

**Farmers' Markets in Tamil Nadu: increasing options for rural
producers, improving access for urban consumers**

by

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April 2002
ISBN: 1-84369-186-8

This paper has benefited from funding from the Danish Ministry of Foreign Affairs (Danida), the UK Department for International Development and the Swedish International Development Agency. Their support is gratefully acknowledged. However, the views expressed here are the sole responsibility of the authors.

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1. Introduction

Food is perhaps the most important commodity linking rural producers and urban consumers. Because of its significance, it also attracts a wide number of actors besides producers and consumers. These include traders, ranging from large wholesalers to petty traders and street vendors, and, most crucially, the state.

Since independence, food has remained an extremely important issue on the Indian policy agenda. National policies address primarily the production and distribution of food grains, but since the mid-1990s a new generation of state-level initiatives deals specifically and exclusively with the production and marketing of fresh vegetables and fruit.

This paper presents the findings of a research project conducted between June 2000 and April 2002. The purpose of the study was to better understand the organisation and functioning of State-sponsored vegetable Farmers' Markets in selected areas of Tamil Nadu, South India. The main objective of this state initiative is to eliminate traders and middlemen from the marketing of fresh fruit and vegetables in the especially constructed Farmers' Markets, and to establish direct contact between producers and consumers. With this in mind, the research project aims to assess the initiative's actual and potential contribution to more viable livelihoods for small and marginal farmers, its impact on the activities of small-scale, low-income vegetable traders with whom it implicitly competes, and its contribution to increasing access to fresh fruit and vegetables for the urban poor.

Background

Flows of goods between villages and towns, together with flows of people, money and information, are an essential element of the interactions between rural and urban areas. Demand from urban consumers can stimulate agricultural production and increase the incomes of farmers. Producers in villages close to towns and with good access to transport facilities can be in a favourable position to supply urban markets with perishable, high-value fresh vegetables and fruit, since short transport times reduce costs and the risk of spoilage. The aim of the Farmers' Markets initiative is to support and expand these benefits for both producers and consumers. In so doing, it builds on a long tradition of Indian food policy.

National policies in India deal essentially with food grains and include three main categories of interventions. The first are measures to promote production, such as improving access to technological inputs (for example, the Green Revolution), subsidies to farmers and producer-friendly price policies. The second are organised interventions in the food market to prevent wide price fluctuations and local shortages. This is done mainly through the Food Corporation of India, created in 1965, which is responsible for the procurement and maintenance of a buffer stock. The third category is the distribution of subsidised food through ration cards under the Public Distribution System (PDS), which although originally intended for the stabilisation of supply, over time has become an instrument for poverty alleviation, especially since the introduction in 1997 of targeted PDS.

Since the introduction of structural adjustment programmes in 1991, India's food policy has come under increased criticism, essentially in relation to its cost and efficiency. The

public sector is perceived as having expanded too much since independence and as being inefficient, and changes in the PDS through the introduction of food stamps have been announced by the Tamil Nadu state government in the 2002-2003 Budget. While there is consensus that the system can certainly be improved, it is worth underlining that, since 1965, India has not suffered from any major food crisis.

The Farmers' Markets initiative in Tamil Nadu

The idea of setting up marketplaces which directly link producers and consumers and exclude traders and middlemen is not a new one. Similar initiatives to Tamil Nadu's Farmers' Markets have been set up in other Indian States in the past few years. Punjab's and Haryana's *Apni Mandi* (Our Market), established in the mid-1990s, were the first ones directly linking vegetable producers and consumers. The success of the *Rythu Bazars* which started in January 1999 in neighbouring Andhra Pradesh, and especially the political clout it gave to the ruling Telugu Desam party, was of particular interest to Tamil Nadu's DMK party, then in government.

The 'Uzhavar Santhai' (Farmers' Markets) scheme was first mentioned in the budget for the year 1999, which was tabled in the legislative assembly of Tamil Nadu on the 17th March 1999. It was formally announced on the 25th October 1999 in the meeting organized by the Chief Minister's special cell to review the developmental activities of the various departments. In this meeting it was decided to implement the Uzhavar Santhai Scheme with immediate effect and on the 14th November 1999 the first Uzhavar Santhai was inaugurated in Anna Nagar neighbourhood of Madurai by the then Chief Minister of Tamil Nadu, Sri M. Karunanidhi. Within a year, 95 Farmers' Markets were established, and reached a total of 102 by the 31st March 2001. Following elections in October 2001 and a change in government, no more Farmers' Markets have been opened, and eighteen have been closed because of low efficiency. Criteria for this include a daily vegetable inflow of less than 200 kg, low numbers of customers and low numbers of participating farmers.

The stated objectives of Farmers' Markets in Tamil Nadu are:

- To eliminate middlemen and traders from the marketing of vegetables in the Farmers' Markets
- To establish direct contact between farmers and consumers
- To maintain stability in the prices of fresh vegetables and fruit
- To increase coordination between the Agriculture and the Horticulture Departments
- To act as information centres for the marketing of fresh vegetables and fruit
- To promote awareness and provide training in relation to the preservation and packaging of perishable fresh vegetables and fruit.

Farmers' Markets are under the administrative control of the State's sixteen Agricultural Marketing Committees, which in turn are part of the Department of Agricultural Marketing. The Committees are also responsible for the administration of Regulated Markets, where farmers sell directly to traders without the intermediary of commission agents and under a tender system supervised by Committee officials. Regulated markets also offer storage facilities to producers, to whom an advance is paid once the produce is deposited. Regulated markets deal with a predetermined list of commodities and

especially food grains and other non-perishable items. With regard to the Farmers' Markets, the Committees are responsible for their overall administration.

Research approach and key questions

The purpose of the study is to better understand the impact of Farmers' Markets on its intended beneficiaries – producers and consumers. Since much of the benefits for both groups are expected to derive from the elimination of middlemen and traders, the study also examines the differences and eventual overlaps between Farmers' Markets and the conventional marketing system, and the impact of the Markets on the different categories of traders in the conventional system.

The initiative treats all actors (producers, consumers and traders) as homogenous categories, for whom the benefits (or lack of benefits) from Farmers' Markets will be the same. The research adopts a different approach, which emphasises differences between groups within the same categories, especially in terms of access to assets. This can have a significant impact on the ways in which Farmers' Markets can contribute – or constitute an obstacle – to more secure livelihoods for the most vulnerable groups. An additional important category of actors are the institutions involved in the day-to-day management of the initiative.

Key questions related to producers

The initiative documents do not specify whether the target group are small and marginal farmers or larger producers, and the impression is that all farmers are expected to benefit from the Markets. However, it is likely that access to assets such as land, water, credit, transport and labour affects farmers' capacity to benefit from participation in the Farmers' Markets initiative. It is also likely that the marketing strategies of farmers vary according to the volume of their production, and that this also affects the forms and levels of their participation in the initiative. The first question the research asks in relation to producers is therefore which farmers are more likely to benefit from the initiative, and why. The second question goes beyond the expected benefit of Farmers' Markets, that is, increased incomes, and asks what is the impact of the initiative on farmers' practices, and their implications for the long-term sustainability of the initiative and of small-scale vegetable production. The final question examines the factors affecting producers' capacity to adapt to changes.

Since women play a key role in agricultural production and marketing in Tamil Nadu and usually shoulder primary responsibility for vegetable production, the research also explores the implications of participating in the initiative for farming women. What is the immediate impact in terms of workload, and, for the women who attend the Markets, of exposure to a new environment? And, from a broader perspective, how do women's new experiences in the Farmers' Markets contribute to changes in women's status and household relations?

Key questions related to traders

The policy documents implicitly portray traders and middlemen as exploitative and essentially negative for both producers and consumers. However, no distinction is made between different categories of traders – for example, between wealthy commission

agents and poor petty traders. The research explores the impact of Farmers' Markets on the most vulnerable vegetable traders, the urban headload vendors, and asks what their strategies to retain their clients in the face of competition are. It also asks whether these vulnerable traders can benefit from access to Farmers' Markets, since they provide a service which responds to the needs of a number of urban consumers.

Key questions related to consumers

The initiative does not differentiate between different categories of consumers, on the assumption that all will benefit from lower prices and precise weighting. However, it is legitimate to explore whether public policy with a subsidy element effectively benefits the groups which most need it. The research examines the impact of Farmers' Markets on low-income urban consumers by looking at the physical accessibility of the Markets and the financial affordability of its produce. This is explored in the wider context of changing food practices, and of how and why these differ among different groups within the same low-income urban settlement.

Key questions related to institutions

A number of institutions play a key role on the implementation of the initiative. They range from governmental departments (Agriculture and Horticulture), local Agricultural Marketing Committees and local voluntary organisations. Clearly, their involvement can be costly, especially in terms of staff salaries. The research examines the overall costs of running the Markets, and the implications for long-term sustainability.

Besides financial costs, other important issues concern the implementation of what is essentially a highly top-down initiative. The research explores the problems faced in putting into practice a complex system of selection and controls, and describes the innovations experienced in one of the three Farmers' Markets included in the study, and what can be learned from this.

Methodology and process

Study locations

The research was conducted in three study locations, each consisting of one Farmers' Market and three feeder villages. The Markets were located in three urban centres: Madurai, Tamil Nadu's second largest city with a population of over one million; Tirunelveli, another large centre which, like Madurai, is under the administration of a City Corporation; and Aruppukottai, in Virudunagar District, a smaller municipality.

The three feeder villages for each Market were selected on the basis on the number of farmers actually visiting the Markets on a regular basis (these data are available for each Farmers' Market); links to the conventional market system as an outlet for vegetables; small to medium population size, to allow the research team to use participatory tools. More details of the study locations can be found in Annex 1.

The low-income urban settlements were all based in Madurai, but with differences in terms of distance from the Markets and in whether the settlement is well-established or recent and therefore with possibly higher levels of insecurity of incomes and tenure.

Process

An important and integral part of the research has been the process of consultation between the research team and a reference group throughout the duration of the project. This was structured as a number of workshops with the participation of NGO representatives, academic researchers, senior government officials from the Department of Agriculture, farmers' representatives, traders from the central markets and small traders and headload vendors. Meetings were held at the planning stage and to review the work conducted in the pilot phase and the main fieldwork phase. At the end of the project, local meetings were also held to feed back information in the villages and at the district level in the three centres (Madurai, Tirunelveli and Aruppukottai).

Tools

The team used participatory tools which were adapted to the research questions and sequenced in such a way as to allow the team to cross-check and validate the information generated by each tool. Tools used included social mapping, resource mapping, seasonal/daily routine calendar, time line and trend change, Venn diagrams, matrixes, impact diagrams.

Constraints

The research team's experience emphasises how the changing political and policy context can affect respondents. The initial, enthusiastic response changed dramatically after the assembly elections in May 2001, which resulted in a new government controlled by the AIADMK party, highly critical of the Farmers' Markets initiative. Although the findings of the study go beyond the initiative and are relevant to most policy concerned with food production and marketing, there is little doubt that the highly political nature of Farmers' Markets has sometimes acted as a major obstacle to information gathering and objective debate.

Other constraints relate to the nature of some groups. For example, fieldwork plans with itinerant headload vendors had to be revised, since the use of tools based on group discussion was impossible with these respondents who work independently and on very tight schedules. Similarly, the small number of farmers regularly attending Farmers' Markets created some problems in the use of visual diagrammatic tools intended for larger groups.

More details on the methodology, process and constraints can be found in Annex 2.

Structure of the paper

Chapter 2 gives a detailed description of the functioning of Farmers' Markets, the institutions involved and the costs. It also describes the innovations adopted in Tirunelveli's Maharaja Nagar Farmers' Market. Chapter 3 turns to producers, and describes how access to specific assets is a pre-condition to participation in Farmers' Markets. It also looks at the different opportunities and constraints which shape farmers' marketing strategies in both the Farmers' Markets and in the conventional marketing system. Finally, it describes how some farmers' practices have changed under the

impact of Farmers' Markets. Chapter 4 takes the analysis of producers further and explores the gendered impact of Farmers' Markets.

Chapter 5 turns to a vulnerable group, headload vegetable vendors, whose role in food marketing is often neglected and who can suffer from the negative impact of Farmers' Markets. The chapter examines the constraints and opportunities they face, and their strategies in counteracting competition from the Markets as well as from other outlets. Chapter 6 explores the impact of Farmers' Markets on low-income urban consumers within the wider context of the factors which affect their food habits. Chapter 7 draws together the main findings for each group, and formulates general recommendations for policy-making as well as a number of specific recommendations for Farmers' Markets in Tamil Nadu. In a rapidly changing political context which raises questions on the future of the initiative, it is hoped that the latter will help to maintain its numerous positive elements while increasing its long-term sustainability.

2. Vegetable markets and Farmers' Markets in Tamil Nadu: an overview

This chapter describes the Farmers' Markets policy and how it is implemented. Drawing on interviews with key informants and farmers attending the Markets, it highlights the practical difficulties and the innovative responses to these developed by the administrator of Tirunelveli's Maharaja Nagar Farmers' Market. It also details the costs of Farmers' Markets to public institutions. This is an important issue in determining whether Markets are sustainable in the long term, since in Tamil Nadu, as in most of India's States, the viability of public subsidies is increasingly questioned.

Before looking in detail at the functioning and organisation of Farmers' Markets, however, it is useful to describe briefly the conventional marketing system for fresh vegetables and fruit. This will help the reader to better understand the origins and problems of the Farmers' Markets initiative against the wider context of vegetable marketing in Tamil Nadu's cities and towns.

The conventional vegetable market system

In Tamil Nadu's larger cities, such as Madurai and Tirunelveli, vegetable marketing systems revolve around a central market. Smaller towns such as Virudunagar do not have a central market, and rely on those in nearby large centres.

The main actors in central markets are commission agents and wholesalers, who collect produce from farmers and distribute it to retailers. Commission agents are the main actors, and retain ten percent of all transactions; this means that they do not actually purchase directly from producers, nor do they sell directly to retailers, aside from rare occasions such as when sourcing produce from other States. Their role is rather that of middlemen, with a low margin of risk since they do not make a direct financial investment.

The material exchanges of goods and money between producers, traders and consumers can appear straightforward; however, they are embedded in a complex web of social relations. Power differences are also significant, especially in terms of access to information on market prices, and to financial assets. Figure 1 below is a simplified version of the basic structure of conventional vegetable markets in Tamil Nadu, and of the relations between the various actors.

There is no doubt that commission agents and wholesalers play an important role in the marketing of vegetables by providing a central distribution point for produce arriving from a wide range of locations. However, as Figure 1 shows, it is also understandable that they are often accused of exploiting farmers by switching most of the costs and risks to producers and at the same time retaining a guaranteed profit margin for themselves.

Two other elements contribute to the charge of exploitation. The first is the high level of dependence of producers from commission agents. Large farmers usually sell directly to central market's commission agents who are considered to be the best outlet. Small farmers usually sell to local traders. However, these are often assemblers of vegetables from different producers, who then sell in the central market. Since prices in the central

market are determined by commission agents, it can be said that even small farmers who have no direct contacts with them depend on them for their incomes.

Figure 1: Simplified structure of conventional vegetable markets in Tamil Nadu

Farmers

- costs: all inputs; transport costs; interest on any loans; contribute to rent of the commission agent's warehouse in the central market; market entry fee for their goods, payable to agents who sub-contract the marketplace from local government
- benefits: safety net in the form of credit facilities from the commission agent

Transporters from the villages to central market

- costs: recovered from fees
- benefits: trade from farmers

Commission agent

- costs: contribute to social functions and family functions, especially of large farmers; provision of basic facilities in the central market (restrooms) for large farmers
- benefits: financial benefits with limited risk (for example when providing credit to farmers in the form of seeds, fertiliser and pesticide. However, this credit is only extended to larger farmers who are less likely to suffer from complete harvest failure. Moreover, the commission agent retains rights on the vegetables produced and while he does not charge interest on the loan, he usually pays the farmer at the lowest market rate [see also below]); higher social status (many commission agents are also farmers, and acting as middlemen in the central market gives them a more powerful status in their villages)

Transporters from the central market to the retail outlets

- costs: recovered from fees
- benefits: secure work, especially within the central market where unions control all transport activities

Retailers

- costs: transport from the central market to their outlets; rental of ground space in local markets, or of shops
- benefits: access to a wide choice of vegetables in terms of quantity, quality and of variety (some vegetables sold in the central market are imported from different districts or neighbouring states, either because they are out of season in Tamil Nadu – for example, tomatoes from Karnataka – or because they can only be grown in specific climates – for example, potatoes from the hill area).

The second element is related to the first and concerns price fixation. As vegetables start arriving in the central market in the evening for the next day's sales, commission agents establish prices. This is not done in open competition between agents, but rather as a common decision, which is likely to benefit primarily commission agents. Another aspect of price fixation is that prices vary throughout the night and the early morning, depending on the volume and time of arrivals. This variation in prices leaves room for commission agents to pay farmers at the lowest price of the day, regardless of the actual price at which their vegetables are sold. Doing so increases the official ten percent profit of commission agents, and is especially frequent when sales go towards the repayment of loans they have extended to farmers.

Farmers' Markets: policy and implementation

The procedures for the implementation of Farmers' Markets are relatively complex; moreover, the first Markets were set up in a short period of time. It is not surprising therefore that many procedures were difficult to follow in practice. This was somewhat exacerbated by lack of communication and/or trust between government officials and farmers, especially during the selection of farmers.

Selection and identification of participating farmers

Participating farmers for each Market are selected by officers from the Agriculture or the Horticulture departments. In order to be selected, farmers must:

- cultivate vegetables at the time of their selection;
- live in a village within a radius of 40 km from the Farmers' Market to which they are allocated (although this condition is relaxed under certain circumstances, for example for producers of 'English' vegetables (winter produce such as potatoes, carrots, cabbages) which are normally grown only in the colder hill areas)

Selected farmers are then issued a laminated identity card with her/his photograph and that of a family member or an assistant authorised to attend the Farmers' Market in the absence of the cardholder. A second card, called the validity or 'white' card, contains details of the vegetables currently cultivated by the identity cardholder, the harvest period and the expected yield. Only the vegetables listed in the validity card can be officially sold in the Farmers' Market.

Both cards are checked each day when farmers arrive at the Market by officers from the Agriculture and Horticulture departments. The purpose of the cards is to ensure that only genuine farmers sell their own produce in the Market, and farmers who lose any of their two cards must apply for a replacement to the Agriculture department. In practice, however, both selection of farmers and control of those attending Farmers' Markets have proved to be more complex to implement than expected.

The available records, up to the 9th November 2000, show that 75,588 farmers were issued identity cards for 95 Farmers' Markets. There seems to be no uniformity in the distribution of cards among feeder villages, and while in some villages up to 150 farmers have been issued cards, in others only one farmer received it. Moreover, the actual number of farmers attending Farmers' Markets, either regularly or on a seasonal basis, is much lower than those registered (see Chapter 3).

In part, this is because in the initial stages of the initiative government officials were keen to achieve pre-set targets by enrolling farmers as quickly as possible. This precluded effective communication and information about the initiative and the selection criteria, and farmers were issued cards in a haphazard way, often without knowing what they were for. This also left scope for officers issuing cards to farmers with whom they had closer personal relations. Once the first Farmers' Markets were launched and the initiative was widely publicised in the local media, farmers wishing to register faced some difficulties.

As a group of farmers who failed to secure cards recall it,

'the officers were in full suits. They came in cars, bringing with them a photographer. They asked for the whereabouts of particular farmers, went to their houses and took pictures of them. All along, they whispered among themselves and ignored us, as if we were bootleggers. We didn't take it seriously then, as this is the usual way with government officials. Later on, when we understood that this was about Farmers' Markets, we approached the officials, but they were not too keen by then. The same officials who initially chased farmers to issue them with identity cards, now began to play hide and seek. When pressed, they offered cards for the less successful markets.'

Implementation problems in farmers' selection

A common criticism of Farmers' Markets is that only a minority of those selling there are actual cultivators, and that there is a large proportion of 'traders in disguise'. In many instances, traders have registered themselves as authorised assistants of legitimate cardholders (that is, genuine farmers) who for whatever reason do not attend the Markets themselves. This is often the case of large farmers, who want to maintain a foothold in the Farmers' Markets but conduct most of their business with commission agents (see also Chapter 3).

It should be noted that the genuine farmers attending Farmers' Markets are generally sympathetic towards traders, especially when these are women, whom they do not consider as unfair competition. In part, this is because traders are much less able than farmers to lower their prices, since they depend on the profit margin between buying and selling the vegetables. Farmers, on the other hand, tend to reduce their prices once they have recovered their costs.

Farmers also feel that it is important to maintain the good reputation of the Farmers Markets as places where genuine farmers sell their produce, and denouncing traders would affect them as well. A final reason - but probably the most important - is that since the beginning, farmers' participation in the planning and implementation of the Farmers' Markets initiative has been minimal. Hence they tend to consider it as a government initiative for the welfare of farmers, and have no objection to others also benefiting from it, as long that this does not negatively affect genuine farmers.

Farmers who cultivate vegetables on more than 5 acres are allowed to register with more than one Farmers' Market. There are no data on the number of eligible farmers, but in a number of families husband and wife have registered separately, for the same plot, in two separate Markets. Since transfer from low-sales Markets to more successful ones is not permitted in principle, this allows the family to increase their chances of gaining access to one of the better Markets.

There were also some problems with the validity card, which details each farmer's vegetable production and what s/he is allowed to sell in the Market. As farmers became more familiar with consumer preference, they changed their cultivation practices by including different types of vegetables and/or extending their planting and harvesting periods. However, these changes are not reflected in the validity card.

Moreover, in order to retain their customers during the dry season, when their own production volumes are low, and to attract them with vegetables in demand, farmers themselves often complement their production with vegetables purchased from other

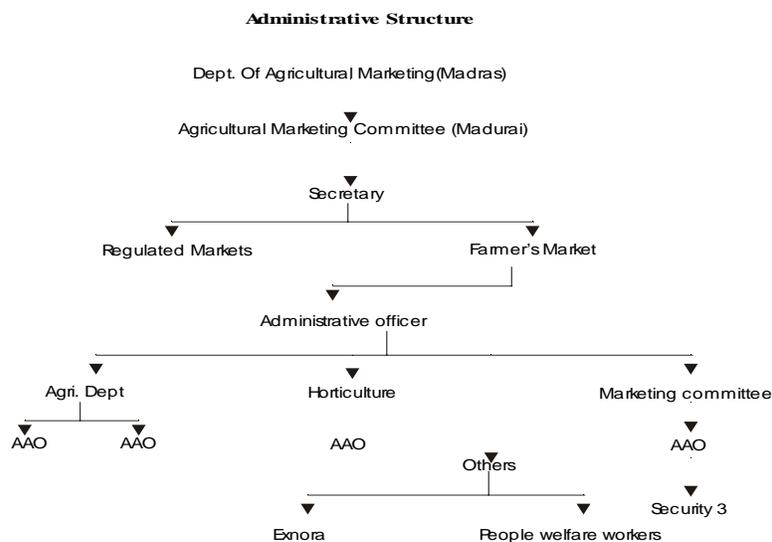
farmers, or in the conventional market. As this contributes to the success of individual Farmers' Markets, the authorities in charge of controlling them usually allow these practices, even though they are officially banned.

Because of the high political profile of the Farmers' Markets initiative, which was launched as one of the 'stellar schemes' of the DMK government, officials were primarily concerned with ensuring that it was a visible success. This meant ensuring that sales volumes were high and that urban consumers, especially middle-class voters, were attracted by the Markets. This then translated into a highly top-down approach to implementation, with minimal participation from farmers, limited transparency and strict regulations difficult to enforce. The result is a certain degree of circumvention and manipulation of the rules: from the officials' side, this relates primarily to the issuing of cards – either to non-farmers or to personally selected farmers. For the farmers, this relates essentially to selling purchased produce – in other words, becoming farmers-and-traders.

The daily running of the Farmers' Markets

The day-to-day operations of Farmers Markets are the responsibility of the administrative officer who coordinates the activities of several other staff, as detailed in the figure below.

Figure 2. Administrative structure of Farmers' Markets



The price of the vegetables is fixed each day by a committee including Marketing Committee officials and farmers' representatives. Committee members collect prices in the central and retail markets before 3 in the morning, and by 6.30 the maximum selling prices in the Farmers' Market are fixed at 15 to 20 per cent over the night sale price at the central market, and 20 per cent below the price in the retail markets – whichever is higher. Farmers are not permitted to sell above the maximum price, although they are

allowed to sell at a lower price. Prices are displayed on a blackboard at each stall, and staff constantly monitor that they are respected.

The mechanism of price fixation in the Farmers' Market and its complete reliance on prices in the conventional vegetable marketing system raises serious doubts on whether the third stated objective of the Markets (to maintain stability in the prices of fresh vegetables and fruit) can be achieved. A pricing mechanism based on production costs would possibly be more effective, but also far more complex to implement.

When farmers arrive at the Market at 6.30 am, they must show their identity and validity cards, and their name and the produce they are bringing is registered by Market officials. The officials then allocate a stall and provide a weighing scale free of charge. Initially, stalls were allocated on a first-come, first-served basis, but that meant farmers had to struggle to secure the best stalls close to the Market gate. A 'lottery' method has since been adopted to reduce this problem.

Other facilities provided to farmers attending Farmers' Markets, aside from the free stall and free scale, are a store room, drinking water and toilets. Transport is provided free of charge by State Transport Corporation buses for the vegetables (but not for the farmer bringing it) to farmers with identity cards from feeder villages on specified routes. However, this facility has been gradually discontinued since the change of government in October 2001.

Most Farmers' Markets host a branch of the district co-operative bank, and farmers are encouraged to open accounts. However, requests for loans have to be made through the Market administration, since the farmers reside in different villages, and according to bank regulations the bank itself cannot give out loans directly, although it does collect the payments.

The tables below show the infrastructure provided in Madurai's Chokkikulam Farmers' Market, included in this study, and a list of the registers used in all Farmers' Markets.

Infrastructure: Ex. Chokkikulam -
1. 146 Shops
2. Aavin milk parlor
3. Canteen
4. Farmer's Market office
5. Information center (to keep scales and other materials)
6. Separate toilets for men and women
7. Drinking water
8. Parking place
9. Co-operative Bank (attached to Anna Nagar)
10. Electricity
11. Co-operative vegetable sales depot

Registers Maintained in each Farmers' Market: -
1. Daily progress report
2. Vegetable arrival list
3. Daily price list (Whole sale/ Retail/ Farmers' Market)
4. Farmers coming to Farmers' Market
5. Feeder village list
6. List of farmers given identity card
7. Consumer-Farmers meeting minutes note
8. Vegetable stock list
9. Weighing machine distribution list
10. Higher officials inspection register
11. Visitors book
12. Complaint book

Innovation and flexibility: the experience of Tirunelveli Farmers' Market

All Farmers' Markets open at 6.30 in the morning, and usually close at 2 in the afternoon, although marketing committee staff remain until 5 to complete all paperwork. A notable exception is Maharaja Nagar Farmers' Market in Tirunelveli, which is open until 7 in the

evening. This allows farmers to bring in their produce twice a day, and has therefore attracted larger farmers, who would otherwise find it difficult to dispose of higher volumes of produce in Farmers' Markets (see also Chapter 3).

Another innovation of Tirunelveli Farmers' Market is that traders 'in disguise' are identified and are allowed to sell, but only if they meet consumers' demand which cannot be satisfied by genuine farmers' goods. When farmers bring large quantities of a specific variety of vegetable or fruit (usually depending on the season), traders are not allowed to sell the same, and if they attempt to do so their goods are confiscated. Traders therefore play a complementary role, by selling vegetables not locally cultivated or out of season in the area.

It is an undeclared procedure of Farmers' Markets that vegetables can be purchased for family consumption only, and that traders are not allowed to purchase in the Markets. The authorities say that this is to protect genuine customers. However, in Tirunelveli headload vendors and other small retailers are allowed to purchase from the Farmers' Markets. This, together with longer business hours, has stimulated sales in the Market. The innovations in Tirunelveli Farmers' Market are the initiative of the first administrator of the Market, who has adopted a pragmatic and flexible approach which overall has increased the success of the Market. However, other Markets have been reluctant to follow this example, mainly because extended opening times mean extended working hours for staff. This underlines the importance of officials' personal involvement and behaviour in the implementation of any policy, and the extent to which this can increase or limit the chances of success.

Costs of Farmers' Markets

By far the most important cost for setting up each Farmers' Market is the construction of the marketplace itself. This amounted to 20.05 lakhs (2,005,000 rupees) in Madurai's Chokkikulam Market, 11.58 lakhs (1,158,000 rupees) in Tirunelveli's Maharaja Nagar Market, and 9 lakhs (900,000 rupees) in Virudhunagar's Arrupukottai Market.

Construction costs are covered by the local Marketing Committee, and if necessary are supplemented by the State Agriculture Marketing Board. The District Rural Development Agency covers the costs for the construction of toilets, store rooms and fountains in the Markets. The land on which Farmers' Markets are built is under the administration of local government – city corporations in the case of large urban centres and municipalities in the case of smaller centres. While local government is responsible for central and retail food markets within its jurisdiction (including issuing licences, administering markets and in many cases auctioning out management of specific markets), in the case of Farmers' Markets its role is limited to providing land, often in prime locations. As a result, there is little coordination in the administration of conventional markets and Farmers' Markets. In some cases, this has resulted in strong opposition from local administrators to release land for the construction of the Markets.

Administration costs for Farmers' Markets are covered by the Departments of Agriculture and Horticulture and by the Marketing Committees. In addition, waste management and other services are provided by voluntary associations which recover their costs in various ways. Since the financial sustainability of Farmers' Markets has been the subject of some debate in Tamil Nadu, this section describes the costs for each one of these actors.

Staff from the departments of Agriculture and Horticulture deputed to work in Farmers' Markets were not recruited expressly for this work, and no new staff has been recruited to replace them. Hence, no extra cost is incurred by the departments, which can also save on per diems (on average 500 rupees per month per officer).

A total of six officers are deputed to each Farmers' Market as follows:

- one administrative officer from the Agriculture department
- two assistant administrative officers, also from the Agriculture department
- one assistant administrative officer from the Horticulture department
- two assistants from the Horticulture department

In most cases, officials are allocated to work in Farmers' Markets on a rotational basis. One possible consequence of new work in Farmers' Markets is that less time and staff are available for extension work in the villages. However, it is difficult to verify the extent to which Farmers' Markets have negatively affected extension work, which suffers from a number of other constraints. Moreover, in principle Farmers' Markets provide an alternative place for officials to contact farmers.

The Marketing Committee funds the costs of staff working in Farmers' Markets on a contract basis. These include:

- two or three watchmen (depending on the size of the market), for a salary of 1,500 rupees/month/person
- three to five People's Welfare workers seconded from the Department of Local Administration, to whom the Marketing Committee pays 250 rupees/month/ person as ex-gratia payment
- one cleaner for office premises only (not the marketplace) at 1,500 rupees/month
- electricity, telephone and stationery costs

The total staff costs of one Farmers' Market for the Marketing Committee are between 5,250 and 7,250 rupees per month. When the actual cost of government officials salaries, interest repayment on construction costs and utilities bills are added (electricity, telephone, sanitation, etc), monthly expenditure for each Market is estimated at 80,000 to 90,000 rupees. The Marketing Committee has no revenue from Farmers' Markets, but collects cess from traders dealing in agricultural commodities under the Agricultural Marketing Committee Act, and rent from farmers using the Committee's godowns for grains.

The responsibility for daily cleaning of the marketplace and the related facilities (toilets, water points) is assigned to voluntary organisations. In the majority of Farmers' Markets, an umbrella organisation, Exnora International, was given this contract. Exnora International is well-known in Tamil Nadu, where it also runs environmental and sanitation services in several other public places such as Madurai Kamaraj University, Rajaji Hospital and the Sales Tax Office.

To fund its services in Farmers' Markets, Exnora is allowed to collect parking charges in dedicated parking spaces outside each Market. Fees are fixed by the government, and are 0.25 rupees for bicycles, 0.50 for two-wheelers and 1 rupee for other vehicles. Customers, but not farmers, wishing to use the toilet facilities are charged 0.25 rupees. In addition, Exnora collects vegetable waste for composting in its own compounds, and runs the Markets' canteens, where cold drinks and savouries are sold. It was impossible

to obtain information from Exnora officials on whether the revenue from these activities covers their costs for the services rendered in the Farmers' Markets.

In summary, while Farmers' Markets do not represent a specific cost for the State (which is reflected in the fact that there is no special budget item for them), their running involves costs for a number of Departments who second their staff to the Markets, and only the voluntary organization in charge of cleaning and sanitation is able to recover its costs.

It can be argued that government officials involved in Farmers' Markets are simply doing the job for which they are paid anyway, the only difference being that their place of work is now in the Farmers' Markets. The question is rather whether their work is organised and done in an effective way, and that it contributes to the objectives of their parent department as well as to that of the Farmers' Markets initiative. Given the heavy top-down approach of the project and the problems in its implementation, it would seem that a more flexible approach, such as the one adopted in Tirunelveli, and greater participation from farmers in the running of the Markets could improve the efficiency of the initiative and reduce its hidden costs.

Similarly, local government is likely to incur a loss of revenue by giving up land in prime urban locations, which it would normally receive some form of rent for. At the same time, through its contribution to Farmers' Markets it is also providing a service which is part of its role and responsibilities. However, the lack of involvement of local government in running Farmers' Markets, unlike other markets, reduces its capacity to maintain an overall perspective on the management of this type of urban services, such as for example ensuring their balanced spatial distribution.

These issues are discussed again in the concluding chapter, where they are addressed in the wider context of the impact of the initiative on three important groups of actors: vegetable producers, low-income urban traders and low-income urban consumers. The research findings on these three topics are presented in the next chapters.

3. The impact of Farmers' Markets on producers

Access to markets is considered essential to increase agricultural production and incomes for producers.¹ This is especially the case for small farmers who, because of the limited volume and seasonal fluctuations of their production, often face difficulties in entering marketing systems dominated by large traders. The stated objective of Farmers' Markets is to exclude middlemen and traders, and thereby increase farmers' incomes. However, access to markets is not the only factor affecting farming. Other assets, such as land, water and labour, and access to roads and transport, are just as important.

This chapter describes the main characteristics of producers of fresh vegetables and the factors affecting their production. It then examines the marketing strategies of different categories of farmers, including the use of different outlets at different times of the year, and the reasons behind farmers' decisions. The final sections of the chapter describe the impact of attending Farmers' Markets and the factors which enable producers to adapt to consumers' demand.

Access to natural resources and changes in agricultural production

Land and farming

Traditional rainfed cultivation in Tamil Nadu has declined in the past decades. The depletion of groundwater resources, increased employment opportunities in the non-agricultural sector and changes in household organisation, from joint to nuclear structures, have all had an impact on agricultural practices. Water shortages and severely limited rainfall in the past few years have resulted in the increase in the area of punjai (rainfed) land left fallow. Although during the rainy season most farmers cultivate at least a portion of their land, few are able to farm throughout the year.

The definition of 'small' and 'large' farmers given by respondents in the study villages is significantly different from the official government classification.² Those who are able to cultivate an area from half to one acre during the dry season are defined by the villagers as small farmers, whereas those who manage to farm over one acre during the same season are seen as large producers. Moreover, those who are unable to cultivate throughout the year, regardless of their land size, are not perceived as 'genuine' farmers. Indeed, in the study areas 'farmers' are increasingly smallholders engaged in irrigated vegetable production, rather than large producers of rainfed crops whose children have generally moved out of farming and into non-farm occupations such as fireworks factories and mills. Only one of the nine villages in the study has access to river water throughout the year, which enables all producers in the village, including a small number of large commercial vegetable farms, to cultivate during both wet and dry seasons.

¹ IFAD (International Fund for Agricultural Development) (2001) *Rural Poverty Report 2001: The Challenge of Ending Rural Poverty*, Oxford University Press, Oxford.

² The Indian government defines as small and marginal farmers those with access to less than 2.5 acres of wetland with irrigation facilities or to less than 5 acres of rainfed land. The classification is based on land taxation rather than on the area under cultivation.

Access to water

Depending on water availability, land is classified as rainfed, tank-fed and garden land (with water wells). Declining rainfall and lack of maintenance of the tanks has resulted in the loss of importance of the first two categories. In the study areas, each village has a considerable amount of garden land with wells. In many cases, various government funding schemes were used to dig the wells.

During the past four decades, oil and electric pumps have replaced manual devices for lifting the water. However, many of the wells are now dry, due to the depletion of groundwater resources. Nowadays, few farmers can afford the costs of maintaining existing wells or digging new ones, and while electricity is free of charge for agricultural use, alternatives such as deep bore wells are costly and only efficient in the right geological conditions. Farmers sometimes resort to illegal practices, such as pumping water from the Vaigai river to replenish their wells.

Wells also depend on irrigation tanks: if the tanks are properly maintained and fill up during the rainy season, they will replenish the wells in their catchment area. Farmers cultivate vegetables in this area during the rainy season, and during the dry season they move closer to the irrigation area below the tank, which is normally used for paddy cultivation. In the areas where tanks have been effectively abandoned, the negative impact on wells and on vegetable cultivation is noticeable.

Although paddy is the main crop in the three study locations, its cultivation has lost importance due to the availability of subsidized rice in the ration shops under the Public Distribution System. Other rainfed cash crops such as pulses, cotton, chillies, groundnut and sugar cane have suffered from the decline in rainfall. While in the 1960s vegetable cultivation was considered mainly if not only for household consumption, it has now become an important alternative for those farmers with limited access to water but who can still farm on smaller portions of their land. Access to water is possibly the most important factor affecting vegetable production. All the farmers in the study areas which attend Farmers' Markets have access to wells for the production of vegetables.

Availability of labour

Household size is important for both production and marketing. Joint households usually have more family labour available for work on the farm and in related activities. However, farming households structures are changing under the combined impact of a number of factors. First, due to the declining incomes from agriculture and improvements in education levels, younger generations tend to move out of farming, either through local non-farm employment or through migration to urban centres. Second, state subsidies to electricity for agricultural use and for the construction of wells have made family labour less necessary. Traditionally, some activities, especially well-digging, were carried out collectively at the village level. In exchange for labour, extended access to water was granted to relatives and neighbours. This has declined and in many case stopped, as subsidies have enabled households to hire waged labour for these works. Reliance on social networks is now more likely to relate to marketing activities than to agricultural production. Parallel to this, household structures have changed, becoming increasingly more nuclear. For example, upon inheriting their parents' land, children now often divide the property and work on their plots separately.

Farmers' Markets put additional demands on household labour, since one member needs to spend at least half a day in the market. All the farming households attending Farmers' Markets in the study villages have at least three or four adult members engaged primarily in the production and marketing of vegetables.

Access to roads and transport networks

More than any other agricultural produce, marketing of highly perishable vegetables depends on transport availability. Subsidized transport from feeder villages to Farmers' Markets was an important element of the initiative at the time of the fieldwork (see Chapter 2). However, since the change of government in Tamil Nadu in October 2001, this facility has been progressively abandoned. Bus routes which had been diverted to serve feeder villages and their related Farmers' Markets were reverted to the original route, often cutting off villages or forcing producers to walk for some distance or hire private transport to the bus stop.

Affordable transport is widely available throughout most of Tamil Nadu, and the case study villages are no exception. With some variations between operators, small amounts of vegetables (such as one or two baskets or bags) are usually allowed free of charge on private buses, or are charged a lower fee than passengers. However, the main problem for farmers is transport from the bus terminal to the marketplace. This can be done by carrying the load on their head – which limits considerably the amounts taken to market – or by hiring a tricycle, which can be relatively expensive.

The main advantage of the Farmers' Markets initiative was that the state-owned buses transporting farmers to the Markets stopped in front of the Market itself. This is perceived by farmers as the most important benefit, more so than free transport for vegetables. However, this is no longer the case for bus routes which did not originally stop in front of Farmers' Markets.

Farmers' Markets and producers' marketing strategies

There are essentially three main markets for vegetables and fruit in the study areas. The first is the conventional market, which is a highly complex system involving a central market where produce is traded primarily by commission agents. The central market supplies various local retail markets, and is linked to other markets within Tamil Nadu and in neighbouring states. The second outlet available to farmers are local traders who collect local produce and then channel it to the central market or directly to retail markets. The third outlet, only available to registered producers in the feeder villages, is the Farmers' Markets. Farmers in the study areas tend to use the three outlets at different times of the year, and in different combinations depending on the volume of their production.

Especially during the dry seasons, when production volumes are low, small producers sell most of their produce in the Farmers' Markets. At this time of the year, it is difficult for them to sell to the conventional markets' commission agents, who buy in bulk and are not usually interested in purchasing small quantities from a large number of farmers. Before the introduction of Farmers' Markets, small producers would sell to local traders. These also work on 10 percent commission, like the central market agents. However, since prices depend on those in Madurai's central market, local traders cannot pay immediately and it can take some time before the farmers are paid. During the rainy

season, when production is higher, small producers sell in the Farmers' Markets, where producer prices are higher; however, since the volume sold there is relatively low, any surplus which cannot be carried to the Farmers' Market is sold through the conventional market's commission agents.

This flexibility is reflected in the patterns of attendance of Farmers' Markets by small producers. In each village, there is a small number of regular users. Another group will attend only two or three times a week when business in the Markets is brisk, usually at weekends. A third group of producers does not attend the Markets, but entrust their vegetables with neighbours and relatives who sell it in the Market on their behalf, usually with their own produce. Farmers move from one group to the other depending on production volumes and on other constraints, for example competing demands on their time or limited labour availability.

Box 3.1. The multiple marketing strategies of larger farmers

Thanks to bore well technology and free electricity provision by the state, Ramarajan, of Thummuchinnampatti village in Virudunagar district, is able to grow vegetables throughout the year on up to 2 of the 5 acres in his farm. He is considered by other villagers as a large farmer. Before the introduction of Farmers' Markets, he used to sell in two different markets. During the lean season, his vegetable production was relatively small, and he used to sell it in the nearby Reddiapatti market, where local traders collect vegetables from small farmers and send it to larger markets. During the winter season production volumes increase, and he then sold it to commission agents in Aruppukottai's 'big market'.

After the establishment of Farmers' Markets, Ramarajan changed his farming practices and adopted both monocrop and multicrop strategies to meet the requirements of both conventional and Farmer's Markets. He sells up to 40-50 kg of vegetables in the Farmers' Markets, and also caters directly to hotels in Aruppukottai. Depending on the volume of the remaining vegetables, he sells them either to local traders in Reddiapatti market (when the volume is low) or to commission agents in Aruppukottai market (when the volume is high). If the surplus vegetables are only 5 to 10 kg, his wife sells them directly in the village.

Each market outlet has its own benefits for Ramarajan. He can get a sizeable advance for his farming expenses from Aruppukottai's commission agents, and smaller advances from local traders in Reddiapatti to meet other expenses. Selling to hotels provides ready cash, and he sells his vegetables in the Farmers' Market at a higher price than in the other outlets. The income from the vegetables sold in the village is kept by his wife for family expenditure.

Medium-sized and larger producers are more flexible in their use of different outlets, and tend to use a combination of markets in all seasons (Box 3.1). For this category, Farmers' Markets alone are not sufficient to dispose of their produce, as the volume that farmers can sell is limited. During the dry season, these producers are the main suppliers of the central markets. Even if prices are higher in the Farmers' Markets and the volume of their production is lower, it is important to keep the links with the commission agent – who plays an important role in providing credit, seeds and other inputs to producers. Indeed, especially in the case of producers of 'English' vegetables (potatoes, carrots, cauliflower and cabbage, which are highly valued and only produced in colder areas), farmers will buy produce from other districts and sell it to the commission agents, often with little or no profit, in order to keep the relationship going.

On the other hand, when prices are low (during the rainy season, when production volumes are higher), medium and larger producers feel that the time spent in the Farmers' Markets is wasted, and that they would be better off selling to the commission agents and keep their time for other activities rather than spending it in the Farmers' Market. However, regardless of the season, they will occasionally go to Farmers' Markets in order to retain their identity and validity cards.

The impact of Farmers' Markets on producers' practices

For many farmers, direct interaction with consumers in the Farmers' Markets is a new experience, whose impact can be divided into two main categories: first, the changes in production practices in relation to a better understanding of demand; and second, the development of marketing strategies to cater for different categories of consumers.

Changes in production practices can be summarised as diversification, or the production of a larger number of varieties of vegetables, and intensification, or the extension of production periods (Box 3.2).

Box 3.2. Changes in the farming practices of producers attending Farmers' Markets

Ganesan is a 49-year old farmer from the village of Kullampatti in Virudunagar district, who gave up farming in 1996 after suffering from typhoid. This was a painful decision for him and his family, who enjoyed the status of *nalla samsara kudumbam* (good farming family). However, it was also the last blow in a long series of problems which had affected his farm, like many others in the village.

Ganesan's father owned 40 acres of rainfed land and 3 acres of garden land with a well equipped with an electric engine. After his father's death, land was divided and Ganesan received half of both rainfed and irrigated land. During his father's lifetime, the rainfed farm had seen many bumper crops, but with increasing water scarcity, this was no longer the case. When Ganesan's two sons decided, at the ages of 16 and 18, that they wanted to 'eat cotton' (work) in the textile mill, he didn't stop them. With dwindling income from agriculture, their earnings were crucial for the family's survival and for investment in the farm. Despite this, eventually Ganesan decided to give up rainfed farming altogether since it was not only unprofitable but was also eating away his children's earnings. To maintain their status as a 'good farming family', Ganesan continued to grow single crops like groundnut on just 30 to 40 cents. This was only possible because his brother had given up farming, and Ganesan was able to use his share of well water.

Once Farmers' Markets started, Ganesan and his wife started growing 10 varieties of vegetables on the same small plot they used for groundnuts. Even with limited water supply, he can now harvest at least 2 or 3 types of vegetables each day. He normally takes 20 to 25 kg of vegetables to the Market, and compensates for any shortages in his own production by purchasing from his village or from the conventional market in Aruppukottai town. Ganesan has also adopted crop cycling and spacing techniques, which allow him to harvest when prices are higher. His wife works full-time on the farm, and he attends the Market. Their income is now sufficient to cover the family's expenses, and they are able to save their children's earnings.

Diversification

Selling at least three or four varieties of vegetables attracts consumers since they can save time by purchasing them all at one stall. Farmers with less than half an acre of irrigated land in the dry season cultivate a number of vegetables (such as brinjal, tomatoes, chillies, greens, ladies' fingers) on a small scale on their plots. In addition, they have started planting fruit trees such as papaya on the plots' borders, and onions and greens on the sides of the irrigation channels, which were previously unused. Vegetables which require less water, such as ladies' fingers and cluster beans, are used in combination with others to maximise water resources. This is a technique used by most farmers attending Farmers' Markets.

An indication of producers' increased attention to maximising the use of scarce resources is the change in terminology related to land areas. While previously producers used approximate measurements for decisions on irrigation and types of vegetables to plant, they now use more detailed figures on land size and specific knowledge on the water requirements of each variety they cultivate.

Consumers' preference has encouraged farmers to adopt new varieties of normally large-size vegetables, such as pumpkins and gourds. Smaller-sized hybrid varieties can be sold in one piece for family consumption, whereas larger specimens must be cut in sections, which increases the risk of spoilage. In the case of bananas, farmers have identified demand not only for fruit but also for stems, flowers and leaves. While they can sell all these in Farmers' Markets, it would be difficult to do the same in the highly segmented conventional market, where different commission agents deal with different parts of the plant.

Intensification

Production periods are often extended. For vegetables with two production cycles within one year, harvesting is now done when prices are higher in the market. This is a significant change in farmers' practices, as previously production was timed around producers' costs rather than on information and understanding of market mechanisms and price fluctuation. Other vegetables, such as coriander, chillies and onions, for which there is constant demand, are now produced on a permanent basis through staggered planting periods.

Market information is particularly beneficial for small farmers. Larger farmers are more likely to receive at least partial information on consumer demand by commission agents, who are also interested in pressing them to produce when prices for specific varieties are high as this will guarantee a higher commission fee.

Marketing strategies

Officials from the Agricultural Department attached to Farmers' Markets are responsible for producing a monthly calendar of rituals, festivals and fasting seasons. This is important for producers, since there are differences in the ways these are observed in the villages and in the towns. Urban residents attach more importance to dietary restrictions, and this affects especially demand for vegetables.

The months of the Hindu calendar and the festivals play a vital role in the consumption of vegetables. For example, demand for cluster beans is high during the Onam festival in Kerala, which is observed by Keralans living in Tamil Nadu's urban centres. Knowledge of these time-specific variations in demand allows farmers to advance or postpone harvest of the relevant vegetables.

Producers also distinguish between different categories of consumers, based on their incomes, preferences and timing of visiting the market. The first category is also the first to arrive to the stalls. These are middle-class customers who shop before going to work. They look for high quality produce and are prepared to pay the fixed price. Following this group are the housewives, who usually go to market in the middle of the morning and who look for lower quality and better prices. The third group of customers are low-income groups who attend the market after the middle-income housewives, and who look for low-price vegetables of lower quality. They compete with small hotel owners who buy larger quantities (2 to 3 kg) and also look for low quality. Producers are able to organise their stalls to cater for the different groups of customers, and once they have recovered their costs with the first groups, they are usually happy to sell any left-overs at a lower price rather than taking them back to the village.

An important benefit of Farmers' Markets is experience-sharing and communication between farmers. This includes information on cultivation techniques and crop varieties, and marketing support. For example, when demand for specific produce is high, farmers may borrow it from others who produce a surplus. When a producer knows in advance that s/he will not be able to attend on a specific day, s/he will let it known to other producers who can increase their harvest accordingly in order to meet demand.

Farmers attending Farmers' Markets also run chit groups among them. Each group has 20 to 30 farmers, and the daily payment of the chit amount is lent to one of the members through a lottery-type system. The amount ranges between 500 and 2000 rupees and is interest-free. Especially in the early times of the initiatives, attending the Markets greatly increased farmers' creditworthiness, and even two-wheelers were offered on credit by dealers, upon presentation of the Farmers' Market identity card.

Factors affecting producers' capacity to adapt to changes

There is no doubt that Farmers' Markets have an impact on producers' practices. However, this is not widespread, and only few producers from each feeder village are able to transform their agricultural practices and to maximise their land and water resources. On the other hand, Farmers' Markets provide the opportunity to sell vegetables which were previously not marketed, either because they were considered as 'weeds', as in the case of greens, or because the production volume was so small that they were used for household consumption or for free distribution. Hence, even the farmers with little access to resources and who are normally excluded from conventional markets – which require large volumes and consistent quality - are able to earn cash through Farmers' Markets (Box 3.3). The downside of this is that the poorest groups in the villages, such as the landless labourers, have lost access to free surplus food.

Box 3.1. Impact of Farmers' Markets on small farmers' marketing strategies

Vadivammal's family in Chinnachettikurichi owns one acre of rainfed land and leases out another acre of irrigated land. Water scarcity has forced them to let the rainfed farm fallow, and before the establishment of Farmers' Markets bananas were grown in the irrigated plot. Vadivammal used to work as a headload vendor, selling mainly banana stems, unripe banana and banana flower.

After the establishment of Farmers' Markets, she started to supplement her own produce with banana parts that her neighbours would otherwise throw away as waste. These include the lower part of the leaves, used for packaging, and the stem, used for medicinal purposes. She also sells banana saplings which are in high demand during auspicious days and festivals. Besides banana parts, Vadivammal sells bitter gourd and sweet beans, which she buys from her neighbours.

Overall, Vadivammal sales include up to 20% of banana parts discarded as waste by her neighbours, and up to 25 % of bitter gourd and sweet beans which she does not cultivate but buys from her neighbours. Regular business in the Farmers' Market has enabled her to increase her cattle stock, which is now looked after by her husband.

Access to credit and financial assets

In addition to limited water resources, lack of access to credit and financial assets can be an important constraint for producers. Non-agricultural employment is increasingly frequent in all the study villages, but only households with sufficient labour and with access to land and water are able to re-invest incomes from non-farm employment into agriculture and especially into vegetable production.

Incomes from non-farm employment clearly depend on the type of activities. If the actual selling of produce in the Farmers' Markets is taken as a type of non-farm activity (although closely related to farming), the additional income it provides to producers is estimated by farmers to be higher than wages for unskilled labourers in the same area. To some extent, then, Farmers' Markets contribute to retaining farmers in agricultural production by providing a more interesting option, especially for low-income, unskilled groups.

Commission agents are a traditional source of credit for farmers, but they usually only lend to larger producers who can guarantee volume and quality consistency. They usually advance inputs in kind, such as seeds, fertilizers and pesticides, and deduct the cost from the price paid to the producer for their harvest, usually with minimal interest rates. Small and marginal producers are more likely to rely on money lenders, who charge high interest rates, or to sell livestock and pawn their wives' jewellery. Moreover, while land used to be accepted by money lenders as collateral, this is often no longer the case, as the value of agricultural land has declined, reflecting the low returns of farming.

Social networks also play an important role in ensuring that even marginal farmers can rely on no-interest loans from their relatives and neighbours, but the amounts available are limited, especially among poor groups. More recently, a nationwide initiative to expand micro-credit through women's self-help savings and credit groups, with loans from

the nationalised banks, aims to increase access to credit – but it is too early to assess the impact of the initiative in connection to Farmers' Markets.

Institutional support

As part of the Farmers' Markets initiative, training programmes for producers are conducted by the Departments of Agriculture and Horticulture. Some training has taken place, while other programmes, for example on handling and packaging for perishable goods, have not been implemented. Educational tours were organised on large government-managed farms, but while small producers expressed interest, they also commented that these were rather different contexts from their own farms, and that it would be difficult to apply the same techniques.

Training in cultivation of new hybrid varieties of vegetables has been relatively more successful, but mainly because of the one-off free distribution to farmers of 'mini-kits' containing small quantities of seeds, fertilizer and pesticides. This has encouraged experimentation among vegetable producers attending Farmers' Markets. However, little support is provided to farmers at the farm level during the growth period on issues such as crop protection. In part, this is because extension agents from the Agriculture and Horticulture Departments have been relocated to the Farmers' Markets, leaving less staff to visit the villages regularly. Moreover, extension officers in the study areas traditionally focus on large-scale, rainfed agriculture and there is limited support for intensive vegetable producers; the activities promoted by officers attached to the Farmers' Markets are therefore not followed up by field officers, even if from the same department.

Key findings

- Agricultural production patterns in the study area have changed in the past decade following semi-drought conditions and increases in migration and non-farm employment. Due to limited water availability, worsened by the lack of public investment in irrigation tanks and canals since 1991, even large landholders have switched to horticulture on a reduced portion of their farmland. Farmers' Markets are thus an initiative which responds to changes in farming practices.
- However, Farmers' Markets alone cannot improve incomes for small farmers, who also need access to land, water and labour. Labour availability is reduced following changes in household structure and organisation, with joint households being replaced by nuclear households. Migration and local non-farm employment opportunities have also contributed to reduce the availability of family labour.
- The study areas, like most of rural Tamil Nadu, have good access to roads and transport. The main benefit from the Farmers' Markets initiative was that, up to October 2001, free transport for vegetables was provided up to the Market gates, unlike other public and private means of transport.
- Producers use different market outlets (commission agents, local traders and Farmers' Markets) at different times of the year as a strategy to maximise profits. Farmers' Markets are especially beneficial for small producers, who have difficulties selling small volumes during the dry season on the conventional market system.
- Farmers' Markets have influenced producers' practices in two main ways: diversification of production, to include a wider variety of vegetables, and intensification, to maximise the use of water and land resources throughout the year.

- Farmers' Markets have also stimulated producers' adoption of marketing strategies, through a better understanding of consumers' needs and preferences based on incomes, dietary habits, religious celebrations. Experience-sharing and communication between farmers has also increased.
- Factors which affect producers' capacity to adapt to changes include access to credit and financial assets, and institutional support. These are key in ensuring that farmers fully benefit from the Farmers' market initiative, and deserve to be better addressed.

4. Women's status and Farmers' Markets

Women play a key role in the production and marketing of agricultural products in Tamil Nadu. However, there is a clear gender segmentation in the types of activities undertaken by men and women. While men traditionally control the more lucrative operations, such as large scale cash crop production and medium and large scale trade, women are confined to vegetable cultivation, often on a small scale, and to petty trade.

The Farmers' Markets initiative aims to increase farmers' incomes by eliminating middlemen from marketing; in doing so, it also expects smallholder vegetable production to increase. Little attention is given to the gendered impact of the initiative; however, since women are more likely to be involved in the production and marketing of fresh vegetables, it is important to examine the differential impacts of Farmers' Markets on women and men.

This chapter describes the main changes in practices as well as in gender relations within households of farmers attending Farmers' Markets in the study areas. The next chapter completes the picture by exploring the impact of the initiative on the most vulnerable traders – the head load vendors – the majority of whom are low-income women.

The traditional role of women in farming

Traditionally, government extension efforts target men as the producers of cash crops such as paddy, cereals and cotton, while women are seen as responsible for the family's balanced and healthy diet, and are therefore targeted as consumers and for training and information on the domestic handling of rice, cereals and vegetables. As producers, women are only targeted for extension related to backyard vegetable cultivation, or kitchen gardens.

As long as vegetable production is only for household consumption, women control and undertake all the activities related to cultivation and harvesting, either in kitchen gardens or as inter-crop harvest. However, since vegetables have attained the status of cash crops providing a good income, women have often lost control of production, which is taken over by men. But this does not mean that women's workload has decreased; on the opposite, in many cases, better access to technological improvements through the availability of electricity connections, and better access to urban centres through improved transport networks, has increased women's already long working hours.

The use of electric engines for water pumps has considerably reduced men's workload on the farm, but women, who are primarily engaged in weeding and harvesting, have not benefited on a similar scale from the new technology. Moreover, men do not usually share women's farming chores, although they now often have more leisure time. This trend extends to the younger generations, as boys, who usually help their fathers, are required to spend less time on the farm and are encouraged to attend school. Girls, by contrast, still help their mothers in farm and household chores, and their school drop-out

rate is consequently higher.³

In addition to this, declining returns from agriculture and reduced employment opportunities in this sector have pushed both men and women to look for income-generating activities elsewhere. While men are more likely than women to engage in activities which require commuting or temporary migration, women's mobility is constrained by their household responsibilities, such as looking after children and elderly relatives. The absence of men from the farm has increased women's role in family farming, which in turn means even longer working hours.

Women and the marketing of vegetables in the conventional market

There are many stages in the marketing of vegetables, and at each of them women face a number of constraints. Transport of produce from the farm to the urban market is usually done by men. This is because any form of transport owned by the household, be it a two-wheeler, a tractor, a van or a bullock cart, is usually driven by men only. Another important constraint for women is the timing of transport. Since produce must be in the market as early as possible to fetch a good price, travel takes place at night or in the very early hours of the morning, times when women are usually busy with domestic chores.

Marketplaces at night have an especially bad reputation, as they are also drinking places for men. This perception extends to the daytime, and it is not perceived as appropriate for village women to spend time on their own in a crowded place and in close contact with strangers, particularly men. Moreover, lack of facilities such as public toilets is an additional strain for women.

Farmers who go to conventional markets do not usually sell their produce themselves, but hand it over to traders. The reason for going is to avoid being cheated on weight and prices. This in practice means that farmers have to wait for a long time, since traders do not actually buy the goods directly but retain a commission on what is sold, thereby paying the producers only towards the end of the market day, when transactions are completed. While male producers can pass the time going to the cinema, smoking and drinking, these activities are not acceptable for women, who tend to feel that they are wasting time waiting while there is so much to do at home and on the farm. By contrast, attending Farmers' Markets is seen as productive time providing additional income to the household. It is even more interesting for women, since their income from selling their produce there is higher than the wages they can earn as agricultural labourers (which are lower than men's).

The immediate impact of selling in Farmers' Markets on village women

Safety and respectability

The role of women in conventional wholesale trade is negligible, as commission agents are almost exclusively male. By contrast, a high proportion of retailers in the

³ Farming practices play a vital role in girls' drop-out rates, but it should be stressed that this builds on wider and more complex socio-cultural expectations of gender, including the issue of dowry which is higher for educated girls.

conventional market system, especially small and petty traders, are women. Management of marketplaces is auctioned by local government, and markets are usually controlled by 'musclemen' with political and often criminal connections. Small traders must deal with them in order to get a permanent place in the market, and negotiation can involve sexual favours, which inevitably tarnish the reputation of all female traders.

No such compromises are needed to gain a place in the Farmers' Markets, and their highly regulated environment and the constant presence of government officials makes them respectable places for women to work in. Moreover, the facilities provided – toilets, canteen, etc – make it easier for women to spend long hours there selling their produce.

Despite this positive reputation, the number of female producers attending the Farmers' Markets regularly is low, at two to four women in each study village, and the majority of women whose household is involved in the initiative only go to the markets occasionally when their husband or another adult male cannot attend, such as during specific times of the agricultural calendar. An important reason for this is women's workload, which can hardly accommodate additional demands on their time. This is especially the case for women with young children. Indeed, the women attending markets on a regular basis are usually of the older age group, and in most cases have previous experience as head load vendors. It is only in the busier Farmers' Markets, where incomes for producers are higher, that younger women's time is perceived to be better spent selling produce than in other farm and household chores.

Another reason for the predominance of male traders in Farmers' Markets is that since women are responsible for the most time-consuming production activities, and the activities traditionally undertaken by men are relatively more mechanised, male villagers have leisure time to spare. Put it differently, attending Farmers' Markets is an income-generating opportunity for under-employed male farmers with limited skills, and an activity with better returns than other unskilled labour.

Increased workload

Women's workload has changed regardless of Farmers' Markets influence, reflecting transformations in lifestyles. Certain aspects of domestic work have been reduced: for example, rice is now bought from the ration shops or from grocery shops and does not need to be parboiled, as in the past. And with government programmes supplying lunch to school children, the main family meal can be prepared once a day instead of twice. But work has increased in other areas: clothes are now washed more often, and tiffin, a type of meal with a variety of sauces and condiments which require lengthy preparation and which used to be prepared only for festival occasions, is now consumed on a weekly basis.

Vegetable production is traditionally the responsibility of women. But while production for household consumption is relatively manageable, increased production for Farmers' Markets significantly increases women's workload. Weeding is especially time-consuming, and can be done in three ways: with a spade, with a weeding hook, or by hand. Men do not weed by hand, while women do not use spades. In vegetable cultivation, weeding is done mainly by hand, often resulting in joint pain and broken nails. Farmers' Markets have encouraged inter-cropping and cultivation of small areas, where only hand-weeding can be done, and have therefore significantly increased women's workload.

Among small-scale producers, women are responsible for all vegetable farming activities, from planting to harvesting and marketing. Their workload therefore is subject to seasonal variations. However, due to the low level of technology and mechanisation, women don't enjoy any lean periods: if pest attacks are lower in winter, this is also the period which requires most weeding, while in summer there are less weeds but more insects.

Depending on their home's distance from the bust stop and from their assigned Farmers' Market, women who also go to Farmers' Markets often have to get up as early as 3 in the morning. But also in households where men go to the Market, women have to get up before their husbands to boil water for their bath and make coffee. So, all women from households involved in Farmers' Markets sleep less.

Even after returning from Farmers' Markets, while men usually rest for at least two or three hours, women cannot wink for a moment, as they are too busy watering, weeding and harvesting, in addition to feeding their family and keeping their homes and clothes clean.

Box 4.1. Women's workload and Farmers' Markets

Karuppayee's husband, Murugesan, works as a mason, and is away from 8 am until 7 pm. Since marrying him, Karuppayee has been responsible for farming on the 2.32 acres which Murugesan inherited. She single-handedly manages the household finances as well domestic chores, cultivation, cattle rearing, attending social functions and sometimes working as headload vendor. To save on hired labour, she has moved the family to the farm house. This hard work has paid its dividends, and all four Karuppayee's children attend school, including her girl child, which is unusual in the village. She has managed to clear all their debts and set aside some savings for emergencies, and improved the water resources on the farm.

Since the opening of Farmers' Markets, Karuppayee got herself an identity card and now grows vegetables on 30 cents of her land. Whenever necessary she supplements her produce with vegetables from her in-laws.

Karuppayee's daily chores start at 4 am. Before leaving and after returning from the Market, she still looks after her family, her house, her cattle and her farm. Murugesan assists her to carry the vegetable baskets to the main road and the children help out with house and farm work before and after school, but Karuppayee has main responsibility for all activities. However, she feels that the Farmers' Market is a much better alternative to headload vending, that it is less physically demanding and has improved their income levels and social status in the village. Her priorities are her children's education and helping her relatives.

Exposure to urban values and institutional relations

For many village women, Farmers' Markets are the first opportunity they have had to have a regular contact with town residents and middle-class groups. They are thus exposed to different sets of values, ranging from personal appearance and hygiene to consumers' demands in terms of quality and prices. They can also appreciate the rather different relations between urban, middle-class couples, where men are often responsible for shopping for vegetables, but must follow strict directions from their wives,

who almost always are the family's cooks. Urban women's higher status in their family is seen with some astonishment by villagers, both women and men. As one respondent put it, ' I plead with one male customer "sir, I am running short of change, so instead of ¼ kilo, I will put ½ kilo". But the man declines my request and says that his wife will scold him if he buys more than she instructed him to do'.

Another important influence of urban contact is the increased value village women attach to children's education. By observing schoolchildren in the city and their families, it is easier to associate education with better jobs and better lifestyles.

Despite the fact that prices in Farmers' Markets are fixed and bargaining is discouraged, producers must nevertheless acquire some marketing skills. These include displaying a sufficient variety of vegetables in their stalls, efficiency in weighing and giving change, and securing stalls in strategic locations, such as those which are close to the entrance of the Market.

Attending Farmers' Markets necessarily involves dealing with a number of institutions. Regular contact with government officers from the Departments of Agriculture and Horticulture is required to obtain the identity and validity cards, and to gain access to experimental seeds and any relevant training. The maze of bureaucratic rules and regulations is often puzzling for producers, but learning to overcome it and to deal with authorities is considered a very useful skill. Both men and women who acquire it have gained in both self-confidence and respect from their communities and kin.

Farmers' Markets and women's status

It is more difficult to assess the impact of Farmers' Markets on household relations and on women's status. This is because transformations in gender relations are linked to a much wider range of social, cultural and economic factors, of which the Farmers' Markets initiative is only a small part. Moreover, changes in gender relations do not usually take place overnight, and it may be too early for any substantial impact of Farmers' Markets to be noticeable.

This section describes the main changes in gender relations in the study villages, as reported during the focus group discussions. While not all changes can be related to Farmers' Markets, an attempt is made to highlight the possible impact of participating in the Markets.

Household division of labour

Activities within the household can be divided into two main categories: common tasks are those which can be carried out by any adult member, regardless of gender. In the study villages, they include: irrigating the plots, switching on the water pump engine, washing and feeding the cows and milking.

The second category refers to tasks which are gender-specific. For men, they include: preparing the beds, sowing fertiliser, ploughing, weeding by spade, cart driving, carrying sacks and bundles. Women's assigned tasks include: all household chores, livestock (goats) care, applying fertiliser, weeding by hand or by hook, transplanting, harvesting vegetables and flowers, and in many cases selling them as head load vendors.

Most of the common tasks were originally assigned to men, but are now largely the responsibility of women. For example, when irrigation water was lifted with animal traction, it was mainly women who were doing this job. Shortly after the introduction of electric pumps, men took over. However, after a while they left the activity again to women, feeling that it is now an 'easy' job. Women have learnt to switch on electric engines, although in the case of petrol engines this is still done by men only. In cases where electricity is only available at night, men usually go and switch the engines on, although this is also changing, as in the village of Chettikulam.

As this example shows, women often take on what were originally men's tasks. But the opposite is not true, and to a large extent men do not take on women's tasks, nor do they help women with household chores.

The key issue here is whether the gendered division of labour is so skewed that it represents a serious obstacle to increased vegetable production. As discussed in chapter 3, while Farmers' Markets can fulfil the need for producers' access to markets and information on market mechanisms and price fluctuations, increasing incomes and quantities produced depends on a number of other factors. In the study villages, these were identified as access to land and water, access to transport and, crucially, availability of labour.

It is too early to assess whether Farmers' Markets can attract or retain significant numbers of farmers in vegetable production. In order to do so, economic and social aspects will need to be addressed. Farmers will engage or remain in vegetable production only if returns are at least as high as those from other employment opportunities and activities available to them locally. For women, this is already the case, as incomes from Farmers' Markets are overall higher than those that can be earned as wage labourers. However, women's wages are lower than men's.

At the moment, men predominate among producers going to Farmers' Markets to sell their produce, as this is a higher status activity than toiling in the fields and it reflects current divisions of labour within households. However, for the total returns from involvement in Farmers' Markets to increase and make the operation sustainable, there is clearly a need for some growth in production. Since these are small-scale operations based primarily on family labour, men's active participation in all stages of production is likely to be the most effective way to increase production. Alternatively, if vegetable production for Farmers' Markets remains the sole responsibility of women, it is likely that, because of constraints on labour availability, it will remain a marginal economic activity. Because of its lower status as 'women's work', men will be less attracted by it.

Household relations

According to the farming women involved in the Farmers' Markets initiative, domestic violence, men's extra-marital relations and personal spending on cigarettes and drink have decreased as a consequence of themselves or their husbands attending the Markets. They attribute this change to two main factors: the first is the regular contact with urban and middle-class consumers, which have increased men's respect for women in general and consequently for their wives. The second is that women's attendance to Farmers' Markets and their contacts with customers and officials has increased their self-confidence, and they can deal more effectively with their husbands' erratic

behaviour.

In the study villages in general, and especially among farming families who are involved in Farmers' Markets, women have begun to play a key role in their household's financial administration. This trend is more evident among small farmers than among large farmers. This is in part because of women's increasing contribution to the household's cash income, since activities which used to be essentially for household consumption, such as vegetable production, have now become commercial operations. The other reason is the dramatic increase in the number of women's self-help groups for savings and credit. These groups are in many cases the outcome of a state-wide government initiative linked to nationalised banks.⁴

The consequence of women's increased visibility in family finances is that even the local money lenders now insist on women being informed of the loans raised by their husbands, as this is felt by the lender to be a better guarantee of repayment. Generally, women are perceived as repaying their debts promptly. The advent of Farmers' Markets, which provide a daily income to those attending, has also improved producers' access to loans as their capacity for repayment has increased.

Changes in women's social status and independence are illustrated by their role in social functions and gatherings. Traditionally, women only go if accompanying their husband. They do not usually go on their own, and even if their husband attends without them, their absence is barely noticed. Women who participate in Farmers' Markets have gained the status of 'working women', which is usually denied to women working on the family farm as this is considered part of their domestic duties. As a result, these women have started attending social functions on their own, as representatives of their families in their husband's absence. This is a new experience for most women in the study villages.

Attending Farmers' Markets enables women to develop new social relations and networks, which can sometimes overcome barriers of kin and caste, as well as spatial distances between villages. For village women who rarely leave their community, this is an important experience. As one woman put it,

'We can see our misery sitting cross-legged on the plant from which we pluck the vegetables. It sits on the basket full of vegetables, and weighs heavily on our shoulders as we go to the Farmers' Market. But one we pass the gates of the Market, the misery is gone with the wind. When we begin to trade, we are infected with the briskness of other farmers. We are free from sorrow. Farmers' Markets act like talismans driving away all misery. We don't know whether the authorities conducted special pujas (prayers) to allow only farmers in, and not their miseries. As long as we are inside the market, we don't feel the pinch. But once we step out of the market, again there is sorrow on our shoulders, as if it was waiting for us outside the gate.'

⁴ The Women Self-Help Groups initiative started in 1997 to benefit women in rural areas. As of April 2002 there are 26,220 such groups in Tamil Nadu, in which 481,733 rural women participate. Total savings amount to Rs 334,300,000 which are used as collateral at a ratio of 1:3 for borrowings from nationalised banks at a nominal interest rate. All government-initiated rural development projects must now pass through Women Self-Help Groups.

Key findings

- Women's traditional role in farming includes major responsibility for vegetable production. Since this has become a cash crop generating a good income, men have taken over control, especially in larger farms. However, women are still responsible for much of the farm work, particularly non-mechanised activities such as hand weeding.
- Marketing in the conventional system is not considered a suitable activity for farming women, as the night start of markets and the close contact with male strangers in the marketplace is not socially appropriate.
- By contrast, Farmers' Markets provide a safe and respectable environment for women. However, few women from producer households attend Farmers' Markets on a regular basis because of their other domestic and farming responsibilities, which have often increased with the introduction of Farmers' Markets.
- Closer contact with urban middle-class consumers and with institutions in Farmers' Markets has expanded women's skills and self-confidence, and earned them recognition from family and community.
- Household division of labour is highly skewed, with women taking responsibility for all domestic chores and a large part of vegetable production. If Farmers' Markets are to affect production levels and improve farmers' incomes in the long term, it is essential that men contribute a more substantial amount of work. This is especially important in view of the limited availability of family labour in the study areas.
- It is difficult to single out the impact of Farmers' Markets on women's status, as other social, cultural and economic factors play important roles. However, women's accounts show that the Market can offer a space for independent experience and respite from daily drudgery.

5. Farmers' Markets and vulnerable retailers

Due to the relatively small volumes traded and their limited number compared to that of central and retail markets, Farmers' Markets do not represent a significant threat nor serious competition to conventional marketing systems. While this is especially true for wholesale traders and large retailers, including grocery shops, the situation is somehow different for small retailers, and especially mobile vendors who sell small quantities and whose profit margins are often minimal.

This chapter describes the different categories of retailers and their major characteristics. Street and head load vendors are usually low-income women for whom this job is often the only income-generating option, because of their lack of access to farming assets, of ill health or lack of skills to engage in better paid activities.

This vulnerable group is likely to be affected by competition from Farmers' Markets, since even the smallest decline in profits may push them out of business altogether. However, their comparative advantage is mobility, which allows them to reach their customers in their homes. The chapter describes the strategies used by mobile traders to retain their clients in the face of competition from Farmers' Markets but also from other retailers.

Types of vegetable retailers in the study areas

Vegetable retailers can be divided into two main categories: permanent and semi-permanent outlets, and mobile vendors. The first category includes neighbourhood retail markets, held on a daily or weekly basis. The area is under the jurisdiction of the local government (municipality or city corporation), which often auctions it out to private organisations who manage it and collect rent from retailers, usually Rs 10-20 depending on the space rented out.⁵ This type of marketplaces usually have basic infrastructure to protect traders and customers from sun and rain. Farmers' Markets can be considered as a sub-group of daily retail markets.

Roadside vegetable shops and street vendors also occupy permanent or semi-permanent locations, often close to other shops. However, traders have to negotiate occupancy with police and local 'musclemen' or risk having their wares confiscated. Given their informal status, roadside vendors are subject to eviction during campaigns to beautify city centres, as was the case in Madurai in 2001. Permanent shops selling a mixture of groceries and vegetables in varying combinations are another outlet for vegetables.

Mobile vegetable vendors include cartload vendors, mostly men with sufficient funds to invest in the purchase of the cart. They sell vegetables and fruit, depending on the season. Headload vendors, by contrast, are mainly women. Hours of business for this latter group are restricted to the morning, as vegetables get easily spoilt with the heat and only a limited amount can be carried around.

⁵ Traders also need to make periodical 'gifts' to local officials and 'musclemen'.

Permanent and semi-permanent retail outlets have not been significantly affected by Farmers' Markets, as they have been able to retain their clients through a combination of strategies, some of which were common practice even before the Markets started. For example, long trading hours in retail markets and the availability of credit and of a wide choice of food and non-food items in shops are customary ways to compete with other, similar outlets.

By contrast, mobile vendors are more likely to be negatively affected by increased competition and lower prices in the Farmers' Markets, since their profit margins are low. This especially the case for headload vendors, who buy in small quantities and therefore are unable to negotiate discount prices from wholesalers.

Main characteristics of headload vendors

The majority of headload vendors are middle-aged women who entered this occupation because of personal or family constraints. These include ill health, often of a gynaecological type, the inability to work or death of their spouse, and inadequate family income. These women also found it impossible to engage in other occupations: for example, ill health precludes work as agricultural or construction labourer, and illiteracy and lack of skills, as well as age, make it difficult to enter better paid occupations such as hospital cleaners, ayahs in schools and shop assistants. While most women come from landless households, the few who have access to land have insufficient family labour (as in the case of widows and childless women) and lack financial assets to hire waged labourers.

Headload vending is an occupation which requires minimal investment. With a starting capital of Rs 200 to 250 it is possible to earn a daily income of Rs 40 to 50 or more, depending on the volume traded and on the prices customers are prepared to pay. This is higher than the wages paid to female agricultural labourers. Other attractive features of the job, as listed by the women interviewed, are the daily income, the flexibility derived from working independently, and the fact that headload vending is generally a socially accepted activity for women. This is due to the fact that vendors do not sit in markets, in close contact with male strangers, but visit clients in their homes. Given that trade takes place mainly in the morning hours, traders interact primarily with other women such as housewives and maids, who are at home at that time of the day. In addition, since headload vendors are mainly middle-aged women, the category as a whole is not suspected of sexual impropriety.

In the three study areas, most headload vendors reside in the same low-income neighbourhoods in urban extension areas. This makes it easier to rely on a network which facilitates the purchase of vegetables to sell. A small number of vendors buy their vegetables directly from peri-urban farmers, usually in their neighbourhood. While there are benefits in this, since producers are often related to the vendors or belong to the same caste, making it easier to purchase the goods on credit, there are usually only one or two varieties of vegetables for sale and quality can be less consistent, both of which negatively affect the vendor's sales.

Relations with traders in central markets

Most vendors prefer to buy in the central markets because of the wider variety and quality of vegetables on sale there, despite the additional transport costs they have to cover. Vendors usually buy different vegetables from a number of traders in the market; however, carrying their basket to each shop can be heavy work. At the same time, vendors cannot afford to hire assistants, as this would increase the overhead charges and the final selling price. If the latter is too high, the vendor risks losing her customers. This is where the network of other headload vendors plays a crucial role.

Going to the central market and making purchases as a group is favourable to vendors. From a social point of view, it increases safety for especially vulnerable middle-aged women, often widows or deserted by their husband. Vendors visit the market between 3 and 5 in the morning, when the place is busiest with produce arriving and retailers buying. As a group, the women can more easily attract the attention of the shopkeepers. They can also buy larger quantities of one kind of vegetable: for example, 20 to 30 kilos can be bought by 5 or 7 headload vendors, and then divided between them. This allows them to negotiate a lower price. Otherwise, a single vendor usually purchases a total of 15-20 kilos of different vegetables, which equals the daily purchase of a hotelier or that of a family on festive occasions. Hence, single vendors are not considered by shopkeepers as particularly interesting clients, unless they increase the total quantities by buying as a group.

Despite the relatively large number of headload vendors visiting the central markets on a daily basis,⁶ they do not usually establish long-term relations with traders but tend to choose the shop from where to buy on the basis of daily prices. Two main reasons explain this: first, given the minimal profit margin for vendors, price is of the uttermost importance. This links to the second reason, which is that vendors prefer not to enter credit arrangements with traders, as this would reduce their ability to choose which shop to patronise. The only arrangement used is short-term part-credit for up to one week.

Sales strategies

Headload vendors' selection of their sales areas depends on the built-up density of the neighbourhood, which reduces distances between customers and saves vendors' time and physical effort to transport their full baskets. Higher-income areas are not considered best, since residents usually have maids who go to the retail markets, and the distance between houses forces vendors to increase their efforts to attract attention by shouting. However, when they can be approached, clients in these areas tend to buy larger quantities of vegetables. Low-income groups, on the other hand, often request to purchase on credit. Since local shops always offer credit facilities, residents usually avoid vendors. However, low-income neighbourhoods have high-density populations, which can speed up the sales.

Mixed-income areas are considered by vendors to be preferable, especially those where they have been selling for some time and where they have a reliable client base. A critical issue is the proximity of retail markets, and vendors can usually be found in the

⁶ In the study areas, it is estimated that 400 to 600 vendors rely on each of the two larger central markets, in Madurai and Tirunelveli.

neighbourhoods which are not served by a local market. Another important aspect affecting vendors' sales is whether consumers possess storage facilities such as fridges in their homes. Daily purchase of fresh vegetables is mandatory for households without such facilities, given the hot climate of Tamil Nadu.

As part of their skills, headload vendors are well acquainted with variations in vegetable consumption among their clients, based on religious dietary prescriptions and festivals, and this information has an important place in their sales strategies.

Impact of Farmers' Markets on headload vendors

Headload vending benefits from three kinds of shortcomings consumers perceive in traditional retail markets. The first is distance, especially where there is no local permanent retail market. The second is the market environment, seen as crowded and dirty, especially by women customers. The third is the lack of parking facilities for cars and bicycles around many retail markets. For all three, headload vendors provide a convenient alternative by bringing goods on consumers' doorstep.

Farmers' Markets also provide an alternative to conventional markets, and one which is often located in areas with no permanent local market, as in the first ever Farmers' Market open in Tamil Nadu, situated in the Anna Nagar neighbourhood in Madurai. Farmers' Markets are well-organised, usually spacious and clean, and are constantly supervised by government officials. All Farmers' Markets have parking facilities, which are the main income source for the NGO responsible for the daily maintenance and waste management of the marketplace.

Farmers' Markets are therefore strong competition for headload vendors, since they respond to at least part of the same requirements of customers. Immediately after the opening of the Farmers' Markets, headload vending declines, and some vendors had to find alternative income-generating activities. Business was affected not only in the neighbourhoods close to the Farmers' Markets, but also at some distance. It is important to stress that Farmers' Markets were one in a number of threats from competing outlets – for example, a grocery shop starting to sell vegetables can also negatively affect headload vendors. However, at the time of the fieldwork vendors felt that things had gone back to normal for a number of reasons described below.

Changes and continuity in demand for vegetables

Headload vendors, and other traders dealing in vegetables, operate in a context where demand tends to change constantly, while some aspects of it remain the same or change at a much slower pace. The introduction of Farmers' Markets is but one among many of the factors affecting demand.

Other factors include changes in dietary habits, with increases in non-vegetable food consumption; preference for English vegetables (potatoes, carrots, cauliflower, etc) which are not usually carried by headload vendors; increase in multipurpose shopping in grocery outlets selling food and non-food items; better transport facilities, both public and

private, allowing consumers to reach shopping areas; and increases in vegetables prices, which result in an overall decline in demand.

In the first year after the start of the Farmers' Markets initiative, customers' interest was stimulated by the wide media coverage, including daily reports on the prices of the main vegetables sold in the Markets. Many customers initially went to the Markets out of curiosity, but it can be argued that those who still attend them regularly do so because of convenience. This can be due not only to prices, but also to proximity to their residence, parking facilities, and the opportunity of making weekly shopping into a family outing, usually over the weekend, because of the spaciousness of the Markets and the availability of a canteen on site.

With time, however, those who did not see these as important benefits have returned to other outlets for their vegetable purchases. Among these, those who regularly rely on headload vendors include a relatively wide group of consumers: those who are unable to go to market because of physical incapacity or lack of time; those with no storage facilities, especially refrigerators, and who cannot stock vegetables but must buy them on a daily basis; those without credit facilities and with low incomes, who can only purchase food after finishing the day's work and receiving their pay; and middle-income groups who buy the bulk of their vegetables from the market on a weekly basis, but rely on headload vendors to supplement their daily requirements of especially perishable items.

Headload vendors' strategies to retain their customers

Some headload vendors have been so affected by competition from Farmers' Markets that they have moved to different activities such as unskilled labour and construction work, or switched to fruit selling. However, the majority of vendors have developed strategies to overcome the decline in sales following the opening of Farmers' Markets (Box 5.1). In part, these strategies are used also when different types of competition arise, for example when new or existing local shops start stocking vegetables for sale.

A first important strategy is to increase the number of working hours, often entailing walking longer distances to reach new customers in areas not served by local retail markets or Farmers' Markets. While vendors can manage to retain their income levels in this way, there are clear opportunity costs in terms of time and physical effort, as distances must be covered on foot to avoid raising the prices of the vegetables.

While this strategy aims to find new customers, other strategies aim to retain the existing clients in the vendors' selling area. The introduction of Farmers' Markets and the daily publication on local newspapers of vegetables' prices in the Markets has greatly increased consumers' awareness, and it is not unusual for them to try and negotiate prices with vendors on the basis of that information. Headload vendors' response is greater care in supplying good quality produce, and more accurate weighing to improve transparency of their pricing.

To this, they often add other incentives to retain their clients, including the free issue of one or two more vegetables than those weighed; bringing non-vegetable items when requested by customers, on which they do not charge any profit; helping customers in other matters, such as arranging for a servant maid, a gardener, a plumber, etc;

delivering to the clients' door, even if they reside on the top floor of an apartment building.

Box 5.1. Strategies of headload vendors

Valliammal moved from her village to Rajiv Gandhi Nagar, a low-income settlement in Madurai, fifteen years ago. She started working as a headload vendor, and after ten years she was able to acquire a plot on government land and build a small tiled house. She was happy with her job, on which she worked 5 hours each day. People were willing to buy her vegetables at any price, bargaining was minimal and she was able to sell all her goods without much effort. This changed after a Farmers' Market was opened in her selling area in April 2000. As her income declined, Valliammal thought of alternative occupations, but then decided to stick to headload vending. However, she had to make some changes in her ways of working.

The first was to expand her selling area and to include new neighbourhoods which she visits on a rotational basis throughout the week to avoid walking too long a distance in the same day. The second change was to develop closer personal relationships with her clients and ensure that she meets their demand. This includes visiting them on her way back from selling and enquire about requests for specific vegetables for her next visit. She is now willing to bargain with her clients, but also keen to explain her difficulties in making a decent profit. She has also started supplying vegetables on a 2-3 day credit basis.

Valliammal's income is still slightly lower than it was before the Farmers' Market opened. However, she considers her earnings to be sufficient and her efforts now concentrate on retaining her customers through closer personal relations and by ensuring that her services meet their needs.

Headload vendors benefiting from Farmers' Markets

In some cases, some headload vendors can actually benefit from the Farmers' Markets initiative. As described in chapter 4, a number of the women from farming households who attend Farmers' Markets on a regular basis had previously worked as headload vendors. Especially in villages closer to the urban centre, it is not unusual for women from low-income households to commute daily to town to sell vegetables. Switching from headload vending to selling in the Farmers' Market provides them with a much better income-generating option (Box 5.2).

However, this opportunity is only available to vendors who reside in Markets' feeder villages, where producers' cards are issued. In addition, vendors should hold some land, even if in some cases they are unable to cultivate it themselves because of limited family labour availability, lack of access to water and/or to credit. In these cases, they normally buy produce from neighbours and bring them to the Farmers' Market.

In this way, Farmers' Markets can be an opportunity for vulnerable village women. However, the fact that, in many cases, these women are not selling produce grown by themselves or their household, raises wider questions on the restrictions imposed on selling in the Farmers' Markets. Especially in the early period of implementation of the

initiative, there were widespread suspicions that traders had somehow managed to enter the Markets, disguising themselves as farmers.

Box 5.2. From headload vending to Farmers' Market trade

Mrs Parvathy, of Muthoor village, 15 km away from Maharaja Nagar Farmers' Market, is a widow with two grown-up sons working in Mumbai and three young daughters. When her husband was alive, the family used to grow paddy on a two-acre leased plot. After he died, the sons left the village but cannot support their mother and sisters. Initially, Parvathy hired labourers to continue cultivating the family farm, but this was unprofitable, forcing her to leave the land fallow.

Parvathy then became a headload vendor in and around Maharaja Nagar, selling vegetables she bought from her village and from the central market. When the Farmers' Market was opened in Maharaja Nagar, Parvathy was able to secure an identity card as her village is one of the feeder villages, and she is a landholder. In the early days, she used to get vegetables from her neighbours and sell them in the Market. With the regular income earned in the Market, she was later able to resume cultivation on her farm, using hired labour and the little water available to grow vegetables.

This has allowed Parvathy's family to regain their higher status in the village as a farming family, and she is able to send her daughters to school. Working in Farmers' Markets is also less physically demanding than headload vending.

However, in the same way as the understanding of what is a small or marginal farmer vary widely between official definition and villagers' definitions (see chapter 3), it seems that a similar argument could be made for poor landholders. If they are unable to farm because of the lack of access to key resources such as water and labour, should they also be excluded from selling in the Farmers' Market? One possible answer to this is that, as long as they sell produce from their farmer neighbours and therefore avoid commercial middlemen, they personally benefit from an income-generating opportunity while at the same time helping out their neighbours who may not be able to attend Farmers' Markets. Of course, in order to ensure that commercial traders do not enter the Market, some sort of regulation also needs to be enforced.

Another, different group benefiting from Farmers' Market are headload vendors in Tirunelveli. There, unlike in the other urban centres studied, vendors are allowed to purchase in the Farmers' Market. This is related to the fact that Tirunelveli Maharaja Nagar Farmers' Market is organised around two shifts of arrival of produce, which allows farmers to dispose of larger volumes of vegetables. This, in turn, makes it possible for buyers of larger quantities, such as vendors, hoteliers, etc, to stock up there, unlike the other markets in Madurai and Aruppukkottai, where purchases are limited in quantity.

A final group which may benefit from Farmers' Markets are headload and street vendors who sell produce such as tamarind and dried chillies which is not sold in the Market. These traders benefit from the fact that the Market attracts customers to whom they can also sell. However, the type of items are usually only purchased by consumers once or twice a year, which means that the overall quantities sold can be quite low.

Key findings

- Headload vegetable vendors are mainly middle-aged, often widows and deserted women who, because of limited assets and skills, find it difficult to enter better-paid occupations.
- Farmers' Markets have negatively affected headload vendors especially immediately after the opening of the first Markets, as sales volumes for vendors decreased. After some time, however, the situation seems to have stabilised, due to two main types of reasons. First, demand for vegetables is varied, and some customers, for example those with limited storage facilities, limited capacity to move to go to markets, etc, still rely on daily purchases from headload vendors.
- Second, headload vegetable vendors face threats from a number of other competitors, and have developed strategies to retain their client base. A main strategy is to expand the area of sales, to cover neighbourhoods more distant from Farmers' Markets and other retail outlets. However, this increases vending time and the effort to carry vegetables.
- Other strategies aim to retain the customers by offering better quality and correct weighting, as well as incentives in the form of gifts and unpaid services.
- Some headload vendors can benefit from Farmers' Markets: this includes vendors residing in Markets' feeder villages and holding land, who can apply for identity cards to sell in the Market.
- Other vendors benefit in the towns where quantities sold in Farmers' Markets are larger, as in Tirunelveli. Vendors based outside the gates of Farmers' Markets and selling items which are not sold there may also benefit, but only marginally.

6. Low-income urban consumers and Farmers' Markets

One of the main stated objectives of the Farmers' Markets initiative is "to establish direct contact between farmers and consumers". The assumption is that, by eliminating middlemen and traders, vegetables can be sold at lower prices, therefore benefiting consumers, while at the same time producers will retain the full amount paid, and their incomes will increase accordingly. The policy documents do not differentiate between different types of consumers. Indeed, officials maintain that selling vegetables at a lower price and at the exact weight will naturally benefit all consumers, regardless of their wealth.

However, it is now well understood that three aspects affect urban low-income group's access to food markets, including Farmers' Markets. The first is physical accessibility, or the location of markets. This is important for poor people, since transport to distant markets can take up much of their income, or time which may be used to earn money. The second aspect is affordability, and low-income groups prefer outlets which offer lower price goods, even if they are of lower quality. Their incomes may also not be regular, especially in occupations depending on daily wages, and as a result credit facilities offered by retailers are highly valued. The third aspect is acceptability. This relates to taste, or personal and cultural preferences, to the preparation time and to the need to buy additional items for cooking, such as oil. Time and money are rare commodities for poor people, and cannot be spent unwisely.

Most Farmers' Markets are located in high- or middle-income neighbourhoods. This, together with the importance given to adequate parking facilities in the construction of all Markets, suggests a certain bias in favour of higher and middle-income consumers. It is certainly true that attracting and retaining this type of consumers is important for the continuing success of the Markets. At the same time, it is legitimate to ask whether public policy and subsidised initiatives such as Farmers' Markets should not explicitly target low-income urban groups as a matter of priority. The reason for this is that the nutritional status of poor groups is more likely to benefit from the initiative than higher income groups who already have a wider range of options.

This chapter describes the impact of Farmers' Markets on the vegetable consumption of residents of four low-income neighbourhoods in Madurai. Three of the neighbourhoods (Rajiv Gandhi Nagar, Nethaji Nagar and Indira Colony) are located within walking distance of two Farmers' Markets, while the fourth (West Kailasapuram) is located at some distance from any Market and its residents rely primarily on local corner shops and retail markets.

It is difficult to isolate the impact of Farmers' Markets from wider changes in food consumption and practices. These depend on socio-economic and cultural factors, as well as on long-standing national food policies such as the Public Distribution System. Hence the role of Farmers' Markets in the changing dietary habits of the research respondents is described against this broader background.

Description of the low-income neighbourhoods

Official definitions of poverty in Tamil Nadu

Government definitions of poverty are based on income. Although definitions vary each year and also between different departments, criteria used for the distribution of concessions and subsidies are unified. The current criteria applied by the Tamil Nadu State for eligibility to family cards under the Public Distribution System establish that families with five members with incomes lower than 24,000 rupees per year are below the poverty line. This applies to both rural and urban residents.

Broader definitions of poverty incorporating non-economic indicators are used by local government in the delivery of basic services. They include income insecurity (low-paid, usually unskilled jobs with daily contracts and little, if any, longer-term prospects); insecurity of tenure (housing in informal settlements under threat of eviction); limited and inadequate infrastructure and services (electricity, water and sanitation). For the residents of all four colonies, these are daily realities, although there are some differences of degree between and within the neighbourhoods.

Origins and physical infrastructure of the settlements

The residents of two of the neighbourhoods are relatively homogenous groups – one also in terms of caste – who migrated to Madurai from villages located 55 and 25 km away from the city. The other two neighbourhoods are more mixed, and residents moved there from a variety of locations both within and outside Madurai. One of these, Indira Colony, is also the best established of the four, with scheme houses (concrete and tiled buildings) built by the State government under the Slums Improvement Project, most of which have private toilets and electricity connections. Public toilets are also available in the colony, as are street lights.

Physical infrastructure is not as good in the other neighbourhoods, where up to 75% of houses are thatched. In Nethaji Nagar, the majority of residents are tenants. In urban low-income neighbourhoods, renting accommodation is usually linked to very low and insecure incomes which do not allow for any savings to build a house. Street lights are available in all three neighbourhoods, but only few houses have private connections. Sanitation is almost non-existent, and aside from a few houses with private toilets, open defecation in nearby tank or river bed is the norm for the majority of residents.

In three of the neighbourhoods, local leaders play important roles in ensuring social cohesion. The emergence and authority of these leaders is linked to the residents' necessity to defend their land rights. The least organised neighbourhood, West Kailasapuram, probably has not developed an internal leadership structure because land property rights are secure and therefore threats to the settlements are limited.

Occupational patterns and incomes

Employment opportunities for residents are largely in the service sector, especially for women, many of whom work as domestic helpers in middle-class homes. Other employment opportunities for women include headload vending, garland making, flower vending and power loom weaving.

Men find employment in a wider range of occupations, from unskilled jobs such as tricycle pullers and loadmen, to semi-skilled ones such as masons, stainless steel polishers, washermen and autorickshaw drivers, to skilled occupations such as fitters and electricians. The last two are only found among residents of Indira Colony, reflecting the fact that it is better established compared to the other three neighbourhoods.

Incomes range from 75 to 125 rupees per day for men, and are much lower for women (between 30 and 60 rupees per day). Domestic workers earn around 20 rupees per day, but usually have the additional benefit of employers providing meals during working hours, as well as giving them any leftover food.

The economic dependence of residents of these low-income colonies on neighbouring middle-income areas is significant. Most occupations, like domestic service, washing and transport, are services which rely on demand from middle-income groups. Other activities such as weaving and steel polishing also depend on small and medium enterprises usually owned by middle-income individuals.

Proximity to middle-income residential and business areas is crucial for poor neighbourhood residents. Residents of new colonies located too far away from these areas, or who have to compete with other and better established neighbouring low-income settlements, as in the case of Nethaji Nagar, often have to roam the city in search of jobs. This means that much time, and sometimes money for transport, are spent looking for employment.

Location is thus important for poor people, not only with regards to Farmers' Markets and generally food markets, but in most aspects of their lives, starting from work and income-generating opportunities.

Changing food practices

Incomes and food practices

Food practices are affected not only by income, but also by whether this is earned on a daily basis or on a weekly basis. Households which rely on daily earnings are less secure, since this is usually linked to casual jobs such as construction work, or to jobs such as headload vending and tricycle pulling where earnings can fluctuate widely from one day to the other. These are also the types of employment which provide the lowest earnings, adding to household's financial insecurity.

Households which rely on weekly earnings are more able to plan their food expenditure, and to save by stocking up some items. Since weekly wages are linked to better paid and relatively more secure jobs, such as semi-skilled and skilled occupations, incomes are also usually higher than those of daily earners. These differences are reflected in the food practices of these two groups, as shown in Table 1.

Table 1. Food practices and daily/weekly earnings

Households relying on daily earnings	Households relying on weekly earnings
<ul style="list-style-type: none"> • Cook once a day • Mainly depending on ration rice 	<ul style="list-style-type: none"> • Cook twice a day • Use ration rice in combination with

<ul style="list-style-type: none"> • Daily purchase of around 100 g of fresh vegetables • Daily purchase of spices and oil • Non-vegetarian food once a week • Daily purchase of vegetables/groceries for 20 rupees • Extended use of leftovers • Purchase of cooked food from vendors and hotels • Gather firewood for fuel 	<ul style="list-style-type: none"> • open market rice • Weekly purchase of 2-3 kg of fresh vegetables • Weekly stock-up of spices and oil • Non-vegetarian food twice a week • Weekly purchase of vegetables/groceries for 150 rupees • Regular preparation of fresh food • Mainly cook at home • Monthly purchase of kerosene for fuel
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The role of the Public Distribution System in food practices

Since the mid-1960s, the PDS has played a major role in the food practices of low-income groups in India. Subsidised items sold in ration shops are the primary source of food staples for households depending on daily incomes. All households in the four colonies possess a ration card.

While all households are eligible in the PDS, they are divided into two categories: pink cards are issued to households below the official poverty line. This entitles them to purchase all the subsidised commodities. These include, for each month, a maximum of 20 kg of rice (for families of three or more members) at 3.50 rupees/kg. Since this quantity is usually insufficient to cover the monthly requirements, it is complemented with rice bought on the open market, which on average costs no less than 10 rupees/kg. Pink cardholders are also entitled to purchase up to 10 litres of kerosene at 7.30 rupees/litre. Lowest-income groups often prefer to re-sell it and make a profit, and use fuelwood and cow dung instead for cooking. The third item available in the ration shops is sugar, and pink cardholders can buy up to 5 kg at 13 rupees/kg. However, lowest income groups do not usually buy their whole allowance of sugar but prefer sugar cane jaggery on the grounds of price and taste.

Households above the poverty line are issued yellow cards, which entitle them to purchase either 3 kg of sugar or 5 litres of kerosene. Under the new budget presented by the Indian government for 2002-2003, subsidies will be targeted exclusively to households below the poverty line, and food stamps will be introduced to replace ration cards.

The PDS has played an important role in establishing rice as the staple food among low-income groups. However, the quantities supplied under the system are insufficient to cover the monthly needs of a family. As shown in Table 1, the better-off among low-income households are able to complement their requirements with rice purchased on the open market. They are also able to bribe staff in the ration shops in order to get more, and/or better quality rice there. It is now recognised that the PDS suffers from problems ranging from inefficiency to corruption which have undermined its objective to increase food security for the poorest people. The introduction of the food stamps system is an acknowledgement of these problems, and an effort to improve targeting of the policy.

By selling ready-to-use rice rather than paddy, the PDS has also contributed to changes

in food preparation practices.

Food preparation practices

Traditionally, low-income groups used to boil paddy in their homes, then hull it either by hand or in rice mills. This has now changed, and it is unusual for households to go through this process. With increased availability of ready-to-use rice and rice products such as rice flour, food preparation times have decreased considerably.

Other widely available products are ground spices and pastes, which are an essential ingredient of any meal. Home grinding is time-consuming, and low-income households, where in most cases all adult members work long hours in income-generating activities, prefer to use ready-made products. In this they are encouraged by the government, which has set up training courses for women on how to use these products in food preparation.

Ready-to-use products were a status symbol for higher-income groups. But their wider availability and relatively low cost has attracted low-income groups, and it is now possible to buy ready-made side dishes such as dry fish, pickles and pappadam. Other changes in the food preparation practices of low-income groups include a wider use of stainless steel utensils, and the switch from fuelwood to kerosene and LPG stoves among the better-off households.

There is also an increase in the use of non-vegetarian food. Previously, this was limited to mutton, as social and cultural considerations did not allow even the lowest-income groups to eat pork or beef. The increased availability of cheaper non-vegetarian food such as eggs and chicken has expanded the possibilities to have a non-vegetarian meal at least once a week, usually on Sunday. The poorest households prepare most of the food at home, and buy non-vegetarian side dishes from vendors or hotels.

Patterns of vegetable consumption and production

One consequence of the use of rice as staple food is the increase in the use of vegetables. Cooked rice requires gravy (sambar) and side dishes in the form of boiled vegetables (avial) or fried vegetables (porial). Although these can be replaced with non-vegetarian substitutes, higher-income groups prefer vegetable gravy and side dishes. Also among low-income groups, vegetables are considered an essential part of any meal, although they often can only afford small quantities, depending on time available for preparation, prices and accessibility of markets.

When vegetable prices increase, low-income families use a variety of strategies in their food preparation. The first is to substitute vegetables with cheaper items like dried fish or eggs. A second strategy is to substitute certain vegetables with cheaper ones, for example tamarind can replace tomatoes when these are at their most expensive, and fresh pulses can replace beans. A third strategy is to change cooking techniques, for example by boiling mixed vegetables together in a gravy instead of frying each vegetable separately. This allows to save on oil and to choose the cheapest vegetables. If nothing is available, pickles will do, and domestic servants will try and manage with the food provided by their employers.

Not all vegetables are bought, and in some cases vegetables can be grown directly by

the household. However, there are a number of problems in doing so. The first is the lack of suitable land, which is particularly important in low-income settlements where the population and buildings density is almost always much higher than in middle and higher-income residential areas. Because of this, only the residents of two of the four neighbourhoods in this study are able to complement purchases with produce grown around the house or on the river bed.

Even this is not without problems. Gardening around the house is constrained by limited space, and is usually done in the washing area for clothes and utensils. Because of this, climber plants and trees are preferred. In Nethaji Nagar settlement, cultivation on the river bed is for both domestic use and marketing. However, this is also a colony with no sanitation facilities, and vegetable cultivation prevented women from using the river bed for defecation. Local leaders decided to limit cultivation to certain areas, but this is now under threat from competing users from the same neighbourhood and from other areas who exploit the area for cattle rearing. Opportunities for urban agricultural activities are therefore severely limited in all four neighbourhoods.

Vegetable purchase and the impact of Farmers' Markets

With the exception of West Kailasapuram settlement, residents of the low-income neighbourhoods use Farmers' Markets in combination with other outlets, especially local shops. Choosing where to shop for vegetables depend on the combination of three factors: physical accessibility, financial affordability and acceptability of the produce sold in any specific outlet.

Accessibility

The location of Farmers' Markets is clearly an essential consideration among low-income consumers. The three neighbourhoods using them are within a short walking distance (0.5 to 1 km) of Farmers' Markets, which are themselves located in middle-income residential areas. By contrast, West Kailasapuram neighbourhood is at 5 km from the closest Farmers' Market, and this is the most important reason why residents do not attend the Market.

In addition, even if the Market is close-by, people need time to go there. This is especially important in the case of Farmers' Markets which in Madurai close before 2 pm. Prices in the Markets are lower after 10.30 or 11 am, so low-income buyers need to be free to visit the Market between then and 2 pm.

Being able to do so is linked to job characteristics. For example, domestic workers have rest time between 12 and 4 pm, which means they can visit the Market at the appropriate time. Home-based workers such as garland makers also have sufficient flexibility to go to the Market when prices are low. However, workers engaged in activities such as washing which require long working hours, those employed in small and medium-sized enterprises such as rice mills and in construction are required to be at their workplace continuously from 9 am until 5 or 6 pm, making it impossible to visit the Markets.

Local shops and some stalls in local retail markets remain open until late at night, and are the main source of vegetables and other goods for low-income residents who have time constraints.

Affordability

Users of Farmers Markets in three out of the four neighbourhoods agree that prices in the Markets are affordable. They usually visit the Market when the peak time is over or when farmers are getting ready to go home and are keen to get rid of any leftover produce. Then they are able to bargain and get an even lower price. Prices paid by low-income consumers are lower than those paid by earlier and higher-income consumers, and in most cases than those charged in other outlets such as corner shops and local retail markets. However, they may not be the lowest. During the course of the research it emerged that in West Kailasapuram, the neighbourhood located far away from any Farmers' Market, prices in the local outlets are even lower. This is likely to be the result of retailers adapting the prices (and possibly the quality) of the vegetables they sell to the purchasing power of local consumers.

Affordability is not only related to prices, but also to credit facilities. Households relying on daily wages and with no income security are prepared to pay slightly higher prices in exchange for credit. However, in order to obtain and maintain the retailer's trust, they must purchase from the same outlet even when they can pay in cash. Since these are usually local shops, it is easy for the shopkeeper to know whether their credit clients have broken this implicit fidelity agreement, and they may refuse credit the next time it is needed. Hence, Farmers' Markets, which do not offer credit facilities, can only be an occasional alternative outlet for the poorest households.

Acceptability

Increases in the consumption of vegetables among low-income urban groups are linked to general changes in food practices, and especially in rice becoming the staple food. Local shops normally stock only a limited range of vegetable varieties which may change every day, and the wider choice offered in Farmers' Markets is appreciated by consumers. Instead of having to buy from local shops on a daily basis, better-off residents relying on weekly earnings can purchase the vegetables they need every 2-3 days from the Market, and thus save on shopping time.

The fact that the majority of stalls in Farmers' Markets sell local (country) vegetables also suits low-income consumers' preferences, who appreciate their lower price compared to English vegetables, and are familiar with preparation techniques. However, English vegetables are also available in Farmers' Markets and their lower price compared to other outlets means that their consumption has increased, especially among the better-off residents of the study settlements.

In summary, these findings show that in many cases Farmers' Markets are a positive contribution to low-income households' access to affordable and acceptable vegetables. However, the poorest groups – those relying on daily wages and insecure incomes - benefit less because of their dependency on credit. Those who work long hours also benefit less because of the relatively short business hours of Farmers' Markets.

Key findings

- Food practices of residents of the low-income settlements are not homogenous. Differences depend on overall income but also on income security. Residents who rely on daily earnings spend more on food than those relying on weekly earnings,

since they cannot save on bulk purchases. This affects the quality and quantity of their food.

- The PDS has played an important role in establishing rice as the staple food of low-income urban groups. This in turn has increased consumption of vegetables as an accompaniment to rice meals. Consumption of non-vegetarian food, especially chicken and eggs, has also increased as they have become more affordable.
- Food preparation practices include more ready-to-use items, from rice and rice products to ground spices and pastes and side dishes. Once the preserve of higher-income groups, they are increasingly adopted by low-income households because of their affordability and, most importantly, because they save time which can be spent in income-generating activities.
- Low-income households adopt a number of strategies to overcome seasonal and non-seasonal increases in the prices of vegetables. They include switching to cheap non-vegetarian items (dry fish and eggs), replacing some vegetables with cheaper varieties, and changing cooking techniques.
- Some households complement their requirements by growing their own vegetables, but this is limited by lack of space in the densely populated low-income settlements. Vegetable cultivation in the few available open spaces is constrained by competing uses, especially open defecation in the settlements with no sanitation facilities.
- Accessibility of Farmers' Markets depends first of all on their location, which must be within a short walking distance from the settlements. Residents must also be able to combine visiting the Market with the demands of their jobs, which often leave them no free time during the relatively short opening hours of the Market. In this case, they must rely on local shops which normally have longer business hours.
- Low-income users of Farmers' Markets agree that prices are affordable and cheaper than most, but not all, local outlets. Despite this, the poorest households relying on daily and/or irregular earnings are tied to local shops which, unlike Farmers' Markets, offer credit facilities.
- Produce sold in the Farmers' Markets meets low-income consumers' demand, especially for local, 'country' vegetables which are cheaper and are prepared in traditional ways. Because of the wider choice of varieties that in the local shops, consumers relying on weekly wages can afford to purchase vegetables every 2-3 days rather than on a daily basis, and save on shopping time.

7. Conclusions and recommendations

The original aim of this study was to better understand the functioning of the Farmers' Markets initiative, and to assess its impact on three key groups: small producers of vegetables, headload vendors and low-income urban consumers. Despite the relatively short period of implementation of the initiative at the time of the fieldwork, it was possible to identify its main positive impacts, as well as the major shortcomings in its conception and implementation.

This concluding chapter summarises the key findings of the research. It then formulates a number of recommendations, drawing also on the discussions held in final review workshops in each of the three study locations. These were attended by farmers, government officials and consumers involved in the initiative, local NGO representatives and traders from the conventional markets.

Bringing together producers and consumers: the impact of Farmers' Markets on key groups

Eliminating middlemen and traders from Farmers' Markets and establishing direct contact between producers and consumers is the most important of the stated objectives of the Farmers' Markets initiative. However, the policy documents do not differentiate between different groups of producers, of traders and of consumers. The findings of the research show that a focus on the most vulnerable actors in the three categories can improve the understanding of the impact of Farmers' Markets, and of the broader issue of poor people's access to, and participation in vegetable markets.

Impact on producers

Farmers' Markets respond to the needs of farmers in two ways: first, wider changes in agricultural systems, linked to water and labour shortages, have resulted in many farmers switching from rainfed foodgrain cultivation to irrigated vegetable production on smaller portions of land. The availability of an additional outlet for their produce is therefore a positive result. Second, Farmers' Markets are especially important for small producers who, because of the small quantities and seasonal fluctuations in production, in many cases find it difficult to sell their vegetables in the conventional marketing system. For this group, the initiative provides an alternative outlet and better incomes, which may encourage them to continue farming rather than move into non-farm employment.

Increased awareness of consumer preference and price fluctuations, gained through Farmers' Markets, has also affected farmers' practices, especially in the form of diversification (the cultivation of a wider range of vegetables) and intensification (multiple harvesting and better use of land and water resources). Direct access to market information seems to be more effective than information gathered from government extension agents. Furthermore, the Markets have stimulated the exchange of information and experience-sharing between farmers, and the establishment of chit groups. These

relationships expand farmers' existing social networks and increase their access to financial and non-financial peer support.

However, compared to the overall number of identity cards issued, the actual number of farmers attending the Markets daily or regularly but less frequently is rather low. There seem to be two main reasons for this. The first is that, while access to markets is clearly key in stimulating vegetable production, other factors and especially access to water and labour are just as important. Farmers' Markets alone cannot solve these problems, and access to markets needs to be integrated in a wider strategy including access to credit and institutional support.

The second reason for low and irregular attendance of the Markets is that, depending on the volume of their production and on the season, farmers use a combination of outlets including central markets' commission agents, local traders and Farmers' Markets. This strategy ensures that, as far as possible, producers can counterbalance the positive and negative aspects of each outlet. By increasing the available options, Farmers' Markets play an important role for producers, even those who only attend them irregularly.

Impact on farming women

Given the important role of women in vegetable production, it is important to understand the differentiated impact of Farmers' Markets along gender lines. Although the number of farming women who regularly attend Farmers' Markets is lower than men, the impact of the initiative is significant both on them and on women from households where it is primarily husbands who attend the Markets.

Unlike conventional retail markets, Farmers' Markets provide a safe and respectable workplace for farming women. Often for the first time, women are exposed to urban and middle-class values ranging from personal appearance and hygiene to more equal relations between husband and wife and the importance of children's education. Furthermore, attending Farmers' Markets involves dealing with several institutions, which is also unusual for farming women. This has increased their skills and self-confidence, and is recognised by their families and in their villages, where they often achieve the higher status of 'working women'. In their own accounts, Farmers' Markets provide a space for respite from daily drudgery, and also a space for independent experience, including developing new relationships with farming women from other villages and expanding their social networks.

Whether they attend the Markets or their husbands do so, women enjoy the benefits of Farmers' Markets in the form of better and more regular income for the household. However, this is often at the cost of an increase in their already heavy workload. Vegetable production is traditionally women's work, and many of the most backbreaking tasks, such as hand weeding, are their responsibility, in addition to all domestic chores. With diversification and intensification of vegetable production, the time spent on the farm has increased for women more than for men.

Availability of labour is an important constraint for most farmers, and the traditionally highly skewed division of labour between women and men can make this problem even more acute. Unless men participate more fully in all production activities, the potential

contribution of Farmers' Markets to increasing vegetable production will remain unfulfilled.

Impact on headload vendors

Among retailers, headload vendors are a particularly vulnerable group. In part this is because these are mainly middle-aged widows or deserted women with little, if any, family support and who in most cases turn to headload vending because ill health and lack of skills make it difficult to enter better paid and more secure occupations. In addition, the nature of their business, which allows very small profit margins, makes them vulnerable to competition from other vegetable outlets. Farmers' Markets have a very limited impact on the conventional market system, especially on wholesalers and on well-established retailers such as grocery shops and local retail markets. By contrast, they have negatively affected headload vendors working in the same areas where the Markets are established. Many of them have been able to develop strategies to retain their market share, but often at the cost of heavier workloads and lower incomes.

A key asset of headload vendors is their mobility, and this allows them to expand their sales area when threatened by competing outlets, from a new grocery store to a Farmers' Market. However, this increases the distances to be covered on foot, and the time needed to create relations with new customers. On the other hand, demand for the services provided by headload vendors is likely to continue, especially from non-mobile customers, those living in areas far away from any vegetable outlet, those with limited storage facilities and those who wish to complement their weekly vegetable stock on a daily basis.

But Farmers' Markets have not been negative for all headload vendors. Many of them have rural roots, and those who hold land can apply for the identity card allowing entry in the Farmers' Market. They can then either continue selling, but in a safer environment and in a less physically demanding way, or they can use the opportunity to gradually return to farming even on very small plots, as the Market is a guaranteed outlet for any amount of produce.

Headload vendors not entitled to enter Farmers' Markets as sellers can do so as buyers, as in the case of Tirunelveli Maharaja Nagar Market, where farmers are allowed to bring their produce twice daily and relatively larger buyers such as headload vendors and restaurant owners are allowed to purchase. This benefits both farmers and vendors, who can avoid the hassle of buying their provisions in the central market.

Impact on low-income consumers

With changes in food practices and consumption patterns, demand for fresh vegetables has increased among all income groups, including the poor. Farmers' Markets can be an important outlet for low-income urban residents, but whether they use them or not depends on accessibility and affordability, which varies between and within settlements.

Accessibility is determined first of all by the location of the Markets. Residents of low-income settlements who are not within short walking distance of a Market do not use

them, as time can be better used in income-generating activities. They must also be able to combine visiting the Market with the demands of their jobs, which often leave them no free time during the relatively short opening hours of the Markets. Longer business hours would increase the possibility to cater for busy urban low-income consumers, who otherwise have to rely on local shops.

Prices in Farmers' Markets are generally affordable, especially towards the end of the business day, when farmers are prepared to sell at low prices. Prices are cheaper than most, but not all, local outlets. Despite this, the poorest households, those relying on casual labour and daily wages, are tied to local shopkeepers who provide them much-needed credit facilities. The absence of credit facilities in Farmers' Markets effectively makes them unaffordable for the poorest households.

Broader objectives of the initiative in relation to markets

Two further objectives of the Farmers' Markets initiative deal with broader vegetable markets. The first aims to stabilise prices in vegetables and fruit, and the second to act as information centres for the marketing of fresh vegetables and fruit.

Aiming to stabilise prices is a common element of most food policies, and was the original objective of the Public Distribution System, which later included a food security element. Farmers' Markets have not fulfilled this objective for three main reasons.

First, the quantity of vegetables sold in Farmers' Markets is extremely small compared to that transacted in the conventional market system. Because of this difference in size, it would be very difficult for Farmers' Markets to exert any influence on the conventional markets.

Second, prices in Farmers' Markets actually depend on prices in the conventional market system, since daily price fixation in the Markets is made on the basis of prices in the central market and in the retail markets. This clearly defeats the objective of stabilising prices, as Farmers' Markets prices merely reflect any fluctuation in the conventional system.

Third, the nature of the produce and especially its extreme perishability, are a serious obstacle to more effective measures to ensure price stabilisation. For example, it would be very costly if not impossible to maintain stocks to release on the market if prices increase too much. In summary, the objective of stabilising prices is too ambitious for a relatively small initiative such as Farmers' Markets. Moreover, it ignores the specific problems of vegetable marketing.

With regard to the objective to act as information centres for the marketing of fresh vegetables and fruit, the results are more mixed. Officials posted in the Farmers' Markets have provided useful information on variations in urban consumers' demand for specific vegetables in connection to festivals and religious occasions. This is important, as the same dietary restrictions are not necessarily followed in the same way in the villages. Officials have also provided mini-kits with seeds for vegetables better suited to urban marketing, such as small-sized pumpkins. However, information related to production was not always followed-up by extension workers, therefore limiting its

impact. In addition, no general information on the marketing of fresh fruit and vegetables was provided which related to the conventional market system. This would have been helpful, since many farmers use both Farmers' Markets and the conventional system.

Institutional objectives

The two final stated objectives of the initiative relate to institutional arrangements and functions. The first is to increase coordination between the Agriculture and Horticulture departments, and to promote awareness and provide training in relation to the preservation and packaging of perishable fresh vegetable and fruit.

Prior to the Farmers' Markets initiative, the Agriculture and Horticulture departments used to work independently and have separate targets fixed at the state and district levels. Under the initiative, the departments were brought together in the selection of participating farmers, and in the daily running of Farmers' Markets. However, little coordination has been shown at the farm level, where joint efforts by extension workers of the two departments could improve production and help participating farmers plan their activities in such a way as to meet demand in the Markets in terms of quality and quantity.

The issue of preservation and packaging of fresh vegetable and fruit is a more complex one. In most cases, training focuses on modern technologies related to cold storage of produce, such as plastic packaging. However, cold storage facilities are used by a very small minority of farmers, and certainly not by small producers who constitute the majority of those attending Farmers' Markets. Moreover, while traditional techniques and materials, such as handwoven baskets made of leaves, are commonly used in all vegetables markets including central markets, training does not usually include how to improve such traditional packaging. This would probably be more effective and affordable for most vegetable producers.

As in the case of price stabilisation, the two institutional objectives seem too ambitious for the Farmers' Markets initiative, and require a much more comprehensive approach focusing on the specific issues involved.

Recommendations

Since the change in government in Tamil Nadu in 2001, the Farmers' Markets initiative has lost its prominence on the policy agenda, and administrative, institutional and political support is dwindling. This report has highlighted the numerous shortcomings in the way the initiative was conceived and implemented. However, it has also shown its sometimes significant benefits for vulnerable categories of producers and consumers, and for some traders. The recommendations below draw on this understanding and aim to support and promote the positive impact of Farmers' Markets while reducing or eliminating the negative aspects.

General recommendations

The findings from this study suggest two main recommendations, which go beyond the scope of the Farmers' Markets initiative and are relevant to most policy initiatives. We recommend that they are widely incorporated into policy-making practices. They are:

- ensure that any definition of target groups for specific policies accurately reflects the sometimes wide variations within these groups in terms of their needs and priorities. This means understanding the characteristics of the livelihoods of different groups (for example, the different constraints experienced by different groups of consumers), the impact of the policy initiative on their livelihoods (for example, how Farmers' Markets affect headload vendors), and incorporating in the policy elements which address potential negative impacts on specific groups (for example, how to ensure that the increased workload resulting from Farmers' Markets participation is more equally shared between farming men and women);

- policy-makers should consider that it takes time for people to fully understand the implications of specific policies for their livelihoods. People require time to adapt to changes brought about by policies, and any abrupt policy change can increase insecurity, especially for poor and vulnerable groups who cannot rely on alternative assets and comprehensive safety nets. For example, it has taken farmers some time to adapt to the Farmers' Markets initiative and make full use of its potential benefits. If the initiative was terminated and no equivalent alternatives were offered, farmers' livelihoods would suffer and their trust in policy-making bodies would be negatively affected.

Specific recommendations

The recommendations below specifically relate to ways to improve the effectiveness of Farmers' Markets. They draw on the various stakeholder workshops held throughout the course of the project, as well as from the wider recognition arising from the research findings that, overall, the initiative responds to the needs of several groups and especially poor and vulnerable ones, and as such deserves to be supported.

1. Reduce subsidies and increase farmers' participation

In the current set-up, we estimate that each Farmers' Market costs between 80,000 and 90,000 rupees per month. This includes salaries for government officials seconded from various departments, as well as utilities bills, local staff salaries and interest repayment on construction costs. The majority of this goes to cover government officials' salaries. Farmers in two of the Farmers' Markets in this study are prepared to cover the running costs of the Markets currently covered by the Marketing Committee, and they have calculated that this would amount to a daily fee for each farmer of around 10 rupees (less than renting a stall in the retail markets). Other costs such as telephone bills would be reduced by installing paying telephone booths in the Market.

Officials seconded from the Agriculture and Horticulture departments would be able to return to their parent departments (which in many cases is already happening), and their functions in the day-to-day running of the Market would be taken over by the Marketing Committee composed by representatives of farmers and consumers, under the supervision of the Agricultural Marketing Committee.

The remaining key functions of government officials are training and the provision of inputs. These would be carried out in the Market as a form of extension activities with a specific focus on farmers participating in Farmers' Markets.

2. Link Farmers' Markets with transport services improvement

With the current re-routing of state transport corporation buses to their original pre-Farmers' Markets routes, a number of feeder villages are being cut off and farmers have to walk a long distance or pay for private transport to reach the bus stop. We recommend that the location of feeder villages is taken as a key element in the decisions concerning bus routes, and that direct connection with Farmers' Markets is made a priority. Concerned farmers are prepared to pay for the service, so no subsidy would be involved. Availability of transport is essential for genuine farmers selling their produce in the Farmers' Markets. Not recognising this implicitly favours the 'farmers in disguise' who are urban-based and buy their vegetables from the central market.

3. Increase flexibility

The example of Maharaja Nagar Farmers' Market in Tirunelveli shows that longer business hours and openness to sell to buyers of larger quantities such as headload vendors and hotel owners is beneficial to both producers and consumers. Low-income consumers would also find it easier to combine visits to the Markets with their working hours. In many instances, opposition to extended business hours came primarily from government officials who feared a workload increase. Under the management of the local Marketing Committee, such decisions would be made by farmers and consumers, under the supervision of the Agricultural Marketing Committee. This would ensure sufficient flexibility to meet local needs.

4. Explore links with other markets

The Farmers' Markets initiative has shown the importance of direct access to markets for small vegetable producers. We suggest that this could be expanded beyond Farmers' Markets. For example, in many countries it is compulsory for retail markets to reserve a small proportion of their stalls for farmers, who pay rent for them. Similar possibilities should be explored in retail markets and weekly markets, if necessary incorporating this as a clause in any market sub-letting contract issued by local authorities.

1. Annex 1. Description of the study feeder villages and Farmers' Markets

	2. Madurai District Chokkikulam Farmers' Market Feeder villages: Kunnanampatti, Chettikulam, Arappadithevanpatti	3. Virudunagar District Aruppokottai Farmers' Market Feeder villages: Kullampatti, Thummachinnampatti, Chinna Chettikurichi	4. Tirunelveli District Palayamkottai (Maharaja Nagar) Farmers' Market Feeder villages: Muthoor, Rajagopalapuram, Kuthukal
1. Caste composition ⁷	Thevar* (BC), Sakkiliar (SC), Parayar (SC)	Naicker* (BC), Pallar* (SC), Chettiar (FC), Thevar* (BC), Reddiar (FC), Mooper (BC)	Pallar* (SC), Thevar (BC), Nadar (BC), Pillai (FC)
2. Irrigation facilities	Mainly wells, with a small number of dry wells. Channel irrigation helps recharging ground water	Mainly wells, larger number of dry wells. Decline in ground water is felt, although tanks help recharging	Mainly wells. The number of dry wells is increasing, despite the tank
3. Soil type	Red soil	Black cotton	Red sandy loam
4. Vegetables cultivated	Brinjal, tomato, ladies' finger, chillies, onions, cluster beans, cauliflower	Brinjal, ladies' finger, tomato, bitter gourd, onion, banana	Brinjal, ladies'finger, tomato, bitter gourd, onion, snake gourd, banana
5. Other crops	Paddy, sugarcane, groundnut	Flowers, guava	Paddy, cotton, groundnut
6. Agricultural production pattern	Year-round because of irrigation channel	Seasonal crops and well-irrigated vegetables	Paddy as main crop, vegetables only on well-irrigated land
7. Population	Kunnanampatti: 380 Chettikulam: 470 Arappadithevanpatti: 1140	Kullampatti: 733 Thummachinnampatti: 1024 Chinna Chettikurichi: 458	Muthoor: 1458 Rajagopalapuram: 495 Kuthukal: 553

⁷ * denotes castes regularly attending Farmers' Market. BC denotes backward caste, FC forward caste and SC scheduled caste. The caste system has a direct implication on individuals' occupation, role in society, social acceptability, access to resources and decision-making. The Government of India recognises that people belonging to certain castes are deprived of basic assets such as education and health, land rights, employment opportunities and access to natural resources. The scheduled caste group is the one with least access to assets. This has implications for participation in Farmers' Markets, since vegetable cultivation is usually done on privately owned or leased land. Scheduled castes are normally landless, or have limited access to garden land in most cases rainfed (not irrigated). Their involvement in vegetable production is therefore minimal. The main groups involved in vegetable cultivation and in Farmers' Markets are backward castes and a small number of scheduled caste households who own land and have access to common water resources, and/or are able to pay for their own well. Forward castes rarely reside in the villages, and are mostly larger landowners who hire wage labour. Their interest in Farmers' Markets is limited, since their involvement in vegetable cultivation, if any, is as large commercial farmers.

8. Occupational patterns	Agriculture, stone crushing, loadmen, housemaids	Match and cotton industries, agriculture, stone crushing	Masonry, construction labourers, agriculture
9. Migration and mobility	Permanent and seasonal migration	Permanent migration and daily commuting	Daily commuting
10. Social organisations	Self-help groups, visible presence of cinema fans youth clubs	Self-help groups, visible presence of caste-based organisations	Self-help groups, visible presence of caste-based organisations
11. Transport	Private van operators, state transport services (city buses)	Private and state transport (city and 'moffusil' buses)	City buses, two-wheelers
12. Characteristics of Farmers' Market	<ul style="list-style-type: none"> • 156 stalls • located in high-income residential area but accessible to low-income groups • open between 6.30 am and 2 pm • more sales on Saturdays and Sundays • high sales of English vegetables 	<ul style="list-style-type: none"> • 72 stalls • located in the city centre • open between 6.30 and 11 am • uniform sales throughout the week • higher sales of country vegetables 	<ul style="list-style-type: none"> • 100 stalls • located in middle-income residential area • open from 6.30 am to 8 pm • higher sales on Saturday and Sunday
13. Number of cardholders in the villages/number of farmers attending FM regularly	Kunnanampatti: 18/10 Chettikulam: 28/10 *Arappadithevanpatti: 100/3	Kullampatti: 12/5 Thummachinnampatti: 16/8 Chinna Chettikurichi: 17/3	Muthoor: 63/6 Rajagopalapuram: 57/10 Kuthukal: 48/8
14. Other vegetable marketing channels	Madurai central market for all categories (large, medium and small) producers. Local markets include Chekkanoorani, Thirumangalam, Thirupparam-Kundram and some of the neighbourhood retail markets in Madurai city	Although there is a 'big market' in Aruppukottai, its influence is felt only among large farmers. Other local markets in Kalloorani and Reddiapatti are outlets for small producers.	Central market in Tirunelveli (Thatchanallur market) is used only by large and medium farmers. Neighbourhood retail markets, especially Pallayamkottai market, used by small producers.

* Arappadithevanpatti, located 50 km away from Madurai, in the beginning was attached with Madurai city farmers' markets, since farmers in that village cultivated 'English' vegetables like cauliflower, beetroot, cabbage. More cards were issued due to political influence. But after the establishment of Theni farmers' market (15 kms), majority of the cards were transferred to Theni market. Three farmers who are regularly attending the Chokkikulam market are based at Madurai.

Annex 2 . Methodology

The research process

Throughout the duration of this project, the research team has made an effort to involve a large number of stakeholders, from the first planning workshop during which the proposal was shaped, to the last dissemination workshops in the study villages and districts. This reference group has also been invited to participate in review workshops where preliminary findings from fieldwork were presented and discussed. This has had the benefit to ensure that all the different viewpoints of stakeholders were taken into account in the planning of the project; to validate the research findings on an on-going basis; and to contribute to the dissemination of the research findings by giving space to often extremely interesting and stimulating debates. Last but not least, it has ensured that information was fed back to the people who generously gave their time and thoughts for the success of this project.

The research itself was sub-divided in several phases, each of which was concluded by a review meeting. This has helped the team to remain focused on the projects' objectives in the middle of a quantity of wide-ranging but also in-depth information. The main phases are as follows:

Phase 1: Planning

Based on the review of the basic policy documents related to Farmers' Markets in Tamil Nadu, the team identified the primary stakeholders, and made a first critical assessment of the policy in order to define relevant research questions. These activities were refined in a planning workshop held with the reference group, and attended by officials concerned with Farmers' Markets, traders, farmers, local NGO representatives and academics. Key outputs from this workshop contributed to the writing-up of the proposal submitted to donor agencies and to the design of the pilot phase.

Phase 2 (ongoing): secondary data review

This phase preceded the start of the research, and continued throughout the duration of the project. Documentation included policy documents, newspapers clippings, reports from Farmers' Markets (arrivals of farmers and vegetables, lists of identity cards, etc), and the consolidated reports produced by the Tamil Nadu government listing financial inputs, infrastructural facilities, etc.

Phase 3: pilot study

This phase included all the research settings (villages, Farmers' Market and low-income urban settlement), and allowed the team to 'make mistakes'. We certainly were too ambitious in this phase with regards to the number of tools to be used and their sequencing, the types of tools to use with different groups, etc. The outcome of this phase was a much more focused set of key questions, linked to relevant tools, checklists and reporting systems. Other difficulties became very apparent, such as gathering

information from large traders in the conventional market and, in many cases but not always, from government officials. With this in mind, both the methodology and the approach were re-assessed by the team. For example, the initial idea of developing a commodity chain analysis in the conventional marketing system was abandoned because of obvious problems in obtaining reliable information in a brief period of time.

Phase 4: Main study

This was conducted in three districts, with the exception of the low-income urban settlements which, to facilitate comparability and a better understanding of the key factors affecting the use of Farmers' Markets, were all in Madurai. Each study location for each district included three feeder villages and one Farmers' Market. Throughout the fieldwork, the team spent considerable time grouping the information collected in line with the key questions. This allowed the early identification of gaps, which were filled by follow-up visits to the same respondents. Constant monitoring and organising of information also made it much easier to develop the conceptual framework for the report.

Phase 5: review workshop and report structure

The main fieldwork was followed by a long review workshop, during which the essential information was discussed against the original study objectives. The team also developed a report structure to use as a guide for the writing up of the report.

Phase 6: local dissemination workshops

The three local workshops were useful in three ways: first, they gave back processed information to those who had participated in the research. Second, it allowed the team to validate the findings. And third, the discussions included the formulation of recommendations which are included in the present report.

Phase 7: reports and dissemination

The findings from this projects are reported in several formats: the present report, intended for a wider (international and non-Tamil) audience, which is also available on IIED's website, and reports in Tamil prepared and disseminated by SPEECH which will stimulate debates within the state.

Participatory tools

A set of participatory tools was used to generate information from various stakeholders. These tools were sequenced in such a way that the research teams could cross check/validate the information generated by one with the other. The tools used at various stages of the study are:

1. Social mapping:

This tool was used to place the study villages in perspective. Demographic data, average family size, and caste groups were used to generate discussion around farmers having identity card, farmers going to various markets including farmers market, occupational diversity, personal transport affordability. (However social mapping exercises were not used in villages where the number of

households were more than 120. In such cases the above data were generated using secondary sources and semi structured interviews.)

2. Resource Mapping:

This tool was primarily used with the study villages and partly with the low-income group. Information generated includes infrastructural facilities, road and transport accessibility, land holding and cultivation practices, availability of irrigation sources and markets.

Semi structured interviews were used to generate focused discussion around the output.

3. Seasonal/Daily Routine calendar:

This tool was used with vegetable producers at the village level, head load vendors and low-income groups. Key information generated using the tools include changes in cultivation practices, crop cycles, workload of women in three categories (farmers, Women HLV, Low-Income Urban consumers) and marketability.

Focus group discussions (FGD) were held to validate and get in-depth information from different actors. This information was further cross-checked and validated with the inflow/out flow of vegetables sold at the farmers market.

5. Time line and trend change:

This tool was used to place vegetable cultivation in perspective as a result of the emergence of farmers market, factors influencing the various categories of farmers to take up vegetable cultivation, changes in conventional market system, changes in government extension departments, price trend and dietary practices.

6. Venn diagram:

This tool was primarily used to understand the journey of vegetables from producers to consumers. Institutional linkages, credit sources, crop linkage, safety net and interactive levels and nature of various actors.

7. Matrix:

This tool was used with the producers and head load vendors to understand the priorities of consumers. Problems associated with production, investment and credit access.

8. Impact diagram:

This tool was used to generate information regarding the positive and negative impact of farmers market at family level in terms of labour, on vulnerable group (head load vendors), extension system officials, dietary pattern of low-income group, risks involved in production and marketing for small and medium farmers.

9. Focus group discussion (FGD) / Semi Structured Interviews (SSI):

On generating broader information using tools like social and resource mapping, potential respondents were identified from various stakeholders groups, to do an in-depth analysis and identify the implication of farmers market in greater detail were shaped by using this tool.

Constraints

Though the team members are experienced in practicing PRA tools, they faced several constraints in generating information from the different stakeholders. This research study provides an example how far seasons and changing political and policy climate has an impact on the concerned stakeholders either to share enthusiastically or to withhold necessary information.

The piloting phase of the research was started during the month of February when harvesting of vegetables was at its peak and the farmers were enthusiastic about vegetable cultivation and their experiences in marketing. Those who were attending farmers markets were interested in training on new cultivation practices and supply of hybrid seeds. Except one or two they were trying to hide the fact that they were compensating vegetable shortages by purchasing it from central market. Those who didn't have identity cards were requesting the team to recommend the officials to give them cards.

Came the main study phase, on the onset of summer their tone became cynical. They misconceived the team as vigilance officers sent by the new government to assess the real impact. They were trying to justify that they are getting benefits from doing business in farmers market and they started pleading with the team to recommend the government not to close down the farmers market.

As far as the institutional stakeholders, especially the persons in charge of farmers' market were hesitant to share their frank opinions about the farmers' market. They were hesitant to answer any critical questions and directed the research team to go and get it clarified with the district collector. After the change of the government, they were hesitant to share any positive aspect of the farmers' market, which would rather irritate the new government, which disowned the very idea of farmers' market. The team was informed that one of the farmers' market official, requested not to quote him, was severely warned by the concerned department higher authorities for his interview in a local television channel for highlighting the benefits of farmers' market. The research team has to use their personal contact and all possible tactics to create trust among the farmers' market officials.

The political will that was visible during the piloting phase and main field work in one district was totally changed after the assembly election in May 2001, which was won by the political party which was opposing and critical to farmers' market initiative.

The farmers' market idea got a severe blow when the governor in her address indicated the failure of farmers' markets to serve either farmers or consumers, and the government's intention to close down the farmers' market. Though the idea of closing down the farmers' market was not carried out due to strong opposition, the present government is planning its natural death by withdrawing all official support.

There was serious difficulty in the application of participatory tools with the vulnerable traders since they are very much independent, come from different places and have tight schedules. Hence it was difficult to meet them, and using participatory group tools was almost impossible. Hence the research team designed appropriate guide questions to

generate information from head load vendors. Wherever possible, group tools were applied, to counter check and validate the generated information.

Similarly at the village level, there were constraints in applying visual diagrammatic tools intended for larger groups, as very few persons attended the farmers market on a regular basis. This necessitated the extensive use of focus group discussion (FGD) and consumed a lot of time of the field workers.

In the case of central markets, for the traders, every minute means money and they have to be on the vigil round the clock since vegetable inflow comes from different areas. The sight of field researchers was seen as interruption to their normal routine and there was strong reluctance in giving out information. The researchers were forced to use all their best abilities to find time with the traders and load men.