and the like illustrate a basic lack of market order that would benefit consumers and the city alike.
- Matara recently constructed stalls for a pola — but the pola is situated beside the town garbage dump, permits vendors to sell fresh vegetables every day along the path leading to the pola, and meanwhile witnesses the deterioration and gradual abandonment of two retail marketplaces.
- In Nuwara Eliya, agri-chemical shops are allowed to do business right beside fresh vegetable stands in the central market, oblivious to the potential for serious harm to consumer health.
- Welimada, because of other town priorities for space utilization, did not allow the construction of a closely nestled group of vegetable trading shops (at their expense or with key money) that could further improve marketing, generate employment, and improve income opportunities for nearby farmers.
- In Colombo, a functioning group of vegetable shops was dislocated in order to build housing flats instead of an improved market facility, which would reduce consumer costs for vegetables and be a positive contribution to the appearance of the city.
- Dambulla is spending millions of rupees provided by an Asian Development Bank project on excessive construction costs to build a beautiful, medium-sized wholesale/retail market instead of improving one of the most vigorous market centers in the country.
- Kandy is spending tens of millions of rupees to construct a facility with features that would not be advised if it had understood the need to link wholesaling and retailing in this terminal market, the shrinking size of the vegetable wholesale trade relative to its former role in regional marketing, and the real benefits of two moderate-sized facilities versus a single large one.

In retrospect, a consequence of this prevailing condition is the lack of effective demand for the services of agricultural marketing specialists. In turn, whenever young professionals look into promising future fields of study and employment, they avoid becoming involved in this field, and the situation goes full circle.

At the policy level, the government needs to endorse and support a market-led approach to development, including willingness to provide the needed infrastructure and management systems together with a vision for the future.

SECTION TEN

AGENDA FOR ACTION AND RESEARCH

An Agenda for Action and Research is an action plan that specifies what can be done about known problems given existing information and resources and identifies what information gaps still require attention before acting upon other important problem areas. The purpose for this Agenda is to suggest a clear direction for corrective activities while providing ideas and substance for public and private sector debate on other priority problems in the vegetable subsector.

A basic necessity for implementing an Agenda for Action and Research is a mechanism in place for accomplishing the particular actions and research recommended, especially for progressive changes that are sustainable. However, the team could not find a well-financed, joint public/private sector institution, organization, commission, or project to initiate or sponsor the broad spectrum of needed changes within the vegetable subsector.

Given that situation, with the recognition that such institutional change takes time, this Agenda will propose a two-pronged thrust:

- A near-term initiative involving a series of discrete activities to create a heightened awareness of the situation with its priority problems; and
- A series of sequential, inter-related activities for establishing and maintaining an appropriate institutional base.

APPROACH AND FUNCTIONS

The approach of this Agenda is to:

- Heighten awareness of the nature and inter-relationships of vegetable marketing/production problems;
- Identify training opportunities to improve analytical and decision-making skills for understanding and interpreting this situation; and
- Indicate timely information-collection opportunities to bring the sector into focus for the public sector decision-makers, both policy makers and those implementing changes.

Likewise, this Agenda will perform the following functions:

- Recommend a systematic course of action for the future;
- Highlight several relevant types of action that can be accomplished in the short run and be accelerated as soon as a mechanism for proactive change is established; and

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- Propose several practical research activities to build a timely information base upon which informed decisions and a progressive sequence of actions can be achieved.

RECOMMENDATIONS

The proactive recommendations are summarized here and elaborated on in the following sections. They include:

- First, in the near-term, USAID, through one of its planned or existing projects, should accept the role of catalyst in sponsoring, providing limited technical assistance, and following up with immediate actions in anticipation of the formation of the institutional base with a market orientation.
- Second, a donor agency — USAID or another donor — should initiate a small project or program to support the design, formation, and operations of the institutional base upon which to develop effective agricultural marketing research, development, and extension activities, especially training, whether within the university community or in a joint public/private sector organization.
- Third, to provide overall direction, broad-based support, and local participation within specific affected locations, the institutional base should establish its own Advisory Group or Board of Directors to facilitate its dual initiatives — to improve the efficiency and condition of traders and growers of vegetables in the outstations, and to assess and resolve the condition of poor market infrastructure faced by those within the terminal markets in Colombo and Kandy.
- Fourth, given a practical, participatory approach to its initiatives and guidance from its own Advisory Group, the institutional base would become a catalytic force for change through select cases of advocacy, petitioning various donors or companies to support needed changes and investment opportunities, sponsoring essential training activities, and leading observation trips to other countries.
- Fifth, the marketing institution would establish a mechanism for the collaborative funding of its activities from a select set of donors, government agencies, and private sector sources to provide balanced financial independence, lower the funding burden on any one donor or agency, and reduce duplication of effort or uninformed investment in the vegetable subsector, such as in the cases of the Dambulla and Kandy market facilities.

NEAR-TERM INITIATIVES

Current events, resource availability, access to unique expertise, and complementary initiatives by other groups often condition the selection of a particular activity. Consequently, to accomplish the first recommendation, the following discrete actions are intended to provide a listing of useful short-term options responsive to the current situation. The subsequent sections provide an inter-linked chain of steps conducive to the resolution of the more entrenched problems and the provision of sustainable solutions from an institutional perspective.

A key to heightening awareness is a series of activities centered on communications and broad-based learning, such as consultative sessions, workshops, and conferences. Each listed activity begins with a stated objective followed by the proposed approach. To accomplish these activities, it will be useful to engage the services of marketing specialists who are both skilled and acceptable to both public and private sector participants.

- To become aware of a problem and committed to its solution, **experience it first hand:**
 - First, complete the case study of the Manning Market,
 - Then arrange a "wake-up call" (details described later), that is, have key officials visit the Manning Market; and,
 - Finally, hold a one-day, high-level workshop to gain commitment for progressive change.
- To respond to location-specific needs, **learn local needs and priorities:**
 - First, conduct a selective set of consultative sessions in five key sites (three assembly markets and two retail markets) with a follow-up series of short analytical papers (facts and preferences) responding to the priority issues raised during each session; and
 - Use the interest and positive responses from these sessions to determine eligibility for participation in the next two activities.
- To know what is missing, **show what is possible:**
 - First, conduct a reconnaissance (including slides) of the positive aspects of the private retail market in Negombo, the layout of the Kurunegala market, and dynamics of the Dambulla market center, as a "show and tell" example;
 - Then conduct a workshop with a select group of municipal council members from 3 to 5 towns; and
 - Finally, conduct a follow-up field trip to those towns.
- To know what is expected, **learn from the experienced** (for use by Municipal Councils or Pradeshiya Shabas):
 - Conduct pilot training of part-time market managers; and
 - Commission the drafting of practical guidelines for the location, organization, and operations of retail and wholesale marketplaces for fresh vegetables, including lessons learned from other countries, especially within the Asian region;

- To feel on an equal footing with one's neighbors, **know first-hand what their situation is and why:**
 - First, focus on the wholesale markets;
 - Based on the participation and reactions to activities above, organize an observation trip to one or two other Asian countries, especially to Bandung, Indonesia. This activity should be done in collaboration with USAID agribusiness projects in neighboring countries.

INSTITUTIONAL BASE

The lack of an institutional base with adequate resources and expertise for consistent, in-depth marketing research, extension, and training services is well recognized. The 1986 study, "Strategy for Domestic and Export Marketing of Subsidiary Field Crops and Vegetables," stated that:

"In general, expertise in marketing, particularly in the Ministry of Agricultural Development and Research, is non-existent. Therefore, the ability to initiate corrective marketing research and extension programs is very limited and not adequate to facilitate support services to the agricultural industry for the development of efficient and effective marketing of SFCs and vegetables." p 100.

Only limited changes seem to have been made since that time.

Because this study focused on field conditions in the outstation markets, there was insufficient time to conduct a thorough institutional assessment of relevant agencies and institutions to determine the extent and causes of this situation. However, our experience confirmed how difficult it is to find professionals with practical expertise and extensive training in agricultural marketing.

In the vegetable subsector, there continue to be recurring high prices of vegetables resulting from frequent shortages in the May-July period, market gluts during the usual peak harvest months of September-October with farmers' incurring serious losses, and local authorities in most districts ignoring the plight of farmers trying to find a place to sell directly to outside buyers or consumers struggling to shop in dilapidated market facilities. In fact, those situations illustrate the present and persistent lack of an effective mechanism for progressive change in the vegetable subsector, particularly from a marketing perspective.

The scope, depth, and interrelated nature of problems observed suggest that no present project can effectively initiate and support all needed changes. However, it can serve as an effective catalyst for change through the establishment of an institutional base as a mechanism for change, promoting ongoing dialogue, and funding pivotal action/research activities over time.

A systematic strategy for developing an institutional base to accomplish specific needed action and to obtain missing or vague information through research is critical. The combination of the two-pronged approach will complete the description of the subsector, diagnosis of its problems, prediction of the consequences of its situation, and prescription for a feasible course of action from the public and private sector perspectives.

Because the first thrust or recommendation has been outlined in a series of discrete activities with some initial data gathering under "near-term initiatives," the following detailed agenda will provide further elaboration while focusing on the second thrust in the last four recommendations.

ACTION AGENDA

Effective action is usually based on informed decisions and experienced judgments of key persons or organizations involved. However, there is a surprising lack of factual information upon which to make such judgments, particularly in regard to the dynamics of the markets and marketing systems. Consequently, many of the proposed actions need to contribute to and reinforce the learning process regarding the very dynamic vegetable subsector which is in the process of transition, especially the marketing component.

The four parts to this section are:

- Development of marketing expertise;
- Wake-up call, or gaining commitment;
- Formation of an Advisory Group; and
- Unifying theme — improvements for terminal markets.

Development of Marketing Expertise

The first course of action will be the search for and/or formation of an interim institutional base for the development and application of agricultural marketing expertise. If it attains a successful track record, it can become institutionalized in the future. The main features of this institutional arrangement are:

- Dual research and development agenda including:
 - A short-term response capability for whenever priority inquiries arise, and
 - A set of priority, in-depth research activities with a broad scope;
- Programmed marketing training courses for government extension agents, extension staff of vegetable processing plants, farmer organizations, and/or municipal and Pradeshiya Shaba officials;
- Consultation sessions for investors interested in specific marketing topics or information on locations that become well known to the staff; and
- Participation in consulting assignments, if precisely aligned with the institution's mandate.

The lessons learned from examples of such institutional arrangements can be used in designing this base with which to accomplish the points noted above and upon which to build a vibrant institutional memory. A somewhat similar arrangement was successfully implemented in the Philippines by Dr. Larry Darrah during the 1970-1980s and became the subject of a case study.

This type of arrangement would have:

- A small number of professional staff trained and experienced in agricultural marketing research and training;
- Apprenticeship candidates who recently graduated from college and want hands-on training in marketing research and development activities; and
- Office with basic equipment, including computer hardware and basic software. Although this interim arrangement would have only the bare necessities, its code of high standards of performance would be its drawing card.

Wake-up Call — Gaining Commitment

The second course of action would be informative and result in heightened awareness of the current situation. If it is accomplished under the near-term initiatives, it would not be repeated here. The second course of action includes an unannounced visit of key officials and business leaders to the Manning Market for a 1 ½-hour period from just before the market opens at 6:00 a.m. until full operations, that is, a period from 5:30-7:00 a.m. An early morning walk through the empty, dilapidated facility followed by the press of thousands of people should "wake up" the most skeptical persons and result in the beginnings of a commitment for change. The visit should occur when key officials can attend and get a firsthand view of market realities.

This visit would be preceded by a case study of this market to clearly explain how it is organized and operates, then followed by the next day's high-level workshop about the current situation within the vegetable marketing system. The simple objective of the workshop would be an agreement that a solution is needed and what sequential steps would lead to such a solution.

The marketing resource persons, local leaders among the trading community (retailers, wholesalers, and commission agents), and progressive vegetable farmers from the main vegetable production areas would explain the situation from their own perspectives, identify wholesale and/or retail trading problems, and explain the farmers' planting dilemma given wide day-to-day price fluctuations within the Colombo market. This workshop would "kick-off" activities and initiate the momentum for actual change.

Formation of the Advisory Group

The third course of action is the formation of a balanced, cross-section Advisory Group or Board of Directors to provide direction and priorities for the institutional base as well as inside access to key informants and previous studies. Hopefully, some members would be able to participate in part of the data-gathering exercises, including some analysis and interpretation. This current study will serve as a reference point with recognized information gaps that can be filled over time, including information from outstations and information on the Colombo and Kandy market situations.

This activity will be time-consuming, sensitive, and complicated, requiring considerable vision and diplomacy to balance the critical forces in both the public and private sectors. Likewise, the catalyst must be aware of a possible hidden agenda. If large businessmen or officials believe that the research findings, interpretation, and recommendations given to the Advisory Group will later influence the flow of government and donor funds into improving the vegetable subsector, one must anticipate that influential persons will vie

for a critical role or position on the Advisory Group regardless of their relevance, expertise, or commitment to progressive change. This behavior should be guarded against.

Location-specific situations and priorities influence how problems can be solved. Many problems observed in this study had features unique to that particular location rather than being similar across locations. Consequently, actual solutions will need local participation rather than only directives or encouragement from the capital. Representatives of local political interests, expertise, and resources should collaborate on any proposed changes. Thus, a couple of local persons would serve on the Advisory Group when research or training affecting their location is pending. Ensuring awareness and gaining commitment is crucial. Location-specific activities will become essential for sustainable change to occur.

An illustrative array of supportive activities includes:

- Conduct a series of "forums for dialogue" by sponsoring consultative sessions with lead traders, transporters, farmers, local officials, and the like, as part of the process of initiating changes in 10 to 15 target districts or towns;
- Draft a Sinhala version of a simple, illustrated edition on "How and Why the Lowland and Highland Vegetable Markets Work As They Do!" to educate the public sector and farmers in market clearing, price signals, buyers market, sellers market, patterns of demand, production response strategies, market risk, and so forth;
- Draft a simple, practical "Guideline for the Operations and Financing of Consumer/Assembly Polas" to explain the how and why of operations and financing, especially the private sector tendering system, but also to provide real references or case examples regarding most aspects recommended;
- Sponsor a series of training programs for Pradeshiya Shaba and Municipal Council officials, as well as part-time market managers, on such topics as the determination and collection of fees, alternative commercial uses of market wastes (animal feeds, composting, and so forth), and effective methods of managing retail marketplaces and polas;
- Promote a series of outstation field reports that describe and document the nature, sources, and implications of problematic situations as identified in this study, such as the retail problems in Chilaw and Matara; and
- Arrange a set of short-term study trips to neighboring Asian countries to determine, in detail, how they determine and modify their food system policies and market infrastructure improvements over time.

Unifying Theme — Improvements for Terminal Markets

The fourth course of action provides a long-term unifying theme for this overall effort to understand the national marketing network and monitor its performance in market coordination from the largest terminal marketplaces. This includes the rehabilitation, relocation, or construction of wholesale markets that compete with the nation's oldest terminal marketplaces in Colombo and Kandy.

Ultimately, a large share of fresh vegetables traded within the commercial marketing system will reach consumers through the terminal markets. Likewise, terminal markets should signal farmers and traders the need for more or less or even different types of vegetables over time. There is a wide spectrum of problems and opportunities associated with this type of unifying theme.

Two key points about this fourth course of action are:

- One, it is essential to recognize that radiating outward from such terminal markets will be a full range of needed systemwide changes, whether,
 - Demand-related, such as, monitoring for excess pesticide residue on vegetables, changes in packaging to match consumer preference, educating consumers on ways to substitute lowland vegetables for exotic vegetables in the diet, and so forth;
 - Supply-related, such as design and implementation of effective seed legislation for important imported seed, monitoring of quality of all commercial seed material, and development of effective strategies for increasing exotic vegetable production during the lean months and decreasing it in the peak months through crop substitution and diversification strategies, and so forth;
 - Marketing-related, such as, construction of retail marketplaces needed in Chilaw, inexpensive handling technologies for reducing the extent of damaged goods, tendering system for collecting revenues at polas, and so forth; and
 - Multifaceted series of training courses for staff of Municipal Councils and Pradeshiya Shabas, technical persons in the Urban Development Authority responsible for marketplace design, or vegetable cultivators for new varieties or in new locations for existing varieties.
- Two, it will require far more than the expertise of architects and engineers to plan and design physical facilities that achieve sustainable corrective action and substantive improvements! Decisions regarding the physical facility and its operations will have several impacts on the agricultural community and urban consumers.

The progressive nature and dynamics of the marketing transactions within those marketplaces must be known, understood, and updated rather than ignored. Likewise, there are questions to be answered before finalizing construction, including whether the markets' volume of business is expanding or contracting, whether the market is responsive to only the demand of this city's consumers or also regional marketing needs or even international markets through increased exports, who benefits from the commission agent form of transactions and why, and the like.

In other words, by proposing to focus initial attention on those two specific situations, the institutional base will have accessible and tangible problem situations from which to explore systemwide conditions

affecting or influenced by those markets from both the consumption and production ends of the marketing system. In this way, its Advisory Group can obtain the commitment and attention of several large businessmen and important government agencies that would ordinarily consider something like assembly markets in outstation areas as far beyond their interest, jurisdiction, or turf.

One example of a related topic on the production side is the support for the first generation of traders in new production sites that ship vegetables to Colombo. For new locations to become substantial suppliers of perishable commodities, such as fresh vegetables, there must be an effective linkage to the existing marketing network. One way for the farming community to more quickly bridge the gap between today's limited production and lack of linkage to nearby traders is to have a few of their sons be given hands-on training in marketing while establishing the needed trust relationship.

Perhaps this can be accomplished through an apprenticeship program whereby select sons would work for the larger traders in market centers, such as Dambulla, in order to later become their representatives in the new production areas. Because most new traders were originally relatives of or workers for the larger regional traders, this approach should naturally fit the current way of doing things in the trading community!

RESEARCH AGENDA

After reviewing several studies, consultant reports, and statistical series, it became clear that there is little understanding of the vegetable subsector, especially during this period of market transition. Illustrations of misunderstanding or apprehension to take action, include:

- Twelve years of continued neglect of the "temporary" Manning Market in a dilapidated sugar warehouse complex;
- Persistent seasonal gluts and shortages that discourage farmers, traders, and consumers alike;
- Confusion of some local officials over the comparative advantage or role of urban polas versus retail market facilities; and
- Emergence of strong transshipment market centers whose viability may be threatened by misguided investment in inappropriate facilities.

It is difficult to make informed judgements regarding this sector because of inadequate information, minimal training in how to interpret market phenomena, and the somewhat strained relationship between public officials and the private trading community. Effective participatory research activities can partially bridge the gap between both sectors, give "hands-on" experience about the dynamics involved, and provide information credible to everyone within the system. Young traders involved in the research can explain to their families and relatives how the information was collected, its meaning, and the possible implications for their businesses. Likewise, a member of the Ministry staff can use appropriate terminology and examples to explain and verify the source and interpretations of this information.

Because this effort collected considerable information from the outstation markets, the next priority market research sites are the Colombo and Kandy markets, to complete the picture of the performance of the national marketing system. However, in the meantime, a few specific information gaps need to be completed and documented based on this study, such as:

- Evaluate the effectiveness of "private sector tendering" of polas and marketplaces as compared with continued fee collection by municipal staff — conduct a comparison of fee-collection experiences with three cases of the private sector tendering of polas, such as Anuradhapura, Kurunegala, and Tambuttegama, with three cases of those using municipal fee-collection procedures.
- Conduct in Negombo a comparative analysis of the "light retail structure" constructed by the private sector versus the "heavy retail structure" constructed and operated by the Municipal Council of Negombo City, to establish a viable model for consideration in other towns. Points could include their expansion or contraction of business, initial construction costs, ease and costs of maintenance, number of consumers per week, shopping satisfaction of consumers, degree by which the vegetables are sheltered from rain or sunlight, price competitiveness, problems, and the like.
- Conduct an analysis of the comparative advantage of Transportation Union lorries versus independent lorries hauling vegetables from highland areas to determine whether such unions actually benefit farmers and help stimulate efficient marketing practices. Likewise, if such unions have a positive impact, they should be encouraged to adopt the freight charge method based on kilograms, as in Nuwara Eliya, versus freight charge per piece.
- Based on what has been done in other countries and as adaptable to Sri Lankan conditions, develop a systematic, participatory "marketplace development process or set of steps" to apply on a case-by-case basis per each main type of market, including;
 - Test of the application and refinement of that development process or steps in one pilot site from among each problematic site;
 - Terminal markets — Kandy or Colombo wholesale markets;
 - Assembly market facilities — first facility for Welimada, and how to change the site for the town of Nuwara Eliya; and
 - Retail markets — appropriate construction in Chilaw, Kalutura, or Kadurawela.
- Review the literature on worldwide experiences over a long period of trial and error regarding the successes or failures of government agencies becoming active in the actual marketing of onions, potatoes, and chilies, such as the Cooperative Wholesale Establishment (CWE) case. Determine whether it has been proven beyond a reasonable doubt that a government agency is the most efficient and effective institution for marketing agricultural products or whether the private sector with clear, but limited, government interventions is more successful and less costly.
- Document the causes, benefits, and implications of the successful cases of women actively retailing vegetables as a model for future job opportunities for women within the settlement areas where cultural norms tend to be less restrictive and this job opportunity should exist (refer to the Annex B, Gender Issues).
- During implementation of the various actions cited in the prior section, scope out the required information, including the private and public sector positions for the development of viable and effective terminal markets for Colombo and Kandy.

Components of the research agenda often emerge from unanswered questions that are critical to the resolution of key issues. Thus, before making final decisions for action, decision makers should be able to predict their consequences on each party, that is, who will be directly benefitted or harmed by a proposed course of action. However, often such consequences cannot be predicted until various stages of change have been put into motion — only then can the reactions from various parties be accurately predicted. In other words, as the institutional base and other entities act upon the advice of the Advisory Group and changes occur, further research issues should be expected.

And finally, as pointed out above, it is important to assess the Colombo market component of the national marketing network with the same approach that was used for the outstations of the country. A clear picture of Sri Lanka's marketing system for vegetables is still incomplete. This study of the outstation markets for vegetables will substantially improve the current understanding of the national marketing network in its state of transition. However, there remains an inadequate understanding of the market dynamics within Colombo and its adjacent areas, especially regarding its implications on the national marketing network. Until that picture is complete, it will be difficult to even choose between such basic recommendations as:

- Constructing an ideal market system that is:
 - Independent of wholesalers in the Manning Market;
 - Competing with them, perhaps providing better services for exporters; and
 - Constructed at one or two sites, such as northeast and south of Colombo to better match the commodity flows from supply regions into the city and/or to correspond to urban expansion patterns.
- Converting the current facility into an actual, functioning wholesale-cum-retail facility rather than forcing the marketing of vegetables in a totally inappropriate structure; or
- Moving Manning Market's wholesalers (including those selling grains, onions, and so forth) and their existing system into improved, basic facilities with an efficient layout and additional services, such as market information, waste disposal facilities, and introduction of new handling technologies, while constructing basic retailing facilities within the Pettah area.

Although information is urgently needed before selecting an option, time has been insufficient to gather information for comparing the options or to contribute to an effective consultative arrangement in which both the public and private sectors can best participate in deciding such key issues. It is important to explain that Colombo, as the political capital, national economic hub, and most densely populated city on the island, warrants the best facilities of the country — not temporary, mostly dilapidated facilities constructed for an inappropriate purpose, such as sugar storage.

ANNEX A

MANNING (PETTAH) MARKET - FIELD OBSERVATIONS

MANNING (PETTAH) MARKET — FIELD OBSERVATIONS

BACKGROUND

For several decades, the Manning Market (alias Pettah Market) has been the main wholesale marketplace for the distribution of fresh vegetables to several suburbs and urban areas near Colombo. In recent years it has encountered many problems, stemming largely from the inappropriate facilities in which it has been temporarily housed. It is important to understand the historical chain of events, promises made, and key interrelationships that have led to the current adverse state-of-affairs.

In 1912, the Manning (Pettah) Market for fruit and vegetables initially covered about 3/4 acres of land near the Kacheri Road. By 1983, traders conducted wholesaling and retailing businesses from about 301 stalls in that area. However, they were transferred to the old sugar warehouse complex nearer to the railway station. Today the number of traders active in this inappropriate facility has ballooned to approximately 1,200 traders of which more than one-half are wholesalers and the balance are wholesaler/retailers or retailers. An exact figure is difficult to determine because all active traders may not be registered and all those registered may not be active.

The Colombo Municipal Council (CMC) is responsible for this market and has an office there. The CMC set the stall rents which vary from Rs. 200-500, depending on their location. Likewise, there are various informal payments that add-up to about Rs 100 per day given difficulties in entry arrangements. The rights to the stalls are supposedly handed down from generation to generation. Whenever rents are unpaid and the stall declared vacant, the CMC selects persons eligible for taking over that stall. Although selection criteria are known, many complain that political connections are cited as an actual criteria for gaining access to such a stall. Meanwhile, the facility remains in overall disrepair and maintenance appears to be minimal.

While in the field, we inquired about who receives credit from the Colombo Commission Agents. All responses were that larger farmers (2+ acres) in the Kalpitiya Belt, Welimada, Kandapola, Keppetipola, Nuwara Eliya, and so forth received credit. Likewise, some large traders in those locations as well as in Matale were agents for the Colombo traders. However, the declining business in the Manning Market seems to have reduced the amount of funds available for credit from the larger commission agents.

MARKET OPERATIONS

The market formally opens at 6 a.m., at which time the loaded lorries waiting in a que outside of the main gate are directed to different parts of the market according to the instructions of the Natami (the laborers who load and unload the lorries). After being parked, the driver gives the designated team of Natami "shipment chits" or shipping envelopes which in turn are given to the designated traders (specified commission agents) as the Natami deliver each bag of vegetables. This rapid dispersal of vegetables is necessary so that the emptied lorry can leave the space for the next full lorry.

Meanwhile, empty lorries to be loaded with newly purchased vegetables arrive and proceed to their pre-arranged spots within the market along the outside walls at the back of the facility. Fees are charged for entering the market and for the use of the limited parking space within it. Likewise, those with users' rights

to designated parking spaces have previously paid rents for the right to those spaces. In all, this is a costly arrangement.

After a buyer purchases the amounts of different vegetables needed from the commission agent's stall, other Natami carry the bags to a specified lorry where the driver notes its ownership, destination, and position where the bag is placed. If the owner does not accompany the goods and no second member of a two-person team is there, he will come later to confirm that the goods arrived and the expected time the lorry will reach its destination. Usually this buyer will catch public transport to the destination and wait for the lorry to arrive and deliver the bags to his retail stall. Much trust is placed in the lorry operator for this service. Although this is the basic pattern, there are several variations on this theme.

The Traders Association is responsible for the internal arrangements of the market, including movement of vehicles, handling procedures, and basic rules for doing business here. It is a credit to their organizational ability that they have been able to quickly move vegetables through this totally inappropriate and ill-maintained facility.

The laborers who unload and load the lorries (the Natami) are very important in the operations of this market. Upon arrival, a few Natami are assigned to unload the lorry, carrying the bags to the designated commission agent's stall and placing them where he directs. A marker is handed to the Natami to return to the driver who oversees the unloading activities. Reportedly the leader of each group manages transport bills, unloading charges, and the like at a rate of 6 percent of the transport cost. Again, this needs further inquiry for verification.

Transport costs are charged in any of three ways:

- Weight basis (common for the Nuwara Eliya and Welimada areas);
- Piece basis (the most usual method and practiced in the Matale, Bandarawela, and Balangoda areas); and
- Load basis (noted for the Hambantota area). Costs from highland areas usually range about Rs 30-35 per piece of 50 kgs whereas the costs from lowland areas vary from Rs 25 per piece upwards, according to distance from origin.

The main form of transactions is reportedly the commission basis at 10 percent of earnings from the commodity sale. However, key informants mentioned that new entrants into this business may be charging only a 5 percent commission in order to gain a larger share of this market. Others contend that new entrants are also taking possession of the commodity by having their relatives buy the vegetables in the production area and ship them to Pettah on their own account. Further inquiry is needed on these points.

There is substantial seasonal variation in price and supply. Consequently the highest prices correspond to the scarcest supply period between May and July. Likewise, there is substantial price fluctuation from day to day given the uncertainties about the volumes that will be shipped on a given day from the main production areas.

The price discovery process usually occurs between 6:30-7:00 a.m., after the bulk of the deliveries arrive and the volume of arrivals can be estimated by the larger traders. At that time, they are said to agree on market clearing prices at which most sales transactions can begin. If additional lorries arrive they can expect to earn a lower price in order to clear the market.

Given that basic process, most lorries from the highlands leave there late at night in order to arrive at or before 5 a.m. so that they have a good position in the queue at the front gate. Lorries from lowland areas are said to arrive at more irregular times of the day.

SOURCING OF VEGETABLE SUPPLY

Informed observations and references to previous studies provide insights into the basic dimensions of this market from the perspective of the national marketing network. Major production areas that supply this market are identified through the way the Wholesalers Union organized its Natami, that is, unloading and portering laborers, into unions with one person in charge of each:

- Nuwara Eliya Society
- Kandapola Society
- Welimada Society
- Kandy Society
- Puttalam-Chilaw Society¹

These designations indicate that there is only one major concentrated lowland production area supplying Pettah, that is, the Puttalam-Chilaw Society, with the remaining four within the more concentrated highland, production areas. In other words, lowland vegetables arrive from dispersed lowland vegetable growing areas.

Although there is insufficient data on the volumes arriving from different places each day throughout the year, the way the Natami organize their members to handle the bulk of arrivals is indicative to the proportion of vegetables arriving from various places. The two main groups of suppliers are the farmers and collectors. For example, Nuwara Eliya and Kandapola are located near each other but each sends sufficient volumes to warrant their own society of Natami. Although there is substantial production in Bandarawela, much of it does not flow to the Pettah Market in contrast to its neighbor, Welimada. Likewise, the seasonal producers in Haguranketa and Marassana (Kandy area) are being sought by such a large number of itinerant traders that their shipments to Pettah are reportedly declining.

Based on field interviews, many farmers and/or traders in Kandapola, Welimada, and Matale areas still send a substantial share of their lean season crops to their commission agents in Colombo. Other former suppliers said they send unsold inventories and less saleable commodities, primarily to keep this channel alive for the peak season shipments. However, the clear trend is a steady reduction in the number of suppliers remaining committed to this channel. In other words, the Pettah Market has become the outlet of "last resort" for most independent traders during the high-priced lean months, whereas during the in-season months of gluts, it is expected to absorb excess quantities. In other words, its disfavor may exacerbate the tendency for price fluctuations and results in opposite impacts — less when shortages and excess when plenty of exotic vegetables are available.

Exotic vegetables are the major type of vegetables traded in the Pettah Market. Some traders quote as much as 75 percent exotic to 25 percent lowland with Colombo possibly consuming 60 percent of the former and 40 percent of the latter. Thus, most buyers coming from towns near Colombo will focus on the

¹Source: "Vegetable and Fruit Handling at the Colombo Manning Market," by Dr. Upali Nanayakkara.

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a substantial trade in lowland vegetables and as more and more traders with lorries from small towns buy directly from the highlands, the volume of Pettah's business should shrink even more dramatically over time.

Those dynamics within the supply areas will have serious implications for the future of the Pettah Market and all of those making a living there.

NATIONAL MARKET NETWORK

The remaining dimension is the diminishing role of Pettah in the national marketing network. Because it can efficiently handle only limited volumes and as it continues to handle less consistent volumes, the interactions of demand/supply and price discovery process will become less and less representative of the national market condition. Previously its price was widely viewed as a national "reference price." However, according to several outstation traders, the unpredictable nature of the widely fluctuating prices each day in the Pettah Market no longer reflect the national supply/demand conditions but often provide a distorted picture.

The unsatisfactory condition of the Pettah Market has repercussions far beyond its facilities. Regional market centers and assembly markets, such as Dambulla, Nuwara Eliya, Bandarawela, Welimada and Kegalle, have become major distribution points for vegetables grown both nearby and as surpluses in distant production areas. Given the daily price uncertainties and difficulties encountered when entering or leaving Pettah Market, most traders in those market centers send vegetables to the Pettah Market only when better options are not available, such as inventories at the end of the day. Given the storage of those commodities throughout the day, their shelf life is already adversely affected.

Indeed it is known that several larger businessmen have more than one type of business, that backhauls are critical for most of the transporters who deliver vegetables from the outstation areas, and that some lorry loads include goods consigned to both the Manning Market and Forth Cross Street. Consequently, the Manning wholesalers argue that to move this market means also moving those other markets because of their close business bond.

Meanwhile, the prices in the Dambulla regional market center become more representative and influential given its effective arbitrage from sourcing on a more organized, nationwide basis. In addition, the relatively slow movement of commodities through this market have contributed to the widely recognized reduction in vegetable freshness, especially by the time those vegetables would have reached more distant markets such as Galle. Thus, how can the Pettah Market prices continue to be recognized as reference prices for the nation?

PROBLEMS

The basic problem is that the facility is totally inappropriate, in addition to being dilapidated, in disrepair, and ready for demolition. The traffic congestion, lack of adequate parking space, insufficient toilet facilities, inadequate water supply, and the like naturally follow from that initial inappropriateness. Even the small space allotted for traders within Pettah (6 ft x 6 ft) results in traders stacking the bags of vegetables on top of one another during the in-season, a further explanation for the inferior quality. Although one might argue that the central location of the facility is ideal, that argument would primarily apply to the retailing aspect of this market, not the large-scale, wholesaling dimension.

Poor conditions include flooding during rainy days; extreme heat during hot days; costly to “purchase” the right to a parking space within the market; and restrictions on the number of lorries allowed inside, with implications of bidding for this privilege, thus increasing costs and barrier to new entrants. It reportedly is common knowledge that the amounts of vegetables sent to that market are not always the amounts received. Someone is taking certain amounts from the bags before they reach the traders (sometimes before reaching the commission agent and sometimes not delivered to a buyer’s lorry parked inside). Although recognized, this situation seems to continue unabated.

The Urban Development Authority under the Ministry of Housing has been responsible for marketplace movement and development, such as in the cases of Kandy and Badulla market designs. Perhaps that institution could profitably use technical assistance in assessing the requirements of vegetable retailers, in terms of proximity to public transportation and retail stands, parking space for large vehicles to off-load and small vehicles to load, and the like.

Traders in several lowland and highland areas made two consistent observations about the Manning Market whenever it was discussed:

- It is receiving lower quality vegetables; and
- The vegetables sold from there have limited shelf life compared with those received in other markets.

The consistency of these remarks indicate the industry’s view of that market and its operations at this point in time. Assuming it is the major distributor of vegetables to most of Colombo’s consumers, one can hardly doubt the consequences.

A very valid issue is the question of not receiving the services for which they pay fees and taxes ; however, the real issue is whether the fees realistically account for the costs incurred by the markets. Throughout the country fees vary by location and seldom change over time. This situation results in many problems and misunderstandings while not corresponding to the real costs that **SHOULD BE INCURRED!** Free services are seldom free — because someone (trader or public sector) must pay. It is more effective to use realistic cost recovery but only for **BASIC** services, not inflated!

ANNEX B
GENDER ISSUES

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GENDER ISSUES

OBSERVATIONS

Observations during the study team's travel throughout the country revealed different levels of women participation in the retailing of vegetables. Such retailing varied according to location and differences in local customs. For instance, as a general rule, men did the buying and selling activities within the market channels for vegetables, even though women were the main customers.

A consistent exception to the prominence of men as retailers was the sale of the leafy forms of vegetable herbs and spices, where women were usually the retailers. When asked why this role of women, some respondents said that the earnings from that type of vegetable were too minimal to support a household, thus usually sold by women who did not rely exclusively on earnings for supporting a household. This implied that the acknowledged norm was for the male heads of households to be the family's bread-winner, except in exceptional cases where women were the heads of households or widows. Other respondents gave diverse types of responses and seemed to find the question peculiar because this was obviously just the way things were, and why question the obvious?

Another variation on the dominance of men in vegetable trade was the retailing role of women in areas where fishing was the main occupation of the men, such as in Chilaw. In the Chilaw market, many women sold every type of commodity side by side with men. Reportedly, because the wives of households are left at home for various periods of time while the men are away fishing, they become rather independent and strong-willed. In fact, if one makes an unwelcome comment to these women, they supposedly respond in even stronger terms and are not easily intimidated — thus their active presence as retailers in these markets.

Still another variation was observed in the markets near settlement areas, such as System B. Although some respondents were widows or single heads of households, a common explanation that men gave for the presence of women retailing in the polas was the chance to earn additional income for the family in the off-season. These women often come in small groups of two or three, whether mother and daughter or women who liked the social interaction with other women as customers. Reportedly, in newly developed areas there is less pressure from the old traditions that expect the women to remain at home. This comparatively open social environment allows more options for women than the prescribed patterns found in their native hometowns.

The more exceptional cases were of strong individual women farmers who not only earn income for their household from growing crops and livestock, but are also active participants in meetings and training sessions provided for farmers. These are clearly strong, reliable individuals who are widely accepted as being different.

No woman was observed driving or loading/unloading lorries within the transport sector.

In the retail shops for agricultural inputs, such as seeds and fertilizer, women are often present, whether as the owner/operator or the clerk responsible for assisting the owner. Husband/wife teams seemed more prevalent in this type of enterprise, but not in the trading of vegetables.

At the production level, the more strenuous activities are more frequently handled by men. Whereas the planting, fertilizing, watering, weeding, and harvesting of vegetables have strong participation by women, whether from the farm household or as hired laborers. Small groups of women are usually found weeding vegetables. We never observed any woman spraying the crops. Likewise, when it came time to sell the crop, men again seem to take that responsibility seriously.

Besides those roles in the vegetable sector, several persons remarked that women are the best tea harvesters given their manual dexterity and patience.

BARRIERS

Although not told directly, there seems to be a common perception that women are not expected to be in a marketplace except as a customer buying vegetables in the early morning or mid-afternoon. Otherwise, women retailers are considered to be not well-off or in a hardship situation, such as being a widow or single head of a household — someone to be pitied.

During one visit to a major wholesale marketplace, the woman researcher in the team was the target of many "crude jokes" and received several unwelcome comments from the male laborers. Finally, she decided to leave the place and return to the office. Although explained away as part of the "rough culture" of such laborers, it reinforced the perception that women are not expected to come to such "rough places" in the early morning hours, that somehow this gives the wrong impression about their character. This cultural or social situation does not seem to be as prevalent in countries of Southeast Asia.

USAID INITIATIVES

New settlement areas provide a unique opportunity for progressive change in the role of women as fruit and vegetable traders. In fact, in new settlement areas where people from several places now come to live near each other and work out their own mode of acceptable social/cultural behavior, that current pattern of women retailing fruits and vegetables is slowly emerging. Reinforcing the merits of such an occupation can have substantial benefits in the years to come and may provide a "demonstration effect" for the more traditional locations throughout the country. From a closer examination of these areas:

- First, the need for additional family income is clear as all family members struggle to gain a foothold in this new environment, while not giving a negative impression about the male head of the household, such as an inability to provide for all economic needs of the household;
- Second, the traditional social structure with historical expectations regarding acceptable behavior built into them have not yet been forged through generations of local enforcement;
- Third, in these settlement development projects, there is an adequate infrastructure for supporting women's training and entrepreneurship in various fields of endeavors, such as buying and selling vegetables;
- Fourth, small-scale trading in vegetables does not require large amounts of capital given the accepted practice of delaying payments to growers; and

- Lastly, one can determine what personal character traits are needed for women to excel in this type of business based on an understanding of the existing, emerging patterns of women involvement in trading as it is slowly becoming acceptable in such areas. Given such insights, the irrigation projects will need only a more systematic method of encouraging the role of women in this occupation.

Specific gender-related activities can be programmed within any future USAID project that focuses on improving the vegetable subsector.

ANNEX C

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