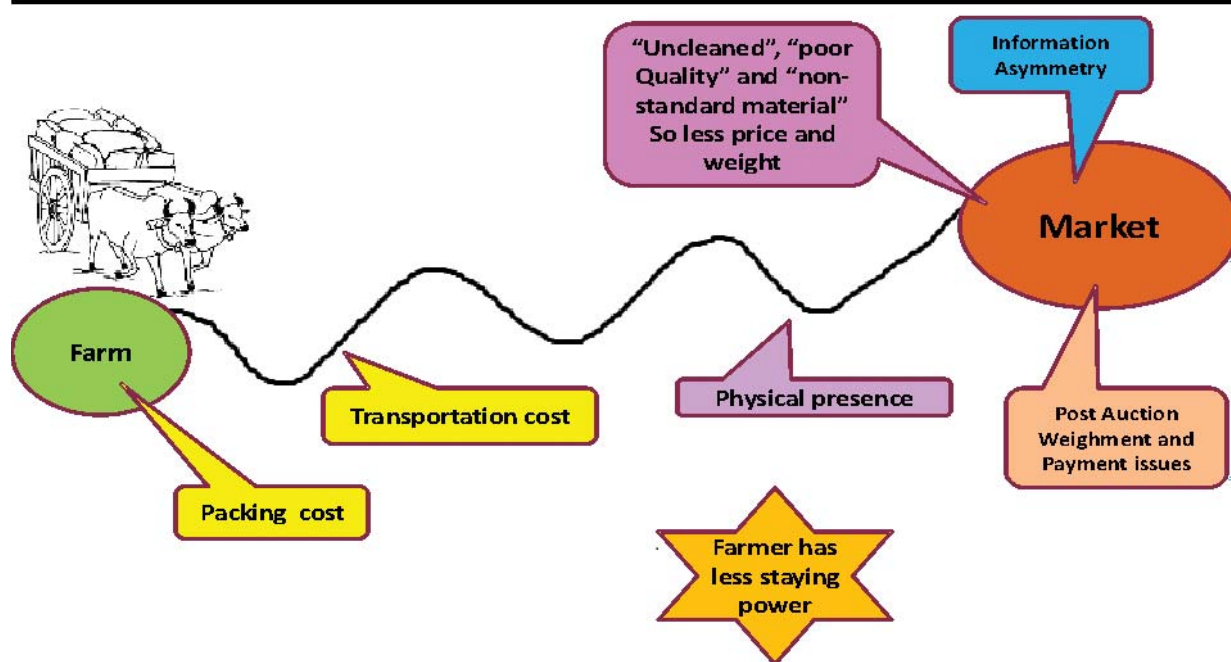




# Agricultural Marketing Reforms

## Committee Report 2013

### “Journey of the farmer”



*“We need a transparent, efficient and simplified process in all market operations”*

*Agricultural Marketing Reforms Committee*

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# Agricultural Marketing Reforms Committee

## 2013



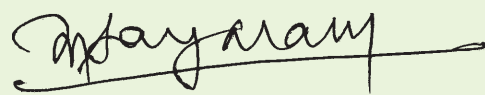
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# Acknowledgement

The Agricultural Marketing Reforms Committee has had the privilege of interacting with farmers, farmer producer organizations, commission agents, traders, processors, warehouse service providers, assayers, bankers, academicians, agricultural university experts, commodity exchange experts, experts in the field of agricultural marketing, Primary Agricultural Produce Cooperative Societies, Taluk Agricultural Produce Cooperative and Marketing Societies and officers of the Departments of Agricultural Marketing, Agriculture, Horticulture and Cooperation.

The Committee would like to thank them for their contributions in various ways, which has helped in shaping of this Report of the Committee.

The Committee would like to express its gratitude and deepest appreciation and gratefully acknowledge the enthusiastic guidance, encouragement and suggestion that it received from Sri G V Krishna Rau, Principal Secretary, Government of Karnataka. But for his personal commitment to initiate reforms in the crucial area of agricultural marketing, this report would have never materialised.

The Committee is also beholden to Sri R. Ramaseshan, a former IAS officer of Karnataka cadre and presently the Managing Director and CEO, NCDEX and desires to place on record his tremendous support and valuable inputs without which this report would never have been possible.

The Director Agricultural Marketing, Sri S Shankaranarayana was a constant source of support all through the deliberations of the Committee. The Committee is thankful to him for his valuable support and other senior officers from the department of Agricultural Marketing, Agriculture, Horticulture and Cooperation, Special thanks are due especially to the APMC Secretaries who shared with us their experience during our field visits.

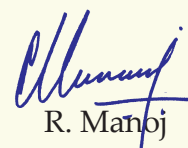
I am deeply indebted to all the committee members who have worked throughout with high dedication and missionary zeal and have taken personal interest in preparation of this report. We specially thank all special invitees for sparing their valuable time and for the fruitful suggestions in the deliberations of the meetings of the Committee.

I would like to place on record my appreciation to Dr K V Mahabalagiri Bhat, General Manager KSAMB, Sri S Vinayaksundar, Superintendent, Marketing Department, Sri E Papanna, Under Secretary and Sri V Shivaprakash, Section Officer, Department of Cooperation for their painstaking work and enthusiasm, for meticulously providing various technical and secretarial inputs and administrative back-up to the Committee.

The Committee would also like to thank the Indian Institute of Management, Bengaluru for helping us organize a workshop of stakeholders which provided important inputs for the final report.

Finally, as Chairman of the Committee, I would like to thank all those who directly or indirectly helped the Committee and preparation of this report.

15th May 2013

  
R. Manoj  
Chairman



# Executive Summary

Since independence, self-sufficiency has been the hallmark of Government policy in agriculture and high yielding varieties, irrigation systems, pest control, and timely availability of inputs led to increased production of food grains, commercial crops, fruits and vegetables. However post-harvest management, especially agricultural marketing has not kept pace with the change in times and therefore faces new challenges in terms of finding an efficient market for the marketable surplus. There has been a growing concern over several aspects of our agricultural marketing system. The Government has made changes in several areas to respond to some of the concerns. There have also been a number of committees which have examined the major issues pertaining to agricultural marketing and have made a number of recommendations. The agricultural marketing system has to be modernised and revitalised to enhance the share of the producer in the end consumer price.

Government policy related to agricultural marketing dates back to year 1926 by the formation of Royal Commission on Agriculture. During 1960s many states brought in legislations which primarily oriented to protect the interest of farmers. Recognising the problems plaguing the sector, namely, low price realisation, high transaction cost and considerable post-

harvest losses in agricultural produce in the entire value chain, the State Government introduced legislations for establishing markets, regulation of market participation and transaction. The regulation of markets, however, achieved a limited success in providing an efficient agricultural marketing system because, these institutions turned out to be more of regulatory and revenue generating institutions than facilitating efficient marketing practices to benefit the farmers and other market participants.

The Committee has deliberated on all prevailing issues and recommends the following interventions.

## **Leveraging Technology**

Leveraging technology in agricultural marketing system should envisage creating a transparent integrated auction mechanisms supported by information dissemination to all market participants. Technology interventions in all market operations to include capturing details of farmers, tracking of producer lot with unique Ids, displaying the lot in the auction screen along-with quality and quantity particulars, reconciliation of arrivals and exit of commodities by appropriate gate entries, integrating post auction process like weighing, payment, market fee collection and other administrative functions.



## **Comprehensive Electronic Auction System**

The comprehensive electronic auction system currently deployed has brought in transparency in market operations by making available real time information of the produce to market participants and by providing equal chance for every lot for being bid in the auction by a wider audience.

Apart from 22 markets where the comprehensive electronic auction system has been introduced, all markets should gain access to the comprehensive electronic auction system to all the markets in the state and the desired level of transparency in the auction process, leading to an improved price discovery.

## **Sampling and Assaying**

Testing all arrivals in the market would call for infrastructure for sampling, space for maintaining the samples to solve disputes that may arise when non sight sale facility is made available (discussed later), adequate testing facilities, etc. Private companies with adequate experience in sampling and assaying may be invited through a transparent process to establish these facilities in the state on a BOOT model.

Such facilities should be made available within the next twelve months in key markets. Other markets may follow within the next two years. Test parameters for every commodity and the testing process should be decided in consultation with all participants and well publicised.

## **Information Dissemination**

The main purpose of disseminating market information is to support decision making by market participants. The price information that is relevant for all concerned is the prevailing prices of a given commodity in the vicinity in case of the producer and prices across the region or country in case of traders.

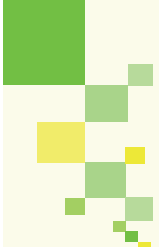
Price dissemination should be aimed at reducing, if not eliminating the information asymmetry currently prevailing in the sale process. Dissemination of lot wise certified quality and quantity particulars on the electronic auction platform is very relevant for the buyer

## **Post Auction Process**

Though individual markets have evolved their distinct post auction process that actually consummates the sale, in essence this is reduced to two important processes - weighing and bagging of the produce followed by issue of sale invoice by the commission agent to the seller and payment to the seller. Recording of the weight of the produce should be done against the respective lot number without any manual intervention. This will eliminate any inadvertent error that can creep in the manual process. With all sale transactions being captured electronically and the consequent sale invoices generated for printing by the buyer, cess accounting and filing of activity reports should not require any personal interaction of the intermediary with the market office. Similar to payment of sale proceeds directly to the farmer, the cess amount payable by individual participants be computed, necessary amounts debited to the designated account of the buyer and credited to the account of the APMC market and/or Government account.

## **Integrating Markets**

Integrating various markets transacting the same commodity supported by warehouses located in close proximity to the farm could eventually result in a better price for the farmer with minimum cost of transaction. Individual markets discover the price of the commodity on a given day, based on the interaction of supply and demand within their precincts. In a perfect market, additional supplies should rush in when the price is high due to excessive demand and in case



of lower prices, supply should either remain subdued or the commodity may move to more reassuring markets, this brings in the phenomenon of Law of One Price.

For integration of markets and allowing participation by market participants in a remote location, standardisation of quality and quantity parameters, dissemination of these parameters to the buyers, clearing and settlement mechanisms and dispute resolution are key prerequisites. This would increase the number of buyers for the commodity and the price discovered would reflect the interplay of supply and demand in the region/area where the commodity is transacted, with the transportation cost duly reckoned.

Testing and certifying the quality of the produce is a crucial intervention. Testing all arrivals in the market would call for infrastructure for sampling, adequate testing facilities, etc. Private companies with adequate experience in sampling and assaying may be invited to establish these facilities in the state on a BOOT model.

### **Creating Virtual Markets**

Every major market with associated warehouses, linked to other markets transacting the same commodity, which in turn have associated warehouses define the possible virtual market of the future. In this market design, the farmer reaches the proximate warehouse, which would link him to the larger market for that commodity, where price discovery is influenced by the fundamental factors in the broader economy.

The warehouse that is linked to the originating market should have an automated stock accounting system that can account for the stocks, immobilise the stock that is exposed for sale, communicate with the auction platform for placing it for sale, transfer the stock in favour of the buyer after the sale and provide all other support functions.

### **Commodity Funding**

Goods stored in a scientifically managed warehouse easily lend themselves to funding by banks and other institutions. The lending bank marks a lien on the stored goods as security for the loan. The commodity accounting system should preclude offering lien marked goods for sale unless the borrower offers authority to pay off the loan amount to the bank and only the balance to be credited to the account of the seller. Adopting this process for commodity funding of goods in the warehouse gives staying power to the farmer and comfort not to go in for a distress sale.

### **Private Markets**

The scope within which private initiative should function in this area is crucial. Public policy should encourage private markets, which should supplement the existing APMC in an environment that would foster healthy competition. Market fee is mandated to be collected for the services provided by the market to the market participants. One significant factor that discriminates against private markets is the market fee payable to the proximate APMC. As the APMC does not render any service to such participants the market fee may be exempted. This measure would make private initiative viable and attract investors.

Effective price dissemination initiative makes the producer aware of the prices in the vicinity for commodities of his choice, which can influence his decision to choose a market in preference over others. This information would make him to arrive at an informed decision about selling at the farm gate, after weighing the additional expenses associated with a sale at the APMC market. Over a period of time as the flow of information improves, it is expected that the price arbitrage that is prevailing between the prices in the market and at the farm gate would at least reduce, if not vanish.

## **Farmer Producer Organisations (FPO)**

To encourage and facilitate Primary Agricultural Cooperative Societies (PACS), Taluk Agricultural Produce Cooperative Marketing Societies (TAPCMS) and other farmer producer organisations having the capability and are willing to take up the role of aggregators. Role of aggregators is very much essential for easy access to markets by the farmer. The Aggregators must provide value added services like pooling of agriculture produce, grading, cleaning, weighing, packing, labelling, market information hubs and transportation to warehouses/markets. Farmer producer organisations may be identified and encouraged to enter this activity in a major way. These institutions would require training and employee skill enhancement to perform this role.

## **Secondary market development**

Sale of the produce in the APMC market (or any private market) called the primary sale, is the beginning of the long journey of the commodity from the farm to the plate. In this long chain, the commodity changes hands a few times. And needless to add, it is this chain that makes goods produced in one season available for consumption in another or for that matter, produced in one region to be consumed in another. Strengthening the primary markets is necessary to support the producer.

Critical to note that the secondary market casts its influence on the primary market through participants and any weakness or crisis in the secondary market would feed itself to the primary market. There are instances in the state where buyers in other states have reneged on their payment obligations, putting the seller (who is a buyer in the APMC market) to hardship. For a robust primary market, it is necessary to

strengthen the secondary market, wherever demanded and feasible.

## **Creation of infrastructure**

Providing infrastructure in the precincts of the APMC is the responsibility of the market committee. This could be warehouses for storage, weighing facilities, personal convenience facilities for farmers, buildings for market participants, etc. The key point to note is that all these are essential infrastructure for the functioning of markets as they are at present. Markets as a constituent of the economy have to be forward looking and creation of infrastructure has to keep pace with, if not precede, such changes. This could be mechanical handling, value addition, branding, bulk storage facilities or elevator companies or any other ones that could emerge in future.

## **Awareness creation and capacity building for stakeholders**

Understanding quality parameters, preparing the produce for the market and appreciating price trends are a few essential skills that farmers must acquire. Besides, all stakeholders in the market should be exposed to the characteristics and complexities of the marketing system to make it more efficient. Market participants have to keep themselves abreast of new legislations like the Food Safety and Standards Act, 2006 and the Warehousing (Development and Regulation) Act, 2007, advances in technology, increasing competition, new practices like derivative trading, etc., to cope up with increasing competition. Therefore, various stakeholders in the value chain have to be trained and equipped for participation in the market and in adapting technology, new instruments, etc.

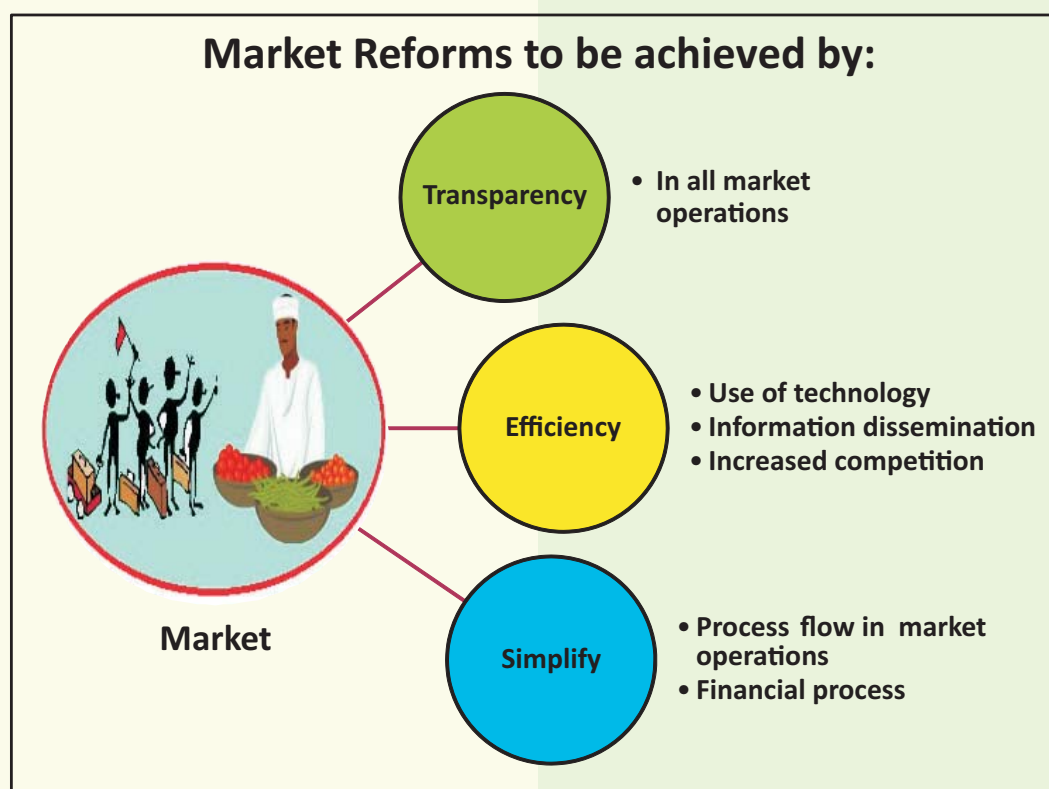
## Re-imagining regulation

The Karnataka Agricultural Produce Marketing (Regulation and Development) Act, 1966 vests regulatory powers on the State Government, Director of Agricultural Marketing and the Market Committee of individual markets. Pertinent to note that providing of infrastructure and other developmental responsibilities and operating markets is also entrusted to the Director of Agricultural Marketing and the Market Committee of individual markets. A separation of developmental and regulatory roles is desirable. The Committee of State Ministers in-charge of Agriculture Marketing have recommended that regulatory functions and developmental functions may be separated for improving the marketing structure in the country.

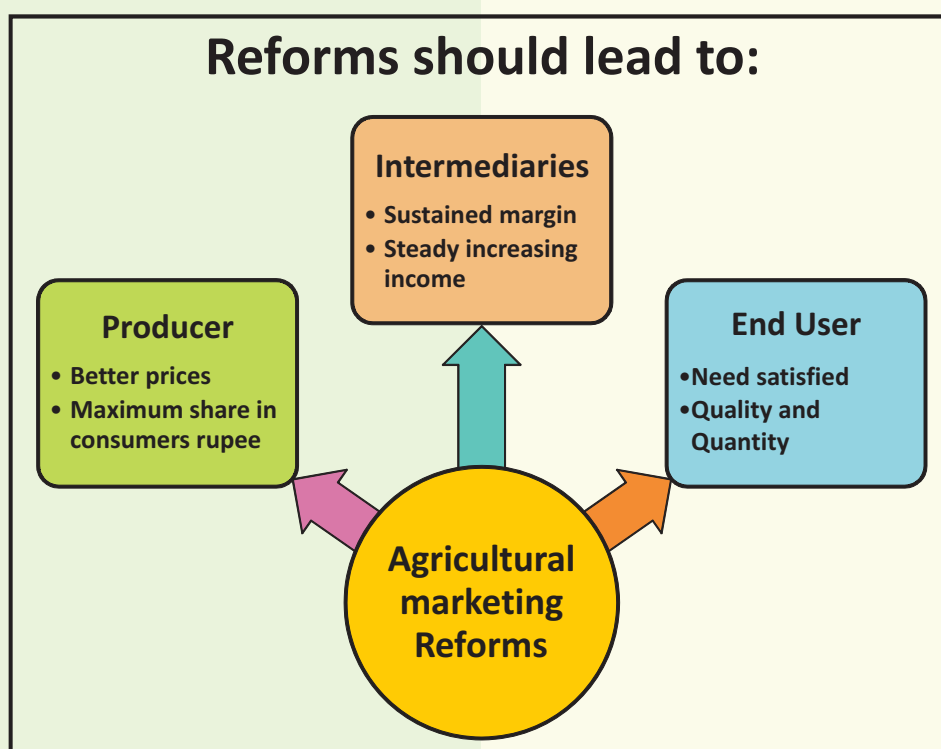
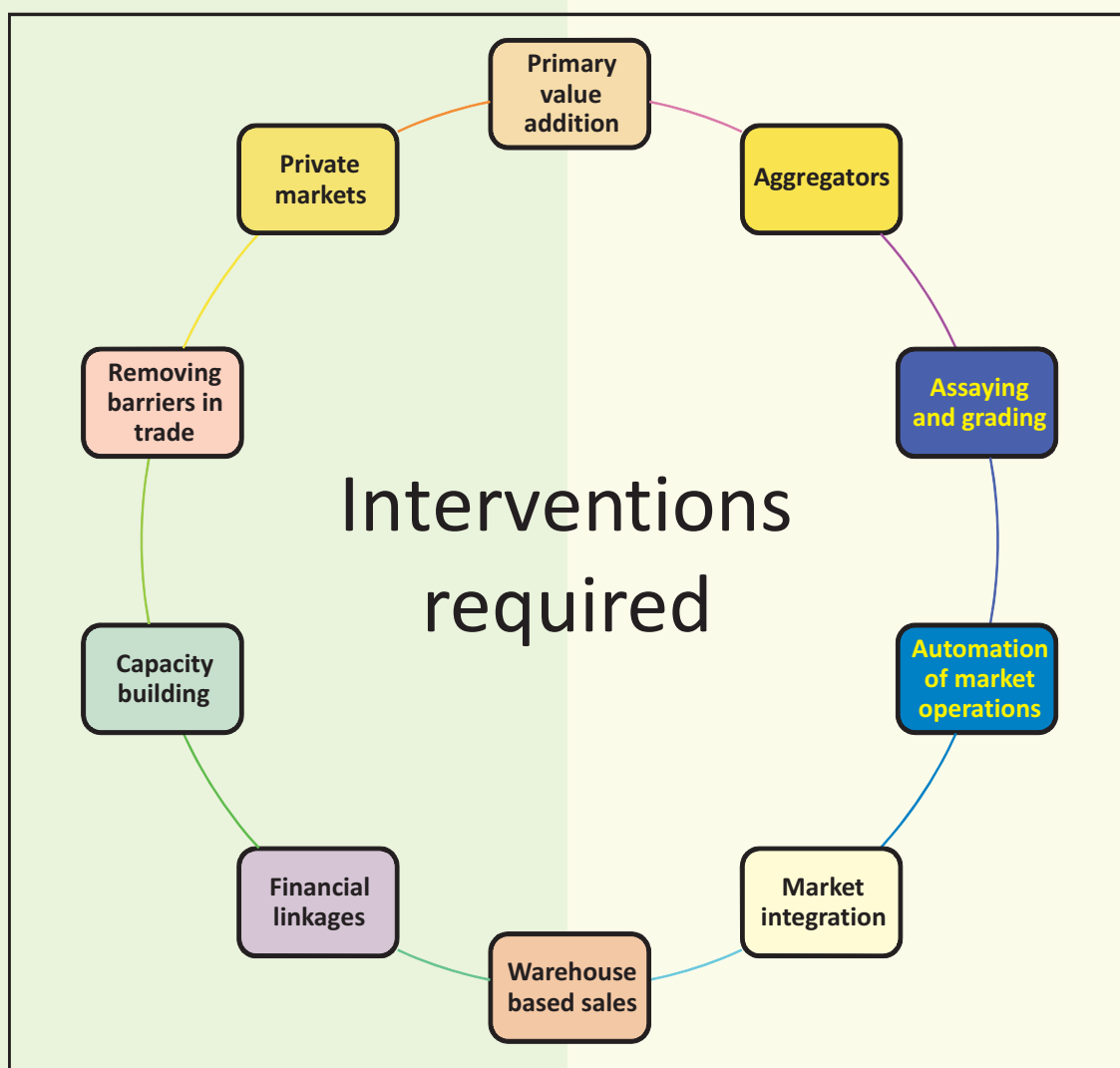
A separate legislation to be called the Karnataka Agricultural Produce Marketing (Regulation) Act, may be enacted for creating a regulatory authority called the Karnataka Agricultural Produce Marketing Regulatory Commission (KAPMRC).

With the main objective of creating competitive agricultural markets the KAPMRC would be the licensing authority for establishing private markets, issue regulations pertaining to operating markets and these regulations would be applicable to APMC markets and private markets. It should have adequate authority for initiating disciplinary proceedings and other incidental matters.

This Committee has taken into consideration all the above recommendations and the views of experts in the field of agricultural marketing. The Committee had deliberated different issues related to market reforms, barrier free markets and market integration, use of technology, capacity building and ease of access to markets etc., in its internal meetings, meeting with various stake holders, discussions with experts and practitioners in the field. This report summarises issues and potential solutions to these problems. The recommendations of the Committee are the outcome of all these efforts. The Committee hopes that this report meets the expectation of the Government.







# Introduction

## 1.01 Committee Constitution

Agricultural Marketing in the state has made notable progress but many challenges still remain. The limitations and constraints in the present marketing systems need to be addressed in a comprehensive manner. Reforms to provide a barrier free market system for the benefit of farmers and consumers while making participation of all other market participants sustainable, to ensure market efficiency and competitiveness, to enhance transparency in all marketing operations, to promote grading, standardization, packaging, and quality certification of agricultural produce is imperative. There is a need for the Government and financial institutions to support such marketing reforms through technical, managerial and financial assistance.

A Committee was constituted by the Government vide order No: CO/98/MRE/2013, dt: 27/03/2013 to suggest reforms in the agricultural marketing sector and identification of necessary interventions by harnessing the advances made in the field of information technology to establish networked markets and efficient price discovery. Technology to be the backbone of reforms in agricultural marketing to establish networked markets, to ensure efficient price discovery which accrue to the benefit of the farmers. The committee consisted of:

- |  |            |
|--|------------|
| 1. Sri. R. Manoj, Additional Secretary, Co-operation Department                              | – Chairman |
| 2. Sri. P. R. Shivaprasad, MD, KSWC  | – Member   |
| 3. Sri. Gopal Naik, Professor, IIMB, Bangalore   | – Member   |
| 4. Sri. M. S. Jayaram, Professor, UAS, Bangalore   | – Member   |
| 5. Sri. R. N. Chamaraju, Additional Director (Admin)<br>Department of Agricultural Marketing | – Member   |
| 6. Sri. B. K. Gopalaiah, CGM, KSAMB, Bangalore   | – Member   |
| 7. Sri. H. S. Nagarajaiah, Joint Registrar Co-operative Societies                            | – Member   |



Copy of the Government order is placed for reference and record in annexure I.

The reforms required in the agricultural marketing sector and a comprehensive approach involving the different departments of the Government is required. Hence, the constitution of the committee of members is fairly drawn from the service providers and the Departments like Department of Co-operation, Karnataka State Warehousing Corporation (KSWC), Department of Agricultural Marketing, University of Agricultural Sciences and Indian Institute of Management, Bangalore.

### **1.02 Proceedings**

The Committee has had 5 meetings on 2nd, 9th, 15th, 19th and 30th April 2013. Many internal meetings were held amongst Committee members. A meeting with PACS and TAPCMS was held on 18th April 2013. Special invitees having knowledge on the issue were invited for the Committee meetings. The Committee members have presented papers and in depth discussion on all relevant issues helped in finalising the recommendations and action plan in this report.

### **1.03 Visits undertaken**

The Committee has undertaken visits to 6 APMCs, visited commission agent's

premises, 3 TAPCMS, KSWCs facilities, 2 processing units and a commodity exchange at Mumbai.

### **1.04 Stake holder's workshop**

A workshop was held in Indian Institute of Management, Bengaluru on 2nd May 2013. The participants for the workshop were stakeholders like farmers, farmer producer organizations, commission agents, traders, warehouse service providers, assayers, bankers, academicians, agricultural university experts, commodity exchange experts, experts in the field of agricultural marketing, primary agricultural produce cooperative societies, TAPCMS, and officers of the department of Agricultural Marketing, Agriculture, Horticulture and Cooperation.

This workshop was conducted to seek the suggestions and opinions of the stakeholders. Easy access to markets, increasing the competition by removing the barriers in market participation, integration of markets, capacity building of stake holders, technology automation of APMC/warehouses, financial linkages, amendments to the Act, Rules etc., were the subjects identified broadly for discussion. The views expressed in the workshop have been considered in this report.

## Status of Agricultural Markets in the State

### 2.01 Background

Government policy related to agricultural marketing dates back to the 1930s and was primarily oriented to protect the interest of farmers. Recognising the problems plaguing the sector, namely, low price realisation, high transaction cost and considerable post-harvest losses in agricultural produce in the entire value chain. Almost all state governments introduced legislations for establishing markets, regulating market participation & behaviour and related aspects during 1960s.

### 2.02 The Karnataka Agricultural Produce Marketing (Regulation and Development) Act, 1966

Karnataka has had a long history of regulated markets, even before many other states conceived the idea. Bailhongal market in Belgaum district was the first regulated market to be established in 1936 in the then Bombay presidency, Tiptur in Tumkur district in 1948 in the then Mysore state. Many other districts followed the trend.

After reorganisation of states, recognising the importance of a unified legislation, the Karnataka legislature enacted a statute to provide for improved regulation in the marketing of agricultural produce, development of an efficient marketing system, promotion of agri-processing,

agricultural export and the establishment and proper administration of markets for agricultural produce. It put in place an effective infrastructure for marketing of agricultural produce and laid down procedures and systems in the state.

Thus, the Karnataka Agricultural Produce Marketing (Regulation and Development) Act, 1966 was given effect from May 1, 1968 by repealing and replacing the following enactments.

- (1) The Bombay Agricultural Produce Markets Act 1939 (Bombay Act 22 of 1939) as in force in the Bombay area;
- (2) The Madras Commercial Crops Markets Act, 1933 (Madras Act 20 of 1933) as in force in the Madras Area and as in force in Bellary District;
- (3) The Coorg Agricultural Produce Markets Act, 1956 (Coorg Act 7 of 1956) as in force in the Coorg District;
- (4) The Hyderabad Agricultural Market Act, 1339F (Hyderabad Act 2 of 1339F) as in force in the Hyderabad Area;
- (5) The Mysore Agricultural Produce Markets Act. 1939 (Mysore Act 16 of 1939) as in force in the Mysore Area.

The growth in the agricultural marketing infrastructure can be assessed from the increase in the number of regulated market

yards, from a meagre 286 at the time of independence in the whole country to 509 regulated markets in the state of Karnataka alone.

### 2.03 Salient provisions of the Act

**Constitution of Market committees:** The Act provides for constitution of market committees, representing agriculturists, traders & commission agents, agricultural co-operative processing societies, co-operative marketing societies and nominees of the state government with appropriate provisions for participation of disadvantaged sections. The Committee members elect amongst the agriculturist's members the Chairman and Vice Chairman of the market committee, who manage the affairs of the market, under the overall superintendence of the market committee.

**Powers and duties of the market committees:** Development of market yards by providing infrastructural facilities for marketing of notified agricultural produce, managing market yards, granting of licences to market functionaries, supervising the conduct of market functionaries, regulating the trade in the form of enforcement of licensing conditions, ensuring weighment, delivery, payment and all other matters relating to marketing of notified agricultural produce, settlement of disputes between the seller and the buyer, disseminating market information, levy and collection of market fee, setup and promote private and public partnership ventures in the management of market yards and prosecuting persons for violating the Act, Rules and bye-laws and managing the market committee funds are some of the important functions of market committees.

**Marketing Board:** The Act provides for constitution of the State Agricultural Marketing Board to take up promotional activities like, promotion of grading,

training, extension, research, printing and publications, etc.

**Private markets:** The Act also provides for establishing private market yards, direct purchase centres, farmer-consumer markets, spot exchanges, contract farming, and special commodity markets.

**Payment of proceeds to the seller:** The Act enjoins that sale proceeds of notified agricultural produce shall be remitted by traders to the market committee and in turn the market committee shall make payment to the seller and the commission agent as the case may be. This provision enacted through Act no.16/1998 could not be given effect due to lack of consensus in implementing the same and the market committees were not having adequate wherewithal to undertake this responsibility. Subsequently, Act no.23/2007, provided that Government may specify the agricultural produce and the markets as the case may be for the implementation of this provision. At present, maize has been notified by the government for implementing this provision.

But for this section, all other provisions of the Act have been implemented with a fair degree of success.

### 2.04 Directorate of Agricultural Marketing and its relationship with market committees

The Department of Agricultural Marketing was originally a part of the office of the Registrar of Cooperative Societies in the Department of Co-operation in the government secretariat till 1972. Since then, it is functioning as an independent department, under the administrative control of the Co-operation department, headed by the Principal Secretary to Government. The Minister in charge of the department is also the Chairman of the Karnataka State Agricultural Marketing Board.

## Agricultural produce market committees

(APMCs) have been established by the state government under the provisions of the Act. The market area of an APMC shall not be less than a taluk and cannot exceed the jurisdiction of a district. Special commodity markets can be established with suitable modifications as regards to the market area, constitution of the committee etc.

The Director of Agricultural Marketing is empowered to declare appropriate markets, market yards, market sub-yards, sub-markets and sub-market yards. The Director is the budget sanctioning authority for the APMCs in the State. He is the approving authority for plans and estimates for works to be taken up by the APMCs in the state. The Director is responsible for the implementation of the Act and the rules made there under.

The Director is the licensing authority for establishing private markets, direct purchase centres, farmer-consumer market, spot exchange, and granting of unified license for trading in the APMCs in the State. He is the appellate authority to hear appeals in respect of the orders of the market committee relating to cancellation and suspension of licences etc.

Officers and the staff of the market committee are government servants whose pay and allowances are paid by the State Government and the market committees reimburse the same to the government by making contributions to the State Consolidated Fund.

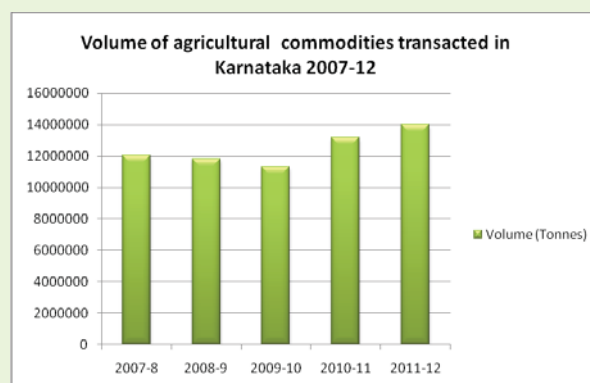
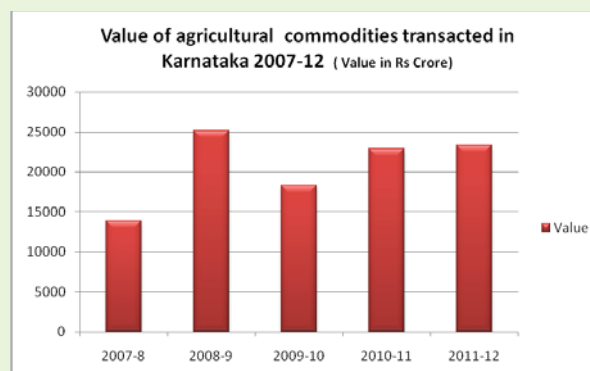
### 2.05 Categories of markets

The state is serviced by a network of 509 wholesale markets and 771 rural primary markets. Out of the wholesale markets, 155 are principal markets and the rest 354 are sub market yards which together have an annual turnover exceeding Rs 25,000 Crore during the financial year 2011-12. List of

markets in Karnataka (main markets and sub markets) are in Annexure II.

### 2.06 Commodities transacted in markets

Commodities to be transacted in the markets are notified by the Government from time to time. As on date, 92 commodities are



transacted in various APMC markets in the state. A list of commodities notified for transaction in these markets is in Annexure III. Major commodities transacted in various markets in the state are in Annexure IV.

### 2.07 Value and Volume of transactions

The cumulative value and volume of agricultural commodities transacted in APMC markets of the state was Rs 13879 Crore in 2007-8, which increased to Rs 25189 Crore in 2011-12.

Details of arrivals of various commodities and value of transaction in various markets of the state are in Annexure V.



## 2.08 Market Fee collected

The market fee is not uniform for all commodities, for vegetables and flowers it is 1%, for dry grapes 0.1%, for livestock, in case of cattle it is Rs 5 per head and for sheep and goat it is Rs 1 per head and for all other notified commodities it is 1.5%. The commission agent collects market fee from the trader on the auction price and remits it to the market committee. The Market fee collected for the last five years from various markets is shown in Annexure VI and a summary of the same is given in the table below.

					(Rs. in Lakhs)
Division	2007-08	2008-09	2009-10	2010-11	2011-12
Bangalore	5841	6148	8192	9771	10338
Mysore	2308	3020	4013	4722	5378
Belgaum	3778	4194	5385	7536	7422
Gulbarga	5817	6983	6760	8300	8287
<b>State Total</b>	<b>17744</b>	<b>20345</b>	<b>24350</b>	<b>30329</b>	<b>31424</b>

## 2.09 Journey of the farmer

Compulsion to sell only in regulated market yards having limited infrastructure, a market loaded against the producer, monopoly practices, restricted competition amongst buyers and a host of other limiting factors characterise the agricultural markets today.

Marketing of agricultural produce has two prerequisites, first getting the produce from the farm to the market and getting adequate traders to participate in the tender/auction. If one tracks the Journey of the farmer from the farm to the market, one can appreciate the hurdles he faces which underlines the need for ushering reforms in the critical sector.

Soon after the harvest, the farmer has to arrange for packing his produce, load the produce and make necessary transport arrangements to reach the market yard, which all entail an initial investment. For most small farmers the unit cost of transportation would be disproportionately large and becomes the first deterrent against going to the market yard. Even if a farmer can bear this cost of reaching the market, this movement results in some wastage, which further reduces the realisation.

Farmers who do not have the wherewithal to meet this expenditure have to depend on agents who move from one village to other, aggregating the produce. The consequence of committing to sell at the farm gate under these circumstances means loss of bargaining power and thus realisation of much lower price.

*Soon after the harvest, the farmer has to arrange for packing his produce, load the produce and make necessary transport arrangements to reach the market yard, which all entail an initial investment.*

At the market, the farmer producer faces an opaque auction process, where his lot begets very little time from buyers. With little knowledge about prevailing prices, he is compelled to sell the produce, as the alternative, namely, storing the produce and the extending his stay at the market place is an additional financial burden on him.

The buyer in the regulated market has his own set of complaints against the producer. More often than not, the produce is non-uniform and mixed with extraneous matter and this from the buyer's viewpoint is the

justification for the lower price offered and the discounts in weighing, and finally the weighing takes place so late in the evening, in most situations not in the presence of the farmer and there is always a great discomfort about the actual weighing and the discounts applied. Therefore all odds are against the farmer.

Any reform has to address such conflicting conditions and perceptions and balance various interests.

## 2.10 Review of recommendations of other committees and others

The Committee of State Ministers in-charge of Agriculture Marketing have highlighted the challenges in Agricultural Marketing, specifically mentioning the fragmented supply chain, inadequate market infrastructure, a long intermediation chain, high degree of wastage, lack of accurate and timely market information/intelligence system and the absence of a national integrated market. The Committee have recommended that the agricultural marketing system in the country needs to be strengthened and revitalised.

The committee considering the above, have suggested wide ranging reforms to agriculture markets, such as, creation of barrier free markets, promotion of investment in marketing infrastructure, rationalisation of market fee/commission charges, providing for an efficient market information system, creating grading and standardisation facilities etc. and have recommended that the existing legislation may be amended to give effect to these recommendations.

Academicians and researchers in the field of Agricultural marketing have published papers on agricultural market reforms and have suggested an Integrated Approach

to Agriculture Marketing and Financing. Over the years, Agricultural marketing responsibility has spread across many other departments and institutions and a multidisciplinary approach is essential in reaping the synergy of all agencies concerned. Technology should provide the backbone for these reforms.

Government of India in consultation with State Governments, trade and industry formulated a Model APMC Act in 2003 and circulated to states and union territories for adoption. This has been followed up by circulating Model APMC Rules in 2007 to facilitate amendments to existing rules.

*The committee considering the above, have suggested wide ranging reforms to agriculture markets, such as, creation of barrier free markets, promotion of investment in marketing infrastructure, rationalisation of market fee/commission charges, providing for an efficient market information system, creating grading and standardisation facilities etc.*

This committee has taken into consideration all the above recommendations and the views of experts and others in the field of agricultural marketing. The committee had deliberated issues related to market reforms, barrier free markets and market integration, use of technology, capacity building and ease of access to markets etc., in its internal meetings, in its meeting with various stake holders, discussions with experts and practitioners in the field and in the field visits the committee undertook. The findings and recommendations of the Committee were discussed with stakeholders in a workshop held at the Indian Institute of Management, Bangalore on 2nd May 2013.



## Consolidating the Reforms Initiative

Government of Karnataka is one of the pioneering states that initiated modernisation of APMC markets in the state. This initiative, popularly called electronic tendering system envisaged automating certain operations of APMC markets. The individual APMC were provided with a computer server with specially developed software for auction of the produce of the farmer and certain functions of the market, both related to the auction process (permit generation and the like) and administrative functions of the market office.

### 3.01 Electronic Tender System

The electronic tender system aimed at ensuring fair market practices and arriving at a competitive price for the farmers' produce. The practice of quoting a rate through tender slips gave way to entering the quote in a computer at the trader end or in kiosks established in the market. The quotes lodged in the server in the markets generated the competitive price for every lot available for sale for the day.

The first phase of this system was introduced in the state between 2008 and 2010 and covered 45 APMC yards. A list of the markets and the commodities to which this was applied is shown in Annexure VII.

As on May 2013 along with the above 45 APMC markets, another 33 APMC markets totalling to 78 markets were taken up for the next level of computerization. Property management (where all assets of the market committee, including properties given for lease or sale to market functionaries are recorded), accounts management (where all accounting transactions including the market fee to be collected from each functionary, the amount collected, the balance due, the cash book of the market, ledger accounts, final statements like Receipt & Payment account and Income and Expenditure account, etc.), developmental work management (where action plan approval, works taken up, works under progress, works completed, etc.) and e-permit system (where traders who purchase commodities in the market can generate permit online) were brought into the system.

This project, one of the first in the country, was a laudable initiative. However the level of implementation of the project varied from market to market. While there were some markets that had implemented the electronic tendering system substantially, there were other markets that had implemented it for some of the commodities transacted in the market. Yet in some markets the implementation was abandoned.

**Further, though of pioneering nature, the project suffered from the following drawbacks.**

- The implementation was left to the local authorities in the market. While some markets attained a satisfactory level of implementation, many others lagged behind. Periodic review by the Directorate of Agricultural Marketing could not monitor implementation on an ongoing basis.
- Existing market practices were automated, without re-engineering the processes to do away with any defective market design. Thus, the potential of Information Technology could not be harnessed to its maximum.
- The software limited itself to the practice in vogue in the markets. New possibilities, like credit of sale proceeds to the farmer's bank account directly, were not envisaged.
- With every APMC market having its independent IT systems, the department was saddled with the need to administer multiple Annual Maintenance Contracts for hardware, etc.
- Every new market to be brought in to the e-tendering system, required fresh investments, which could limit the number of markets that can be brought into the system.
- The vendor provided different platforms for different markets, and the department was not even aware of the ground realities of this nature, thereby making the integration of the markets more difficult.

### **3.02 Comprehensive Electronic Auction System**

Considering the above, Government vide order SAI 149 MRE 2010, dated August 27,

2010 embarked upon a different approach. Abandoning the concept of having an IT solution for each market individually, which made every market an island, connecting selected markets to the comprehensive auction system of the NCDEX Spot Exchange ("NSPOT") was approved. The advanced design of the auction system of the Exchange could monitor every market on real time basis and had the following advantages over the earlier architecture.

- Relative independence of each aspect of the architecture, namely, the Logical Architecture, the Platform Architecture and the Deployment Architecture. This implies that each market can control the commodities being traded, the transaction protocol used for each commodity and the participants in transactions. The need for software installation and maintenance at the market could thus be avoided. Further, deployment of a wide range of operating systems, browsers and handsets was made feasible. The number of servers required could be reduced due to centralized deployment, harnessing the potential of cloud technology, high availability, reduced costs, etc.

*Existing market practices were automated, without re-engineering the processes to do away with any defective market design. Thus, the potential of Information Technology could not be harnessed to its maximum.*

- Flexibility in re-engineering the market process. In practical terms, this implies making available multiple trading systems such as direct purchase, quote based purchase and real time competitive bidding, and sealed bid auctions, stock and inventory tracking of each commission agent and trader, funds settlement, etc.

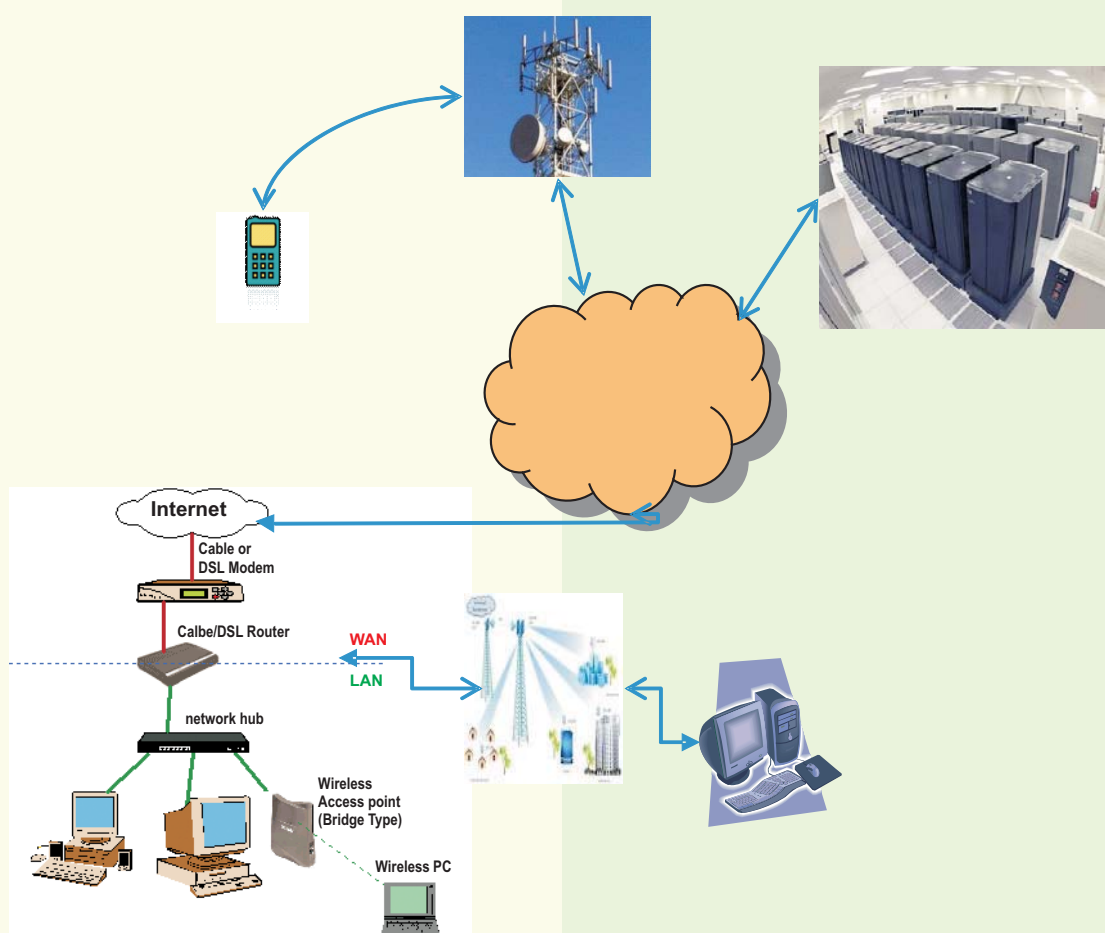
- Scalability – the ability to handle increasing loads without affecting performance or service levels, resulting in hardware investments spread over a period of time, managing growing complexity of the transactions, etc.
- The state of art trading platform is robust, offers adequate security and is amenable to integrate markets, provide virtual markets across the state, etc.

The markets that have been brought online may be seen in Annexure VIII and details of the produce transacted (as on March 31, 2013) may be seen in Annexure IX.

Any reform process will have to bear in mind this experiment of the Government and draw appropriate lessons and suggest the way ahead.

A schematic diagram of the architecture deployed may be seen below.

### Concept diagram of the ModernisationArchitecture



Technology has been introduced in 3 stages, at each stage the learning's have been improved upon in the next stage. We are now recommending redesigning the markets; bringing in technology to handle all market operations, a comprehensive electronic auction system, market integration, warehouse based sales, linking clearing

and settlement and financial linkages and to have capacity building to all market participants. (Comment: I think, after claiming what all good things we have so far done, we should also flag the limitations of those initiatives, and from there we move on to suggesting the required changes. But pointing out the limitations of the earlier

initiatives need not be in the nature of or with the intension of fault finding, but as part of going through a learning curve, and drawing the lessons from the experience which leads to the recommendations.)

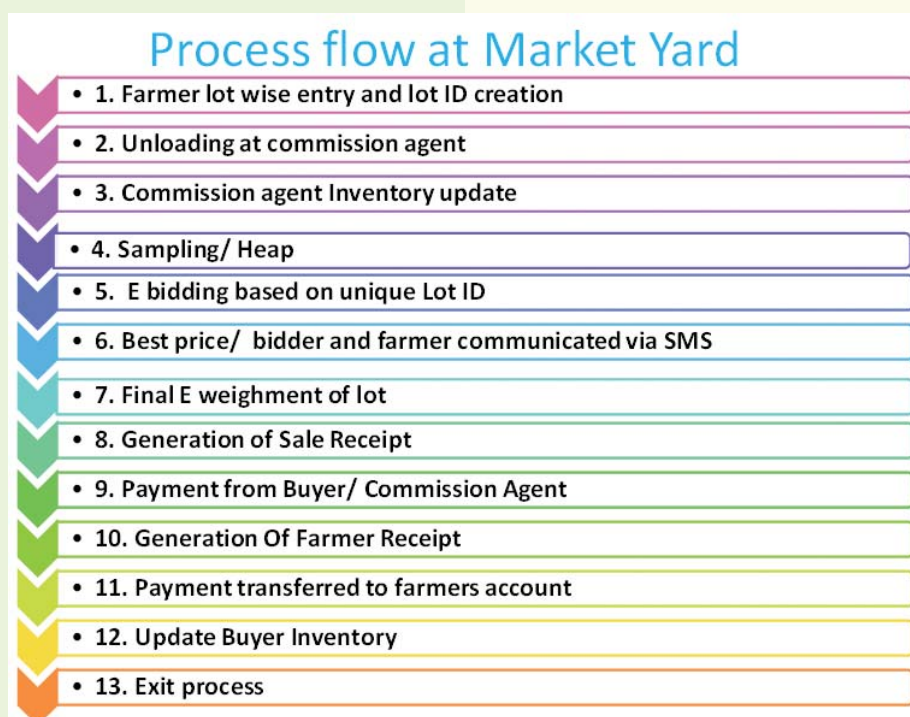
### 3.03 Leveraging technology in all market operations

Both the above initiatives, namely, e-tendering and the comprehensive electronic auction system have a common thread – use of technology. Given this experience in transforming markets in the state, Leveraging technology in agricultural marketing should envisage creating a transparent integrated auction mechanisms supported by information dissemination to all market participants. The principle of a higher quality produce attracting a better price can be realised by establishing adequate infrastructure for sampling, assaying and grading of the produce. Integrating various markets transacting the same commodity supported by warehouses located in close proximity to the farm could eventually result in a better price for the

farmer with minimum cost of transaction.

Well established processes for achieving the above with the help of technology are critical. Capturing details of the farmer, namely personal particulars, land holding and other details, tracking of producer lot with unique ids, displaying the lot in the auction screen along with quality and quantity particulars, rule based bidding processes, integrating post auction processes like weighing etc. with the auction mechanism, reconciliation of arrivals and exit of commodities by appropriate gate entries, payment accounting and market fee collection and other administrative functions pertaining to the sale process would all collectively bring the markets to a desirable state where the prices discovered would be the most optimum one at any given point of time.

*Leveraging technology in agricultural marketing should envisage creating a transparent integrated auction mechanisms supported by information dissemination to all market participants.*



This report dwells upon each of the above in subsequent chapters in detail for a stage by stage recommendation of the reforms to be undertaken.



## Reforms in the Mother Market

Marketing of agricultural produce has two prerequisites - getting the produce from the farm to the market and participating in the selling process in the market. The producer faces an inherent disadvantage on both these counts. While the former entails initial expenditure compelling a sale on that very day, the latter in an alien setting places him at an inherent disadvantage.

The much maligned buyer in the regulated market has his own set of complaints - uncleaned and nonstandard material being brought for sale is the most cited one. And this, from the buyer's viewpoint is the justification for the lower price offered and the discounts in weighing.

*Marketing of agricultural produce has two prerequisites - getting the produce from the farm to the market and participating in the selling process in the market.*

A fair market has to address these twin issues to make the process equitable to both participants. And designing such market structure, without alienating any section of participants is critical to any reform effort.

The current market process suffers from information asymmetry, leading to inefficiencies in the market. The seller has full knowledge of the produce that he is offering for sale (contents, variety,

extraneous matter, etc.), but the buyer has limited or no information of these details. Exposing the produce for visual inspection before the sale attempts to correct this asymmetry; but is not an optimum solution.

The seller has limited knowledge of the prevailing prices – both in the market where he is participating and in the state/region in general. On this count, the buyer is better informed and uses the knowledge to his advantage. The limited information on prices leads the seller to choose a familiar market as a default option and the available price in the market as offered at the end of the sale process.

Against this background, this phase of reforms should focus on transparency in market operations and information dissemination. This phase would have to be conceived in a manner that would seamlessly lead to subsequent phases of reforms.

*The current market process suffers from information asymmetry, leading to inefficiencies in the market. The seller has full knowledge of the produce that he is offering for sale (contents, variety, extraneous matter, etc.), but the buyer has limited or no information of these details.*

#### 4.01 Transparency in market operations

The comprehensive electronic auction system currently deployed has brought in transparency in market operations by making available real time information of the produce to market participants and by providing equal chance for every lot for being bid in the auction by a wider audience (the earlier system lead to limited participation of buyers due to limitation in the space available and lots in the end of the process received lesser attention), informed decision making by the seller (the seller has to explicitly accept the last price for the sale to happen) and the wider market being informed of the quantity of goods available on a given day leading to finer price discovery.

Apart from 22 markets where the comprehensive electronic auction system has been introduced, additional markets are expected to be covered in the coming six months. Pertinent to note is the fact that these markets are medium size or large markets, functioning regularly in the year and have adequate market fee collection that can support the connectivity charges to be incurred for accessing the auction platform in the data centre. These markets would cover over half the value of the goods transacted in the APMC markets in the state.

The manner in which other markets can be covered requires examination. Out of these uncovered markets, the ones which can defray connectivity charges can be brought under the comprehensive auction system. The markets that cannot afford connectivity charges can be covered using a broad band connection or data cards, as these markets may not be time critical. Further low cost tablets may be used in these markets for capturing bids, thereby avoiding personal computers and other infrastructure.

The above approach would give access to the comprehensive electronic auction system to all the markets in the state and the desired level of transparency in the auction process, leading to an improved price discovery.

However, the information asymmetry on the quality of produce brought for sale would continue. This situation can be corrected only if key quality parameters of a given commodity are tested and the results displayed in the auction screen.

#### 4.02 Sampling and Assaying

Testing all arrivals in the market would call for infrastructure for sampling, space for maintaining the samples to solve disputes that may arise when non sight sale facility is made available (discussed later), adequate testing facilities, etc. This calls for specific skills with sufficient control over the test process and would require upfront investment in test equipment and other facilities.

It is therefore recommended that private companies with adequate experience in sampling and assaying may be invited through a transparent process to establish these facilities in the state on a BOOT model. The terms of inviting competitive offers may be finalised independently. However, this being a critical requirement that would pave the way for further reforms, such facilities should be made available on priority, say within the next twelve months in key markets. Other markets may follow within the next two years.

*It is therefore recommended that private companies with adequate experience in sampling and assaying may be invited through a transparent process to establish these facilities in the state on a BOOT model.*



Test parameters for all selected commodities and the testing process should be decided with the knowledge of all participants and well publicised. While the agency selected for establishing testing infrastructure would bring in the professional expertise needed, the Directorate of Agricultural Marketing should prescribe necessary control procedures so that participants develop confidence in the system.

A critical decision point is defraying the cost of sampling and assaying. In the initial phase, farmers may be reluctant to pay for sampling and assaying. Therefore efforts should be made to raise the awareness levels among the farmers about the advantages of assaying their produce and convince them to be willing partners in the reform process. If it becomes necessary, as a last resort market committee may provide this service free as a market development activity, for a limited period for lots of appropriate sizes.

#### 4.03 Information dissemination

Price dissemination should be aimed at reducing, if not eliminating the other asymmetry currently prevailing in the sale process, namely, inadequate knowledge on prevailing prices. The seller is more handicapped due to lack of information and therefore any intervention has to be tilted in his favour.

The pioneering initiative of the Ministry of Consumer Affairs in Government of India in installing price ticker boards in regulated markets in the state is a step in the right direction. However, this may be inadequate - these ticker boards display information that is not current and may pertain to a location that is away from the market where the price information is made available. Moreover, availability of information at the market does not support the seller to arrive at any decision.

*Price dissemination should be aimed at reducing, if not eliminating the other asymmetry currently prevailing in the sale process, namely, inadequate knowledge on prevailing prices.*

The main purpose of disseminating market information is to support decision making by market participants. The information that is relevant for all concerned is the prevailing prices of a given commodity in the vicinity in case of the producer and prices across the region or country in case of traders.

Prior knowledge of prevailing prices helps the producer to choose the market where he would prefer to sell his produce in preference over other markets. Such information can also be used by him to choose the time of sale. It is therefore recommended that farmers who register with a market in their vicinity may be provided with price information on three commodities of their choice in markets in a radius of 50 kms from the main market in the taluks where they reside.

The key issue at this juncture is how to defray the expenditure towards providing this service. It is recommended that such a service should be charged, as any service rendered free of charge loses its importance. While profit making should not be driver of providing this information, the service provider should at least break even while providing this critical service.

It may be necessary to lay down the principle on which price information can be made available to other interested parties. Transaction prices (in the form of raw data) should be made available with suitable delay to everyone without any charge. However, live data and/or processed information may be priced by NSPOT or the government, as

the case may be. As partners in the reforms project, the processed information by one may be made available to the other, free of cost only for their own use.

*It is therefore recommended that farmers who register with a market in their vicinity may be provided with price information on three commodities of their choice in markets in a radius of 50 kms from the main market in the taluks where they reside.*

#### 4.04 Post auction process

Though individual markets have evolved their distinct post auction process that actually consummates the sale, in essence this is reduced to two important process

- weighing and bagging of the produce followed by issue of sale invoice by the commission agent to the seller and buyer and payment to the seller.

It is recommended that weighing of produce may be integrated with the auction. The weighing scales should be part of the network, whereby the weight is automatically captured and linked to the lot number. What is of essence is that details of lot numbers are accessible at the weighing points. Recording of the weight of the produce should be done against the respective lot number without any manual intervention. This will eliminate any inadvertent error that can creep in the manual process.

Details of weight recorded and the amount payable/receivable should then be communicated to the buyer/seller as soon as the weight is captured in the system. This would be another step in ushering in transparency in market operations.

At the same time, sales invoice for the produce sold should be generated and sent

as a dump file to the commission agent, who can then simply print the same and issue to the seller/buyer. With preset seller/buyer accounts, transaction details along with invoices may be made accessible through the web site of spot exchange. As computer literacy improves, this would be of immense help to all participants.

*Recording of the weight of the produce should be done against the respective lot number without any manual intervention.*

Transaction details of individual commission agents/traders may be consolidated at the end of the day to compute the stock of goods with individual participants. This, along with carry over stock of previous days, would lead to the inventory tally of the day, which should be completed and made available to market authorities. At the central level, the Directorate of Agricultural Marketing should be able to access all relevant information through a web based dash board system.

*Details of weight recorded and the amount payable/receivable should then be communicated to the buyer/seller as soon as the weight is captured in the system. This would be another step in ushering in transparency in market operations.*

#### 4.05 Clearing and settlement

The Karnataka Agricultural Produce Marketing (Regulation and Development) Act, 1966, in section 77A provides that market authorities shall collect sale proceeds from the buyer and pay to the seller on the same day. However, this provision has not been implemented.

As a key component of reform, it is recommended that this provision be implemented, after all participants are

taken into confidence. This provision should be implemented without human intervention, that is, the process should be completely automated. If necessary, the payment time may be made less stringent to start with, and progressively improved. Lifting of commodities should be only after payments have been settled by the buyer.

Even if the producer is paid directly as recommended above, the requirement for cash at the last mile cannot be undermined. Therefore, for the above to be effective, adequate infrastructure is required to dispense cash at the village level. It is therefore recommended that the Directorate of Agricultural Marketing convene a meeting of leading public and private sector commercial banks to find a solution to this issue. Further, this step is inevitable for commodity funding (discussed later in Chapter) and is therefore necessary to address the same on a war footing.

The committee desires to clarify at this juncture that the requirement to have adequate cash dispensing infrastructure need not hold up implementing the provision of direct payment to farmers - the best should not become the enemy of the desirable.

#### 4.06 Intermediary interaction

Market intermediaries, namely, commission agents and traders, interact with the market office on two main counts. First, payment of market fee/market charge, Second, filing of returns regarding their transactions, inventory, etc.

With all sale transactions being captured electronically and the consequent sale invoices generated for printing by the buyer, market fee accounting and filing of activity reports should not require any personal involvement of the intermediary

with the market office.

The Committee proposes that similar to payment of sale proceeds directly to the farmer, the market fee amount payable by individual participants be computed, necessary amounts debited to the designated account of the buyer and credited to the account of the APMC market and/or government account. Thus, the entire machinery related to market fee collection and accounting can be abolished and employees released to perform other important market functions.

As regard so there returns that the intermediary has to file regularly, it is recommended that suitable forms be devised to the satisfaction of the Directorate of Agricultural Marketing and necessary report generation capabilities built in the system, so that these can be filed electronically. If any other report is required for surveillance or other functions, before the intermediary is called upon to furnish the same, the concerned APMC market or the Directorate of Agricultural Marketing may call upon system operators to generate such exceptional report, and only in the event that such system generated reports do not render sufficient information, should the intermediary be directed to submit additional information/report.

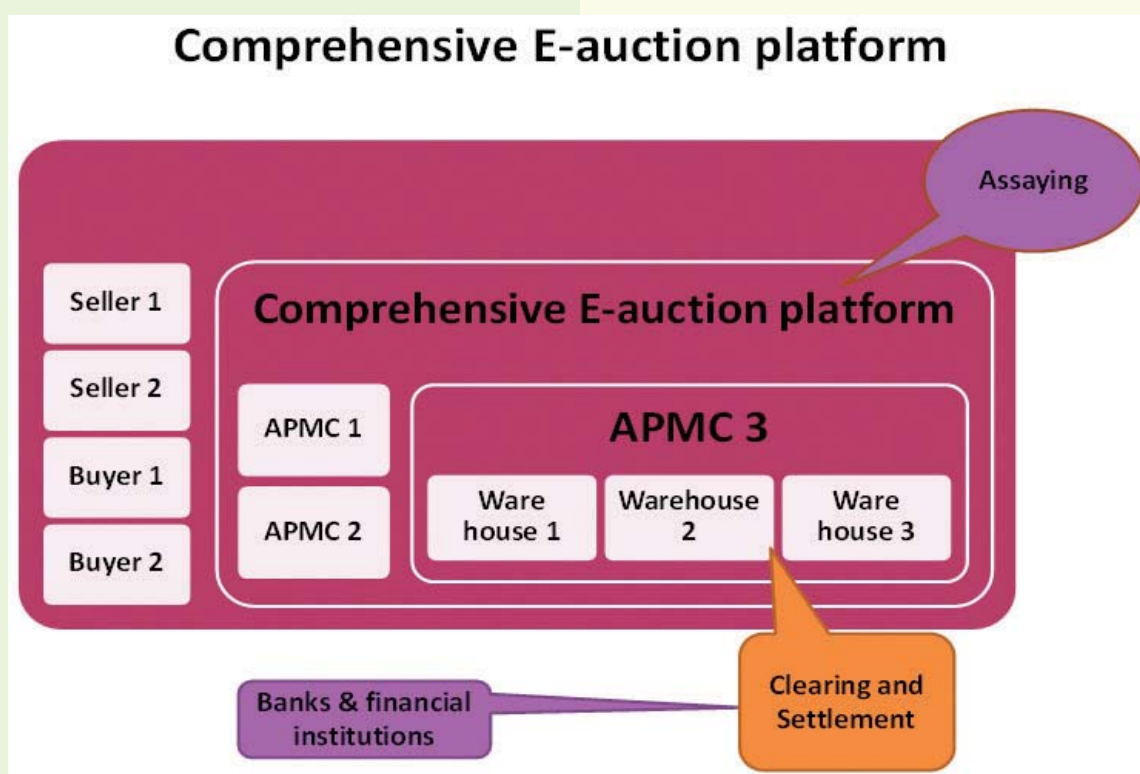
*With all sale transactions being captured electronically and the consequent sale invoices generated for printing by the buyer, market fee accounting and filing of activity reports should not require any personal interaction of the intermediary with the market office.*

These measures would save valuable time for buy side market intermediaries, who can now concentrate on developing their business.

#### 4.07 Auction platform - long term view

The state had issued spot exchange licence to NSPOT of NCDEX, NSEL of MCX and Reliance Spot exchange infrastructure. Of the 3 exchanges that had come forward to take up spot trading only NSPOT of NCDEX is functioning in the State. NSPOT is a fully owned subsidiary of NCDEX Limited. NCDEX is a leading futures exchange dealing with agricultural and non-agricultural products. More than 80% of the turnover on the Exchange is derived from agricultural commodities.

Government have consciously decided to adopt the auction platform provided by NSPOT. Undoubtedly, the NSPOT architecture offers advantages over the hitherto distributed architecture attempted and paves the way for further reforms with a different market design, as detailed in other chapters. However, it is critical to take a long term view in this regard.



The recommendations made aforesaid, namely, adopting the comprehensive electronic auction platform for all APMC markets (with direct connectivity or otherwise), including quality parameters in the auction screen, clearing & settlement, market fee collection & accounting and intermediary interaction critically depend on the NSPOT system being available continuously.

While the Committee wishes to place on record it's satisfaction of the available system and current arrangement of availability of the system, two critical issues have to be highlighted. First, availability of the system in perpetuity and second data security.

As regards the first issue, while the current arrangement may continue, it is recommended that government arrange



to secure the source code, without being saddled with the burden of operating the system till such time NSPOT provides service satisfactorily. The rights over the source code may be vested with a Special Purpose Vehicle (SPV) with government having a stake not exceeding 50 per cent in the SPV. Such a SPV may have other critical functions in the new market structure, as detailed in subsequent chapters.

As regards data security, it is recommended that government/SPV create a separate infrastructure wherein, daily trade data may be replicated and be accessible by it. This replication facility would act as a duplicate disaster recovery site and

can also be used to operate the system, if the situation so warrants. Given the sophistication required to establish and maintain this facility, it is recommended that NSPOT may be requested to provide technical and advisory support to create this facility and maintain the same, on par with internationally acceptable standards.

Further, government through the Directorate of Agricultural Marketing may conclude an agreement with NSPOT specifying the rights, obligations and duties of both the parties for the smooth operation of the market system, which amongst others may also dwell upon data security and privacy matters.

# Integrating Markets

Consolidation of the reforms initiated would usher in transparency in the selling process and make information available for informed decision making. But the distributed architecture deployed has much more capabilities that can change the market structure to the benefit of all stakeholders. This chapter proceeds to outline one such disruptive innovation.

Individual markets discover the price of the commodity on a given day, based on the interaction of supply and demand within their precincts. While the discovered price may not be far too away from the price of the commodity in the broader economy, it is likely that for a variety of local reasons the price therein may be sub optimum. In a perfect market, additional supplies should rush in when the price is high due to excessive demand and in case of lower prices, supply should either remain subdued or the commodity may move to more reassuring markets.

Information dissemination may persuade the producer from bringing his produce for sale to a given market, if the price is sub optimum. However, goods once brought in to the market cannot be taken out without substantial cost. While temporary storage could be a solution (addressed later as virtual markets), there ought to exist a way

by which the producer can offer his goods for sale to other markets without physically moving his goods, if better prices prevail in other markets. A possible solution lies in integrating markets transacting the same commodity.

## 5.01 Integration of markets

Integration of markets makes it feasible to satisfy the excess demand in one market by accessing supplies in another market without the requirement to be physically available in the second market. For integration of markets and allowing participation by market participants in a remote location, standardisation of quality and quantity parameters, dissemination of these parameters to the buyers, clearing and settlement mechanisms and dispute resolution are key prerequisites.

Once the commodity is tested and key quality parameters displayed in the screen, then there is no need for physical inspection of a sample before bidding in the auction. Since all markets are connected to a central data centre, it is possible to expose the goods physically available in a given market (the originating market) to other markets transacting the commodity (destination markets). This would increase the number of buyers for the commodity and the price



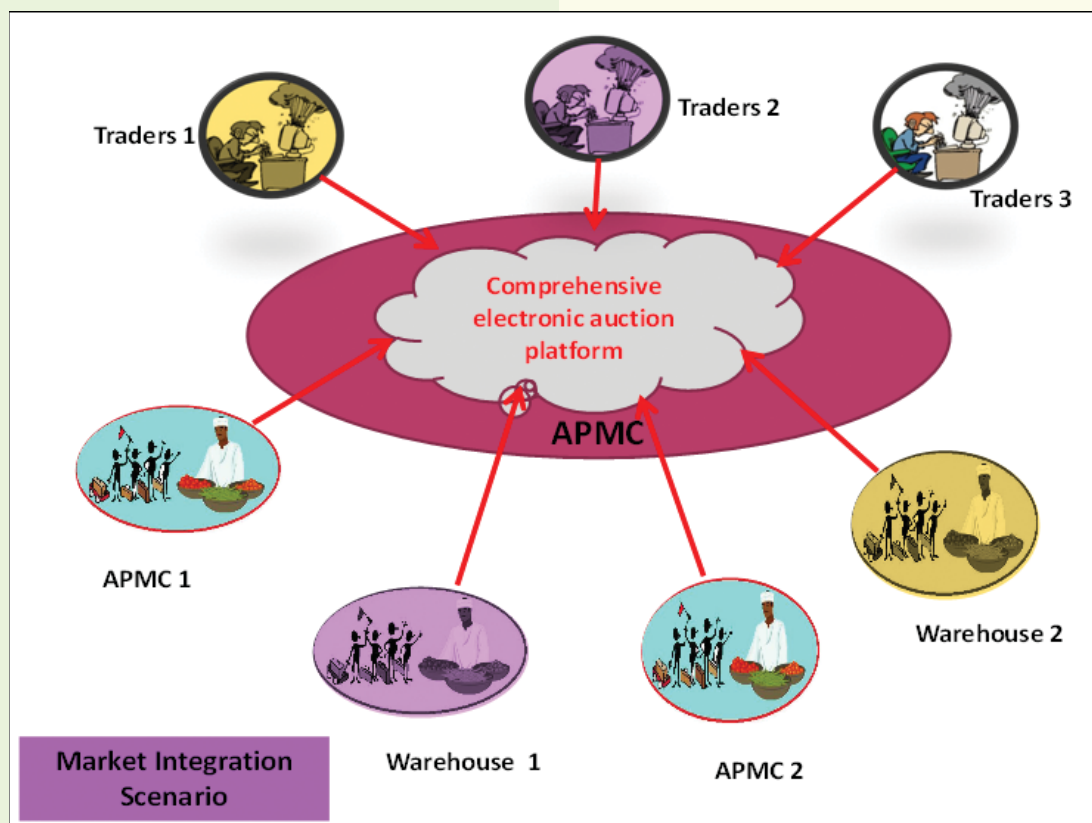
discovered would reflect the interplay of supply and demand in the region/area where the commodity is transacted, with the transportation cost duly reckoned.

*Integration of markets makes it feasible to satisfy the excess demand in one market by accessing supplies in another market without the requirement to be physically available in the second market. For integration of markets and allowing participation by market participants in a remote location, standardisation of quality and quantity parameters, dissemination of these parameters to the buyers, clearing and settlement mechanisms and dispute resolution are key prerequisites.*

It is therefore recommended that as and when major markets adopt the comprehensive electronic auction system, they may be logically integrated, depending

on the commodity transacted. It is possible that a market transacting more than one commodity would get integrated to multiple markets, depending on the commodity in question. For instance, Rannebennur APMC market would get integrated with Bailhongal and other markets where cotton is brought for sale; whereas the same Rannebennur APMC market maybe integrated to Davangere APMC market to create a broader market for Maize. Similarly Raichur APMC market would get integrated to Gulbarga and other markets where Tur is brought for sale; whereas the same Raichur APMC market maybe integrated to Rannebennur APMC market to create a broader market for cotton.

The Directorate of Agricultural Marketing may draw participation norms for buyers, licensing requirements and other procedures to facilitate this process. Every



commodity transacted in multiple markets may be mapped with regard to the ease of access of various markets, distance with respect to a reference location, etc., to determine the markets that can be integrated to facilitate remote buyer participation.

### 5.02 Quality Testing

The need for quality testing is *sine qua non* for integration and has already been recommended. Participants from other markets should be on par with the participants physically present in the given market, for integration to succeed. The most critical feature to create a level playing field is disclosure of complete information about the goods offered for sale.

### 5.03 Clearing and Settlement

The previous chapter has recommended direct credit of sale proceeds to the bank account of the producer. Such a measure is another critical pre-requisite for integration of markets.

As post auction process in the originating market would be completed by the end of the day, it is recommended that the commission agent initiating the sale take custody of the goods from the seller for delivery to the buyer in the destination market. Upon confirmation, sale proceeds collected from the commission agent in the originating market may be credited to the seller by the end of the day. Further, traditional practice may allow the buyer in the destination market to pay the commission agent in the originating market after a lag, typically within a week. The buyer in the destination market may be debited by the clearing and settlement system and the proceeds credited to the commission agent in the originating market.

However, as the buyer is not in the originating market, delivery of the goods to him may not take place on the same day. Therefore, the commission agent in the originating market who has the custody

of the goods may deliver it to the buyer as instructed by the latter. Suitable guidelines (the number of days for taking delivery, service charges that the commission agent can levy, warehousing charges, etc.) may be issued by the Directorate of Agricultural Marketing.

### 5.04 Dispute resolution

Clear rules are necessary for the success of this concept. As the commission agent in the originating market takes possession of goods for delivery to the buyer, he has to assume responsibility for good delivery.

The time within which the buyer can raise quality disputes, the protocol for second quality testing, the maximum time within which the buyer should take delivery, the rights of each party (the buyer and the commission agent), etc., should be specified and well publicised. It is likely that some disputes may remain unresolved, as parties could have differing interpretations of the guidelines. Necessary dispute resolution mechanisms - reconciliation process, arbitration norms, etc., may be specified.

### 5.05 Intermediary interaction

The previous chapter has made recommendations on the new paradigm of stakeholder and market office interaction. With multiple markets involved in completing transactions, such an arrangement becomes inevitable.

A critical element requiring clarity is which of the market would be entitled for the market fee. It is recommended that the originating market retain the market fee. As the sale is taking place at the originating market, the market fee belongs to the originating market and as very little effort is required for collection of market fee and reconciliation thereof (as all this would be automated), a share of the market fee collected for the destination market may not be warranted.

## Creating Virtual Markets

Consolidation of the reforms initiated and integrating markets would make price discovery transparent and the discovered price of the commodity would reflect the prices in the broader economy. But the need to bring the produce from the farm gate to the market is not obviated. This chapter attempts to address this restriction.

### 6.01 Warehouse based sales

That the tested commodity with key quality parameters displayed in the screen need not be seen by the buyer has been propounded in the previous chapter. The reach of an APMC market in a given area (the originating market) can be significantly enhanced if the produce can be stored in accredited warehouses close to the farm and particulars of the storage (quality parameters, quantity, location, etc.) displayed in the transaction screen of the originating market. Thus, the goods for sale in the originating market would then comprise goods arriving in the market (both tested and non-tested) and goods in remote warehouses.

Certain pre-requisites are critical, if warehouse based sales has to become a reality.

### 6.02 Warehouse service providers

The warehouse proximate to the farm has to receive the goods, account it against

individual producers, test the goods for the parameters and upload all details to the transaction screen (comprehensive electronic auction system) of the originating market. Post sale, the warehouse has to account it in the name of the buyer and deliver it to the buyer as and when he desires. As the warehouse takes possession of goods from the seller, it has to ensure that the goods are stored properly and assume responsibility for good delivery.

The Government through different schemes provides for construction of warehouse and storage facilities in rural areas. These schemes should be utilised extensively in rural areas where there is paucity of warehousing facilities. The warehouses and storages so built should be such that they get accredited so as to support warehouse based sale and also pledge finance facility.

*The warehouse proximate to the farm has to receive the goods, account it against individual producers, test the goods for the parameters and upload all details to the transaction screen (comprehensive electronic auction system) of the originating market. Post sale, the warehouse has to account it in the name of the buyer and deliver it to the buyer as and when he desires.*

It is therefore critical that such warehouses are operated by reliable, well capitalised warehouse service providers (WSPs). Eligibility conditions for operating warehouses, their responsibilities, quality testing facilities, storage charges and a host of other operating guidelines are required if warehouse based sales have to take off. To sum up, WSPs have to operate under the watchful eye of market authorities.

Given the challenges, warehouse based sales would require careful nurturing. To start with, select warehouses of the KSWC, wherever required may be taken up for accreditation and be brought in for participation.

Declaration of accredited warehouses wherever suitable and on requests received from market participants to be treated as market sub yards or sub market yards as the case may be by the Director of Agricultural Marketing

Another possible participant could be TAPCMS warehouses. These societies, essentially involved in rural credit disbursement, may offer their warehouses in select locations towards this end. However, these societies lack the expertise to undertake the responsibilities of a WSP. Therefore, qualified WSPs may operate these warehouses under a suitable commercial agreement, with the TAPCMS being paid rent for the infrastructure made available.

It may not be economically viable for an entire warehouse to be dedicated for this purpose. It is therefore recommended that a part of the storage be made available for warehouse based selling, while the rest may be operated commercially.

While this concept takes off, in the initial phase the reserved space may not give

adequate return to defray the cost of providing this facility. It is recommended that the entire cost of the reserved space in such warehouses be underwritten from the market fee collected, as this is a critical step in market development.

The reserved space may be made available to commission agents in the mother market and other private entrepreneurs, who can publicise the availability of storage space and the capability to link to the mother market, which can attract producers.

### 6.03 Stock accounting

The warehouse that is linked to the originating market should have an automated stock accounting system that can account for the stocks, immobilise the stock that is exposed for sale, communicate with the auction platform for placing it for sale, transfer the stock in favour of the buyer after the sale and provide all other support functions.

Therefore, any available stock accounting system may not fit the bill. Maybe, NSPOT that has provided the comprehensive electronic auction system can advise in this regard.

*The warehouse that is linked to the originating market should have an automated stock accounting system that can account for the stocks, immobilise the stock that is exposed for sale, communicate with the auction platform for placing it for sale, transfer the stock in favour of the buyer after the sale and provide all other support functions.*

### 6.04 Quality testing

Unlike sellers in the originating market who have the option of exposing their goods for sale either with or without quality testing,



sellers opting to sell through the warehouse have to mandatorily get their lots tested.

While test parameters specified for a commodity would be identical (as already recommended), a key question to be considered is whether the testing agency should be engaged by the warehouse or should be independent. While the former makes the WSP completely responsible, thereby obviating disputes later, the latter has the advantage that the testing agency would be independent and possibilities of collusion between the WSP and the agency would be minimal.

Each of the above has its merits and demerits. The Committee has no preference for either. The advantages and the risk in each case may be evaluated and decided.

### **6.05 Clearing and Settlement**

The previously recommended model for clearing and settlement, with some changes would be necessary for operationalising warehouse based selling.

As the goods would be weighed at the time of arrival and stored in the warehouse, the goods would continue to remain in the custody of the WSP before and after the sale. Post auction process would simply require transfer of ownership in the records of the WSP to the buyer. Sale proceeds collected from the commission agent in the originating market may be credited to the seller by the end of the day. Further, traditional practice may allow the buyer in the destination market to pay the commission agent in the originating market after a lag, typically within a week. The buyer in the destination market may be debited by the clearing and settlement system and the proceeds credited to the commission agent in the originating market.

Suitable guidelines (the number of days for taking delivery, service charges that the commission agent can levy, warehousing charges, etc.) may be issued by the Directorate of Agricultural Marketing. As the goods are in a warehouse, the guidelines (the number of days for taking delivery, service charges that the commission agent can levy, warehousing charges, etc.) may be less stringent and left to the buyer.

### **6.06 Dispute resolution**

The rules are specified earlier for the integrated markets with suitable modifications would be adequate to deal with disputes.

### **6.07 Intermediary interaction**

The recommendations of earlier chapters would serve as guideposts for managing warehouse based sales.

As warehouses looking up to an originating market are to be construed as a larger virtual market, the entire market fee collected would go to the originating market.

### **6.08 Commodity funding**

Though not directly linked to the market structure as propounded in this chapter, commodity funding is related to warehouse based selling and therefore finds mention in this chapter.

Goods stored in a warehouse easily lend themselves to funding by banks and other institutions. The lending bank marks a lien on the stored goods as security for the loan. Selling of the funded goods is prevented unless the loan is discharged. A borrower who cannot arrange bridge funding to release the lien is discouraged from approaching the bank, which otherwise would have given him the power to hold on to his goods in anticipation of better prices.



The process will have to be reengineered, if this concept has to gain acceptance. The innovation pioneered by NSPOT is worth emulating on a wider scale. The commodity accounting system developed precludes offering lien marked goods for sale unless the borrower offers authority to NSPOT to pay off the loan amount to the bank and only the balance to be credited to the account of the seller. This also facilitates smooth shifting of the loan to the buyer, after prior due diligence by the bank. The procedure has been accepted by banks and funding has been facilitated in various locations in the country.

The committee strongly recommends adopting this process for commodity funding of goods in the warehouse to give staying power to the farmer. A workshop of leading banks in the state may be convened to develop a protocol for this initiative.

*Goods stored in a warehouse easily lend themselves to funding by banks and other institutions. The lending bank marks a lien on the stored goods as security for the loan.*

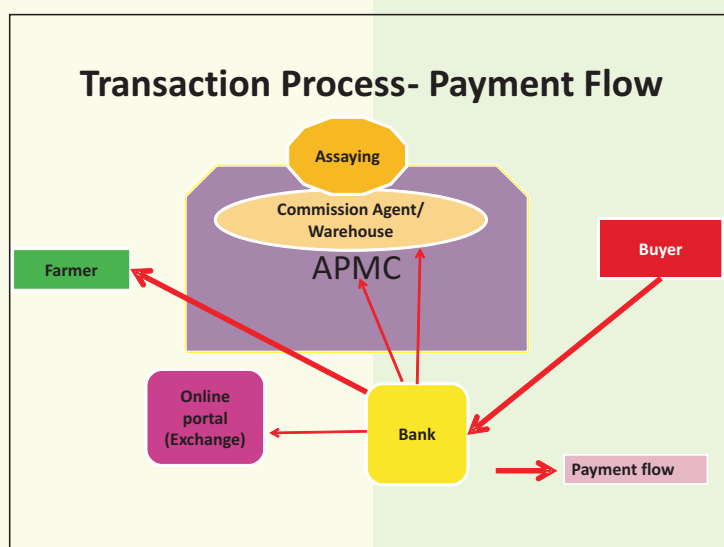
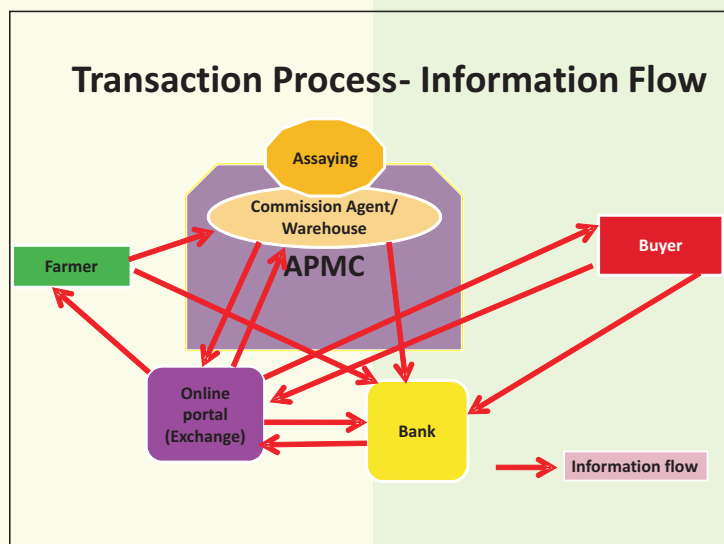
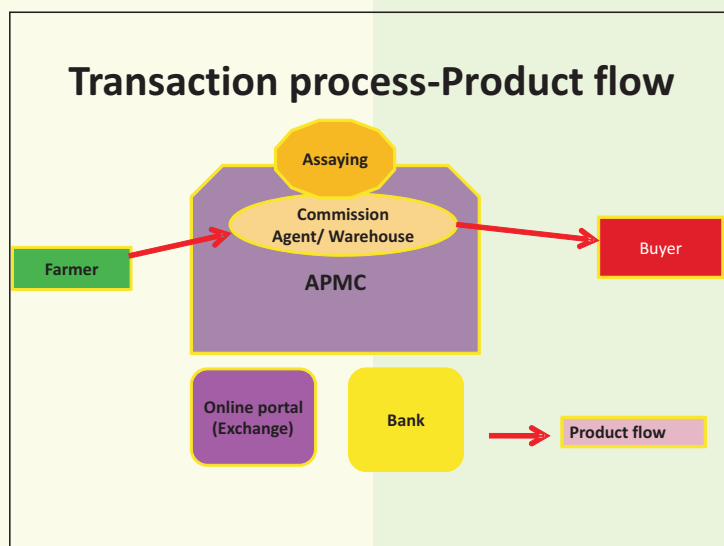
Besides, KSWC and other collateral managers should be sensitised about this initiative to progressively cover all commodities across the state.

A caution at this juncture is in order. Anticipation of better prices may result in shaping the behaviour of the market. The blind belief that prices would always increase after the arrival season may prompt the producer to postpone selling with the target price always just away from prevailing prices. The market anticipating this reaction, may factor bunching of arrivals far removed from the harvest months and influence price discovery accordingly.

So a producer holding on to his produce without price hedging is exposed to price risk. Unable to bear such risk, commodity funding may fall into disrepute. Against this background, the committee recommends intensive farmer education and capacity building before advocating this concept.

### 6.09 The virtual market

Every major market with associated warehouses, linked to other markets transacting the same commodity, which in turn have associated warehouses define the possible virtual market of the future. In this market design, the farmer reaches the proximate warehouse, which would link him to the larger market for that commodity, where price discovery is influenced by the fundamental factors in the broader economy.



A long way to go to reach there, but many humble steps would define that definitive journey to that destination!

## Private Markets

A virtual market, dispersed physically with an environment facilitating commodity funding and giving the farmer the right to choose the time of sale is a market design that the state should progressively move to.

The recommendations till now have been dealt with APMC markets. These markets attract considerable arrivals, have established infrastructure and have dedicated buyers. It is in public interest to make these markets efficient to serve the larger purpose with which the Karnataka Agricultural Produce Marketing (Regulation & Development) Act, 1966 was enacted.

Existing APMC markets enjoy a monopoly status, not to speak of the patronage that they receive as government established markets. That public interest demands competition has been accepted by amending the Karnataka Agricultural Produce Marketing (Regulation and Development) Act, 1966 over five years ago. The amendment was with an intention to encourage new private markets, facilitate contract farming, direct procurement, etc. Yet, the last five years has witnessed little activity in this direction.

Past experience in APMC markets across the state indicates that about half the agricultural production in the state gets transacted in these markets. Even after accounting for self-consumption, there is a

considerable quantity that does not come to the markets and is sold directly. The response of the government has been to view the issue as an evasion of market fee and violation of the law in force, leading to APMC check posts that dot the state to detect evasion. While the evasion could be one reason why this could be happening, the moot point is whether the producer gets some value in concluding transactions outside the market system.

The Committee is of view that the scope within which private initiative should function in this area is crucial. Presently some of the APMCs have constraints to make available lands to offer significantly improved physical infrastructure like more warehouses, cold storages, primary value addition facilities like cleaning, sorting, grading, packing, branding etc. Public policy should encourage private markets, which should supplement the existing APMC markets in an environment that would foster healthy competition.

### 7.01 Market fee payable by Private players

One significant factor that discriminates against private markets is the market fee payable to the proximate APMC. Spot Exchanges, direct purchase centres and contract farming arrangements have to

pay a market fee of 0.7% for vegetables and flowers, 0.07% for dry grapes and 1.05% for all other notified commodities of the sale value; while all other private buyers are required to pay a market fee of 1% for vegetables and flowers, 0.10% for dry grapes and 1.5% for all other notified commodities of the sale value. Market fee is mandated to be collected for the services provided by the market committee to the market participants. As the APMC does not render any service to such participants in the private market, the fee may be exempted and instead they may be permitted to collect service charges commensurate with the services provided and in the interest of provision of improved facilities, on the other hand it would be desirable to stipulate certain minimum standards for the pvt markets. This measure would make private initiative viable and attract investors.

*The Committee is of view that the scope within which private initiative should function in this area is crucial. Public policy should encourage private markets, which should supplement the existing APMC markets in an environment that would foster healthy competition.*

## 7.02 Farm gate procurement

Certain commodities are very actively sold at the farm gate. Agents, who may themselves be traders in the proximate APMC market, engage local representatives in villages or groups of villages, negotiate the price of the commodity and take charge of the goods soon after the harvest. For instance, a good quantity of maize is sourced by such agents and moved in rail rakes to feed manufacturers across the country during the arrival season.

The reason for farm gate procurement is manifold. Commodities with low

prices may not be able to absorb the cost of transportation associated with the transaction in the APMC market and farm gate sale could be for lowering post-harvest cost. The need of the processor (like feed manufacturers) for a certain quality material could trigger such behaviour. Yet, it could be due to sheer arbitrage factors at work – for the farmer the savings is the cost of transportation, wastages, etc., and for the agent it is the difference between the price that he pays the farmer and the price at which he can resell.

Whatever be the reason, an activity that has an economic value cannot be restricted, as ways around the restriction would be devised. The restriction would then remain only in paper, as the check posts currently are. Therefore, a market friendly approach to this issue is proposed.

The price dissemination initiative makes the producer aware of the prices in the vicinity for commodities of his choice, which can influence his decision to choose a market in preference over others. This information would make him to arrive at an informed decision about selling at the farm gate, after weighing the additional expenses associated with a sale at the APMC market. Over a period of time as the flow of information improves, it is expected that the price arbitrage that is prevailing between the prices in the market and at the farm gate would at least reduce, if not vanish.

The agent who sources at the farm gate to be regulated. Such market functionaries should be registered with the appropriate authority. The Director of agricultural marketing may take necessary steps to issue proper guidelines addressing price dissemination, payment and weighment issues and put up a regulatory mechanism

to address farm gate procurement.

### 7.03 Procurement by Processors

Such procurement is similar to farm gate procurement, the only difference being that the processor is located close to the farm and the farmer takes his produce to the processing location, rather than the AMPC market. Contract farming and sugarcane procurement by sugar mills are typical examples of such transactions.

In this case also, arbitrage factors are at work – for the farmer the savings is the cost of transportation, wastages, etc., and for the processor it is the assurance of regular supply of raw material of a particular quality. The policy in this regard should be to ensure that the seller takes an informed decision before committing his goods for sale and the price dissemination initiative would be critical in this direction.

Processors should be registered with the appropriate authority and mandated to disclose the prices at which factory gate sourcing is being done. Since they have necessary infrastructure, details of sales must be captured in a system similar to the comprehensive electronic auction system adopted by APMC markets. They shall also have a payment process similar to the Clearing and Settlement process recommended for APMC markets.

### 7.04 Organized Private Markets

Setting up of private markets has been permitted in section 72A of the Karnataka Agricultural Produce Marketing (Regulation and Development) Act, 1966. There has been some interest from a few private parties to set up such markets. However, these have not spread across the state; nor have they made significant inroads in any particular commodity. Given

the investment required and the time that would be necessary for the private sector to make an impact, it is likely that these may have an impact in select areas of the state or in select commodities.

While public policy should be oriented to establishment of private markets, it is likely that the APMC markets would have to provide the marketing linkages to the producer for times ahead.

As and when these markets come up, they have to provide similar, if not better, avenue to the producer to sell his produce. These markets should have a comprehensive electronic auction system similar to the one that the APMC markets are currently migrating into. Their auction process, clearing & settlement system and all other processes should be on par with the APMC market, so that price discovery is transparent.

The price dissemination initiative should include the prices discovered in these markets also and make them available (along with other prices) to all stakeholders.

### 7.05 Regulatory environment

It is important that private markets and APMC markets function within a framework laid down by an appropriate regulation. The regulatory system necessary forms a separate chapter in this report.

*These markets should have a comprehensive electronic auction system similar to the one that the APMC markets are currently migrating into. Their auction process, clearing & settlement system and all other processes should be on par with the APMC market, so that price discovery is transparent.*



## Market Development

The recommendations till now envisages a mixed market structure with participation from existing APMC markets and private initiatives, be it farm gate procurement or organised private markets. When compared to the present position, this would certainly be a leap forward; but much more needs to be done to bring the market on par with international norms. Such a move is essential as, when the country opens up to organised retail multinational companies, the marketing infrastructure should provide adequate safeguard to the small and marginal farmers and place them on an even keel with them.

This chapter looks ahead and recommends a series of steps to strengthen the marketing structure in the state.

### 8.01 Producer societies/companies

Small and marginal farmers are an important constituent of the Indian agriculture landscape. Government policy and action must support the well being of this section.

In the emerging market structure, the producer is required to decide on the rate offered for his produce, choose the time (during the arrival season or later) and place (APMC market or a private market) of sale, decide on storage of the produce

and if necessary accept a loan against the produce, etc. All these call for a good understanding of the market conditions, which could change often. And a sale later exposes him to price risk, which has to be hedged, if feasible.

Under these circumstances, producer organisations assume importance. Such organisations can give individual farmers a strength in numbers, as resources that cannot be deployed by an individual (like retaining experts for advice) can be obtained by the organisation for the community as a whole.

As a first step, PACS, TAPCMS and Sales and Processing Cooperative Societies which have the capability and are willing to take up the role of aggregators and provide value added services like pooling of agriculture produce, grading, cleaning, weighing, packing, labelling and transportation to warehouses/markets may be identified and encouraged to enter this activity in a major way.

These institutions would require training and employee skill enhancement to handle this role and therefore capacity building programmes should be taken up immediately. Further, augmenting of the available infrastructure may also be taken up on priority.

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As regards establishing such entities in areas not serviced by cooperative societies, while intervention efforts are necessary, the Committee does not favour setting up such entities across the state in a time bound manner as a government programme. Such organisations should be established in favourable locations, namely, where the local community is cohesive (like self help groups) or where NGOs are active, etc. Each such entity may be set up with a leading organisation (like a NGO, RRB, etc.) as a mentor.

Such an approach is essential, as the producer company has to act in the larger interest of its constituent farmers and should therefore be an outcome of considerable capacity building in the area. Moreover, in the initial phase, a guiding hand is necessary and an active mentor organisation would lend support in the formative stage.

Government may consider providing seed money for initial capital (in conjunction with the recently announced policy of Government of India) which can be deployed for training the community in managing such entities. Guidelines in strengthening such entities, namely, management practices, processes to be followed, sharing of the proceeds due to higher price realised, etc., may be evolved

for the benefit of producer companies.

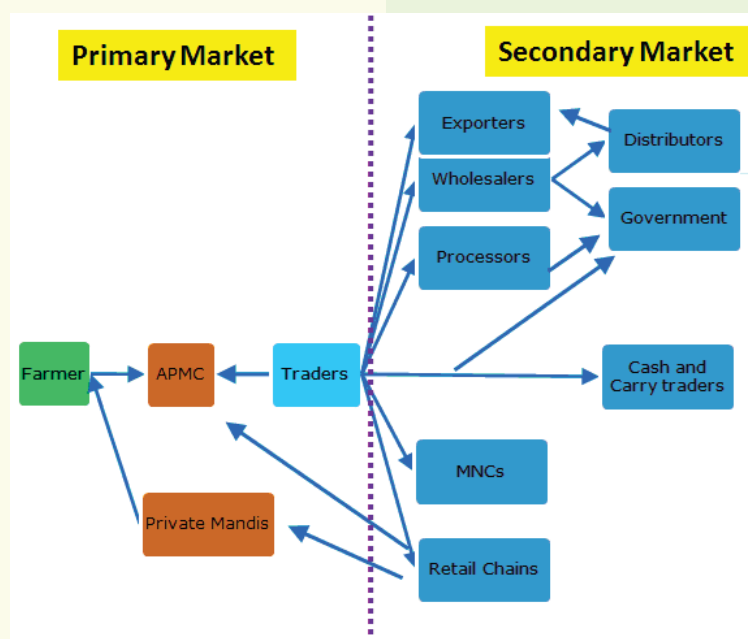
## 8.02 Secondary market development

Sale of the produce in the APMC market (or any private market) called the primary sale, is the beginning of the long journey of the commodity from the farm to the plate. It may be processed (like pulses, which are milled), stored and released later (like cold storage in case of chillies), undergo a change in form (like extraction of juices) or repacked (like for retail consumption). In this long chain, the commodity changes hands a few times – estimates vary from two sales to even five sales till the ultimate customer is reached. And needless to add, it is this chain that makes goods produced in one season available for consumption in another or for that matter, produced in one region to be consumed in another.

A schematic illustration of various participants in the market, with the primary and secondary markets distinguished may be seen below. It may be appreciated that in the commodity chain, the role of the participant depends on which side of the transaction he is at a certain point of time. For instance, the buyer in the APMC market could be the seller to a processor and so on.

*In this long chain, the commodity changes hands a few times – estimates vary from two sales to even five sales till the ultimate customer is reached. And needless to add, it is this chain that makes goods produced in one season available for consumption in another or for that matter, produced in one region to be consumed in another.*

## Markets: Spot - Future Integration



Strengthening the primary markets is necessary to support the producer. Critical to note that the secondary market casts its influence on the primary market through participants and any weakness or crisis in the secondary market would feed itself to the primary market. There are instances in the state where buyers in other states have reneged on their payment obligations, putting the seller (who is a buyer in the APMC market) to hardship. For a robust primary market, it is necessary to strengthen the secondary market, wherever demanded and feasible.

Secondary market development could encompass any or all of the following

- Providing a transparent national platform for sale of the commodity (or its variant) to other regions;
- Managing risks in such sales;
- Providing clearing and settlement services for such transactions;
- Extending funding through banks and financial services companies for storage of the produce;

- Developing procurement platforms for processors (raw material procurement), governments (for their midday meals programmes, hostels, etc.); and
- Logistics support.

This would involve an in depth understanding of the commodity value chain, reasons for reneging on contractual obligations, measures to overcome such difficulties balancing the interests of both the parties, etc. Such intervention cannot be conceived for all commodities and has to be selective, depending on a host of parameters. But the key point for consideration is that this is a critical area that has to be addressed, if the market in the state has to be robust and grow.

Secondary market development goes hand in hand with all risk mitigation systems in place (like clearing and settlement). It would be inevitable to have a fund to intervene in case of defaults to isolate the defaulters and avoid a cascading effect. It is therefore recommended that a Guarantee Fund be set up, through appropriate contributions from market participants. Suitable mechanisms for administering this fund may be devised.

### 8.03 Linking with derivative markets

Commodity exchanges are in operation in the country since 2003. Of the six exchanges that are in operation as on date, the National Commodity and Derivatives Exchange Limited has a predominant market share in agricultural commodities. Maize, turmeric, chana and chillies (though of a different variety) contracts are liquid in the exchange.

When APMC markets in the districts where these commodities are grown are brought online, then the farmer should be provided with a choice to sell in the APMC market (which is a spot market) or sell in the futures market in the exchange. Such an arrangement would also provide a hedge to the farmer who gets a loan against his produce in anticipation of better price in the days ahead.

The Forward Markets (Regulation) Act, 1952 is likely to be amended for wider participation by banks and mutual funds and for trading in new instruments like options. This would open up new vistas for farmers to hedge their price risk.

Between the spot market and the derivatives market, the world of OTC market's operate to serve various requirements of the market. OTC markets are popular in a few areas and/or in certain commodities. Central counter party clearing could reinvigorate the use of the OTC market to the benefit of all stakeholders. This can also provide price risk hedge for commodities where futures market is either not liquid or the delivery parameters (quality, delivery centre, etc.) are not suitable to the holder of the commodity.

*When APMC markets in the districts where these commodities are grown are brought online, then the farmer should be provided with a choice to sell in the APMC market (which is a spot market) or sell in the futures market in the exchange.*

### 8.04 Creation of infrastructure

Providing infrastructure in the precincts of the APMC market is the responsibility of the market committee. This could be warehouses for storage, weighing facilities, personal convenience facilities for farmers, buildings for market participants, etc. The key point to note is that all these are essential infrastructure for the functioning of markets as they are at present.

Markets as a constituent of the economy have to be forward looking and creation of infrastructure has to keep pace with, if not precede, such changes. This could be bulk storage facilities or elevator companies or any other ones that could emerge in future.

### 8.05 Regional markets

The recommendations in this report look at the state as the geographical area where the change has to be triggered. But a commodity is not bound by political boundaries. Each commodity has its own movement characteristics, depending on the area of production, the preferred trading location, areas of consumption, etc.

A case in point is turmeric farmers in Chamarajanagar district of the state, who rely upon traders in Erode in Tamil Nadu to sell their produce. Another example could be raisins in north Karnataka area, for which the market is just across the border in Maharashtra.

If transparency in the sale process and attendant principles recommended in this report has to be made a reality in such cases, these traders would have to be made a part of the market process in Karnataka. Such an initiative would call for considerable leg work in areas outside the state, for which dedicated teams are necessary.

As the recommendations in this report

are a precursor for a national market for agricultural commodities, intervention in this direction could give the state a head start.

### **8.06 Support for Minimum Support Price (MSP) operations**

Currently, MSP operations are dispersed with multiple agencies undertaking the responsibility, depending on the exigency of the situation. Each agency acts as per its internal processes. The major casualty of this is the quality of the procurement, which is reflected in the poor price realised when the procured quantity is disposed off.

An experiment in Gulbarga for MSP operations for Tur recently is revealing. Available infrastructure for quality testing, a strict control over identity verification of the producer, well documented storing and direct transfer of the procurement amount to the bank account of the farmer demonstrated that the procurement process can be considerably improved. Post procurement sale gave profits to the government. This initiative by the Tur Board

and the NSPOT can be institutionalized and the MSP operations made transparent.

With successful secondary market development the procured quantity can be sold through a transparent process, with the time of sale being decided the prevailing price of that point of time.

### **8.07 Capacity building**

Markets would get more sophisticated, with the entry of MNCs in course of time. Modern practices like forward contracts, hedging in derivative markets, etc., would become a necessity.

It is therefore essential to impart necessary skills to the producer, so that he can take informed decisions. While producer organisations could play a role, the need to have coordinated effort for stakeholder education cannot be under estimated. The need for capacity building has been elaborated in the next chapter.

Resources for capacity building can be mobilised by creating a fund for this purpose, with dedicated sources of contribution.



# Capacity Building for Stakeholders

Training and capacity building in agriculture assumed importance in wake of the Green Revolution. The new high yielding varieties required hand holding of farmers and so an elaborate Training and Visit mechanism was institutionalised. While pre harvest capacity building received importance, post-harvest activities, especially marketing of the produce received little attention.

Understanding quality parameters, preparing the produce for the market and appreciating price trends are a few essential skills that farmers must acquire. Besides, all stakeholders in the market (namely, farmers, traders, commission agents, warehouse service providers, assayers, market officials, etc.) should be exposed to the characteristics and complexities of the marketing system to make it more efficient.

## 9.01 Prevailing scenario

Presently, initiatives for capacity building for various stake holders including farmers, commission agents, traders and other participants in the market are very limited. These participants conduct themselves based on knowledge passed on from one generation to another and knowledge acquired from peers. Adequate training would help them blend acquired

knowledge with modern concepts and face the emerging realities in the market.

Market participants have to keep themselves abreast of new legislations like the Food Safety and Standards Act, 2006 and the Warehousing (Development and Regulation) Act, 2007, advances in technology, increasing competition, new practices like derivative trading, etc., to cope up with increasing competition. Therefore, various stakeholders in the value chain have to be trained and equipped for participation in the market and in adapting technology, new instruments, etc.

*Understanding quality parameters, preparing the produce for the market and appreciating price trends are a few essential skills that farmers must acquire.*

## 9.02 Capacity building areas

Capacity building is essential in practices and processes adopted in markets, opportunities and facilities available in APMC markets, duties and responsibilities of stakeholders, the legal environment, managing market infrastructure, determinants of demand and supply, price discovery, government intervention, marketing costs and margins, accessing and using market information

services, warehousing practices, negotiable warehouse receipt systems, transportation and packaging services, the benefits of use of branding, importance of assaying, contract farming and its provisions, availing benefits of crop insurance/ weather based insurance/different government schemes etc. Crop planning, good management practices, crop diversity, awareness on staggered planting, staggered harvesting, primary value addition etc.

### 9.03 Action plan

Existing agencies like Krishi Vigyan Kendras (KVKs), agricultural universities, cooperative societies, APMCs, Directorate of Agricultural Marketing, NGOs, state government departments, etc., have to work in tandem towards this end.

Agricultural universities in the state have inter-disciplinary expertise. The state can be divided into convenient zones and each zone allocated to a university to form farmer groups for training such groups. These universities may organise hobli level farmer groups and/or commodity specific sub-groups at least twice a year and train such groups, which can in turn train individual

farmers.

The Directorate of Agricultural Marketing has to standardize course structure and training material for each market participant in association with line department and Agricultural universities. APMCs/ PACS/ TAPCMS may build necessary expertise and wherewithal to train farmers visiting the market.

APMCs/PACS/TAPCMS to have orientation cum training centers at their premise for capacity building.

Innovative methods and display boards in market yards, warehouses and other prominent places for disseminating information to market participants may be provided for. Farmer associations at the hobli level may be provided a onetime financial assistance for initial motivation and support to start such associations.

*The Directorate of Agricultural Marketing has to standardize course structure and training material for each market participant in association with line department and Agricultural universities.*

## Re - imagining Regulation

The recommendations till now envisage a mixed market structure with participation from existing APMC markets and private players. This structure should foster healthy competition between APMC markets and private markets and offer a choice to the farmer.

The regulatory environment should be the same for both set of market participants. There should be no scope for regulatory arbitrage. The conduct of all participants should be under the watchful eye of an empowered regulator, with public interest being paramount.

This chapter recommends steps to strengthen the regulatory structure in the state.

### 10.01 Current Regulatory Environment

The Karnataka Agricultural Produce Marketing (Regulation and Development) Act, 1966 vests regulatory powers on the State Government, Director of Agricultural Marketing and the Market Committee of individual markets. Pertinent to note that providing of infrastructure and other developmental responsibilities and operating markets is also entrusted to the Director of Agricultural Marketing and the Market Committee of individual markets.

This dual responsibility, namely, developmental and regulatory is acceptable when government creates and operates markets. However, for attracting private initiative in this sector, it may be necessary to provide for a level playing field and therefore separation of developmental and regulatory roles is desirable.

### 10.02 Separation of Regulatory Functions

The Committee of State Ministers in-charge of Agriculture Marketing have recommended that regulatory functions and developmental functions may be separated for improving the marketing structure in the country.

This Committee after careful consideration recommends that a separate legislation to be called the Karnataka Agricultural Produce Marketing (Regulation) Act, may be enacted for creating a regulatory authority called the Karnataka Agricultural Produce Marketing Regulatory Commission (KAPMRC). The KAPMRC would be the licensing authority for establishing private markets, issue regulations pertaining to operating markets and these regulations would be applicable to APMC markets and private markets. It should have adequate authority for initiating disciplinary proceedings and other incidental matters.

*The Committee of State Ministers in-charge of Agriculture Marketing have recommended that regulatory functions and developmental functions may be separated for improving the marketing structure in the country.*

The Karnataka Agricultural Produce Marketing (Regulation and Development) Act, 1966 may then be renamed as the Karnataka Agricultural Produce Marketing (Development) Act, and would then deal with matters related to providing infrastructure, establishing market committees, operating markets and other related matters.

### 10.03 Interim Arrangement

The recommendations in the report touch upon various areas and multipronged action is necessary to achieve the desired market structure. Therefore, till such time the government accept the recommendation to separate regulation and development functions, certain interim arrangement is required, as other reform initiatives need not await this step.

The Committee is of opinion that the Karnataka Agricultural Produce Marketing

(Regulation and Development) Act, 1966 and the rules there under may be amended to commence implementing the reforms suggested.

Typically, amending section 72 of the Act to issue a licence to be a market participant without insisting upon having a local address and issue a licence based on bank guarantee and issuing single licence to trade across the state, amending section 65 of the Act for rationalizing the market fee in line with these recommendations are some amendments that come to mind immediately. Moreover, a group in the Directorate may exclusively look into this and come up with necessary details. Similarly, coming up a notification to facilitate warehouse based sales by declaring accredited warehouses as sub yards or sub market yards and other measures may be initiated.

*The KAPMRC would be the licensing authority for establishing private markets, issue regulations pertaining to operating markets and these regulations would be applicable to APMC markets and private markets.*

## Summary of Recommendations

### 11.01 Reforms in the Mother market

1. Major markets to be brought under the comprehensive electronic auction system in a time bound manner.
2. Markets that cannot afford connectivity charges to be covered using a broad band connection or data cards.
3. Test parameters for every commodity and the testing process should be decided in consultation with all participants and well publicised. While the agency selected for establishing testing infrastructure would bring in the professional expertise needed, the Directorate of Agricultural Marketing should prescribe necessary control procedures for participants to develop confidence in the system.
4. Through a transparent process invite private companies with adequate experience in sampling and assaying to establish sampling, assaying and grading facilities in the state on a BOOT model, so that such facilities are made available within the next twelve months in key markets. Other markets may follow within the next two years.
5. Farmers who register with a market in their vicinity to be provided with price information on five commodities of their choice in markets in a radius of 50kms from the main market of the taluks where they reside.
6. Weighing of produce to be integrated with the auction process, so that recording of the weight of the produce is done against the respective lot number without any manual intervention and the amount payable/receivable communicated to the buyer/seller as soon as the weight is captured in the system.
7. Generation of sales invoices by commission agents to be automated, market participants to be provided with details through a web interface, transaction details and arrivals to be reconciled with sales and dispatches and a suitable MIS to be built for the Directorate of Agricultural Marketing.
8. Systems to be set up for making payment to farmers directly by the APMC market after collecting the same from the buyer/ commission agent.
9. The Directorate of Agricultural Marketing to convene a meeting of leading public and private sector commercial banks to ensure that cash is easily available to the farmer, after the sales proceeds are credited to his account.



10. Market fee accounting, collection, reconciliation and filing of returns to be automated.
11. Government to secure the source code of the comprehensive electronic auction system and replicate daily trade data in a separate infrastructure facility.
12. The Directorate of Agricultural Marketing to conclude an agreement with NSPOT specifying the rights, obligations and duties of both the parties for the smooth operation of the market system, which amongst others may also dwell upon data security and privacy matters.

### 11.02 Integrating Markets

1. Markets where the comprehensive electronic auction system is in operation to be integrated, depending on the commodity traded. Participation norms by buyers, licensing requirements and other procedures to be specified by the Directorate of agriculture marketing.
2. Every commodity transacted in multiple markets to be mapped to determine the markets that it can be integrated with. Ease of access of various markets, distance with respect to a reference location, etc., to be mapped to facilitate remote buyer participation.
3. The Directorate of Agriculture Marketing to specify norms for clearing and settlement, obligation of the commission agent in the originating market for delivery, service charges that the commission agent can levy, warehousing charges, the number of days for taking delivery, dispute resolution, protocol for second quality testing, etc.

4. Government to specify that the originating market may retain the market fee collected.

### 11.03 Creating Virtual Markets

1. Declaration of accredited warehouses as market sub yards or sub market yards as the case may be by the Director of Agricultural Marketing
2. Eligibility conditions for operating warehouses, their responsibilities, quality testing facilities, storage charges and a host of other operating guidelines to be specified.
3. Warehouses of the KSWC and TAPCMS to be selected to start off warehouse based sales, if necessary through a collateral manager. These warehouses should initiate action for being accredited by appropriate authority.
4. Invite private companies with adequate experience in warehousing to act as Warehouse Service Providers in the state through a transparent process.
5. The Directorate of Agricultural Marketing to assess the availability of stock accounting system from NSPOT and decide on an appropriate system for operationalising warehouse based sales.
6. The Directorate of Agricultural Marketing to specify norms for clearing and settlement, obligation of the commission agent in the originating market for delivery, service charges that the commission agent can levy, warehousing charges, the number of days for taking delivery, dispute resolution, protocol for second quality testing, etc.
7. The process for marking of lien, legal formalities for paying off the loan

amount to the bank and the balance to the seller, etc, to be specified.

8. A workshop of leading banks in the state to be convened to develop a protocol for commodity funding.
9. Sensitizing warehouse service providers and other collateral managers about this initiative to progressively cover all commodities across the state.
10. Intensive farmer education to be taken up to make the producer aware of the risk of holding on to the produce before advocating warehouse based funding.

#### 11.04 Private markets

1. Director of Agricultural Marketing to take necessary steps for exempting market fee payable by private markets (Spot Exchanges, direct purchase centers, contract farming arrangements).
2. Director of Agricultural Marketing to take necessary steps for regulating farm gate procurement.
3. Guidelines to be issued for all processors who buy from directly from the producer to have a Clearing and Settlement system similar to APMC markets.
4. Guidelines to be issued for organised private markets to provide an auction system, facilities similar to the one at the APMC markets, so that their auction process, clearing & settlement system and all other processes are at par with the APMC market.
5. Price data from private markets to be included for price dissemination.

#### 11.05 Market Development

1. PACS, TAPCMS and Sales and Processing Cooperative Societies which have the capability and are willing to take up the role of aggregators and

provide value added services like pooling of agriculture produce, grading, cleaning, weighing, packing labelling and transportation to warehouses/markets may be identified.

2. Capacity building programmes for these organisations to be taken up immediately along with augmenting of the available infrastructure.
3. Government to formulate a policy on providing seed money for initial capital which can be deployed for training the community in managing such entities.
4. Guidelines for strengthening such entities, namely, management practices, processes to be followed, sharing of the proceeds due to higher price realised, etc., may be evolved.
5. Creation of a Guarantee Fund with appropriate contributions from market participants for risk management in markets.
6. Formulation of guidelines for MSP operations using the comprehensive electronic auction platform and warehouses and for disposing off the procured goods.

#### 11.06 Capacity Building

1. The Directorate of Agricultural Marketing to demarcate convenient zones and assign to Agricultural universities to take up training and capacity building programmes.
2. Agricultural universities to organize hobli level farmer groups and/or commodity specific sub-groups and train such groups, which can in turn train individual farmers.
3. The Directorate of Agricultural Marketing has to standardize course structure and training material for

each market participant in association with line department and Agricultural universities.

4. Guidelines to be issued to have orientation cum training centers at APMCs/ PACS/TAPCMS for capacity building for farmers visiting the market.
5. Display boards to be designed innovatively for disseminating information in market yards, warehouses and other prominent places to market participants.
6. Providing of financial assistance for initial motivation and support to farmer groups imparting training and capacity building.

#### **11.07 Re-imagining regulation**

1. A separate legislation to be called the Karnataka Agricultural Produce

Marketing (Regulation) Act, to be enacted for creating a regulatory authority.

2. The Karnataka Agricultural Produce Marketing (Regulation and Development) Act, 1966 to be renamed as the Karnataka Agricultural Produce Marketing (Development) Act, and to deal with matters related to market operations and infrastructure.
3. Interim arrangements for amending section 72 of the Act to issue a licence to be a market participant without insisting upon having a local address and issue a licence based on bank guarantee and issuing single licence to trade across the state, amending section 65 of the Act for rationalizing the market fee in line with these recommendations.

## PROCEEDINGS OF THE GOVERNMENT OF KARNATAKA

Subject: Formation of an Agricultural Marketing Reforms Committee to recommend reforms in Agricultural Marketing and the road map for the implementation of the reforms.

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### PREAMBLE

Agricultural Marketing in the state has made notable progress but many challenges still remain. The limitations and constraints in the present marketing systems need to be addressed in a comprehensive manner. Reforms to provide a barrier free market system for the benefit of farmers and consumers while making participation of all other market participants sustainable, to ensure market efficiency and competitiveness, to enhance transparency in all marketing operations, to promote grading, standardization, packaging, and quality certification of agricultural produce is imperative. There is a need for the Government and financial institutions to support such marketing reforms through technical, managerial and financial assistance.

The Advances made in the field of Information Technology needs to be harnessed to improve efficiency and transparency in the system. Technology should be the backbone of reforms in Agriculture marketing to establish networked markets, to ensure efficient price discovery which accrue to the benefit of the farmers. After examining the matter Government has decided to constitute the committee as under.

Government Order No: CO 98 MRE 2013, Bangalore Dated: 27/03/2013

Accordingly, Government are now pleased to constitute a committee consisting of the following members to develop a comprehensive roadmap for reforms along with identification of necessary interventions in Agricultural Marketing reforms;-

- |   |                        |
|---|------------------------|
| 1. Sri. R. Manoj, Additional Secretary, Co-operation Department                                     | - Chairman             |
| 2. Sri. Shiv Prasad P.R. Managing Director, KSWC  | - Member               |
| 3. Sri. Gopal Naik, Professor, IIMB, Bangalore  | - Member               |
| 4. Sri. Jayaram M.S. Professor, UAS Bangalore   | - Member               |
| 5. Sri. Chamaraju R.N, Additional Director (Administration),<br>Department of Agriculture Marketing | - Member<br>(Convener) |
| 6. Sri. Gopalaiah B.K. , Chief General Manager , KSAMB, Bangalore                                   | - Member               |
| 7. Sri. H.S. Nagarajaiah, Joint Registrar of Co-operative Societies, Bangalore.                     | - Member               |

The committee members shall have deliberations amongst themselves, consultation with stakeholders and culminate in a larger workshop and finalise its report and recommendations. The committee should submit its report before 4th May 2013.

By Order and in the name of  
Governor of Karnataka

-sd-

(E. PAPANNA)

Under Secretary to Government  
Co-operation Department

To:

1. Accountant General (A & E), Karnataka, Bangalore.
2. Sri. R. Manoj, IFS, Additional Secretary to Government , Co-operation Department.
3. The Director, Department of Agricultural Marketing, No:16, 2nd Raj Bhavan Road, Bangalore.
4. The Managing Director, Karnataka State Warehousing Corporation, No:43, Primrose Road, Bangalore-52.
5. The Managing Director, Karnataka State Agricultural Marketing Board, No:16, 2nd Raj Bhavan Road, Bangalore-01.
6. Sri. Chamaraju R.N, Additional Director (Administration), Department of Agricultural Marketing, No:16, 2nd Raj Bhavan Road, Bangalore-01.
7. Sri. Gopalaiah B.K. Chief General Manager, Karnataka State Agricultural Marketing Board, Bangalore-01.
8. Sri. Jayaram M.S. Professor, Gandhi Krishivignana Kendra, Bellary Road, UAS, Bangalore-65.
9. Sri. Gopal Naik, Professor, IIMB. Bannerghatta Road, Bilekahalli, Bangalore-76.
10. Sri. H.S. Nagarajaiah, Joint Registrar of Co-operative Societies, No:70, Jayanivasa, Shankaramata Road, Bangalore-25.
11. PS to Minister for Agricultural Marketing, Haj and Wakf, VikasaSoudha.
12. PS to Principal Secretary to Government, Co-operation.
13. Guard file Spare copies.



## Annexure II

LIST OF APMC MAIN MARKETS AND SUB MARKETS IN KARNATAKA				
Sl.No.	Division/District	Main Markets	Sub Markets	Total
<b>Bangalore Division</b>				
1	Bangalore (U)	2	7	9
2	Bangalore (R)	2	4	6
3	Ramanagar	3	5	8
4	Chickkaballapura	4	8	12
5	Chitradurga	5	9	14
6	Davanagere	6	8	14
7	Kolar	5	7	12
8	Shimoga	7	15	22
9	Tumkur	9	26	35
	<b>Division Total</b>	<b>43</b>	<b>89</b>	<b>132</b>
<b>Mysore Division</b>				
10	Mysore	7	8	15
11	Chamarajnagar	3	4	7
12	Dakshina Kannada	5	10	15
13	Udupi	3	3	6
14	Kodagu	3	4	7
15	Chikkamagalur	5	10	15
16	Hassan	6	17	23
17	Mandya	6	11	17
	<b>Division Total</b>	<b>38</b>	<b>67</b>	<b>105</b>
<b>Belgaum Division</b>				
18	Belgaum	10	38	48
19	Bijapur	4	13	17
20	Bagalkote	6	14	20
21	Dharwar	5	13	18
22	Gadag	5	17	22
23	Haveri	7	12	19
24	Uttara Kannada	8	20	28
	<b>Division Total</b>	<b>45</b>	<b>127</b>	<b>172</b>
<b>Gulbarga Division</b>				
25	GULBARGA	5	14	19
26	YADGIR	3	8	11
27	BELLARY	6	15	21
28	BIDAR	5	9	14
29	RAICHUR	5	11	16
30	KOPPAL	5	14	19
	<b>Division Total</b>	<b>29</b>	<b>71</b>	<b>100</b>
	<b>STATE TOTAL</b>	<b>155</b>	<b>354</b>	<b>509</b>

# Annexure III

## Notified Commodities as per KAPM(R&D) Act 1966

Sl.No	I. Animal Husbandry
1	Cattle
2	Goats
3	Sheep
II Fibres	
4	Cotton(Ginned and Un-ginned)
III. Flowers	
5	All Flowers
IV Food Crops	
6	Bajra
7	Jau
8	Jowar
9	Kambu
10	Maize
11	Navane
12	Paddy
13	Ragi
14	Rice
15	Savey
16	Wheat
V. Forest Produce	
17	Antwala
18	Bamboo
19	Canes
20	Hippe Seeds
21	Honge Seeds
22	Neem Seeds
23	Soap Nuts
24	Tamarind
25	Tamarind Seeds
VI. Fruits	
26	Apple
27	Banana

28	Borehannu
29	Citrus Fruits
30	Chakkothaihannu
31	Guava
32	Grapes
33	Jack Fruit
34	Jamun
35	Lemon
36	Kharbuja
37	Mango
38	Mosumbi
39	Marasebu
40	Pine apple
41	Pappaya
42	Pomegranate
43	Sapota
44	Siddota
45	Orange
46	Watermelon
VII. Oil Seeds	
47	Groundnut (Shelled and Unshelled)
48	Castor Seeds
49	Cotton seeds
50	Linseed
51	Mustard
52	Niger seeds
53	Safflower
54	Seasamum
55	Sunflower seeds
56	Soyabean
VIII. Plantation Crops and Spices	
57	Arecanut
58	Cashewnut

## Notified Commodities as per KAPM(R&D) Act 1966

59	Chillies(Dry)
60	Coconut
61	Copra
62	Coriander
63	Garlic
64	Ginger
65	Methi
66	Pepper
67	Turmeric
<b>IX. Pulses</b>	
68	Alsande(Cowpea)(Whole & Split)
69	Avare(Whole & Split)
70	Bengalgram(Whole & Split)
71	Blackgram (Whole & Split)
72	Bullar (Whole & Split)
73	Greengram (Whole & Split)
74	Horse Gram
75	Lakh (Whole & Split)
76	Matki (Whole & Split)

77	Masoor (whole & Split)
78	Peas
79	Tur (Whole & Split)
80	Moath (Whole & Split)
<b>X. Vegetables</b>	
81	All Vegetables [except Gherkin(including leafy)]
82	Gourds
83	Green Chillies
84	Onion
85	Potato
86	Suvarnagadde
87	Sweet Potato
88	Tomato
<b>XII Other Products</b>	
89	Betel leaves
90	Jaggery
91	Seegu
92	Dry grapes

## Annexure IV

Major Commodities and Markets of Karnataka		
Sl. No.	Name of the Commodity	Name of the Major Markets
1	Paddy	Gangavati, Bhadravati, Davanagere, K.R. Nagar, Raichur, Shimoga, Sindhanur, Siruguppa,
2	Ragi	Piriyapatna, Chintamani, Huliya, Bengalur, Kadur, Mysore, Hassan, Tumkur, Arsikere, Nagamangala.
3	Maize	Bagalkot, Bijapur, Davanagere, Hassan, Honnali, Shikaripura, Shimoga, Ranebenur.
4	Jowar	Bijapura, Gadag, Bagalkot, Gulbarga
5	Tur	Gulbarga, Bidar, Raichur, Yadgiri, Talikote,
6	Bengalgram	Gadag, Gulbarga, Bagalkot, Yadgiri, Talikote.
7	Greengram	Dharwar, Gadag, Gulbarga, Hubli, Mysore.
8	Groundnut	Bellary, Bijapura, Challakere, Chitradurga, Davanagere, Koppal, Raichur, Ramdurga, Haveri.
9	Sunflower	Bagalkot, Bellary, Gadag, Chitradurga, Challekere, Yadgir, Gulbarga, Ranebenur,
10	Soyabean	Bailahongala, Hubli, Kalgatagi, Dharwad, Aurad, Sankeshwar.
11	Ball Copra	Tiptur, Arsikere, Turuvekere, Gubbi, Huliya, Channarayapatna.
12	Areca nut	Shimoga, Sagar, Sirsi, Siddapura, Mangalore, Puttur, Tirthahalli, Chitradurga (Bhimasamudra)
13	Cashewnut	Puttur, Sulaya, Mangalore, Udupi, Belthangadi, Karkala.
14	Coconut	Chamarajnagar, Arsikere, Tiptur, Channarayapatna, Chickanayakanahalli, Tur, Bengaluru, Bhadravathi, Chikaballapur, Hosdurga, Hiriya, Sira, Kunigal, Nagamangala, K.R.Pete, K.R.Nagar, Kadur, Kundapura, Gunglupete, Sulya, Karkala
15	Drychillies	Byadagi, Hubli, Gadag, Mysore.
16	Turmeric	Chamarajnagar.
17	Jaggery	Chamarajnagar, Mandya, Mahalingapura, Bhadravathi.
18	Cotton	Bellary, Bijapur, Chitradurga, Davanagere, Gadag, Hubli, Raichur, Savadathi, Bailahongal, Santhesargur, Nargund, Dharwar, Ranebenur, Havari.
19	Tamarind	Tumkur, Mysore, Chintamani,
20	Onion	Bengaluru, Bijapura, Hubli, Gadag, Raichur, Belgaum, Challakere, Davanagere, Mysore
21	Potato	Bengaluru, Hubli, Hassan, Dharwad, Chikaballapur,
22	Tomato	Kolar, Chamarajnagar, Mysore, Davanagere, Bengaluru, Chintamani, Srinivasapura, Mulbagal, Honnali, Nagamangala, Chimagaluru,
23	Mango	Srinivasapura, Bengaluru, Ramanagara, Channapatna, Hangal, Dharwad, Belgaum, Mysore, Shimoga, Chikaballapur, Mulbagal, Shikaripura,
24	Pomegranate	Bengaluru, Bijapura, Koppala, Kustagi.
25	Banana	Hospet, Bengaluru, Channapatna, Sirsi, Kanakapura,

# Annexure V

Annual arrivals and value of agricultural commodities in the APMC's of Karnataka during 2009-10 To 2011-12							
	( Arrivals in Tonnes )				( Value in Rs. Lakhs )		
Sl. No.	Commodity	2009-10		2010-11		2011-12	
		Arrivals	Value	Arrivals	Value	Arrivals	Value
I Food Crops							
1	Bajra	80489	6384	81876	7110	83606	8662
2	Jau						
3	Jowar	115972	10616	67854	9026	60860	11948
4	Kambu						
5	Maize	2108789	172814	2374060	220022	2339964	247581
6	Navane	10240	1219	8516	1111	7024	943
7	Paddy	2397117	287823	3165601	348681	3217662	372591
8	Ragi	75224	6779	91452	8026	106945	9876
9	Rice	634760	162108	658854	141537	671669	151300
10	Savey	13020	1784	9477	1894	7845	1486
11	Wheat	169438	24855	177567	26619	184745	27440
		5605048	674381	6635256	764025	6680320	831826
II Pulses							
12	Alsande	24222	5669	24803	6922	25818	6857
13	Avare	3289	883	2306	588	1937	498
14	Bengal Gram	183430	39634	167786	37760	144643	47964
15	Black Gram	9993	4243	21049	7792	18159	6636
16	Bullar						
17	Green Gram	64200	29320	125457	54965	126532	51914
18	Horse Gram	14031	2677	20697	4066	21407	2923
19	Lakh						
20	Matki	50	19	65	29	92	34
21	Masuri Dhal	4142	2206	6260	2552	6830	2583
22	Peas	13492	3598	13627	3221	11627	3233
23	Tur	217386	102293	427849	162954	345546	123086
24	Moath			540	367		
		534235	190543	810439	281216	702591	245727



**Annual arrivals and value of agricultural commodities in the APMC's of  
Karnataka during 2009-10 to 2011-12**

Sl. No.	Commodity	2009-10		2010-11		2011-12	
		Arrivals	Value	Arrivals	Value	Arrivals	Value
III Oil Seeds							
25	Groundnut (Shelled	232727	58547	231355	71721	227714	90234
	& Unshelled)	3289	1331	8378	3636	5653	3022
26	Caster	180	38	1261	265	743	237
27	Cotton Seeds	66	11	82	46	2187	306
28	Linseed	29	7	64	13	52	12
29	Mustard	2358	706	2794	792	2538	818
30	Niger	199	85	699	236	1402	450
31	Safflower	7259	1562	5303	1073	5070	1274
32	Sesamum	18845	7927	27969	9982	15574	6495
33	Sunflower	15596	32336	99955	27418	91238	26931
34	Soyabean	36196	7758	49343	10560	60126	13516
		316743	110308	427202	125743	412298	143296
IV Plantation Crops & Spices							
35	Arecanut	216430	178710	218871	196295	218762	237670
36	Cashwenut	7461	3262	8512	4269	16587	10306
37	Chillies (Dry)	61999	33110	65016	55376	89966	58668
38	Copra	76332	33497	92547	43509	95454	61203
	Copra Koutu	22865	4705	33135	9464	38906	15353
39	Coriander	12772	6527	12594	5223	14191	7139
40	Garlic	49756	21242	37379	20096	47950	17414
41	Ginger	1770	1424	5575	4066	20468	9914
42	Methi	1801	610	2026	647	1698	510
43	Pepper	9283	8657	7599	9338	8145	17150
44	Turmeric	2004	1195	3658	4185	9826	5192
		462472	292938	486911	352468	561954	440520
V Vegetables							
45	All Vegetables	2102294	206663	2044647	249013	2674299	217238
46	Gourds	7386	70	9391	797	9259	873
47	Green Chillies	24070	1928	24482	2439	23002	2490
48	Onion	929107	93954	951586	143539	1058555	94685
49	Potato	364751	41414	433508	36428	491309	44717

**Annual arrivals and value of agricultural commodities in the APMC's of  
Karnataka during 2009-10 to 2011-12**

Sl. No.	Commodity	2009-10		2010-11		2011-12	
		Arrivals	Value	Arrivals	Value	Arrivals	Value
50	Suvarnagadde	2346	259	2062	238	1941	244
51	Sweet Potato	35514	1018	8436	236	28290	1074
52	Tomato	33823	13261	301021	18923	317785	18076
		3499290	358567	3775133	451614	4604440	379397
<b>VI Fruits</b>							
53	Apple	11182	5816	14327	7315	45353	25543
54	Banana	57565	8874	66683	11141	46736	6364
55	Borehannu	3086	199	2410	212	2090	115
56	Citrus Fruits						
57	Chakkothahannu						
58	Gauva	360	8	347	43	337	55
59	Grapes	6402	883	10657	1674	9289	1500
60	Jack Fruit	1089	15	890	21	675	21
61	Jamun						
62	Lemon	22084	2010	34176	2274	20224	1492
63	Karbuja	2867	341	2871	458	9507	719
64	Mango	54330	5142	42282	3618	24379	2064
65	Musambi	18232	2091	28171	3990	51631	5007
66	Marasebu	61	3	1	0	420	45
67	Pinapple	3674	281	4469	404	7150	836
68	Pappaya	13386	340	8112	276	7040	332
69	Pomegrante	9390	2012	9603	2350	11299	2296
70	Sapota	2642	361	2880	442	1589	222
71	Siddota						
72	Orange	5488	867	5881	1006	32467	4685
73	Watermelon	19692	918	16004	1014	20314	1160
		231531	30163	249765	36239	290498	52454
<b>Fibres</b>							
74	Cotton	368918	109698	480610	225881	456945	181607
		368918	109698	480610	225881	456945	181607

**Annual arrivals and value of agricultural commodities in the APMC's of  
Karnataka during 2009-10 to 2011-12**

Sl. No.	Commodity	2009-10		2010-11		2011-12	
		Arrivals	Value	Arrivals	Value	Arrivals	Value
VIII Forest Produce							
75	Antwala	2149	196	1836	178	2604	187
76	Bamboo	0	1267	0	298	0	1
77	Canes	0	0	0	1	0	0
78	Hippe Seeds	97	5	64	9	18	3
79	Honge Seeds	1125	158	1862	218	2068	383
80	Neem Seeds	5912	528	4650	482	8240	830
81	Soap nuts	9598	2124	7844	949	5809	1143
82	Tamrind	22288	6997	23642	8934	19990	9811
83	Tamrind Seed	10751	665	10594	1001	10867	1175
		51920	11940	50491	12070	49597	13532
IX Other Products							
84	Betel leaves	28927	726	35369	908	6524	921
85	Jaggery	191969	48373	192005	42705	202362	47253
86	Seegu	19754	798	17853	893	24153	1514
87	Dry Grapes					235	192
		240650	49897	245227	44506	233273	49879
	Total I - IX	11310806	1828436	13161035	2293762	13991916	2338238
X Animal Husbandry							
88	Cattle (in No.s)	442261	55663	419546	56405	488746	75466
89	Goats (in No.s)	710193	20389	666260	21284	766711	24188
90	Sheep (in No.s)	940561	27382	862131	23973	1245293	47940
		2093015	103434	1947937	101662	2500750	147595
XI 91	Coconut	336968430	14351	499429751	24451	531734754	33014
	Total of X - XI	339061445	117785	501377688	126114	534235504	180608
	State Total I - XI Value		1946221		2419875		2518846

# Annexure VI

Statement Showing The Details Of Market Fee Collected By The APMC's						
During Year 2007-08 To 2011-12.						
Rs. In Lakhs.						
Districts & Apmc Names	2007-08	2008-09	2009-10	2010-11	2011-12	
<b>Bangalore (U) Dist</b>						
1 Bangalore	1655.14	1611.70	1895.67	2307.54	2075.46	
2 Bangalore (Veg)	317.57	295.12	468.49	570.09	660.50	
District Total	1972.71	1906.82	2364.16	2877.63	2735.96	
<b>Bangalore (R) Dist.</b>						
3 Doddaballapur	137.86	247.53	290.63	331.14	163.90	
4 Hosakote					86.99	
District Total	137.86	247.53	290.63	331.14	250.89	
<b>Ramanagaram Dist.</b>						
5 Channapatna	17.31	18.67	24.73	35.08	35.05	
6 Kanakapura	6.20	4.07	7.16	13.66	17.53	
7 Ramnagarm	20.25	22.11	30.51	47.70	50.31	
District Total	43.76	44.85	62.40	96.44	102.89	
<b>Chickballapur Dist.</b>						
8 Chintamani	27.35	25.93	32.41	52.42	62.37	
9 Gouribidnur	26.66	19.74	45.60	102.04	163.80	
10 Chickballapur	29.65	34.61	43.64	55.28	77.44	
11 Bagepalli	16.01	17.08	16.37	34.21	45.89	
District Total	99.67	97.36	138.02	243.95	349.50	
<b>Chitradurga Dist.</b>						
12 Chitradurga	332.68	397.55	510.92	616.12	619.37	
13 Challakere	254.67	123.09	170.07	195.03	191.14	
14 Hiriyur	43.47	57.18	23.87	52.76	152.78	
15 Hosadurga	107.58	105.00	153.24	146.35	113.33	
16 Hollalkere						
District Total	738.40	682.82	858.10	1010.26	1076.62	
<b>Davangere Dist.</b>						
17 Davanagere	355.32	426.89	604.44	675.90	683.26	
18 Harihara	87.37	100.09	182.63	223.20	163.27	
19 Channagiri	173.01	166.96	288.70	243.15	317.08	
20 Honnali	73.44	81.34	107.02	155.33	159.67	
21 Harapanahalli	12.81	20.19	54.20	72.43	70.57	
22 Jagalur	11.12	15.22	29.49	39.43	41.03	
District Total	713.07	810.69	1266.48	1409.44	1434.88	
<b>Kolar Dist.</b>						
23 Kolar	78.08	61.89	81.63	113.61	109.30	
24 Bangarpet	265.34	159.50	165.94	169.41	251.32	

## Statement Showing The Details Of Market Fee Collected By The APMC's

During Year 2007-08 To 2011-12.

Rs. In Lakhs.

Districts & Apmc Names		2007-08	2008-09	2009-10	2010-11	2011-12
26	Mulbagal	16.85	15.07	17.33	23.98	23.84
27	Srinivasapur	31.44	20.00	60.60	46.96	65.47
	District Total	427.62	303.86	380.87	411.23	482.37
<b>Shimoga Dist.</b>						
28	Shimoga	731.69	880.78	1153.87	1247.53	1322.42
29	Sagar	177.66	192.50	305.54	370.65	300.09
30	Shikaripur	67.23	92.55	152.23	225.89	237.57
31	Bhadravathi	124.79	151.12	191.98	274.69	303.05
32	Hosanagar				15.23	89.04
33	Tirthahalli				27.32	107.15
34	Sorabha				17.66	82.44
	District Total	1101.37	1316.95	1803.62	2178.97	2441.76
<b>Tumkur Dist.</b>						
35	Tumkur	225.62	323.97	416.47	379.60	372.08
36	Gubbi	46.82	46.05	46.48	37.13	61.42
37	Huliyar	34.26	36.87	54.56	75.70	68.05
38	Madhugiri	15.46	12.69	19.16	20.92	18.07
39	Pavagada	28.14	18.79	16.23	30.31	39.32
40	Sira	66.26	61.37	56.36	65.46	59.31
41	Tiptur	151.26	193.18	366.33	538.30	764.13
42	Turuvekere	33.16	32.51	38.96	42.37	57.51
43	Kunigal	5.73	11.71	12.94	22.11	23.49
	District Total	606.71	737.14	1027.49	1211.90	1463.38
	Division Total	5841.17	6148.02	8191.77	9770.96	10338.25
<b>Mysore Division</b>						
<b>Chickamagalur Dist</b>						
44	Chickamagalur	46.45	52.88	68.22	105.39	79.52
45	Tarikere	55.38	69.44	80.73	109.66	122.82
46	Kadur	74.32	87.56	95.75	117.52	151.57
47	Mudigere	27.13	23.99	27.33	28.67	32.34
48	Sringeri	34.99	40.39	60.53	51.46	55.69
	District Total	238.27	274.26	332.56	412.70	441.94
<b>Coorg Dist.</b>						
49	Madikeri	20.38	18.42	20.34	20.63	21.83
50	Gonikoppal	71.39	93.87	109.54	112.30	131.72
51	Somwarpet	45.02	70.39	100.53	135.46	113.72
	District Total	136.79	182.68	230.41	268.39	267.27



## Statement Showing The Details Of Market Fee Collected By The APMC's

During Year 2007-08 To 2011-12.

Rs. In Lakhs.

Districts & Apmc Names		2007-08	2008-09	2009-10	2010-11	2011-12
<b>Hassan Dist.</b>						
52	Hassan	122.04	147.82	250.50	367.22	411.30
53	C.r.patana	37.59	36.52	41.25	51.26	75.83
54	Arsikere	150.03	124.41	167.38	210.39	344.53
55	Holenarsipur	20.56	32.34	54.47	80.79	112.50
56	Sakleshpur	24.62	31.41	41.47	47.68	50.00
57	Belur	27.00	33.32	54.44	86.46	104.78
	District Total	381.84	405.82	609.51	843.80	1098.94
<b>Mandya Dist.</b>						
58	Mandya	172.42	261.53	517.88	422.28	437.20
59	Maddur	54.68	82.66	101.18	131.74	165.26
60	K.r.pet	23.28	2.91	25.39	37.36	50.10
61	Nagamangala	32.44	33.24	43.63	63.82	63.81
62	Pandavapura	10.51	14.03	22.75	24.94	33.87
63	Srirangapatna	24.38	33.34	34.28	42.50	28.68
	District Total	317.71	427.71	745.11	722.64	778.92
<b>Mysore Dist.</b>						
64	Mysore	256.51	319.68	424.65	462.75	513.20
65	Hunsur	46.38	56.15	52.21	45.82	71.87
66	K.r.nagar	44.02	47.37	64.64	84.16	84.83
67	Nanjangud	38.21	56.80	94.76	129.96	124.91
68	Santhe Sargur	31.41	46.47	77.69	142.67	141.97
69	T.narsipur	89.14	114.20	150.46	189.65	161.30
70	Periyapatna	33.33	44.59	49.93	68.03	89.39
	District Total	539.00	685.26	914.34	1123.04	1187.47
<b>Chamrajanagar Dist</b>						
71	C.R.Nagar	35.76	57.58	52.02	56.43	75.30
72	Kollegal	27.60	34.72	47.11	50.73	60.02
73	Gundlupet	54.01	55.07	50.26	95.38	130.67
	District Total	117.37	147.37	149.39	202.54	265.99
<b>South Canara Dist.</b>						
74	Mangalore	258.53	335.24	382.78	397.88	435.64
75	Puttur	86.51	175.71	183.51	200.95	218.91
76	Sulya	50.40	87.83	101.46	109.85	151.38
77	Belthangadi	32.42	44.84	56.45	70.31	75.06
78	Bantwala	48.08	124.18	139.25	135.13	173.46
	District Total	475.94	767.80	863.45	914.12	1054.45

## Statement Showing The Details Of Market Fee Collected By The APMC's

During Year 2007-08 To 2011-12.

Rs. In Lakhs.

Districts & Apmc Names		2007-08	2008-09	2009-10	2010-11	2011-12
<b>Udupi Dist.</b>						
79	Udupi	29.08	29.98	47.49	59.50	64.32
80	Karkala	43.57	62.44	78.71	121.29	150.81
81	Kundapur	28.64	36.60	42.21	53.72	67.84
	District Total	101.29	129.02	168.41	234.51	282.97
	Division Total	2308.21	3019.92	4013.18	4721.74	5377.95
<b>Belgaum Division</b>						
82	Belgaum	168.44	159.30	222.93	219.83	227.42
83	Bailahongal	99.58	125.76	146.68	234.22	269.81
84	Gokak	86.06	123.89	179.27	234.00	256.63
85	Athani	18.53	13.58	10.61	16.13	26.99
86	Kudchi	4.78	5.49	4.71	4.22	7.09
87	Nandagad	6.97	10.99	9.09	9.29	8.84
88	Nippani	12.31	15.07	13.78	13.99	11.00
89	Ramdurga	37.32	48.56	67.81	69.77	82.63
90	Savadatti	105.86	123.36	203.49	279.07	224.83
91	Sankeshwar	45.49	20.59	20.81	21.95	31.36
	District Total	585.34	646.59	879.18	1102.47	1146.60
<b>Uttar Kannda</b>						
92	Haliyala	27.25	40.13	49.36	61.04	40.28
93	Kumta	50.17	54.24	57.64	62.66	117.04
94	Honnavaara	15.41	15.74	15.11	16.47	25.01
95	Siddapura	40.20	44.80	61.98	63.76	102.82
96	Yellapura	68.82	85.13	118.92	140.57	147.38
97	Sirsi	134.25	161.01	205.09	200.69	271.95
98	Mundagod	11.47	10.99	27.27	29.02	24.08
99	Karwar	7.88	5.04	5.47	4.96	5.56
	District Total	355.45	417.08	540.84	579.17	734.12
<b>Dharwar Dist.</b>						
100	Dharwar	167.05	147.34	169.82	220.49	257.68
101	Annigeri	43.04	44.89	101.76	132.64	121.84
102	Hubli	414.81	471.76	619.91	858.50	629.80
103	Kalghatgi	20.03	25.16	37.75	66.77	61.54
104	Kundgol	9.59	9.37	11.88	26.44	23.54
	District Total	654.52	698.52	941.12	1304.84	1094.40
105	Gadag	189.49	206.14	296.09	466.05	512.00
106	Rona	26.43	18.05	32.72	40.22	47.45

## Statement Showing The Details Of Market Fee Collected By The APMC's

During Year 2007-08 To 2011-12.

Rs. In Lakhs.

Districts & Apmc Names		2007-08	2008-09	2009-10	2010-11	2011-12
107	Nargund	99.77	110.86	157.80	203.39	242.01
108	Mundargi	32.17	34.53	44.68	66.16	101.50
109	Laxmeshwar	34.86	64.11	94.83	115.44	115.19
	District Total	382.72	433.69	626.12	891.26	1018.15
<b>Haveri Dist.</b>						
110	Haveri	252.30	311.19	385.95	538.79	352.21
111	Hangal	52.62	65.39	67.96	150.09	175.02
112	Byadgi	390.00	283.89	322.31	543.21	516.93
113	Hirekerur	50.18	55.30	129.38	144.90	188.47
114	Savanur	20.37	24.26	49.48	97.13	77.97
115	Ranebennur	465.29	603.43	653.65	950.04	841.44
116	Shiggaov	12.92	18.33	21.13	36.43	25.16
	District Total	1243.68	1361.79	1629.86	2460.59	2177.20
<b>Bijapur Dist.</b>						
117	Bijapur	241.14	265.52	307.39	486.40	537.58
118	Sindgi	31.79	32.12	26.43	36.95	53.72
119	Talikot	53.20	43.69	68.57	146.06	113.83
120	Indi					
	District Total	326.13	341.33	402.39	669.41	705.13
<b>Bagalkot Dist.</b>						
121	Bagalkote	114.01	136.43	167.27	317.09	359.50
122	Badami	16.67	21.24	30.10	48.12	48.17
123	Hungund	12.98	12.98	16.10	20.08	20.42
124	Jamkandi	17.96	21.89	23.08	26.02	21.02
125	Mahalingapur	68.26	102.49	129.28	116.58	96.85
126	Bilagi					
	District Total	229.88	295.03	365.83	527.89	545.96
	Division Total	3777.72	4194.03	5385.34	7535.63	7421.56
<b>Gulbarga Division</b>						
<b>Bellary Dist</b>						
127	Bellary	545.10	591.39	464.33	668.68	672.43
128	H.b.halli	55.00	56.69	80.53	100.02	110.08
129	Hoovinahadagali	31.53	41.04	52.34	56.27	102.69
130	Hospet	68.11	112.76	123.07	138.83	166.48
131	Kottur	92.75	82.98	149.03	233.12	250.83

## Statement Showing The Details Of Market Fee Collected By The Apmc's

During Year 2007-08 To 2011-12.

Rs. In Lakhs.

Districts & Apmc Names		2007-08	2008-09	2009-10	2010-11	2011-12
132	Shirguppa	455.96	725.38	528.37	406.33	394.89
	District Total	1248.45	1610.24	1397.67	1603.25	1697.40
<b>Bidar Dist.</b>						
133	Bidar	283.07	240.81	215.32	341.72	367.87
134	Basavakalyana	30.87	33.97	31.83	37.40	34.43
135	Humnabad	10.63	15.58	16.50	20.63	20.06
136	Aurad	14.69	14.03	11.26	20.65	16.89
137	Bhalki	55.48	41.47	33.65	69.71	90.03
	District Total	394.74	345.86	308.56	490.11	529.28
<b>Gulbarga Dist.</b>						
138	Gulbarga	722.04	817.97	847.90	1033.72	1181.40
139	Chittapur	91.71	83.72	92.45	102.61	116.76
140	Chincholi	1.18	1.21	6.05	6.58	10.44
141	Sedam	165.04	153.00	143.71	200.08	220.06
142	Javargi					
	District Total	979.97	1055.90	1090.11	1342.99	1528.66
<b>Yadgir Dist.</b>						
143	Yadgir	194.67	221.09	210.16	352.35	344.81
144	Shahapur	50.23	41.61	30.93	55.76	44.76
145	Shorapur	186.74	236.32	173.52	274.07	234.35
	District Total	431.64	499.02	414.61	682.18	623.92
<b>Raichur Dist.</b>						
146	Raichur	1069.22	1089.28	1178.60	1566.97	909.97
147	Manvi	160.04	240.19	196.10	160.37	175.88
148	Lingasugar	70.99	82.61	94.45	117.50	110.66
149	Devdurga					
150	Sindhur	459.05	570.92	494.41	635.07	737.66
	District Total	1759.30	1983.00	1963.56	2479.91	1934.17
<b>Koppal Dist.</b>						
151	Koppal	100.21	100.28	113.62	269.52	292.80
152	Gangavathi	856.46	1333.86	1405.13	1045.34	869.39
153	Kustagi	35.53	41.41	45.17	64.86	95.77
154	Yelburga	10.69	13.04	21.77	27.64	36.99
155	Karatagi				294.51	678.17
	District Total	1002.89	1488.59	1585.69	1701.87	1973.12
	Division Total	5816.99	6982.61	6760.20	8300.31	8286.55
	State Total	17744.09	20344.58	24350.49	30328.64	31424.31

## Annexure VII

APMC markets where the Electronic Tender System had been implemented		
Sl No.	Name of the APMC market	Commodities for which the system was introduced
1	Bijapur	Tur, Jowar, Bengal gram, cotton
2	Gangavathi	Sunflower, Bajra, Navane
3	Tumkur	Areca nut, Groundnut, Tamarind and Soapnut
4	Yadgir	Groundnut, Tur, Bengal gram, Sunflower and Green gram
5	Byadagi	Dry chillies
6	Bagalkot	Sunflower, Groundnut, Green gram
7	Sirsi	Areca nut
8	Hubli	Cotton, food grains
9	Bellary	Cotton
10	Shimoga	Areca nut, Cotton, Dry chillies
11	Sagar	Areca nut, Pepper
12	Haveri	Cotton
13	Gulbarga	Tur and Green gram
14	Kottur	Maize
15	Kumta	Areca nut
16	Ranebennur	Cotton, Groundnut
17	Chitradurga	Bengal gram, Green gram, Sunflower, Jowar
18	Bailhongal	Cotton, Groundnut
19	Savadatti	Cotton, Groundnut
20	Bheemasamudra (Chitradurga)	Areca nut
21	Hosdurga	Horse gram, Sesamum, Navane
22	Surpura	Cotton, Green gram, Groundnut, Sunflower, Tur
23	Siddapura	Areca nut, Pepper
24	Koppal	Maize, Groundnut
25	Bhadravati	Areca nut
26	Channagiri	Areca nut
27	Challakere	Jowar, groundnut, sunflower
28	Mandya	Jaggery
29	Tiptur	Copra
30	Arasikere	Coconut, Copra, Cotton, Sesamum
31	Dharwar	Groundnut, Cotton
32	Gadag	Groundnut, Green gram, Jowar, wheat
33	Bidar	Tur, Bengal gram
34	Ramdurga	Groundnut, Cotton
35	Yellapura	Areca nut, Pepper
36	Shahapur	Horse gram, Green gram, Groundnut
37	Laxmeshwar	Groundnut
38	Sulya	Areca nut
39	Mysore	11 commodities (Food grains, oilseeds, etc)
40	Davanagere	Groundnut, Sunflower, cotton
41	Raichur	Cotton, Groundnut, (10 commodities)

In 4 APMC markets, namely, Sedam, Jewargi, Sindhanur and Annigere the scheme was introduced but not implemented.



## Annexure VIII

Markets online as on April30, 2013		
Sl. No.	Name of the APMC	Date activated
1	Gulbarga	20-Dec-11
2	Tiptur	22-Jun-12
3	Tumkur	23-Jul-12
4	Bijapur	8-Aug-12
5	Arsikere	14-Aug-12
6	Bagalkot	8-Oct-12
7	Bellary	10-Oct-12
8	Yadgir	12-Oct-12
9	Haveri	22-Oct-12
10	Challakere	13-Nov-12
11	Gadag	19-Nov-12
12	Chitradurga	7-Dec-12
13	Hubli-Amargol	27-Dec-12
14	Mysore	27-Dec-12
15	Raichur	31-Dec-12
16	Dharwad	1-Feb-13
17	Shimoga	22-Feb-13
18	Bailahongal	9-Mar-13
19	Bhadravathi	16-Mar-13
20	Yellapura	16-Mar-13
21	Koppal	19-Mar-13
22	Sagara	8-Apr-13

# Annexure IX

Commodities Transacted Through The Comprehensive Electronic Auction System				
Market	Commodity	Arrival (Qunitals)	Traded quantity (Qunitals)	Total Trade Value (Rs. In Lakhs)
Arsikere	Coconut	10540412	10401672	699.18
	Copra	76540.01	63182.29	3179.81
	Cotton	127.18	118.14	5.20
	Sesamum	304.14	304.14	21.91
Balhongal	Cotton Banni	2436	2350	109.26
	Cotton Dch	36	36	1.66
Bhadravati	Arc	0.046	0	0.00
	Bette2	6.75	6.75	0.56
	Gorabalu	235.5	222.75	14.61
	Rashiedi	4608	3442.5	462.19
Bagalkote	Alasande Gram	103	79	3.71
	Bajra	27442.65	20488.25	251.50
	Bengalgram	7987.75	5480	190.86
	Greengram	241	135	6.47
	Groundnut	7497.35	5576.85	197.43
	Horse Gram	5	0	0.00
	Jowar	957	528	5.78
	Linseed	10	0	0.00
	Maize	155775.04	100311.95	1326.44
	Safflower	18.4	0	0.00
	Sunflower	39307.11	22078.4	777.71
	Tur	189	48	1.58
	Wheat	73	12	0.17
Bijapur	Bajra	422	172.1	2.05
	Bengalgram	2741.6	2332.6	80.91
	Cotton	317201.245	312142.74	12808.89
	Jawar	1	0	0.00
	Maize	929.6	836.2	10.73
	Tur	515.5	423	15.37
	Wheat	54.5	53.5	0.70
Bellery	Bajara	76.5	66.5	0.93
	Bengalgram	1513.7	1463.6	50.79
	Cotton	465.6	440.8	16.82
	Groundnut	9320.9	8583.5	393.39
	Jowar	224.1	215.6	2.86

### Commodities Transacted Through The Comprehensive Electronic Auction System

Market	Commodity	Arrival (Qunitals)	Traded quantity (Qunitals)	Total Trade Value (Rs. In Lakhs)
Bellery	Maize	8922	8479.5	112.61
	Navane	38.1	36.6	0.54
	Sunflower	126.1	96.5	3.24
	Tur	1354.4	1298.4	47.42
Chellekere	Sunflower	4523	2094.5	74.22
Chitradurga	Bengalgram	1334.1	1169.4	42.65
	Bullar	5.4	4.8	0.21
	Cotton	53525.2	51392	2208.79
	Sunflower	6101.25	5673.3	189.55
Dharwad	Cotton	2582	2576	111.88
Gadag	Groundnut	21348.2	20185.9	849.23
	Safflower	4587.8	4338	147.87
	Sesamum	1.5	0	0.00
	Sunflower	34290.766	30829.8	1042.25
Gulbarga	Bajra	8713	0	0.00
	Chana	174968.7273	138754.3	5704.87
	Greengram	6731.25	0	0.00
	Groundnut	41	0	0.00
	Hydjowar	6	0	0.00
	Jaggery	22	0	0.00
	Jowar	2565	13	0.13
	Maize	233	0	0.00
	Moonga	545.2	0	0.00
	Paddy	132	0	0.00
	Ricebroken	239.75	0	0.00
	Ricecoarse	130	0	0.00
	Ricefine	12078.75	137	1.23
	Safflower	1385	0	0.00
	Sunflower	11529.3	0	0.00
	Tilwhite	1362	0	0.00
	Tur	1474130.224	1068861.9	42269.24
	Turdal	504.25	0	0.00
	Urad	9522	0	0.00
	Wheatbansi	397.5	0	0.00
	Whatsarbthi	1	0	0.00

### Commodities Transacted Through The Comprehensive Electronic Auction System

Market	Commodity	Arrival (Qunitals)	Traded quantity (Qunitals)	Total Trade Value (Rs. In Lakhs)
Hubli	Ak-Bengalgram	8855.05	7309	251.17
	Ak-Blackgram	43	20	0.46
	Ak-Greengram	11	10	0.49
	Ak-Horsegram	3	3	0.06
	Ak-Jowar	1629	1204	16.28
	Ak-Loba	39.5	27.5	1.15
	Ak-Madike	12	0	0.00
	Ak-Maize	1615.15	1240	16.75
	Ak-Ragi	20	0	0.00
	Ak-Saffflower	53	45	1.44
	Ak-Save	24	0	0.00
	Ak-Soyabean	3065.85	2737	85.91
	Ak-Sunflower	200.9	106	3.36
	Ak-Tur	75	47	1.16
	Ak-Wheat	629.36	422.5	8.08
	Cottnjydhrr	46.5	36	1.72
	Cotton	13436.13	12226.45	538.44
	Drychillie	2.8	0	0.00
	Groundnut	1588.43	1057.6	44.70
Haveri	Cotton	154857.192	148601.8	6165.57
Koppal	Groundnut	1516.2	1497	65.26
Mysore	Bengalgram	116	0	0.00
	Blackgram	5.5	0	0.00
	Buller	754	0	0.00
	Castorseed	86.5	9	0.30
	Coriander	9.6	0	0.00
	Cowpea	3812	0	0.00
	Drychillie	13.16	6.5	0.03
	Greengram	260.5	0	0.00
	Groundnut	450.25	0	0.00
	Hongeseeds	1436.03	297.5	5.24
	Horsegram	6319.5	0	0.00
	Jowar	200.36	14.5	0.21
	Kambu	100	0	0.00
	Maize	12909.48	2184.6	28.19

### Commodities Transacted Through The Comprehensive Electronic Auction System

Market	Commodity	Arrival (Qunitals)	Traded quantity (Qunitals)	Total Trade Value (Rs. In Lakhs)
Mysore	Navane	561	0	0.00
	Nigerseeds	4	1	0.04
	Paddy	7433.94	4520.7	66.20
	Ragi	1170.98	538.6	10.47
	Soapnut	294	0	0.00
	Sunflower	90.5	0	0.00
	Tamarind	5160.4	0	0.00
	Tamseeds	9321.07	2456.5	28.92
	Till Seeds	38	0	0.00
	Tur	68.5	0	0.00
Raichur	Bajra	16	16	0.19
	Bengalgram	2533	2533	87.90
	Caster Seed	11	11	0.28
	Greengram	2	2	0.07
	Groundnut	152683.3	147397.6	5994.03
	Horse Gram	2	2	0.03
	Jowar Hybrid	857	857	10.79
	Jowar White	4034.2	4034.2	65.82
	Paddy Rajahamsa	64	64	0.61
	Paddy Sonamasuri	600	600	9.85
	Paddy-Sujatha Bt	54	54	0.63
	Safflower	14	14	0.42
	Sunflower	13784.95	12128.55	381.99
	Tur	208.5	0	0.00
	Tur Black	56	56	1.75
	Tur Red	1605	1605	70.86
	Tur White	72	72	2.72
Sagar	Arcrashi	10.5	0	0.00
Shimoga	A E	42	34.3	3.06
	Appi	275.1	266.7	32.96
	B E	102.2	4.2	0.18
	Belegotu	21.7	18.9	1.74
	Bette	27523.615	23022.609	3197.62
	B-Gottu	2.1	2.1	0.15
	Bm	32.2	11.9	1.32



### Commodities Transacted Through The Comprehensive Electronic Auction System

Market	Commodity	Arrival (Qunitals)	Traded quantity (Qunitals)	Total Trade Value (Rs. In Lakhs)
Shimoga	Ce	15.4	15.4	1.38
	Challi	126	119.7	9.94
	Churu	112	85.4	4.51
	Dust	44.1	27.3	0.32
	Edi	12810	12044.9	1594.46
	G-E	1036	800.1	68.67
	Gorbalu	18925.226	15439.226	1290.74
	Gorbalu Bette	387.8	247.1	21.02
	Hasa	3457.3	3034.5	527.56
	Hasa Bette	18.9	0	0.00
	He	1334.9	1047.9	82.13
	H-G	172.9	150.5	10.91
	K-B	40.6	37.8	2.28
	K-E	1007.3	851.9	65.00
	K-G	173.6	137.9	9.79
	K-M	4.9	0	0.00
	Kole	102.9	101.5	9.64
	K-R	62.3	0	0.00
	K-S	141.4	141.4	9.22
	M-B	781.2	590.8	47.50
	M-E	1869.42	1535.52	111.46
	M-G	31.5	31.5	1.74
	Mini	37.8	31.5	1.94
	M-S	0.7	0.7	0.08
	Ne	43.4	43.4	3.51
	Nulli	211.4	211.4	15.21
	Rashi	10386.101	7219.1	936.33
	Rashi-Edi	38832.515	33336.815	4449.64
	Sagatu	6365.1	5904.5	720.55
	Saraku	10924.2	9543.1	1788.92
Tumkur	Arcaapi	23.98	23.63	2.02
	Arcchuru	1046.305	769.03	71.24
	Arcrashi	3389.996	3005.44	236.38
	Grndnut	181.7	0	0.00
	Soapnut	4913.8	3792.47	113.33

### Commodities Transacted Through The Comprehensive Electronic Auction System

Market	Commodity	Arrival (Qunitals)	Traded quantity (Qunitals)	Total Trade Value (Rs. In Lakhs)
Tumkur	Tambot	17204.975	14948.05	171.91
	Tamflower	10973.8	9106	208.51
	Tamkarpuli	32918.358	21038.04	1055.79
Tiptur	Copra	517072.93	479566.18	24381.34
Yadgir	Bengalgram	16451.55	15819.55	560.29
	Blackgram	925	690	20.59
	Ellu	21	1	0.06
	Groundnut	254368.98	238325.6	10476.82
	Loba	53	11	0.13
	Moong	13151.0001	12739	639.87
	Sunflower	7178.95	6954.35	242.66
	Tur	588	456	17.14
	Tur-Black	416.25	398.25	14.53
	Tur-Red	96894.1	94976	3669.70
	Tur-White	18869	18081.5	742.60
Yellapur	Aapi	4	4	0.65
	Ajagayi	26	25.5	2.96
	Arigere	1	1	0.08
	Bette	274.5	246.5	30.89
	Bette Rashi	45.5	31	4.37
	Bilegotu	137	133.5	11.41
	Chali	347.5	335.5	39.70
	Chali Chooru	6.5	5.5	0.42
	Chali Gundu	5	5	0.54
	Chali Haledu	3.5	3.5	0.45
	Chali Hosadu	34.5	34.5	4.62
	Chali Second	101.5	99	9.54
	Chikani	1	0.5	0.06
	Chooru	2.5	2.5	0.25
	Kalwar	33	32	2.74
	Kempu Bette	21.5	17.5	1.87
	Kempu Gotu	151.5	143.5	13.81

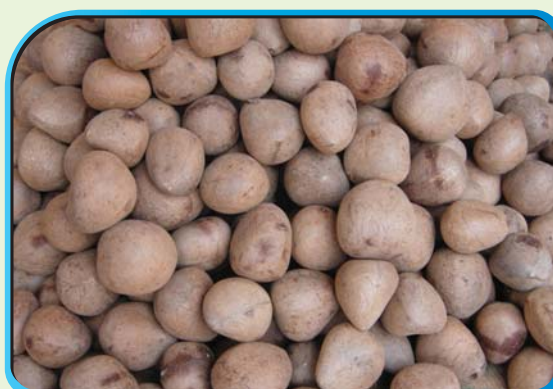
**Commodities Transacted Through The Comprehensive  
Electronic Auction System**

Market	Commodity	Arrival (Qunitals)	Traded quantity (Qunitals)	Total Trade Value (Rs. In Lakhs)
Yellapur	Kette Bette	55.5	54	6.22
	Koka	86	80.5	5.80
	Kole	95	90.5	7.92
	Kole Muri	2	2	0.23
	Muri	128.5	121	13.59
	Papper	24.5	23	6.76
	Rashi	459	424	61.28
	Rashi Haledu	4.5	4.5	0.58
	Rashi Hosadu	0.5	0.5	0.07
	Shiger Bette	14	14	1.97
<b>Grand Total</b>		<b>14592886.86</b>	<b>13683535.32</b>	<b>145290.06</b>

## Annexure X

List of Committee meetings and field visits		
Date	Meeting (Location)	
2nd April 2013	Preparatory Meeting ( Bangalore)	
9th April 2013	Paper presentations (Bangalore)	
15th April 2013	Paper Presentations and discussion on recommendations (Bangalore)	
18th April 2013	Meeting with Stakeholders (PACS/ TAPCMS) (Bangalore)	
19th April 2013	Discussions on draft recommendations (Bangalore)	
24th April 2013	Field visit and stakeholder meeting (Tiptur, Gubbi and Tumkur)	
29th April 2013	Meeting at NCDEX ( Mumbai)	
30th April 2013	Draft recommendations- presentation (Bangalore)	
2nd May 2013	Stakeholders Workshop at IIMB (Bangalore)	
7th May 2013	Field visit and stakeholder meeting (Rannebennur, Davangere and Chitradurga)	

## Photo Gallery



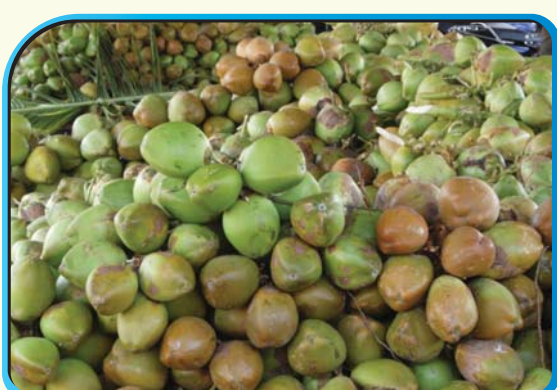


## Photo Gallery





## Photo Gallery





## Photo Gallery





## Photo Gallery

