

Study No.168

Impact of emerging marketing channels in agricultural marketing: Benefit to producer-seller and marketing costs and margins of agricultural commodities - A study in West Bengal

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Preface

To achieve an efficient system of buying and selling of agricultural commodities most of the state and Union Territories of India enacted the Agricultural Produce Marketing Committee Act in order to provide the regulation of agricultural produce markets. Though, regulated markets have positive features, yet the achievements to fulfil the purposes of the Act in West Bengal are not so significant due to poor market infrastructure and procrastinations of government machinery. Due to remove the bottlenecks in the APMC, government of India (2003) formulated amendments and the state government are required to amend the act accordingly. The amendment has controlled monopolistic clutch of the agriculture produce market committees and made provisions for entering private sector companies and other formal and informal agencies in dealing in agricultural commodities and there is also have the provisions for contract farming etc. Hence it is presumed that opening of new channel of marketing of agricultural commodities through the amendment would obviously beneficial to the farmers of all the size classes. Intending the same, a study was assigned by the Ministry of Agriculture, Government of India to Agro-Economic Research Centre, Visva-Bharati to look into the emerging marketing channels in the marketing of agricultural commodities in West Bengal. Some other AER Centres are also conducting the study in their respective states. The coordinating centre of this study is the institute of Economic Growth, New Delhi.

Reform in implementation of APMC Act is yet being operative in West Bengal. Hence new channels of marketing of agricultural commodities have not emerged yet. Oilseed and mustard are being market through traditional channels of marketing. However, Arum a vegetable crop is being marketed through new channel where member of market intermediaries is less as compared to the traditional channel. Thus to some extent, it is efficient channel of marketing of agricultural commodities.

The study was coordinated by Dr. Anananda Vadivela and Nilabja Ghosh, Institute of Economic Growth, New Delhi. They have formulated the study design and prepared the questionnaire. They have also given constant support, suggestions and comments for preparation of this report. I am indebted to them.

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Chapter –I Introduction

1.1 Brief Introduction of the Study

The implementation of the Land Reforms Programme in West Bengal ushered in a new era in terms of markets and marketing channels for agricultural services, input and outputs. Agricultural commodity marketing and pricing policy implemented during the era induced the emergence and proliferation of a new regime of markets and market relationships. The harsh economic environment that prevailed during the era induced some form of mutation that gave birth to an innovative and experimental spirit within the farmers and rural residents. Agricultural marketing during this era was one characterized by government interventions in some areas with partial and sometimes complete regulation along the value chain.

It is fact that a considerable progress has been achieved in technological developments in agriculture by the use of high yielding variety of seeds, chemical fertilizers and other complementary input, resulting in a substantial increase in the production of cereals and other crops in West Bengal. The production of food grains has increased from 61 lakh tonnes in 1970-71 to 109 tonnes in 1989-90, i.e. an increase by 79 per cent. Similarly, the production of vegetables and oilseeds has increased from 202 tonnes and 102 tonnes in 1970-71 to 502 tonnes and 405 tonnes in 1989-90, respectively. This is mostly by way of increasing adoption of improved technologies. The rapid development in agricultural research and the introduction of technological innovations viz., high yielding/improved varieties, improved agricultural implements, fertilizers and pesticides in the recent past, have brought about a considerable change in West Bengal agriculture.

These developments have no doubt exerted much stresses and strains on the existing marketing facilities, particularly relating to different marketing functions like assembling, processing, storage, transportation, market intelligence and other accompanying functions. In fact, this development in the field of agriculture and horticulture has given rise to new problems in agricultural marketing. The farmer-producers should be assured of a fair price for their produce, failing which they may lose the incentive to increase agricultural production. A fair price for the produce may be assured when there is an orderly marketing system in the state. But an orderly marketing system can be created only when the problems, which have emerged with the advent of the adoption of improved technologies, are effectively tackled. There is an urgent need in the present context for tackling the emerging problems of agricultural marketing more resolutely and efficiently than ever before. The improvement in the domestic marketing system has assumed special significance with the launch of new economic policy in 1991 and opening up of the external trade regime.

In view of the above, the present study has been conducted to examine the impact of emerging marketing channels in agriculture marketing with special reference to benefit to producer-sellers and marketing costs and margins of major agricultural commodities in West Bengal.

1.2 Objectives

The specific objectives of the study are

1. to explore the farmer's share in the consumer rupee in emerging marketing models vis-a-vis the traditional marketing channels;
2. to work out the degree of market efficiency and incidence of post-harvest losses in emerging marketing channels vis-a-vis traditional marketing channels;
3. to find out the market practices and services provided by different agencies in the emerging marketing channels vis-a-vis traditional marketing channels;
4. to examine the constraints faced by the farmers and different market functionaries in the emerging marketing channels vis-a-vis traditional marketing channels;
5. to suggest policies based on the findings of the study.

1.3 Review of Literature

From an economic viewpoint, distributional arrangements are of interest for several reasons. In their most neutral form they perform the function of signalling prices to consumers and producers, thus bringing about the allocation of available supplies among consumers and the same of resources among producers. The popular view in underdeveloped countries is that markets for agricultural commodities do not operate efficiently in price signalling and that there are great differences between price paid by the consumers and those received by producers, both time and space. Krishna *et al.* (1962) while studying the price elasticity of marketable surplus of a subsistence crop and arrived at negative value of price elasticity of marketable surplus. Bardhan *et al.* (1969) tested long term responsiveness to prices, allowing for the operation of output response to process and technological change. They obtained a positive and also an unitary elasticity of the marketed surplus with respect to the ratio of cereal price and other food products; but a negative (and less than unitary) elasticity with respect to the price ratio between commercial crops and cereals (the reciprocal of which determines the output of

cereals, along with technological change). The study of Bardhan *et al.* (1970) also produced conflicting results regarding price elasticity of marketed surplus of food grains (in aggregate). They arrived at a negative price effect on short-run marketable surplus of food grains though output had a positive effect. The assumption and derivation procedure of their models were different and resulted in over-simplification of income and institutional relations in their theoretically sophisticated models. Commenting on Bardhan's results, Hassel (1975) pointed out that the village prices were not exogenous to the model as they themselves were determined by the magnitude of marketable surplus. Using Bardhan's data he developed a model which specifies that the consumption decision is a function of the price of food grains and farmer's income and marketable quantities were treated as residual. He found positive short run price elasticity of marketable surplus ranging from 2.7 for entire sample to more than 3 for large farmers which directly contradicted Bardhan's results. He also found that the elasticity of marketing with respect to output would be substantially greater than unity which was slightly higher than Bardhan's estimates. He concluded that farmers are price and income responsive as consumers and higher prices will result in short run response to the marketable surplus to changes in the terms of trade for agriculture was highly inelastic due to the combination of (1) dominance of substance consumption over disappearance of agricultural output and sizeable income effect in agricultural consumption, and (2) movement along with given production function instead of response to a technological change of horizontal expansion. In a very interesting analysis Pushpangadan (1979) showed that the price elasticity of marketed surplus of large farmers was both negative and positive without stock behaviour. However, under the alternative assumptions of different models, the controversy regarding price elasticity remains unresolved. Although little work had been done on the aggregate supply response to relative changes in sectoral prices, the available evidence on the response of individual crops, marketed surplus and input use suggested that though terms of trade may not be in themselves, they may accelerate or retard the growth rate initiated by a technological change. Agricultural price policy must thus consist of much more than a programme oriented toward influencing the producer's and the consumer's prices mainly through market margins, which often may not even provide scope for improvement except through a major technological change in marketing process.

Another problem which had received attention in policy debate is that of level of marketable surplus. Narain (1951) found that marketable surplus as a proportion of output declined as size of holding increased up to the size classes of 10 - 15 acres, and then it rose steadily along with the size of holding. Dubey (1963) attacked the view that an increase in agricultural production did not lead to an increase in marketable surplus of agricultural commodities. Dandekar (1964) pointed out that peasants may sell commercial crops to buy back food, which only suggests the complexity of the situation which does not indicate market involvement of the kind implicit in 'distress sale'. He further pointed out that large farmers in any case accounted for the larger part of area, and they responded normally to economic stimuli. He however, pointed out that the small farmers sold little of their food grains and depended on other sources to meet their cash needs, such as sale of other crops, wage labour and remittances received. Shah (1965) showed a significantly high positive relationship between production and market supply (sales). Bhalerao *et al.* (1965) observed that the proportion of produce for home consumption of subsistence crops to total production was found to be decreasing with the increase in size of holdings. Rao (1965) observed that there was a tendency for output elasticity to decline with an increase in output. Singh *et al.* (1969) showed that on an average 90 per cent of production of paddy was sold in Punjab. The proportion ranged from 88 per cent among small farmers with one hectare and below 92 per cent among farmers with 4 - 5 hectares. Rastogi *et al.* (1972) defined the marketable surplus as the quantity sold out during the year and the quantity kept apart (for later disposal) obviously repurchases are not netted out from this. Thus, none of the size classes not even the lowest size class of one hectare and below had negative marketable surplus. Marketable surplus as a proportion of production amounted to 9.2 per cent in the lowest size class, 51.33 per cent in the highest size class of 4 hectares and above, and 33.9 per cent in all holdings together. Bhaduri (1974) pointed out that a superficial commercialisation was a situation where farmers made distress sales and repurchased later on. Such transactions did not involve any exchange between rural and urban sectors. Apart from the fact that distress sales were only a small part of the marketed surplus, a good part of these transactions may involve sale of superior food grains for purchasing more of inferior food grains. Hati (1976) analysed the relationship between the marketable surplus of paddy and size of holding on the basis of data from Hooghly district, West Bengal (1971-72 and 1972-73) He took marketed surplus as net of repurchases and fitted to non-linear equation and grafted them into one. The curve, drawn on the basis of results is divided into three parts according to farm size. Marketable surplus was negative for the first part of the curve up to the size class of 0.66 hectare and the curve rose sharply upwards till it crossed the zero line. For holding between 0.66 and 1.98 hectares, the curve flattened at about 5 per cent of marketable surplus, and an increase in farm size practically had no effect. It was in the third phase (i.e. for farm size above 1.98 hectares) that the proportion of marketable surplus rose again at an increasing rate as farm size increases. In a very interesting analysis, Mondal *et al.* (1968) showed that marketed surplus increases with an increase in farm size and output. They further showed that the elasticity of marketable surplus was appreciably large even in Orissa villages though the marginal propensity to hoard was higher than the same in West Bengal. They concluded that the net balance held as stock by farmers of

Orissa does not represent some abnormal hoarding but it was just a normal propensity to save consistent with a low level of living. Harris (1982) concluded that most farmers, even small producers, supplied the market. He also showed that cultivators with small families, other things being equal, contributed more to the marketed surplus than those with large families. He also observed that proximity to market also acted as a positive determinant of marketed surplus and prices was an important conditioner of the level of marketed surplus. Farm enterprises displayed no obvious association with price obtained. Small farmers with as little as one acre participate in the marketing system without direct price discrimination against them, and large farmers even are forced by lack of storage or drying facilities had to part with much of their surplus immediately after the harvest when prices remain low. Sharma (1972) found that farms up to 5 acres had a negative marketable surplus at the national level and also all states except Andhra Pradesh, Kerala and Tamil Nadu. Even the next size class of farmers (5-10 acres) were found to have a negative marketable surplus, though it showed a positive surplus in other states and at the national level. The proportion of marketable surplus to net production of food grains also increased consistently with the increase in the size of holdings. Pattanaik (1975) found that the contribution of small farmers was smaller in the overall picture. The farms up to 10 acres contributed 33.2 per cent and these up to 15 acres only 44.4 per cent of the total marketable surplus of all farms. Moreover, the researcher did not find any perversity, as the proportion of marketable surplus increases steadily from 20 per cent in the lowest size class of 1 hectare and below 63 per cent in the highest size class of 20 hectares and above, without any dip in between. The behaviour of marketable surplus, however, was fairly the same as in Pattanaik's study, as could be seen from the picture given by Rastyannikov (1975) based on the same data from 'The All India Rural Debt and Investment Survey 1961-62'. The proportion of marketed surplus to total product increased steadily from 19.8 per cent in the lowest asset group of less than Rs. 1000/- to 41.4 per cent in the highest asset group of Rs. 20,000/- and above. For all households together, the proportion amounted to 31.4 per cent. The first two asset groups (up to Rs. 2500/-) accounted for only 10.7 per cent of the marketed produce, the next two groups (Rs. 2500/- to Rs. 10,000/-) for 33 per cent and two largest asset group (Rs. 10,000/- and above) had a lion's share of 56.3 per cent in the same. Both in Pattanaik's estimates and the picture obtained from Rural Debt and Investment Survey, the contribution of small farmers to marketable surplus seems to have been over estimated. It may be noted that in either case no size class had negative market surplus. One reason for this, as admitted by Pattanaik also is that the estimate is not netted of repurchased quantities. The Reserve Bank of India data also related to marketed produce which was not netted out for repurchases. Secondly, they have used gross value of output of agriculture.

Thus it may be concluded that the studies failed to identify single or common factor which have direct bearings on marketing of agricultural commodities. The factors which they have discussed as having bearing on marketing of agricultural commodities varied from study to study.

1.4 Data Base and Methodology

The study has been conducted in West Bengal based on both primary and secondary data. The reference year of the study is 2009-10. The study has been conducted in Murshidabad district. For primary survey two crops i.e. arum for emerging channels and mustard for regular channels have been selected for the enquiry and a comparison has been done in between the regular and emerging marketing channels. The detailed methodology of the study is as follows.

Table 1.1: Distribution sample farmers and other market intermediaries

	EMC	TMC
Farmers (Nos.)	100	100
Trader/Commission Agent (Nos.)	15	15
Whole-seller (Nos.)	5	5
Retailer (Nos.)	15	-
Consumer (Nos.)	15	-

Primary data has been collected from the farmers and market intermediaries. The farmers were stratified on the basis of their land holding i.e. marginal (up to 1.00 hectare), small (>1.00 – 2.00 hectare) and medium (> 2.00 to 4.00 hectare). Farmers having land more than 4.00 hectares was not available. The proportion of households from the give size group was selected on basis of incidence in the total population. Total number of households selected for in depth survey was 200 – 100 each from the Traditional Marketing Channel (TMC) and Emerging Marketing Channel (EMC). The numbers of other market intermediaries selected for in depth survey were given in Table – 1.1.

Apart from that with a view to gather official information of the Agricultural produce Market Committee (APMC) opinion of the members of the APMC was collected from a focus group discussion.

A simple tabular analysis is taken up for to analyse the impact of traditional vis-a-vis emerging marketing channel for the crops, Arum and Mustard. The market efficiency of both the crops has been calculated by using Acharys's method – the modified method of market efficiency. The formula of the same is:

$$MME = FP/(MC + MM)$$

Where, FP = Price Received by the Farmer
MC = Marketing Cost and
MM = Marketing Margin

1.5 Limitations of the Study

The study suffers from limitation of number of parameters selected and in the outline of objectives drawn. However, the parameters selected are the core to find out the impact of emerging marketing channels in agriculture marketing on various parameters and perhaps this impact analysis without these parameters tends to remain incomplete. The selected indicators are easily comprehensible and are basic to judge the impact.

The study has been area specific as it relates to one district and with two specific crops. But the selection was made after due consideration of the related factors and is expected to deliver results which is representative in character and devoid of systematic bias. The field level investigations based on individual respondents' opinion which may not be exclusively unbiased might be reflected in the results as well as findings. The time constraints played its usual roles in conducting the study.

1.6 Scheme of the Chapters

The study has been sub-divided into six chapters. The first chapter introduces the brief introduction, methodology and socio-economic profiles of the study. Second chapter portrays a background on agricultural market reforms with reference to traditional and emerging marketing methods. The third chapter compares the benefits and examines the constraints for the agents trading in the traditional marketing channels and emerging marketing channels. The chapter fourth works out the market efficiency both for traditional and emerging marketing channels and finally the fifth chapter ends with the conclusion and policy implications of the study.

Chapter-II

Agricultural Market Reforms

2.1 Agriculture Reforms in West Bengal

The implementation of the Fast Track Land Reforms Programme (FTLRP) which commenced in June 2000 ushered in a new era in terms of markets and marketing channels for agricultural services, inputs and outputs. Agricultural commodity marketing and pricing policies implemented during the FTLRP era induced the emergence and proliferation of a new regime of markets and market relationships. The harsh economic environment that prevailed during the same era induced some form of mutation that gave birth to an innovative and entrepreneurial spirit within the farmers and rural residents. Agricultural marketing during the FTLRP era was one characterized by strong government interventions with partial and sometimes complete regulation along the value chain.

2.2 Marketing Acts, Bye-laws, Rules and Regulations

2.2.1 Marketing act

The West Bengal Agricultural Produce Marketing (Regulation) Act, 1972 is an act to provide for the regulation of marketing of agricultural produce in West Bengal, whereas it is expedient to provide for the regulation of marketing of agricultural produce in West Bengal and for matters connected therewith; and whereas previous sanction of the President under the proviso to clause (b) of article 304 of the Constitution of India has been obtained. This Act may be called the West Bengal Agricultural Produce Marketing (Regulation) Act, 1972. It extends to the whole of West Bengal.

In this Act, unless the context otherwise requires, “agricultural produce” means any produce of agriculture, horticulture, pisciculture, sericulture, forestry or animal husbandry and includes any related product specified in the Schedule to this Act provided that the State Government may, by notification, include any item of agricultural produce in the schedule or exclude any such item from it; “agriculturist” means a person who ordinarily by himself or by his tenant or hired labourer or otherwise, is engaged in the production and growth of agricultural produce, but does not include a trader or broker in agricultural produce notwithstanding that such trader or broker is also engaged in the production or growth of agricultural produce; “Board” means the West Bengal State Marketing Board established “broker” means an agent whose ordinary course of business is to negotiate and make contracts on payment of commission for the purchase or sale of agricultural produce on behalf of his principal, but does not include a servant of such principal engaged in negotiating or making such contracts; “commission agent” means a person who buys and sales agricultural produce for any person, keeps it in his custody and controls it during the process of its sale or purchase, and collect payment therefore from the buyer and pays it to the seller, and receives by way of remuneration a commission or percentage upon the amount involved in each transaction; “Director” means the Director of Marketing, West Bengal and includes the Additional Director of Agriculture (Marketing), West Bengal and the Joint Director of Agriculture (Marketing), West Bengal; “licensed trader” means a trader licensed “local authority” means a municipal area, the municipal authority and in a notified area, the notified area authority, by whatever name called, and includes a Town Committee, a Gram Panchayat, a Panchayat Samiti or a Zilla Parisad or any such authority, by whatever name called; “market” means a market established or declared as such under this act for a market area and includes a principal market yard and sub-market yard, if any; “market area” means any area declared to be a market area “market committee” means a committee constitute “market functionary” includes a trader, commission agent, broker, weigh man, measurer, warehouseman or surveyor carrying on business in a market area on valid licence issued “market year” means the year commencing on the first day of April; “measurer” means a person whose business is to measure a consignment of agricultural produce for sale; “notification” means a notification published in the Official Gazette; “person” means an individual and includes a firm, a joint family, a local authority, an association or a body of individuals incorporated or not; “prescribed” means prescribed by rules made under this Act; “principal market yard” means any enclosure, building or locality within the market area declared to be a principal market yard “retail sale” means a sale of any agricultural produce not exceeding such quantity as may, by rules made under this Act, be fixed in respect of such agricultural produce; “Schedule” means the Schedule to this Act; “Secretary” means a person appointed as such and includes an officiating or acting secretary; “standard weight” and “standard measure” have the same meaning respectively assigned to them in the West Bengal Standards of Weights and Measures (Enforcement) Act, 1958; “sub-market yard” means any enclosure, building or locality within the market area declared to be a sub-market yard “surveyor” means a person whose business is to survey a consignment of agricultural produce for sale in regard to quality, refraction, adulteration and any other purposes; “trader” means a person ordinarily engaged in the business of purchasing and selling agricultural produce as a principal or as a duly authorised agent of one or more principals and includes a person ordinarily engaged in the business or processing or preservation of agricultural produce; “trade allowance” means anything realized in cash or kind, by the purchaser from the seller in any transaction relating to agricultural produce either by deduction from the price agreed upon

or otherwise; Explanation.-In this clause “purchaser” includes a commission agent; “Warehouseman” means a person whose business is to store agricultural produce in any building, structure or enclosure on behalf of persons depositing such produce; and “Weighman” means a person who, in the ordinary course of business, is engaged in the weighing of agricultural produce in connection with a transaction of sale or purchase thereof.

If any question arises as to whether a person is or is not an agriculturist or a trader within the meaning of the Act, the decision of the Director on such question shall be final, provided that the Director Shall Give the person a reasonable opportunity of being heard before giving his decision.

2.2.2 Declaration of market area

Declaration of market area are (1) Notwithstanding anything to the contrary contained in any other law for the time being in force, the State Government may, by notification, declare any area as a market area within which purchase and sale of such agricultural produce as may be specified in the notification, shall be regulated; (2). On the publication of such notification, or with effect from such later date as may be specified therein, no local authority or other person shall, notwithstanding anything to the contrary contained in any law for the time being in force, within the market area, or within such distance thereof as may be declared by notification in this behalf, set up, establish or continue or allow to be set up, established or continued any place for the purchase or sale of such agricultural produce as has been specified in the notification, except in accordance with the provisions of this Act and the rules made there under; (3) The State Government may, by notification, include or exclude any area or form a market area, as the case may be, or include or exclude any agricultural produce in or from the list of agricultural produce; (4) The State Government may, by notification, declare that a market area declared as such shall cease to be a market area with effect from such date as may be specified in the notification. When a market area thus ceases to be a market area any market established, declared or notified in such market area shall cease to be a market and the Market Committee constituted for the said market area shall stand dissolved with the following consequences: (a) the members of the market committee shall be deemed to have vacated their offices, and (b) the unexpended balance of the Market Committee Fund and other properties and liabilities shall vest in the State Government free from all encumbrances and in such manner as may be prescribed provided that the liability of State Government shall be limited to the extent of the unexpended balance of the Market Committee Fund and the value of the property vesting in the State Government as may be determined in the manner prescribed.

2.2.3 Declaration of principal market yard and sub-market yard

Declaration of principal market yard and sub-market yard are (1) The State Government may, by notification, declare any enclosure, building or locality in any market area, to be the principal market yard and other enclosures, building or localities in such to be one or more sub-market yard or yards for a market area; (2) The State Government may, by notification, declare that no local authority or any other person, notwithstanding anything contained in any law for the time being in force, shall setup, establish or continue or allow to be continued any place for the purchase, sale, storage or processing of any agricultural produce within such distance of the principal market yard or a sub-market yard as may be specified in the notification; (3) Nothing contained in sub-section (2) shall apply to (a) the sale of agricultural produce by the producer himself or by any person employed by him when such sale is made to an individual who purchase it for his own consumption, (b) the purchase by an individual of agricultural produce for his own consumption, and (c) the sale or purchases of agricultural produce through retail sale.

2.2.4 Market committee

Market committee is composed of (1) There shall be a Market Committee for every market area; (2) Every market committee shall be a body corporate by such name as the State Government may specify shall have subject to the provision of sub-section (4) of section 3 perpetual succession and a common seal, may sue and be sued in its own name, shall acquire, hold and dispose of property both movable and immovable, enter into contracts and do all such things as may, from time to time, be necessary for carrying out the functions of this Act provided that save as the State Government may, be general or special order, direct, no market committee shall permanently transfer any immovable property except in pursuance of a resolution passed at a meeting of the market committee by not less than three-fourths of its members and with previous sanction of the State Government; (3) The State Government shall, by notification, constitute a market committee consisting of the following members: (3) The State Government shall, by notification, constitute a market committee consisting of the following members: (3) The State Government shall, by notification, constitute a market committee consisting of the following members (a) two officers of the State Government of whom at least one shall be an officer of the directorate of Agricultural Marketing, West Bengal, having jurisdiction over the area for which the market committee is constituted or any part of such area; (b) one person to represent the members of any co-operative marketing society carrying on business in the market area, or if there is no such co-operative marketing society any other co-operative society carrying on business in such area; (c) one person representing the bank

financing the market committee provided that in case where financing by bank is not done, the State Government may nominate a representative of any other bank functioning in or near the market area; (d) one person representing the local authority having jurisdiction over the market area or any part thereof; two persons representing the small growers. In this clause “small grower” means a grower owning, or having in his possession, less than two hectares of agricultural land; the member of the West Bengal Legislative Assembly elected thereto from the constituency comprising the principal market yard or the major part of it provided that where a market committee was constituted prior to the commencement of the West Bengal Agricultural Produce Marketing (Regulation) (Amendment) Act, 1981, with more than one member of the West Bengal Legislative Assembly as members of the market committee, the State Government may declare the names of the Chairman, the Vice-Chairman and other members of the market committee by fresh notification with only one member of the West Bengal Legislative Assembly as a member of the market committee under this clause and upon such declaration the other members of the West Bengal Legislative Assembly who were members of the market committee prior to such declaration shall be deemed to have vacated their offices as members of the market committee; (e) five persons representing the agriculturists of the market area; and (f) two persons representing the licensed traders doing business in agricultural produce in the market area provided that a market committee constituted may consist of the members mentioned above). The other members of the market committee may, subject to provision be appointed subsequently. Notwithstanding anything contained in any judgment, decree or order of any court, a market committee constituted with the members mentioned in clauses shall be deemed to have been duly constituted under that sub-section, and any action taken, any order made, any notice issued, any fee imposed or realised, any direction given, any decision taken, any punishment awarded or any authority or power or jurisdiction exercised by such market committee under this Act shall be deemed to have been validly taken, made, issued, imposed or realised, given, taken awarded or exercised under this Act, and shall not be called in question in any court; (4) The State Government may, at any time, by order issued in this behalf increase the representation of members mentioned to seven and three respectively; (5) The members of every market committee constituted shall be appointed by the State Government; (6) The State Government shall appoint one from among the members of the market committee to the chairman who shall be the executive head of the market committee and another to be the Vice-Chairman of the market committee; (7) The term of office of the members of the market committee save as otherwise provided in this Act, shall be three years from the date of notification and shall include any further period which may elapse between the expiration of the said period of three years and the date of the first meeting of the succeeding market committee at which a quorum is present provided that a member of a market committee may, on expiry of his term of office, be re-appointed provided further that the term of office of a member of a market committee appointed at any time subsequent to constitution of such market committee shall expire simultaneously with the expiry of the term of office of the other members constituting such market committee.

2.2.5 Date of constitution of market committee

The names of Chairman and Vice-Chairman appointed with the other members of a market committee shall be declared by the State Government by notification, but such market. Committee shall be deemed to be duly constituted from the date of notification provided that the notifications constituting market committee prior to the commencement of the West Bengal Agricultural Produce Marketing (Regulation) (Amendment) Act, 1981, shall be deemed to have been issued.

Disqualification of members may be happened due to (1) No person who (a) is an employee of the market committee, or (b) has been declared by a competent court to be of unsound mind, or (c) is an undischarged insolvent, or (d) has been convicted by a court of law for an offence involving moral turpitude, shall be eligible to be appointed as a member of any market committee; (2) No members of a market committee shall, if he ceases to represent the category of person referred to in sub-section (3) of section 5 from which he was appointed, continue in office as such member.

The members of every market committee shall hold office on such terms and conditions as may be prescribed. The members of every market committee shall hold office on such terms and conditions as may be prescribed. The members of every market committee shall hold office on such terms and conditions as may be prescribed.

Casual vacancy means (1) If, at any time, a vacancy occurs in the office a member of a market committee by reason of the non-acceptance of office, or by the removal, death or resignation, the vacancy shall be filled by a fresh appointment of a person belonging to the class which such members represented; (2) Every person appointed under sub-section (1) shall hold office for the unexpired period of the term of office of members whose place he fills.

2.2.6 Removal of members

The State Government, by notification, remove any members of a market committee from his office if such members has, in the opinion of the State Government, been guilty of misconduct or neglect of duty or has

become disqualified within the meaning of section 7 provided that the State Government shall, before passing any order under this section give the person concerned an opportunity of being heard. No member of the market committee who has been removed from his office on any of the grounds mention in section 10 shall be eligible for reappointment to any market committee. No action of a market committee shall be called in question merely by reason of the existence of any vacancy in, or any defect on the constitution of, the market committee at the time of taking such action. Subject to the other provision of this Act, there shall be the duties and function of a market committee such as (i) to establish if so required by the State Government market for the market area providing for facilities in connection with the marketing of agricultural produce; (ii) to grant or renew licenses, in the manner prescribed, to traders, commission agents, brokers, weighmen, measurers, warehousemen, surveyors and other persons or firms referred to in section 13; (iii) to administer market committee fund referred to in section 19 and maintain the accounts thereof in the prescribed manner; (iv) to maintain and manage the principal market yard including the sub market yard or yards and to control, regulate and run the market and to regulate the marketing of agricultural produce in the market area in accordance with the provisions of this Act and the rules made there under; (v) to keep a set of standard weights and standard measures in each principal market yard and sub market yard against which weighmen and measurement may be checked; (vi) to collect and furnished such statistics and information relating to every such market yard and the making of agricultural produce as may be required by the director or any other person authorized by him in this behalf; (vii) to publish and disseminate for the benefit of the general public such market information and other instructions as may be issued by the Director in this behalf; (viii) to settle disputes between buyers and sellers of agricultural produce or their agents in such manner as may be prescribed; (ix) to promote grading and standardisation of agricultural produce in such manner as may be prescribed; (x) to control and regulate admission of persons to the principal market yard or sub market yard or yards and to determine the conditions for the use of the market and to prosecute persons operating without a valid licence in the market area; (xi) to bring, prosecute or defend any suit, action, proceeding, application or arbitration in regard to any matter; (xii) to perform such other duties and discharge, such other functions as are imposed or conferred upon it by or under this Act or the rules made there under. (xiii) to frame bye-laws for the purpose of carrying out the provisions of this Act and the rules made there under; (xiv) to inspect and verify scales, weights and measures in use in a market area and also the books of accounts and other documents maintained by the market functionaries in such manner as may be prescribed.

A market committee may delegate to a sub-committee or sub-committee constituted by it from amongst its members in such manner as may be prescribed all or any of its functions under this Act in respect of any market over which it has jurisdiction: Provided that the market committee may accept, reject or revise the decision of such sub-committee or sub-committees. Subject to the other provision of this Act, a market committee may, on inspection and verification, confiscate, in such manner as may be prescribed, scales, weights and measures in use in a market area if any of these dose not conform to a standard scale, weight or measure, as the case may be. After six months from the declaration of any area, as a market area, no person shall within the market area, carry on business or act as a trader, commission agent, broker, weighman, measurer, warehouseman or surveyor, or sale or purchase agricultural produce, or engage in processing or preservation of agricultural produce, or setup, establish or continue a place for storage, sale or purchase of any agricultural produce, except under and in accordance with the prescribed terms and conditions of a licence issued in this behalf by the market committee notwithstanding anything contained in any other law for the time being in force and irrespective of any licence required and issued under any law for the time being in force: Provide that nothing in this sub-section shall apply to any sale by a producer of his own produce, to retail sale and to purchase by an individual for his own consumption.

Any person desiring to obtain a license under sub-section may make an application to the market committee in such form and on payment of such fee not exceeding rupees two hundred as may be prescribed. On receipt of an application, the market committee may issue the license in such form, subject to such terms and conditions and for such period as may be prescribed. Any license issued under may be renewed for such period as may be prescribed, by the market committee from time to time on application made in this behalf by licensee and on payment of such fee not exceeding Rupees two hundred as the market committee may fix. The market committee may refuse to issue or renew any licence under this section in favour of any person if it is satisfied that such person has previously being convicted by a court of law for an offence punishable under this Act. The market committee may, after giving the holder of a licence under this section an opportunity of showing cause in such manner as may be prescribed, cancel his licence or suspend it for such period as it thinks fit for any breach of the terms and conditions of the licence or for any contravention of the provision of the Act. When a licence is cancelled or suspended under sub-section (6), the licence may appeal, in such manner as may be prescribed, to an officer of the State Government not below the rank of a Superintendent of Agricultural Marketing having jurisdiction over the area, as may be specified by the State Government by an order issue in this behalf, and the decision of such officer shall be final. Where a licence is cancelled or suspended, the licence shall not be entitled to any compensation therefore, nor shall he be entitled to the refund of any fee paid by him for the licence. When

a licence is lost, destroyed torn or defaced, the market committee shall, on application made in his behalf by the licensee, and on payment of such fee as may be prescribed, issue a duplicate licence in the manner prescribed.

2.2.7 Officers and employees of the market committee

Every Market committee shall have a Secretary to be appointed by the State Government on such terms and condition as may be prescribed: Provided that the State Government may appoint any officer of the directorate of Agricultural Marketing as secretary of the market committee. The market committee may appoint such other officers and employees as the Board may sanction. The salaries and allowances of the officers and employees of the market committee shall be paid from the market committee fund and the market committee shall also provide for the payment of the leave allowance, pension, gratuity and provident fund to all its officers and employees in accordance with such rules relating to the terms and conditions of service of such officers and employees at the market committee may, subject to the approval of the Board, determine. The market committee or any person dissatisfied with the decision of the Board in respect of any matter may appeal to the State Government in such manner and within such time as may be prescribed.

2.2.8 Meetings of the market committee

Every market committee shall hold its meeting at least once in every month. The Secretary shall fix the agenda and convene the meeting with the approval of the Chairman of the committee. The Chairman or in his absence the Vice-Chairman of a market committee shall preside at every meeting of such market committee and in the absence of both, the members present shall elect one from among themselves to preside at such meeting. Six members shall form quorum for a meeting of the market committee. No business shall be transacted at a meeting of a market committee if there be no quorum and the same shall stand adjourned: provided that no quorum shall be necessary in the case of an adjourned meeting. Every matter coming before the market committee shall subject to the provision be decided by a majority of votes of the members present and voting in the meeting and in the case of equality of votes, the president of the meeting shall have a second or casting vote. The Chairman and the vice-chairman of the Board or any person authorised by the Board in this behalf and the director any person authorised by him in this behalf shall have the right to attend any meeting of any market committee without any right to vote in such meeting. The Secretary and the other officers and employees of the market committee shall discharge such duties as may be entrusted to them by the market committee.

2.2.9 Levy of fee by market committee

Notwithstanding anything contained in the Bengal Finance (Sales Tax) Act, 1941 or any other law relating to taxation of agricultural produce in force, the market committee shall levy fees on any agricultural produce sold in the market area, at a rate which shall not be more than two rupees per one hundred rupees of the amount for which the agricultural produce is sold, whether for cash or for deferred payment or for other valuable consideration, irrespective of the fact that the buyer of the produce is the Central Government or the State Government or an agent or undertaking of either of them or a corporation Constituted under any law for the time being in force: Provided that no fee shall be levied in the same market area, more than once, in relation to the same agricultural produce irrespective of the number of transaction. For the purpose of this sub-section all agricultural produce taken out, or proposed to be taken out of a market area shall, unless the contrary is proved, be presumed to have been within sold such area. In the determination of the amount of the fees payable under this sub-section any fraction of ten paise less than five paise shall be disregarded and any fraction of ten paise equal to or exceeding five paise shall be regarded as ten paise. For the purpose of this sub-section all agricultural produce stored in the cold storages within the market area shall, unless the contrary is proved, be presumed to have been stored for the purpose of sale. The fees referred to shall be paid by the purchaser of the agricultural produce concerned in the following manner, namely (i) When a licensed trader is the buyer of any agricultural produce, he shall pay the fees to the market committee in the prescribed manner within a week from the day of the transaction; (ii) When a licensed trader is the seller of any agricultural produce and the buyer is not licensed, the trader shall recover the fees from the buyer and deposit the same in the prescribed manner with the market committee within a week from the day of the transaction; (iii) the market committee may authorise its officers or staff or any other person to realise the fees directly from the buyer.

2.2.10 Submission of returns

Every licensed trader shall submit to the Secretary returns of turnover in such manner, for such period and by such dates as may be prescribed. The trader shall before submitting any return of turnover referred to pay into the market committee fund amount of fees due under this Act according to such return; and for such payment a receipt in duplicate shall be issued to the payee. One of the duplicate receipts issued to the payee shall be attached to the return of the turnover to be submitted to the market committee. In case of failure to submit return within the prescribed period, the market committee shall initiate assessment proceeding for that return period soon after the expiry of the time. If the Secretary is satisfied that the return of turnover submitted by a

trader is correct and complete, he may, without requiring the presence of the trader or the production of evidence by him, determine the amount of fees due from the trader. If the Secretary is not satisfied with the return of turnover submitted by a trader and requires the presence of the trader or the production of evidence by him, he may serve on such a trader a notice in the prescribed form requiring him or his nominee on a date to be specified there in to attend before him and produce or cause to be produced before him any evidence in support of the return. On the day specified in the notice issued under sub-section (4) or as soon thereafter as may be, the secretary, after considering such evidence, oral or documentary, as the trader or his nominee may produce and such other evidence as the Secretary may require on specified points, shall, by an order in writing, assess and determine the fees payable by him. If a trader fails to submit any return of turnover as required or fails to comply with the term of a notice issued, the Secretary shall, after giving the trader an opportunity of being heard, make, in the prescribed manner, the assessment of fees payable under this Act to the best of his judgment and determine the sum payable by the trader on the basis of such assessment. The Secretary may, in such a case, and in a case where a trader has failed to comply with the provision, direct that the trader shall in addition pay, by way of penalty, a sum not exceeding the amount of the fees assessed, if he is satisfied that the failure was unjustified or wilful.

2.2.11 Search and seizure

The officers or employees of the market committee shall have power to seize any agricultural produce taken, or proposed to be taken, out of a market area in any vehicle, boat or other conveyance, and to search or seize records of market functionaries if such officer or employee has reason to believe that any fees or other amount due to the market committee under this Act in respect of such agricultural produce has not been paid, together with any container or other materials for the packing of commodities. Such seizure shall be forthwith reported by the officer or employee to a Magistrate having jurisdiction to try an offence under this Act and the provision of the code of criminal procedure, 1973 shall, so far as may be, apply in relation to the agricultural produce seized as aforesaid as they apply in relation to property seized by a police officer.

At any time when so required by any officer or employees of the market committee empowered by the State Government in this behalf, the driver or any other person in-charge of any vehicle, boat or other conveyance which is taken or proposed to be taken out of a market area, shall stop the vehicle, boat or other conveyance, as the case may be, and keep in stationery as long as may reasonably be necessary and allow the officer or employee empowered as aforesaid to examine the contents in the vehicle, boat or other conveyance and inspect all records relating to the agricultural produce carried, which are in the possession of such driver or other person in-charge, who shall, if so required, give his name and address and the name and address of the owner of the vehicle, boat or other conveyance.

Any person aggrieved by an order made may appeal to an officer of the State Government not below the rank of a superintendent of Agricultural Marketing, as may be specified by the State Government by an order issued in this behalf, having jurisdiction over the area and the decision of such officer shall be final provided that no appeal against an order made shall be entertained by such officer unless he is satisfied that such amount of fee as the appellant may admit to be due from him has been paid.

A market committee may, with the previous sanction of the State Government, raise money, by taking loan from the State Bank of India or any other bank or otherwise, required for carrying purposes of this Act on the security of any property vested in and belong to such committee. A market committee may subject to such condition as may be imposed by the State Government, obtain loan from the State Government.

2.2.12 Market committee fund

All moneys received by a market committee shall be paid into a fund to be called the market committee fund and all expenditure incurred by the market committee under or for the purposes of this Act shall be defrayed out of the said fund. Out of the surplus, if any, remaining with the market committee at the close of each market year after meeting all expenditure incurred for the purpose of this Act during the said year, rupees one thousand shall be credited to the reserved fund of the market committee and out of the excess amount, if any, twenty per cent, shall be paid into the West Bengal State Marketing Board Fund.

Subject to the provisions, the market committee fund may be applied for the following purpose only, namely; (i) acquisition, and taking on lease, of market, and management of market; (ii) maintenance and improvement of the market; (iii) construction and repair of buildings and installation and repair of equipments which are necessary for the purpose of the market and for the health, convenience and safety of the persons using it; (iv) provision for and maintenance of standard weights and measures; (v) payment of pay, leave allowance, gratuity, compassionate allowance and contribution towards leave allowance, compensation for injuries and death resulting from accidents while on duty, medical aid, pension or provident fund of the persons employed by the market committee; (vi) payment of interest on loans that may be raised for carrying out the purpose of this Act and creation of a fund for repayment of such loans; (vii) collection and dissemination of information regarding all matters relating to crop statistics and marketing in respect of the agricultural produce concerned; (viii)

providing facilities, such as shelter, parking accommodation and water for the persons, draught cattle, vehicles and pack animals coming or being brought to the market and construction and repair of approach roads, culverts, bridges and such other purposes; (ix) meeting the expenses incurred in maintenance of office and in auditing the accounts of the market committee; (x) publicity in favour of agricultural improvements and thrift; (xi) fostering co-operative marketing and assisting co-operative marketing societies in the procurement and organisation of profitable disposal of produce particularly the produce belonging to small and marginal farmers; (xii) prevention, in conjunction with other agencies, State, Central and others of distress sale; (xiii) meeting any legal expenses incurred by the committee; (xiv) incurring all expenses for training in marketing of the agricultural produce; (xv) payment of travelling and sitting allowances to the members and employees of the market committee in such manner and at such rates may be prescribed; (xvi) grant of loans and advances to the employees; (xvii) performing, with the previous sanction of the Board any other function as may be necessary to carry out the purpose of this Act. (1A) Every market committee shall, with the previous approval of the Board, spend every fifty per cent of the fees referred to in sub-section (1) of section 17 for providing facilities with a view to ensuring smooth marketing of agricultural produce or for servicing loans taken on that account. If any market committee fails to spend the amount or portion of it for the aforesaid purposes, the same amount of the unspent portion shall be utilised for other purposes referred to in sub-section (1): Provided that the Board may from time to time review the requirement of the person using the market area and direct the market committee to provide such facilities as the Board may consider necessary and any such direction by the Board shall be binding on the market committee. The market committee fund shall be operated by the Chairman jointly with the Secretary and in the absence of the Secretary, with another member of the market committee and the accounts thereof shall be kept and audited in such manner as may be prescribed.

2.2.13 Budget of the market committee

The Chairman of the market committee shall, at a special meeting to be held for the purpose before the fifteenth day of November in each year, lay before the market committee a budget of the committee for the next market year. The market committee shall within the seventh day of December in each year, consider the budget lay before it and accept it with or without modification. Every budget as accepted by the market committee shall be submitted to the Board within the twentieth day of December in each year and the Board shall, within the twentieth day of January of the following year, either sanction the budget as accepted by the market committee and communicate necessary intimation in this behalf to the market committee or return it to the market committee for making such modifications there in as the Board may deem fit to specify. Where the budget is returned to the market committee by the Board for making any modifications therein, the market committee shall, within the fifteenth day of February, make such modifications and submit, within the first day of March the budget as so modified to the Board and the Board shall, then, within the thirty first day of March, sanction the same and communicate necessary intimation in this behalf to the market committee. The Chairman of the market committee may, at any time during the year for which a budget has been sanctioned by the Board, lay before the market committee a supplementary budget, and the provisions of sub-section (2), sub-section (3) and sub-section (4) shall mutatis mutandis apply to such supplementary budget. No sum shall be expended by or on behalf of the market committee unless the expenditure is covered by a specific provision in the budget sanctioned by the board provided that the market committee may sanction any re-appropriation from one head of expenditure to another or from the provision made for one scheme to the provision made for another, with the previous approval of the Board. The Secretary of a market committee shall, at a special annual meeting, place before the market committee the audited statement of accounts and annual administration report of such market committee.

Every contract required to be entered into by the market committee shall be in writing and signed on behalf of the market committee by its chairman, Secretary and two other members. No contract other than a contract as provided in sub-section (1) shall be binding on the market committee.

2.2.14 Supersession of the market committee

If at any time the State Government considers it necessary so to do in the public interest, it may, by notification, supersede the market committee, the members of which shall forthwith vacate their offices, and proceed to reconstitute it in accordance with the provisions of this Act and appoint a person to perform the functions of the market committee until it is so reconstituted. For the avoidance of doubts it is hereby declared that a notification of supersession shall not effect or imply in any way the dissolution of the market committee as a body corporate.

The market committee shall furnish such information in connection with its duties and functions as the Director of the State Government or any officer appointed by the State Government may in this behalf call for.

2.2.15 Power of inspection

The Director or any other officer not below the rank of a superintendent of Agricultural Marketing, authorized by the State Government in this behalf by general or special order, may inspect or cause to be

inspected the accounts of the market committee or institute an enquiry into the affairs of the market committee and require the market committee or its chairman to do a thing or to refrain from doing a thing which the director or other officer considers necessary or desirable in the interest of the market or the market committee. The Director or any other officer authorised by the State Government shall, have the same power as are vested in a court under the Code of Civil Procedure, 1908, when trying a suit in respect of the following matters namely, (a) enforcing the attendance of any person and examining him on oath or affirmation; (b) compelling the production of documents; and (c) issuing commissions for the examination of witness.

The Director may for reasons to be recorded in writing, suspend or cancel any licence issued and may take such other steps as he may deem fit in the interest of market; Provided that before passing any order under this section the director shall give a reasonable opportunity to the licensee of being heard. Where the market committee is unable due to any order or decision of a court or any other reason to perform the duties imposed upon it by or under this Act, the State Government shall make such alternative arrangement as it deems necessary for the due performance of the duties and functions of such market committee. The Director or the Board may at any time call for and examine any record from market committee for the purpose of satisfying himself or itself, as the case may be, as to the legality or propriety of any decision or order passed by such market committee and may, after giving an opportunity to the market committee of being heard, pass such order thereon as considered fit and proper: Provided that the Director of the Board when he or it, as the case may be, calls or any record from a market committee, shall also notify the other about such action and the other, as the case may be, shall not in such a case take any action. The Director or the Board may, pending the examination and disposal of the matter, direct that the execution of the decision or order the market committee be stayed. The market committee, if dissatisfied with the decision of the Director or the Board under sub-section (1), or any person aggrieved by the refusal to stay the execution of the decision or order the market committee, may prefer an appeal to the State Government within such time and such manner as may be prescribed.

Where any land is needed for the purpose of the market committee, the State Government may proceed to acquire the same under the provisions of the Land Acquisition Act, 1894 the West Bengal Land (Requisition and Acquisition) Act, 1948 or any other law for the time being in force. Any land so acquired shall be transferred to the market committee on such terms and conditions as may be agreed upon between the State Government and the market committee. The State Government may, by notification and subject to such conditions and restrictions as it may think fit to impose, exempt any class of persons, commodity or traders from all or any of the provisions of this Act. Such exemption order shall also be published in the market area or the office of the local authority in such manner as may be prescribed. Every due to market committee under this Act shall be recoverable as an arrear of land revenue under the provisions of the Bengal Public Demands Recovery Act, 1913. Every member of a market committee and every officer and employee of a market committee shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code, 1860.

2.2.16 Bar of suits in absence of notice

No suit shall be institute against any market committee, its Chairman, Vice-Chairman, or any other member, any officer or employee, or any person acting under the direction of any such market committee, Chairman, Vice-Chairman, or any other member, any officer or employee, for anything done or purported to be done, in good faith as such member, Chairman, Vice-Chairman, office, employee or person under this Act, until the expiration of two months next after notice in writing stating the cause of action, the name and place of abode of the intending plaintiff and the relief which he claims, has been in the case of a market committee delivered or left at its office and in the case of the Chairman, Vice-Chairman or other member, officer, employee or person as aforesaid, delivered to him or left at his office or usual place of abode, and the plaint shall contain a statement that such notice has been so delivered or left. Every such suit shall be dismissed unless it is instituted within six months from the date of accrual of the cause of action. Nothing in this section shall be deemed to apply to any suit instituted under section 38 of the Specific Relief Act, 1963. No trade allowance, fee or charge other than such as may determined by a market committee shall be recovered in any transaction within a market area.

2.2.17 Penalty

Whoever contravenes the provisions sub-section (2) of section 4 or the provisions of section 13 shall, on conviction, be punishable with imprisonment for a term which may extend to six months or with fine which may extend to five hundred rupees or with both, and in the case of a continuing contravention, with a further fine which may extend to fifty rupees per day during which the contravention continues after the first conviction. Whoever in contravention of the provisions of section 33 recovers any trade allowance, fee or charge shall, on conviction, be punishable with imprisonment for the term which may extend to six months or with fine which may extend to five hundred rupees or with both, and in case of a continuing offence with a further fine which may extend to fifty rupees for every day during which such offence continues after the first conviction. Whoever contravenes any condition of a licence granted by a market committee shall on conviction, be punishable with fine which may extend to five hundred rupees. Whoever obstructs any authorized person while discharging his

duty shall, on conviction, be punishable with fine, which may extend to five hundred rupees. Whoever fails to pay any fee or other sum due to the market committee under the provision of this act or the rules or bye-laws made there under evades the payment due towards remuneration to any weighman or palladar, or demands remuneration without authority for the seller or buyer for his employment or demands remuneration otherwise than in accordance with the provisions of the rules and bye-laws made under this Act shall, on conviction, be punishable with fine which may extend to five hundred rupees and in case of a continuing offence with a further fine which may extend to fifty rupees for every day during which such offence continues after the first conviction. Whoever contravenes any provisions of this Act or any rule or buy-laws made there under shall, if no other penalty is provided for the offence, be punishable with fine which shall not be less than twenty rupees but may extend to two hundred rupees. All offences punishable under this Act or the rules made there under shall be cognizable and bailable. The market committee may accept from any person who has committed or reasonably suspected of having committed an offence against this Act or the rules or buy-laws made there under by way of composition of such offence (a) Where the offence consists of the failure to pay on evasion of any fee or other amount so recoverable under this Act or the rules or bye-laws made there under, in addition to the fee or other amount recoverable, a sum not exceeding five hundred rupees or double the amount of fee or other amount of fee or other amount whichever is greater, and (b) in other cases, a sum of money not exceeding five hundred rupees. Whenever any person is convicted of any offence under this Act or rules or bye-laws made there under, the magistrate shall, in addition to any fine which may be imposed, direct the person to pay the market committee the amount of fees or any other money that may be due from him under this Act and the rules or bye-laws made there under, and also such costs of prosecution as may be fixed by the magistrate, within such time as may be fixed by him and on failure to pay such dues within such time, the Magistrate shall impose such further fine or imprisonment or both as he may think fit. Any police officer may arrest any person committing any offence against any provision of this Act or any rule or bye-law made there under and produce him before the nearest Magistrate for necessary orders and communicate that information to the market committee forthwith. Subject to the other provisions of the Act the State Government may delegate any of its powers or functions under this Act to the Director.

2.2.18 Constitution of the board

The State Government may, by notification, establish a Board to be known as the West Bengal State Marketing Board. The Board shall be a body corporate by the aforesaid name, shall have perpetual succession and a common seal, may sue and be sued in its corporate name and shall be competent to acquire, hold and dispose of property, both movable and immovable, enter into contracts and do all such things as may, from time to time, be necessary for carrying out the purposes of this Act. The Board shall be constituted by the State Government by notification and shall consist of members, both officials and non-officials not more than 20 in number of whom not more than 10, shall be non-officials. The members of the Board shall be appointed by the State Government. The State Government shall appoint one from among the members of the Board to be the Chairman, one to be the Vice-Chairman and another to be the secretary of the Board. The term of office of the members of the Board shall be three years from the date of notification under subsection (3) and shall include any further period which may elapse between the expiration of such period of three years and the date of the first meeting of the succeeding Board at which a quorum is present: Provided that a member of the Board may, on the expiry of his term of office, be re-appointed. The names of Chairman, Vice-Chairman and Secretary appointed with the other members of the Board shall be declared by the State Government by notification, but the Board shall be deemed to be duly constituted from the date of notification under sub-section provided that the notification constituting the Board prior to the commencement of the West Bengal Agricultural Produce Marketing (Regulation) (Amendment) Act, 1981, shall be deemed to have been issued. A member of the Board including the Chairman, the Vice-Chairman and the Secretary may, by writing under his hand addressed to (a) the State Government, in case of the Chairman, Vice-Chairman and the Secretary, and (b) the Chairman, in case of the other members of the Board, resign his Office and on such resignation being accepted, he shall be deemed to have vacated his office. If at any time a vacancy occurs in the office of the member of the Board by reason of the non-acceptance of office or by the removal, death or resignation, the vacancy shall be filled up by fresh appointment of a person who shall hold office for the unexpired period of the term of office of the member whose place he fills. The Board shall meet as and when considered necessary by the Chairman but the least once in a quarter provided that Chairman may, for the purpose of disposing of outstanding business of the Board or for any other purpose, and shall on receipt of a written requisition, signed at least by majority of the members of the Board and specifying the agenda, call a special meeting of the Board. The Chairman, and in the absence of the Chairman, the Vice-Chairman, of the Board and in the absence of the both the Chairman and the Vice-Chairman, any member chosen by the members of the Board present in the meeting for the purpose shall preside over the meeting of the Board. All questions in the meeting shall be decided by the majority of votes, the person presiding having a second or casting vote in case of equality of votes. The numbers of the members necessary to form a quorum shall be such as may be prescribed. If there be no quorum in the meeting, no business shall be transacted

at such a meeting and the meeting shall be adjourned to another date: Provided that no quorum shall be necessary in the case of such adjourned meeting. The Board shall meet at such time and place and shall observe such rules of procedure in regard to the transaction of business at its meeting as may be prescribed. No person, who – (a) is an employee of the Board, or (b) has been declared by a competent court to be of unsound mind, or (c) is an undercharged insolvent, or (d) has been convicted by a court of law for an offence involving moral turpitude, shall be eligible to be appointed as a member of the Board. The State Government may, by notification, remove any member of the Board from his office if such member has, in the opinion of the State Government been guilty of misconduct or neglect of duty or has become disqualified within the meaning of sub-section provided that the State Government shall, before passing any order under this clause, give the person concerned an opportunity of being heard. No member of the Board who has been removed from his office on any of the grounds mentioned in clause (a) shall be re-appointed to the Board. No action of the Board shall be called in question merely by reason of the existence of any vacancy in or any defect in the constitution of, the Board at the time of taking such action. If any difficulty arises in giving effect to the provisions of this Act, the State Government may take such steps or issue such orders, not inconsistent with this Act, as may appear to it to be necessary or expedient for the purpose of removing such difficulty.

2.2.19 Powers and duties of the board

Subject to the control of the State Government, the Board shall have the powers (a) to exercise superintendence and control over the business and affairs of the market committees, (b) to inspect or cause to be inspected the business and affairs of the market committees including their accounts and the markets established by them, (c) to institute an inquiry into the affairs of any market committee, the enquiring officer having the same powers, as are vested in a court under the Court of Civil Procedure, 1908, when trying a suit, in respect of the matters referred to of this Act, to approve the place or places of transaction in agricultural produce within such distance of a principal market yard or sub-market yard as may be determined by the market committee, (d) for carrying out the purposes of this Act, to issue directions, from time to time, to the market committees, to be binding upon such committees, and (e) to do in relation to, or in connection with, the regulation of marketing of agricultural produce in West Bengal, such other acts as the Board may deem necessary. It shall be duty of the Board namely, (a) to supervise, control and co-ordinate the activities of the market committees, to review the requirements of persons using a market and to direct the market committee to provide facilities for the marketing of agricultural produce, to approve the programme drawn up by a market committee for the purpose of providing facilities to persons using the market area, (b) to provide for expert technical assistance or guidance for efficient working of the market committees, (c) for the efficient functioning of the market committees, to arrange for the training of the officers, employees and technical personnel of such committees, and, if necessary, to establish under its direct charge and control, for such training purposes, and for affording practical guidance to such committees, a model market in accordance with the provisions of this Act, (d) to educate the public and impress upon them the advantages and merits of patronising the markets established by the market committees, (e) to collect and furnish such statistics and marketing information in relation to or in connection with market committees including the market established by such committees as may be required by the Board for its efficient and effective functioning under this Act and to publish and disseminate for the benefit of the general public any statistics and marketing information, and such other instructions as may be issued by the Board from time to time, (f) to help the market committees with expert advice and guidance in grading and standardisation of the agricultural produce and to bring about, as far as practicable, uniformity in respect thereof in all the markets established by the market committees in the State, (g) to initiate, from time to time, such other actions as the State Government or the Board may deem necessary to carry out the purposes of this Act.

If the State Government considers it necessary so to do, it may, by notification, delegate, subject to such restrictions as it may deem fit to impose, to the Board all or any of the powers exercisable by it by or under this Act. While exercising the powers referred to in clause, the Board shall be under the control of State Government.

2.2.20 Delegation of the board's powers and duties

For the purpose of efficiently discharging its business under this Act, the Board may, from time to time, by order, delegate, under such restrictions, if any, as it may think fit to impose, any of its powers duties conferred and impose on it by it on this Act to the Chairman of the Board or to Secretary of the Board or to the Chief Executive Officer, or to any other officer of the Board or to a sub-committee or sub-committees formed amongst the members of the Board. The Board shall have a Chief Executive Officer to be appointed by the State Government on such terms and conditions as may be prescribed. The Board may, for the efficient discharge of its business, appoint other officer, technical personnel and employees under such terms and conditions as may be determined by the Board with the approval of the State Government. The Chief Executive Officer and other officers, technical personnel and employees of the Board shall discharge such duties as may be entrusted to term by the Board.

For carrying out the purposes of this Act, the Board may, with the previous approval of the State Government, raise loan in the open market or from any financial institution, and the State Government may stand guarantee for payment of the principal amount of such loan and for payment of interest, subject to such terms and conditions it may determine. The State Government may advance money or grant loans to the Board on such terms and conditions as may be determined by the State Government. The Board may advance money or grant loans to the market committees, subject to the terms and conditions as the Board may determine. Notwithstanding anything contained in any other law for the time being in force, every debt arising out of any loan taken by the Board from the State Government or any financial institution for carrying out the purposes of this Act shall (a) have priority over all other debts whether secured or unsecured, and (b) be a preferential debt within the meaning of section 530 of the Companies Act, 1956 and such debts shall rank equally among themselves and be paid in full out of the assets of the Board unless such assets are insufficient to meet them, in which the case they shall abate in equal proportion.

The Board shall have a fund to be called the West Bengal State Marketing Board fund. All moneys received by the Board shall be paid into the West Bengal State Marketing Board fund and expenditure incurred by the Board under or for the purpose of this Act shall be defrayed out of the said fund. The West Bengal State Marketing Board fund shall be operated by the Chief Executive Officer of the Board jointly with such an official member of the Board as the Board may determine and the accounts thereof shall be kept in such manner as may be approved by the Board provided that the Board may also authorise another official member to operate the fund jointly with the Chief Executive Officer in case of absence of the official member determined in the aforesaid manner. A copy of the audited accounts, along with auditor's report there to shall be, as soon as may be forwarded to the State Government, and any direction issued by the State Government in relation thereto, shall be forthwith carried out by the Board. The accounts of the Board in respect of each market year shall be audited within three months of the closing of the market year, by such auditor as may be approved by the State Government, and the fees payable to such auditor and the other expenditure incurred for audit shall be paid out of the West Bengal State Marketing Board fund. The Board shall cause to be produced all accounts, registers, documents, vouchers, receipts and other relevant papers which may be called for by the auditor for the purpose of audit. Any explanation called for by the Auditor for the settlement of any discrepancy in the accounts shall be immediately furnished to him. The auditor shall have the same rights and privileges and authority in connection with audit of the accounts of the Board as the Comptroller and Auditor-General of India has with the audit of Government accounts. The West Bengal State Marketing Board fund shall be applied to enable the Board to carry out the purposes of this act. The West Bengal State Marketing Board fund shall be utilised for the following purposes, namely (i) better marketing of agricultural produce; (ii) marketing of agricultural produce on co-operative lines and assisting the co-operative marketing societies in the procurement of produce belonging to small and marginal farmers and their disposal. In this clause, "small farmer" shall mean a farmer who possesses more than two hectares but less than four hectares if he is a member of any of the Scheduled Tribes, and more than one hectare but less than two hectares in other cases, of land, either as an owner or as a raiyat or as a share-cropper and "marginal farmer" shall mean a farmer who possesses no more than two hectares if he is a member of any of the Scheduled Tribes, and one hectare in other cases, of land, either as an owner or as a rayat or as share-cropper; (iii) taking of steps to stop distress sale in conjunction with other agencies State or Central; (iv) provision for transport and storage facilities; (v) collection and dissemination of market rates and news; (vi) grading and standardisation of agricultural produce; (vii) general improvements in the markets or the respective market areas; (viii) participation in any scheme designed to augment and improve production and betterment of agricultural produce; (ix) subsidising the implementation of production oriented schemes such as small irrigation, spraying, drainage, in the hinterland of the market; (x) acquisition, establishment or management of the retail markets periodic hats and fairs located in the market areas; (xi) maintenance of the office of the Board and constructions and repair of its office buildings, rest house and staff quarters; (xii) giving aid to financially weak market committees in the shape of loans and grants; (xiii) payment of salary, leave allowance, gratuity, compassionate allowance, compensation for injuries or death resulting from accidents while on duty, medical allowance and pension or provident fund to the persons employed by the board and leave and pension contribution to Government servants on deputation; (xiv) payment of travelling and other allowances to the members of the Board, its officers and employees; (xv) carrying out of propaganda, demonstration and publicity in favour of agricultural improvements; (xvi) meeting any legal expenses incurred by the Board; (xvii) imparting education in marketing or agriculture; (xviii) construction of godowns; (xix) granting of loans and advances to the employees; (xx) meeting expenses incurred in auditing the accounts of the Board; (xxi) carrying out, with the previous sanction of the State Government any other purpose which is calculated to promote the general interest of the Board and the market committee or the national or public interest.

2.2.21 Budget

The Chairman shall, at a special meeting to be held for the purpose before the fifteenth day of December in each year, lay before the Board a budget of the Board for the next market year. The Board shall,

within the seventh day of January in each year, consider the budget lay before it and accept it with or without modification. Every budget as accepted by the Board shall be immediately submitted to the State Government, and the State Government may, as expeditiously as possible, sanction the budget and accepted by the Board or return it to the Board for marking such modifications therein as the State Government may deem fit to specify. Where a budget is returned to the Board by the State Government for making any modification therein, the Board shall forthwith make such modification and submit the budget as so modified to the State Government and the State Government may, then, as expeditiously as possible, sanction the same. The Chairman may, at any time during the year for which a budget has been sanctioned by the State Government, lay before the Board a supplementary budget, and the provision of sub-section (2), sub-section (3) and sub-section (4) shall mutates mutandis apply to such supplementary budget. No sum shall be expended by or on behalf of the Board unless the expenditure is covered by a specific provision of the budget sanctioned by the State Government provided that the Board may sanction any re-appropriation from one head of expenditure to another or from the provision made for one scheme to the provision made for another, with the previous approval of the State Government.

2.2.22 Progress of Regulated of Markets - Agricultural Produce Market Committees (APMC Act)

Agricultural Produce Market Committees constituted as per APMC Acts manage the markets. Over the years, to achieve an efficient system of buying and selling of agricultural commodities, most of the State Governments and Union Territories enacted legislations (Agricultural Produce Marketing (Regulation) Act (APMC Act) to provide for regulation of agricultural produce markets. Most of the wholesale markets and some of the rural primary markets have been brought under regulation. Many of the regulated wholesale markets have a principal market with large area and relatively better infrastructure and number of sub-yards attached to the principal market. The establishment of regulated markets has helped in creating orderly and transparent marketing conditions in primary assembling markets. Further, increase in the number of regulated market yards, from a meagre 286 at the time of independence to 7557 in year 2005, has helped in increasing the access of farmers to such orderly market places. These regulated markets (7557) consist of 2428 principal markets and 5129 sub yards. Some wholesale markets are outside the purview of the regulation under APMC Acts.

This development, coupled with construction of approach roads and roads network linking primary markets with secondary wholesale and terminal markets, also improved the process of price discovery at the primary market level where most of the small farmers dispose off their produce. Increase in access of farmers to market places, apart from reducing transaction costs of farmers has helped the small farmers having low-marketed surplus and are not able to transport their surpluses to long distances. Though precise data on the proportion of benefits of regulated markets going to the small and marginal farmers are not available, there is evidence to show that expansion of such physical infrastructure in rural areas has helped small and marginal farmers more by increasing their access to the markets. During 1992-93, agricultural commodities worth Rs.62, 000 crore were traded in these regulated wholesale markets, which account for about 43 per cent of the value of marketed surplus (Acharya-2004).

However, this does not mean that everything is fine in all the regulated markets of the country. The facilities created in market yards continue to be inadequate. The cleaning, grading and packaging of agril. produce before sale by the farmers have not been popularized by the market committees on a sufficient scale. Even facilities for these have not been created in most of the market yards. The Institution of State Agril. Marketing Boards were established for expeditious execution of the market development work. So far 25 States and 2 UTs (Delhi and Chandigarh) have established Agril. Marketing Boards in their respective States/UTs. Out of these 27 States/UTs, in A.P. the SAM Board has been established with only advisory functions under the provisions of the market rules. Although the purpose of establishment of State Agricultural. Marketing Board is almost the same in all the States where Statutory Boards exist; a broad variation has been observed in their composition/constitution and functioning. It is necessary to bring more uniformity in powers and functions of Boards and demarcations of activities between the Directorate of Marketing and State Agricultural Marketing Boards. This can facilitate proper regulation of marketing practices as well as building more infrastructure facilities so as to achieve a faster growth and better private participation.

The number of regulated markets is relatively more in geographically larger states viz. Andhra Pradesh, Bihar, Maharashtra, Madhya Pradesh, Uttar Pradesh and West Bengal. These six States account for 53% of total regulated markets in the country. However, some of the regulated markets are non-functional, as actual transactions do not take place in their market premises, but market fee is collected by the APMC at designated check posts. In such cases, it is more of a fee collection activity rather than providing marketing functions. The States of Punjab and Haryana though geographically small, have a large number of regulated markets owing to sizable quantity of surpluses of rice and wheat. These two states account for 9.5% of the total regulated markets in the country.

The area served by each regulated market across the States reveals large variations. The area served per regulated markets varies from 115 Sq. Km. in Punjab to 11215 Sq. Km. in Meghalaya. On an average, a regulated market serves 435 Sq. Km. area in the country, which is quite high. Farmers have to travel long

distances with their produce to avail the facility of regulated market. The National Commission on Agriculture (1976) and National Commission on Farmers (2004) have recommended that the facility of regulated market should be available to the farmers within a radius of 5 Km. If this is considered a benchmark, the command area of a market should not exceed 80 Sq. Km. However, in the existing situation, except Delhi and Pondicherry, in no State/UT, the density of regulated markets is even close to the norm. The area served per market yard is as high as 7096 Sq. Km. in Sikkim, 1465 Sq. Km in Himachal Pradesh, 940 Sq. Km in Uttaranchal and 823 Sq. Km. in Rajasthan. The studies have shown that increase in the density of market has a positive impact on agricultural productivity. The targeted norms can be broadly achieved if the remaining wholesale markets and rural periodic markets are developed as regulated markets.

Area served by the market may not be a right indicator to assess the optimum density of the markets, because the non-crop area which gets added to this indicator may not require a market. Therefore, the gross cropped area served by each market can be taken as useful indicator for assessing the density of the markets and adequacy of number of markets in a state. As per this criterion, the State of Punjab has one market for 18,000 ha. of gross cropped area. Similarly, one market exists for every 13,580 ha. of gross cropped area in West Bengal, 15380 ha. in Andhra Pradesh, 37,050 ha. in Madhya Pradesh. According to this information, it can be presumed that one market for every 15,000 to 18,000 ha. of gross cropped area will be optimum so as to meet the requirements of the farmers. This, however, depends on the number of functional regulated markets in a state. For example, though the regulated markets are shown as 889 in Andhra Pradesh, about 500 markets are either non-functional or very little transactions occur in those markets. Though, the indicator of gross cropped area per market will give more realistic indication of the adequacy of markets in a state, the actual requirement will have to be assessed based on the field study, depending on the cropping pattern, seasonality, production of crops etc. For example, the market arrivals are maximum during the wheat harvesting season in Punjab as at that time the market infrastructure and the market density may appear to be highly inadequate, requiring opening up of collection centres/sub-yards. However, after the season there may be little activity in these sub-yards.

The benefits available to the farmers from regulated markets depend on the facilities/amenities available rather than the number of regulated markets in the area. Both covered and open auction platforms exist in two-thirds of the regulated markets. One fourth of the markets have common drying yards. Traders modules viz.; shop, godown and platform in front of shop exist in 63 percent of the markets. The cold storage units exist in only nine percent of the markets and grading facilities exist in less than one-third of the markets. The basic facilities viz., internal roads, boundary walls, electric light, loading and unloading facilities and weighing equipment's are available in more than eighty percent of the markets. The state-wise comparison of each market coverage of population, total area, gross cropped area is given in – (table – 2.1).

2.2.23 Background information on Agricultural Produce Marketing Committee (APMC) Model Act 2003

Economic liberalization and promoting global capital, especially in the agriculture sector invited to introduce the New Agricultural Policy (1995). The thrust of this policy was to encourage private investment in agriculture and promote high-value crops for export at the expense of food crops. The present Agricultural Produce Marketing Committee (APMC) Act and invite MNCs into the agriculture sector. But the question is whether farmers and others involved in this sector would benefit from the New Agriculture Policy/Agricultural Produce Marketing Committee Act? The Government is of the opinion that the proposed APMC Act Amendment will address the loopholes of the prevailing APMC Act and strengthen the current marketing system by bringing professionalism and competitive attitude into the system. This, it claims, will be a boon to farmers. At present, we are witnessing an agrarian crisis where farmers are committing suicide across the country due to indebtedness over crops, less yield, and crop loss due to heavy rains in some parts of the country and severe drought in others. In this critical moment, the state government should ideally introduce programmes which will support the farming community. Instead, the government has weakened the present act and introduced the model act which gives more power to large private players and the state government rather than representatives of agriculturists. In the model Act, committee members are nominated by the state government in contrast to earlier when committee members were elected. To speed up the process of privatizing APMC act, the central government has gone to the extent of threatening the State Governments by cancelling grants meant for certain schemes/subsidies if the state government delays or fails to implement the APMC model act.

2.2.24 Main Features of APMC Model Act

The two main features of the APMC Model Act 2003 are:

- 1) Privatisation of the agricultural sector by encouraging private and special markets and contract farming. Any individual or group can start these markets and the special /private market traders can directly purchase produce from the farms.
- 2) Centralization of power within the state government through nomination of representatives of the market committee.

Table 2.1: The state-wise comparison of each market coverage of population, total area, gross cropped area

	Maharashtra	Uttar Pradesh	Rajasthan	Madhya Pradesh	Andhra Pradesh	Karnataka	Gujrat	West Bengal	Orrisa	Punjab
Regulated markets	871	584	416	488	889	492	405	684	314	437
Area served by each market (km ²)	353.3	408.5	822.7	631.4	309.4	389.8	484.0	129.8	495.9	115.2
Gross cropped area served by each market (000ha)	25.44	37.21	51.44	37.05	15.33	25.02	26.42	13.58	26.83	18.57

Table 2.2: Progress of Reforms in Agricultural Markets - APMC Act. In different States

(As on 01.05.2006) S.No	Stage of Reforms	Name of States/Union Territories
1	States/ UTs where reforms to APMC Act has been done for Direct Marketing; Contract Farming and Markets in Private/Coop Sectors	Madhya Pradesh, Himachal Pradesh, Punjab, Sikkim, Nagaland, Andhra Pradesh Rajasthan and Chhattisgarh.
2	States/ UTs where reforms to APMC Act has been done partially	<i>a) Direct Marketing:</i> Haryana, Karnataka, NCT of Delhi, Chandigarh, Maharashtra, U.P. <i>b) Contract Farming:</i> Haryana, Gujarat <i>c) Markets in Private/Coop. Sectors:</i> Karnataka (Only NDDB), Maharashtra
3	States/ UTs where there is no APMC Act and hence not requiring reforms	Kerala, Manipur, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu and Lakshadweep
4	States/ UTs where APMC Act already provides for the reforms	Tamil Nadu
5	States/UTs where administrative action is initiated for the reforms	Orissa, Assam, Mizoram, Arunachal Pradesh, Tripura, Meghalaya, J&K, Uttaranchal, Goa, West Bengal, Pondicherry and
6	States/UTs where there is no progress	Bihar and Jharkhand

2.2.25 Constraints towards implementation reform of the Act:

As per the model act if the traders want to trade in the private / special markets they must deposit a prescribed amount as per the marketing committee for trading in addition to a trading license. Earlier only a license was required and there was no deposit for trading. Most of the present local traders cannot afford the deposit amount so automatically they will be pushed out of the business. Along with traders other people like coolies and hawkers and other service providers like transporters, pushcart workers, small and medium financiers, small retailers etc, will lose their jobs and livelihoods. This Act therefore not only promotes the entry of big companies, such as Metro Cash and Carry and Wal-Mart, into the agricultural sector but also pushes out small and medium farmers, traders, hawkers and other associated service sectors.

2.2.26 Risk factors involved in APMC model act for the farmers

- To qualify as a member of the market committee, the Model Act imposes the conditionality that the agriculturist has to have sold agricultural produce in the market for two years. This makes contract farmers more likely to qualify for membership in the market committee and pushes the agricultural system towards contract farming.
- The Model Act gives MNCs entry into the agricultural retail sector. This will push out existing local traders and trading systems seriously impacting livelihoods of small and medium farmers and traders, hawkers, coolies and associated service sectors.

2.2.27 Risk factors involved in contract farming

Contract farming mainly attracts small, medium and marginal farmers who are not in a position to invest in farming due to several reasons; they are the one who will be negatively affected by entry of big companies/MNCs into agricultural sector.

1. In contract farming, farmers have to depend on external sources for food because sponsors favour growing commercial crops rather than food crops. Also, after the contract period, farmers will find it difficult to grow food crops in the same land because of intensive use of fertilizers and pesticides in contract farming. If not, what are the alternatives for farmers? This will destroy the whole network in the agriculture sector and seriously impact food security, leading to more migration to cities, lack of job opportunities, and increase in urban poverty.
2. There is tremendous uncertainty involved in growing new, unfamiliar crops and producing for markets that might not always live up to the sponsor's expectations. Under the new system of contract farming, however, there is no provision made for extension support or training in crop management for farmers. Collaborative for the Advancement of the Study of Urbanism through Mixed Media
3. Under contract farming, the farmer is at the mercy of the sponsor with no protection from the state government. In some cases sponsors may be tempted to manipulate quality standards in order to reduce purchases from farmers. In other cases inefficient management can lead to overproduction for which the farmer may not be able to find a market.
4. One of the biggest risks for farmers is debt which can be caused by production problems, poor technical advice, significant changes in market conditions, or a company's failure to honour contracts.

2.2.28 implementation of the APMC Model Act

A few State Governments are not implementing the Model Act citing that the model act is anti-farmer, anti-poor and anti-citizen. Sixteen states have committed to amend their APMC Acts. Some of the State governments, which are already supporting private capital and investor-friendly policies, are eager to implement the model act. However, some farmers' association groups and traders oppose the proposed APMC Amendment Act. However, in West Bengal, though administrative actions have been initiated for reforming APMC Act., the progress in this sphere is very slow. At present the new government is eager to bring reform in APMC Act. and various plans and programmes have been initiated for the same. We can have a look about the progress of APMC Act in different states in - (table – 2.2)

Chapter –III

SOCIO-ECONOMIC CHARACTERISTICS OF THE SAMPLE DISTRICT AND FARMERS

3.1 District: Murshidabad

Murshidabad district is a district of West Bengal in eastern India. It is situated on the left bank of the river Ganges and the district is very fertile. The Murshidabad city, which lends its name to the district, was the seat of power of the Nawabs of Bangla. All of Bengal was once governed from this town. Few years after Nawab Siraj-ud-Daula lost to the British at the Battle of Plassey, the capital of Bengal was moved to the newly founded city of Calcutta. The present administrative head quarter of the district is located at Berhampur. Murshidabad city was the administrative head quarter of Bengal during early 18th century and was the first capital of British India. However, the British shifted the supreme civil and criminal courts to Calcutta in 1772.

Here thrived the cultures of many races and of religions like Buddhism, Brahmanism, Vaishnavism, Jainism, Islam and Christianity. Here settled the European traders like the Dutch, the British, the French and the Armenians. The capital city of Shashanka, the great king of Gauda (comprising most of Bengal) in the seventh century AD and perhaps that of Mahipala, one of the later Pala kings of Bengal, were in this district. The earliest evidences of history in the district date back to the pre-historic days perhaps as early as circa 1500 B.C. The district got its present name in the early eighteenth century and its present shape in the latter half of the eighteenth century. Murshidabad town, which lends its name to the district, derived its name from its founder. Travellers marveled at its glory through ages. The city, lying just east of the Bhagirathi River, is an agricultural trade and silk-weaving centre. Originally called Makhsudabad, it was reputedly founded by the Mughal emperor Akbar in the 16th century. Kartalab Khan was appointed as *Diwan* of Bengal Subah in 1701 CE by Aurangzeb. He shifted his office from Dacca (present day Dhaka) to Maksudabad in 1702 CE. In 1703 CE, Aurangzeb honoured him with the title of Murshid Quli Khan and granted the permission to rename the town as Murshidabad in 1704 CE after his newly acquired title.

In 1704 the nawab Murshid Quli Khan changed the seat of government from Dacca to Maksudabad, which he called after his own name. The Nawab Murshid Quli Khan made Murshidabad the capital city of Sube Bangla, comprising Bengal, Bihar, and Orissa. The family of Jagat Seth maintained their position as state bankers at Murshidabad from generation to generation. The East India Company reigned from here for many years after the Battle of Plassey. Warren Hastings removed the supreme civil and criminal courts to Calcutta in 1772, but in 1775 the latter court was brought back to Murshidabad again. In 1790, under Lord Cornwallis, the entire revenue and judicial staffs were fixed at Calcutta. The town is still the residence of the nawab, which ranks as the first nobleman of the province with the style of Nawab Bbahadur of Murshidabad, instead of Nawab Nazim of Bengal. The Murshidabad palace, dating from 1837, is a magnificent building in Italian style. The city still bears memories of Nawabs with other palaces, mosques, tombs, and gardens, and retains such industries as carving in ivory, gold and silver embroidery, and silk-weaving. An educational institution is named after Nawab family.

3.1.1 Administrative and Political divisions

The district comprises five subdivisions viz., Barhampur, Domkol, Lalbag, Kandi and Jangipur. Other than municipality area, each subdivision contains community development blocks which in turn are divided into rural areas and census towns. In total there are 29 urban units; 7 municipalities and 22 census towns. Baharampur and Kasim Bazar together form an urban agglomeration. Administrative divisions are presented in Table -3.1.

Table 3.1: Administrative divisions of Murshidabad district

Description	Year	Unit	Particulars
Sub-division	2007	Number	5
Police Station	2007	Number	26
Inhabited village	2001	Number	1925
Mouza	2001	Number	2210
Municipality	2007	Number	7
Block	2007	Number	26
Panchayat Samity	2007	Number	26
Gram Panchayat	2007	Number	254
Gram Sansad	2007	Number	3633

Source: District Statistical Handbook, 2007

Barhampur consists of Baharampur municipality, Beldanga municipality, and five community development blocks viz., Berhampore, Beldanga-I, Beldanga-II, Hariharpara and Naoda. Domkol subdivision consists of Dhulian municipality and four community development blocks viz., Domkol, Raninagar-I, Raninagar-II and Jalangi. Lalbag subdivision consists of Murshidabad municipality, Jiaganj Azimganj municipality and five community development blocks viz., Murshidabad-Jiaganj, Bhagawangola-I, Bhagawangola-II, Lalgola and Nabagram. Kandi subdivision consists of Kandi municipality and five community development blocks viz., Kandi, Khargram, Burwan, Bharatpur-I and Bharatpur-II. Jangipur subdivision consists of Jangipur municipality and seven community development blocks viz., Ragnathganj-I, Ragnathganj-II, Suti-I, Suti-II, Samsorganj, Sagardighi and Farakka. There are 26 police stations, 26 development blocks, 7 municipalities, 26 panchayat samity, 254 gram panchayats in this district. The district is divided into 19 assembly constituencies.

3.1.2 Geography

The shape of the district is like an isosceles triangle with its apex pointing to the North-West. The river Padma flows through the entire eastern boundary, separating the district from the districts, Malda and Rajshahi (Bangladesh). Burdwan and Nadia are the Southern side and Birbhum and Pakur (Jharkhand) are on the western side of Murshidabad. It borders Malda district to the north, Birbhum to the west, Bardhaman to the south-west and Nadia district due south. The international border with Bangladesh's Rajshahi division is on the east. Geographical location is presented in Table-3.1.

Table 3.2: Geographical location of Murshidabad district

Latitude		Longitude	
North	South	East	West
N 24 ⁰ 50'20"	N 23 ⁰ 43'30"	E 88 ⁰ 46'00"	E 87 ⁰ 49'17"

Source: District Statistical Handbook, 2007

The district comprises two distinct regions separated by the Bhagirathi River. To the west lies the Rarh, a high, undulating continuation of the Chota Nagpur plateau. The eastern portion, the Bagri, is a fertile, low-lying alluvial tract, part of the Ganges Delta. The district is drained by the Bhagirathi and Jalangi rivers and their tributaries. Bhagirathi is a branch of Ganges, and flows southwards from Farakka barrage where it originates from the Ganges. It flows southwards through the district and divides it into more or less equal halves.

3.1.3 Climate

Murshidabad has a tropical wet-and-dry climate (Koppen climate classification). The annual mean temperature is approximately 27°C; monthly mean temperatures range from 17°C to 35°C. Summers are hot and humid with temperatures in the low 30's and during dry spells the maximum temperatures often exceed 41°C during May and June. Winter tends to last for only about two and a half months, with seasonal lows dipping to 9°C to 11°C between December and January. On an average, May is the hottest month with daily average temperatures ranging from a low of 27°C to a maximum of 41°C, while January the coldest month has temperatures varying from a low of 12°C to a maximum of 23°C. Often during early summer, dusty squalls followed by spells of thunderstorm or hailstorms and heavy rains cum ice sleet lash the district, bringing relief from the humid heat. These thunderstorms are convective in nature, and locally known as Kal baisakhi (Nor'westers).

Table 3.3: Area and climate of Murshidabad district

Total Area	5324 sq. Km
Maximum Temperature	41 ⁰ C
Minimum Temperature	8 ⁰ C
Annual Rainfall	1722 mm
Height over mean sea level	19m

Source: District Statistical Handbook, 2007

Rains brought by the Bay of Bengal branch of South-West monsoon lash the city between June and September and supplies the district with most of its annual rainfall of approx 1,722 mm. The highest rainfall occurs during the monsoon in August approx 300 mm. Floods are common during Monsoon, causing loss of life, destruction of property, and loss of crops. Area and climate of this district is presented in Table-3.3.

3.1.4 Demography

As of 2001 Census, Murshidabad district had a population of 5,863,717 with a sex ratio of 952. A 23.70 per cent growth of population and an increase of sex ratio by nine were noted since the previous census of 1991. The district has an area of 5,324 square kilometers (2,056 sq mi) and a population density of 1,101/km² (2,852/sq mi) as per 2001 census data. Table-3.4 summarises the population distribution. Muslims constitutes around 63.67 per cent of the population according to 2001 census, the rest of the population are mostly Hindu: 35.92 per cent. There is a sprinkling of other religious groups in the population. According to the 2001 census, 13.5 per cent of the population belong to the scheduled castes and 0.02 per cent to the scheduled tribes.

Table 3.4: Demographic features of Murshidabad district

Particulars	Area (sq km)	Population	Males	Females	Density of population/km ²	Sex ratio
Total	5,324	3,015,422	1,546,633	1,468,789	1,101	952
Rural	5,195.11	2,757,002	1,414,097	1,342,905	988	949
Urban	128.89	258,420	132,536	125,884	5,682	970

Source: Census, 2001

3.1.5 Transport

Surface transport (road and rail) is the most important way of transport. Even though a major river runs through the district (Bhagirathi), water transport is not very common, even though small boats ferry people across rivers where no bridge is available.

Buses are the most common form of transport, and they are easily available, and run to a wide range of destinations within and without the district. Bus transport is cheap. Trucks carry majority of goods transported in the district. Overloaded trucks on the road are also a common sight, and they are a major reason roads are in bad condition.

There are two major rail routes. The major line runs north-south and connects the district to Kolkata and North Bengal. There is another line that branches out from this line at Azimgunj and connects the Sahebgunj loop at Nalhati (Birbhum.)

3.1.6 Economy and Industry

Most of the people depend on agriculture for their livelihood. There are some silk farms and some weaving machines, but they are losing out fast against the modern industries. Murshidabad is famous for the high quality silk produced here. Trade and business are conducted primarily with Asansol, Burdwan and Kolkata. There were some discussions between India and Bangladesh to open an internal water transport link between Dhulian and Rajshahi but it has not materialized yet.

The Ivory and Wood craft industry dates back to the time when the Nawabs of Bengal had their court at Murshidabad. As this industry was fully dependent for its prosperity on the support of a luxurious court and wealthy noblemen, it had to face a crisis when the Nawabs lost their power and their court disappeared. During the early period of the British rule, the performance of the ivory carvers of Murshidabad was also praised by foreigners. During the Exhibition of 1851 in London, a variety of specimens of carving in ivory were sent to different parts of India and these were much admired for their minuteness and elaborate of details. In 1888 again, the Murshidabad carvers were declared to be perhaps the best in India, fully displaying the finish, minuteness and ingenuity characteristic of all true Indian art. When Berhampore rose into importance as chief military station in the province, the art flourished there for a time but began to wane with the decline of the military importance of the town. If not for the trade depending on the railway communication, this art would have died out long ago. Earlier the ivory carvers used to get large orders from Government for supplying specimens of their work for various exhibitions in England and other European countries, as also in India. But this was later discontinued when arrangements were made to collect the exhibits on loan from noblemen and zamindars, like the Nawab of Murshidabad and the Maharaja of Cossimbazar who were in a position to supply the best specimens under their possession. Mathra, Daulatbazar and Ranshagorgram bordering the city of Murshidabad were once noted for the industry but altogether forgotten in later years owing to decay of the industry. Sholapith is a milky-white sponge-wood which is carved into delicate and beautiful objects of art. Shola is a plant which grows wild in marshy waterlogged areas. The biological name of shola is *Aeschynomene indica* or *Aeschynomene aspera* (bean family) and it is an herbaceous plant. The sholapith is the cortex or core of the plant and is 1½ inch in diameter. The outer harder brown skin is removed by expert hands to reveal the inner soft milky-white and spongy material, almost similar to "Thermocol", artificially produced in a laboratory. However, sholapith is much superior to thermocol in terms of malleability, texture, lustre and sponginess. Artisans use it for making artefacts used for decoration and ornate head-wears of bridal couple. In Murshidabad the shola crafts are flowery designs, decorative head-wears of gods and goddesses, garlands, exquisite figurines like faces of

gods and goddesses, elephant-howdahs, peacock-boats, palanquins and so on are made of sholapith. Bell-metal and brass utensils are manufactured in large quantities at Khagra, Berhampore, Kandi, Baranagar and Jangipur. They are exported as well as sold in the local markets. Locks and betel nut cutters of a superior kind are made at Dhulian and iron chests at Jangipur. The problem of getting raw materials for the brass and bell-metal artisans of the district is, however, acute. While delay in getting raw materials owing to the complicated procedural formalities involved in the submission of applications for raw materials has been almost a constant factor, the industry has also been affected by the change in consumers demand in favour of stainless steel, plastic and ceramic goods and crockery.

The Baluchari sarees are figured silk saree produced in the town of Baluchar in Murshidabad district. Baluchar sarees essentially have a silk base with silk brocaded designs with respect to their colours, where in spite of a rich composition; the Baluchar bootidars almost avoid strong contrasts. Each pattern is treated in a colour which harmonises with the ground on which it is laid. The most popular colours used are red, blue, yellow, green and scarlet. The Baluchari sarees have large floral motifs interspersed with flowering shrubs. Traditionally the Muslim community was also known to produce these Baluchars with figured patterns depicting court scenes, horse with a rider, women smoking hookah. The Kalka design or the cone motif is often surrounded with floral borders.

Bengal had a nourishing silk industry in the past and Murshidabad long enjoyed a special reputation in this respect. The Bengal silk manufactures formed one of the important exports of the English East India Company to England, and these were exported also to the markets in the Asiatic countries. After the establishment of English factories at Malda and Cossimbazar, the English Company's trade in Bengal silk manufactures began to increase, and their use became common among the people in England because of their good quality and cheapness. In the mid-eighteenth century the country round about it (Cossimbazar) was very fertile, and the inhabitants remarkably industrious, being employed in many useful manufactures. About 1663 AD, the Dutch in their Cossimbazar factory sometimes employed 700 silk weavers, and the English and the other European nation's smaller number. They generally furnished 22,000 bales of silk a year, each bale weighing 100 lbs. The Total was equivalent to 30,078 mounds (1 mound = 40 kg). The silk thread was thus distributed: the Dutch took for Japan or Holland 6,000 to 7,000 bales, the merchants of Tartary and the Mughal Empire about the same quantity, and the remainder (about 9,000 bales) were consumed by the people of the country for manufacturing their own stuff. This silk was brought to Ahmedabad and Surat and was woven into fabrics. There was considerable demand for Bengal's raw silk in England's markets as the Continental System occasioned an entire cessation of the customary importations of the Italian raw silk.

3.1.7 Tourism

The district, especially Murshidabad town is very important in Bengal's history. The place draws a good number of tourists every year. The Hazarduari Palace or the palace with a thousand doors is the chief tourist attraction of Murshidabad. This three-storey palace was built in 1837 by Duncan McLeod for the Nawab Najim Humaun Jah, descendent of Mir Zafar. It has thousand doors (among which only 900 are real) and 114 rooms and 8 galleries, built in European architectural style. The total area of Hazarduari Palace is 41 acres (170,000 m²). It is now a museum and has an exquisite collection of armoury, splendid paintings, exhaustive portraits of the Nawabs, various works of art including beautiful works of ivory (Murshidabad School) of China (European) and many other valuables. The Armoury has 2700 arms in its collections of which only few are displayed. Swords used by Shiraj-ud-Daulla and his grandfather, Nawab Alivardi Khan, can be seen here. The other attractions in this floor are Vintage Cars and Fittan Cars used by the Nawabs and their families. Between the palace and the Imambara is a small mosque, 'Madina', with colourful tiled verandas. The Mosque has an ornamented replica of Hazrat Muhammad (SM)'s tomb at Madina. Around the palace are other attractions like the Wasef Manzil (the New Palace) by the bank of the Ganga, Tripolia Gate, the Dakshin Darwaza, the Chak Darwaza, the Imambara, the Gharighar (the Clock Tower), the Bachchawali Tope (a canon) and the Madina, the only surviving structure built by Siraj-ud-Doula. The Bachchawali Tope (canon) was made between the 12th and the 14th century, probably by the Muslim rulers of Gaur, and required about 18 kg of gun powder for a single shelling.

3.1.8 Culture

The language of the district is Bengali. The dialect is more or less the same as spoken in south Bengal, with occasional local accents. Eid-ul-Fitr and Eid-ul-Adha (Bakri-eid, locally) are prominent festivities in this district. The eateries and the bus stands wear a deserted look during Ramadan, the month when Muslims fast. On the day of Ashura during the month of Muharram processions are taken out to commemorate the deaths of Imam Hassan and Imam Hussein, the grandsons of Muhammed. Durga Puja, a four day long puja, is the most important festival of the Hindus.

3.1.9 Agriculture

Murshidabad is one of the potential districts in the agricultural map of the state, where diversified crops are grown in different seasons of the year. Being located centrally in the lower Ganga valley, it presents a high picturesque physical configuration. The district is divided into two distinguished separate zones, viz., 'Rarh' and 'Bagri depends mainly on its soil type. The west side of river Bhagirathi is known as 'Rarh' which is subsequently a continuation of the subvindhyan region of lateritic clay and calcareous nodules. The land is high and slightly undulating having a gentle slope from west to east. The soil is comparatively heavy, greyish ore reddish in colour, mixed with lime and iron-oxide. Most of the land of the district is arable, and used as agricultural land. Common trees of this district are Neem, Mango, and Jackfruit. Jowbona is a popular village near nowda Thana and also called 'green village' in West Bengal. The district is drained by the rivers Bhagirathi, Jalangi and their tributaries. Its eastern portion is noted for its production of rice, jute, legumes, oilseeds, wheat, barley, and mangoes and the western portion is famous for mulberry. The district, however, is more famous for the Murshidabad Silk i.e. much in demand for making saris, scarves etc.

Rice, jute, legumes, oilseeds, wheat, barley, and mangoes are the chief crops in the east; extensive mulberry cultivation is carried out in the west. The district is known for the quality and diversity of Mango produced. However, mango is not a major of Murshidabad district, unlike the adjoining district of Malda. Area under principal crops of Murshidabad district is presented in Table-3.5.

Table 3.5: Area under principal crops in Murshidabad

(Area in '000 ha)

Crops	2002-03	2003-04	2004-05	2005-06	2006-07
Food grains					
Aus rice	53.3	40.2	38.1	36.3	32.6
Aman rice	238.3	232.3	232.2	230.3	225.2
Boro rice	115.1	131.0	140.4	137.7	137.3
Wheat	134.0	134.8	130.4	125.5	125.5
Barley	0.7	0.7	0.6	0.6	0.9
Maize	0.1	2.0	2.7	5.4	7.5
Other cereals	1.2	1.1	1.3	1.3	1.3
Gram	10.0	12.6	11.6	10.8	8.1
Tur	1.4	0.4	0.2	0.1	0.3
Other pulses	41.5	52.0	52.0	44.2	43.6
Oilseeds					
Rapeseed & mustard	62.0	77.5	76.1	77.3	77.4
Linseed	0.6	0.6	0.5	0.3	0.1
Other oilseeds	4.9	14.5	15.2	15.2	14.9
Fibres					
Jute	143.9	154.0	131.6	127.6	135.0
Mesta	0.1	0.1	0.2	0.5	0.6
Miscellaneous crops					
Sugarcane	6.5	5.8	5.3	6.1	5.1
Potato	8.8	7.4	10.3	10.3	10.7
Chillies	4.6	4.7	5.2	4.4	4.5
Ginger	0.3	0.3	0.2	0.2	0.2

Source: District Statistical Handbook, 2007

3.1.10 Classifications of workers

District Murshidabad is mainly dominated by rural people hence participation of both male female as main workers are relatively higher male – 89.62% and female 62.99%. However, the proportion of male workers engaged in cultivation, agriculture labouring and others are higher in comparison with female workers, while the later Outspread the former in case of securing employment in household industries. Marginal workers in different sectors is found to be higher in the other sectors followed by household industries – 6.04 per cent, agricultural labourers – 5.37 per cent, others – 3.85 per cent and cultivation – 1.35 per cent. Comparing with the proportion of main workers employed in different sectors in Murshidabad district and the state of West Bengal, it is found that the percentage share of main works as cultivators, agricultural labours, and workers engaged in household industries are relatively higher in the district than that of the state while workers engaged in other sector is higher in case of later as compared to the former. Further, classification of total main workers by profession in the district of Murshidabad is as follows: cultivators – 17.36 percent, agricultural labourers – 22.66 per cent, household industries - 14.36 per cent and others - 29.02 per cent. Similarly, proportion marginal workers in different sectors is found to be higher in the other sectors followed by household industries – 6.04 per cent, Agricultural labourers – 5.37 per cent, others – 3.85 per cent and cultivation – 1.35 per cent - (table 3.6).

Since Block level secondary source data for different agriculture aspects were not available, our proceeding discussion would follow on the basis of district and state level data.

Table 3.6: Economic classification of workers in Murshidabad

Class of Workers	Male		Female		Total	
	No.	% to total workers	No.	% to total workers	No.	% to total workers
Main Workers						
Murshidabad						
Cultivators	337888	21.99	10294	2.20	348182	17.36
Agricultural labourers	435330	28.33	18951	4.04	454281	22.66
Workers engaged in household industries	97362	6.34	190492	40.66	287854	14.36
Others	506597	32.97	75397	16.09	581994	29.02
Total main workers	1377177	89.62	295134	62.99	1672311	83.40
Marginal workers						
Cultivators	18743	1.22	8247	1.76	26990	1.35
Agricultural labourers	83591	5.44	24002	5.12	107593	5.37
Workers engaged in household industries	16688	1.09	104432	22.29	121120	6.04
Others	40470	2.63	36690	7.83	77160	3.85
Total marginal workers	159492	10.38	173371	37.01	332863	16.60
Distribution of workers						
Total workers	1536669	100.00	468505	100.00	2005174	100.00
Total non-workers	1468331	-	2392995	-	1468331	-
Total population of district	3005000	-	2861500	-	5866500	-
West Bengal						
Class of Workers	Male		Female		Total	
	No.	% to total workers	No.	% to total workers	No.	% to total workers
Main Workers						
Cultivators	4182888	18.68	373138	5.26	4556026	15.45
Agricultural labourers	3744905	16.73	778029	10.97	4522934	15.34
Workers engaged in household industries	778046	3.48	658332	9.28	1436378	4.87
Others	10789132	48.19	1719113	24.23	12508245	42.43
Total main workers	19494971	-	3528612	-	23023583	78.18
Marginal workers						
Cultivators	472322	2.11	625574	8.82	1097896	3.72
Agricultural labourers	1335331	5.96	1504692	21.21	2840023	9.63
Workers engaged in household industries	139134	0.62	596558	8.41	735692	2.51
Others	946286	4.23	83821	1.18	1030107	3.49
Total marginal workers	2893073	-	3565034	-	6458107	21.92
Distribution of workers						
Total workers	22388044	100.00	7093646	100.00	29481690	100.00
Total non-workers	19077941	-	31616566	-	50694507	-
Total population of state	41465985	-	38710212	-	80176197	-

Source: Census, 2001

3.1.11 Land Use Pattern

It is evident from the table – 3.7 that out of total geographical, net sown area of West Bengal is about 70 per cent followed by land for non-agricultural usages – 20.29 per cent, forest – 13.52 per cent, other cultivatable land – 11.54 per cent current fallow – 3.58 per cent and Barren and uncultivable land – 2.48 per cent. Uniformly, 74.49 per cent of the geographical area of district is net sown area followed by land for non-agricultural use - 22.01 per cent, other uncultivable land – 5.23 per cent and Barren and uncultivable land – 3.75 per cent. Forest area is only 0.14 per cent and fallowed land is 0.07 per cent.

Table 3.7: Land use pattern in Murshidabad and West Bengal (2006-2007)**(Area in Hectare)**

State & selected district	Total Geographical Area (ha)	% to total geographical area						Net area sown
		Area under Forest	Land not available for Cultivation		Other uncultivated land	Fallow land		
			Land put to non-agricultural use	Barren and uncultivable land		Current fallow	Other fallow	
West Bengal	8684113	1173670	1761920	21520	100270	310780	20180	5295770
%		13.52	20.29	2.48	11.54	3.58	0.02	60.98
Murshidabad	532499	770	127850	2000	2780	330	10	398760
%		0.14	22.01	3.75	5.23	0.06	Neg.	74.40

Source: Bureau of Applied Economics & Statistics, Government of West Bengal

3.1.12 Land Holding

Table- 3.8 reveals that distribution of land holding of the selected district is more or less similar with the distribution of land holdings in the state. The average size of holding of the selected district is 0.74 hectare while the same for the state as a whole is 0.79 hectare. Marginal farms of both the selected district and the state account for maximum members (79.57 per cent and 81.16 per cent respectively) of land holding and accounted area for the same are 48.69 per cent and 50.56 per cent respectively. The percentage figures of land holding and area for small farmers are 14.38 per cent and 28.87 per cent respectively for the state and 15.85 per cent and 33.39 per cent for the selected district respectively. Other farms of the state are occupying 4.54 per cent of land holding are 20.47 per cent of the total area while other farmers of the selected district is holding 4.58 per cent of land holding with 17.92 per cent of total area.

Table 3.8: Number and area of operational holdings in Murshidabad and West Bengal (2000-2001)

State & selected district	Marginal(<1 ha)		Small (1-2 ha)		Other (>2 ha)		Total		Av. Size of holding
	No of holding	Area in hect.	No of holding	Area in hect.	No of holding	Area in hect.	No of holding	Area in hect.	
West Bengal	5674788	2799071	1005594	1595340	311281	1131403	6991663	5525814	0.79
Murshidabad	473388	213695	94306	146560	27231	78657	594925	438912	0.74
% share SD to State	8.34	7.63	9.38	9.19	8.75	6.95	8.51	7.94	-

3.1.13 Irrigation

It is evident from the table – 3.9 that total net irrigated area of the state is 2980.68 thousand hectares (55.24 per cent of net cropped area) in which area irrigated by surface irrigation by wells and other source are 34.03 per cent, 57.59 per cent and 8.38 per cent respectively. Total net irrigated area of Murshidabad district is 305.63 thousand hectare (70.93 per cent of net cropped area) in which net area irrigated by different sources is as follows surface irrigation – 18.73 per cent, well irrigation – 72.20 per cent and by other irrigation sources – 9.87per cent. The table reveals that access to irrigation by the wells and other sources of the selected district is relatively higher as compared to the state. So far as access to irrigation by canal and tank is concerned, the district lags behind the state.

Table 3.9: Source-wise irrigated area in Murshidabad and West Bengal (1995-96)**(Area in ha)**

District & Selected Block	Net cropped area (NCA)	Irrigated Area by source			Net area irrigated (NIA)	% NIA to NCA	Net dry land (%)
		Surface	Well	Other			
West Bengal	5396118	1014377 (34.03)	1716668 (57.59)	249648 (8.38)	2980693	55.24	54.66
Murshidabad	430880	54798 (18.73)	220639 (72.20)	30163 (9.87)	305636	70.93	29.07

Figures in parentheses are % to net irrigated area

Source: Irrigation Census, Govt. of W.B

3.1.14 Cropping Pattern

Table-3.10 shows that in both the select district and state the gross cropped area is dominated by total cereals (59.25% gross cropped area) mainly food crops (54.02%). The percentage share of other crops in the

gross cropped area in the selected district is as follows: Jute – 15.09 per cent, total vegetable – 8.85 per cent and rape and mustered – 7.85 per cent etc. In comparison with state, the selected district has higher proportion of area for the crops like rape seeds and mustered, jute and sugarcane and the proportion of the crops like total food grain, vegetables and potato is to some extent lower.

Table 3.10: Cropping pattern of Murshidabad District & West Bengal (2007-08)

(Area in '000 ha)

Sl. No.	Crops	Murshidabad		West Bengal	
		Area	% to GCA	Area	% to GCA
1.	Rice	398.4	40.81	5719.8	58.66
2.	Wheat	122.6	12.56	352.6	3.62
3.	Other cereals	6.4	0.66	97.00	0.99
4.	Total cereals	527.4	54.02	6169.4	63.27
5.	Total pulses	51.5	5.28	200.9	2.06
6.	Total food grains	578.9	59.30	6370.4	65.33
7.	Rape & mustard	76.6	7.85	361.7	3.71
8.	Total oil seeds	90.3	9.25	705.7	7.24
9.	Jute	153.2	15.69	609.8	6.25
10.	Total fibers	153.3	15.70	626.5	6.42
11.	Sugar cane	52.7	5.30	16.9	0.17
12.	Potato	14.7	1.51	400.8	4.11
13.	Total vegetables	86.4	8.85	912.41	9.36
14.	Gross cropped area	976.3	-	9751.51	-

3.1.15 Infrastructure

(a) Access to electricity

It is observed from the table – 3.11 that access to electricity of the rural people of the selected district Murshidabad is higher than that of the rural people of the state as a whole. It is evident from the fact that 97.20 percent people of the rural household have access to electricity in the selected district while 90.70 per cent of rural people of the state as whole are enjoying the same.

Table 3.11: Number of towns and villages electrified in Murshidabad and West Bengal (2006 – 07)

Agency	State & selected district	Total No.		Electrified Villages		Electrified Towns		Electrified Towns and Villages	
		Villages	Towns	No.	Population benefited (%)	No.	Population benefited (%)	No.	Population benefited (%)
WB State Elect Board & CESE.	Murshidabad	2210	29	1865	97.20	29	100.00	1894	98.60
	West Bengal	40782	376	34388	90.70	376	100.00	34764	95.35

Further, from table – 3.12, it can be observed that consumption of electricity in agriculture is 22.16 percent of total power consumption of the state. Consumption of electricity for domestic purpose is highest (56.15%) in the district while consumption of electricity for commercial and Industrial purposes is 9.39 percent and 10.67 percent respectively.

Table 3.12: Sector-wise use of electricity in Murshidabad and West Bengal (2006 – 07)

Sl. No.	Particular	Murshidabad		West Bengal	
		Total use ('000 kilo watt)	% to total	Total use (mkwh)	% to total
1.	Domestic	239454	56.15	6507	27.73
2.	Commercial	40034	9.39	2786.32	11.88
3.	Industrial	45509	10.67	11102.05	47.32
4.	Public lighting	5549	1.30	241.34	1.03
5.	Agriculture	92366	21.66	940.01	4.01
6.	Other	3553	0.83	1885.36	8.03
7.	Total	426465	100.00	23462.08	100.00

Source: Government of West Bengal

(b) Access to road

The district Murshidabad is covered with different types of roads. These are National Highways, State Highways, District Road, Village Roads etc. The table quantify that the road facilities in Murshidabad district is relatively high than that of the district as a whole – (The table – 3.13).

Table 3.13: Road length by type of road in Murshidabad District (2006 – 2007)

Sl. No.	Road	Murshidabad District		West Bengal	
		Length (Kms)	% to total	Length (Kms)	% to total
1	National Highway	149.0	1.66	2334.0	0.75
2	State Highway	236.0	2.62	3337.0	1.07
3	Major District Roads	403.0	4.48	6330.0	2.04
4	Other District Roads	7760.4	86.23	146070.26	47.05
5	Village Roads	445.0	4.94	6344.00	2.04
6	All Roads	8999.4	100.00	310485.26	100.00

Source: Government of West Bengal

Note: Other roads constructed and maintained by Zilla Parishad, Gram Panchayat, Panchayat Samity and Prime Minister's Gram Sarak Yojana.

3.1.16 Socio-Economic Characteristics of the Selected District

Table-3.14 presents the socio-economic indicators of the selected district Murshidabad and the state. The table shows that the district inherits 7.32 percent population of the state and the shares of the district in state's rural and urban population are 8.89 and 3.27 percent respectively. The share of agriculture sector to the net domestic product (NDP) is 35.61 per cent which is higher than that of the share of NDP for the state. The per capita income of Murshidabad is Rs. 22662 which is lower as compared to the per capita income of the state as a whole. The normal rainfall of the district (June to September) is 1419 mm which - against spontaneity - is quite low as compare to the normal rainfall of the state. The average size of land holding is 0.74 hectares, almost equates the state's average. The percentage of net irrigated area to net cropped area of the district is higher as compared to the State's irrigated area. So far as the proportion of irrigated area by sources is concerned, the district enjoys higher proportions by ground water irrigation but lower proportions for surface irrigation as compared to the State.

Table 3.14: Selected socio-economic indicators of Murshidabad and West Bengal

Particular	Murshidabad	West Bengal
Total Population (thousand) (2001)	5866569 (7.32)	80176197
Rural (thousand)	5133835 (8.89)	57748946
Urban (thousand)	732734 (3.27)	22427251
Rural agriculture workers (% is to total workers)	1102	903
Population density (per sq km.)	952	934
Female per thousand males	12.00	23.01
Percentage of SC population to total	1.29	5.50
Percentage of ST population to total	52.30	63.4
Rural literacy rate (percent) 2001	54.35	68.64
Human development index (2000)	0.46	0.61
Percentage of rural families below poverty line (2002)	-	31.85
Per capita income at current prices at 1999-00 series in Rs.	22661.83	31721.69
Share of agriculture sector in NDP (in 2007-2008current prices)	35.61	22.09
Normal rainfall (in mm) June to Sept 2007	1419	30121
Average size of holdings (Hect.) (2005-06)	0.74	0.79
Percentage of irrigated area to gross cropped area (in 2004-05)	31.31	30.57
Percent of irrigated area to NIA (1995 - 96)	70.93	55.24
Electricity use in agriculture (% to total) 2004 - 05	19.56	4.35
Cropping intensity (%) 2006-07	235	182
No. of primary Agricultural Cooperative Societies as on 31.03. 06	471	6594
No. of fair price/ ration shop per lakh population (2007)	1367	18036
No. of banking offices per lakh population (2003)	30	60
No. of regulated markets per lakh ha of net sown area (2008)	31	684
Total road length per lakh population (2007-08)	21	23
Input use: Fertilizer (kg/ha)(2007-08)	159	141
HYVs coverage to GCA (%)		91.99
Wheeled Tractors (000ha of NSA) 2005 - 06	4.13	5.61

Contd....3.14

Contd...table 3.14

Particular	Murshidabad	West Bengal
Area under major crops (percent to GCA) : 2007-08		
Total Cereals	63.48	63.27
Total Pulses	6.20	2.06
Total Food grain	69.70	65.33
Total Oilseeds	9.60	7.25
Jute	15.69	6.25
Sugarcane	0.62	0.17
Fruits	2.52	1.99
Vegetables	8.49	9.36
Productivity (kg/ha) : 2007-08		
Total Cereals	2800	2578
Total Pulses	809	787
Total Food grain	2622	2521
Total Oilseeds	964	998
Jute	2327	2425
Sugarcane	101365	105051
Fruits	10855	14243
Vegetables	1595	1376

So far as the crop pattern is concerned, although area of total cereals in the gross cropped area of the district as well as the state is more or less same, the district has an edge over the state for the crops like, total pulses, total oilseeds, jute, sugar cane, fruits and vegetables etc. On that hand as regards to productivities (kg./hect.) of crops, the district - as compare to state - through reaps higher productivities of crops like, total cereals total pulses and vegetables, it lags behind the state for the productivities of crops like total food grain, total oilseeds, jute, sugarcane and fruits.

3.2 Profile of the Selected Block: Kandi

It has been stated earlier that for in-depth study of agricultural marketing through traditional channel (TC) and emerging channel (EC), crops selected are Arum (a vegetable crop) and mustard (oilseeds) respectively. Primary data collected for the same from Kandi Block in Murshidabad district. The socio-economic features of Kandi Block are given in the table – 3.15. The table exhibits that the selected block is stretched

Table 3.15: Profile of selected block; Kandi (2005)

Particulars	Units
Area (Sq.Kms.)	227.48
No. of Villages	84
No. of Town	1
No. of Household ('000)	38.08
Total Population ('000)	193.01
Density of Population (No./Sq.km)	849
% of Population to District Population	3.29
Rural Population ('000)	159.80
Urban Population ('000)	33.21
Rural Female Population ('000)	77.49
Rural Male Population ('000)	82.30
Sex ratio (No. of female / thousand meal)	938
% of Literacy Urban	75.2
% of Literacy Rural	52.5
No. of Main Workers ('000)	49.98
No. of Marginal Workers ('000)	10.46
No. of SC Population ('000)	31.11
No. of ST Population ('000)	2.60
No. of Others Population ('000)	159.3
No. of Medical Institutions	7
Surfaced Road (Km)	44.01
Un-surfaced Road (Km)	15.74
total Road (Km)	59.75
Gross Cropped Area (ha)	34190 (P)
Surfaced Irrigation (Ha)	2570
Wells Irrigation (Ha)	6083
Total Irrigation (Ha)	5921
No of Cattle ('000)	47.07
No. of Buffaloes ('000)	5.81
No. of Goats (000)	41.33
No. of Poultry Birds ('000)	265.33

Source: Government of West Bengal

covering an area of 227.48 sq. km. Total population is 193.01 thousand and number of households is 38.08 thousand. Out of total population, rural and urban populations are 82.38 per cent and 17.62 per cent respectively. Total gross cropped area is 34190 hectares in which irrigated area from government source is 8653 hectare i.e. 25.31 per cent of gross cropped area. The livestock population is as follows: cattle – 47.07 thousand, buffalos – 5.81 thousand, goat – 41.33 thousand and poultry birds – 265.33 thousand.

3.3 Socio-Economic Characteristics of the Sample Farmers

Primary data for in-depth survey have collected for two crops – Arum and Mustard. The local name of Arum is Kochu. Cultivation practices of Arum/Kochu are similar to potato. The crop (Arum) is a vegetable crop. The crop season of Arum is April to July. Arum does not substitute production of mustard. Since sophisticated emerging channel of agricultural commodities is yet to develop in West Bengal a vegetable crop Arum for which a different marketing system is operative and this as follows: on maturation of Arum, the farmer sell out entire Arum covering area to the trader at pre settled price (Rs./hect.). The channel of marketing of Arum may be referred as field level lease in marketing channel. The channel is operative since long time. The traders, who lease in matured crop (Arum), make all arrangements i.e. lifting, packing and marketing etc. Since the trader is the only intermediately between the farmers and whole-seller, such marketing system seems to some extent efficient as compared other traditional marketing system where so many middlemen / commission agents enter into market mechanism. Hence arum (a vegetable crop) has been selected as a crop for Emerging Marketing Channel (EMC) with consultation of officials of Agricultural Department, Government of West Bengal. Mustard has been selected for Traditional Marketing Channels (TMC)

Total number of sample households EMC and TMC is 200. EMC households are one hundred in which marginal, small and medium farmers are 80, 16 and 4 respectively and TMC farmers are of same number in which marginal, small and medium farmers are 78, 17 and 5 respectively. Hence, total marginal, small and medium farmers are 158, 33 and 9 respectively for in-depth survey (table – 3.16).

Table 3.16: Selected sample households in Kandi Block of Murshidabad District

	Number of farmers											
	EMC				TMC				All			
	Marginal Farmer	Small Farmer	Medium Farmer	Total	Marginal Farmer	Small Farmer	Medium Farmer	Total	Marginal Farmer	Small Farmer	Medium Farmer	Total
Arum	80	16	4	100	-	-	-		80	16	4	100
Mustard	-	-	-		78	17	5	100	78	17	5	100
Total	80	16	4	100	78	17	5	100	158	33	9	200

The socio-economic characteristics of the sample households are furnished in the table – 3.17, which indicates that distribution of sample households by religion for TMC and EMC are as follows: for TMC the percentage of Hindu and Muslim is 76.00 per cent and 24.00 per cent respectively while for EMC and the distribution is 79.00 per cent and 21.00 per cent respectively. The sample households belonging to others and Other Backward Castes are 60.00 per cent and 40.00 per cent respectively for EMC and 27.00 per cent and 73.00 per cent respectively for TMC. All the sample households of either group is owing ration card and 19.00 per cent of sample households are showing in below poverty line for TMC whereas the percentage figures of the households of EMC are quite high – 56.00 per cent. As regards to the farm assets, the overall impression is that the sample farmers of TMC group have good access to farm assets while the households of EMC group have poor access for the same. So far as landholdings of the sample households are concerned, the average maximum and minimum size of the farmers of TMC group are 2.66 hectare and 0.03 hectare respectively while the same are 2.39 hectares and 0.01 hectare respectively for EMC. Among the same households of TMC group, the distribution of land holding for marginal, small and medium farmers is 58.96 per cent, 26.94 per cent and 14.10 per cent respective where as in the EMC group, the incidence of land holding for marginal farmers is 57.02 per cent followed by small farmers – 29.70 per cent and medium farmers – 13.28 per cent. Almost all sample households are the owner of owner land and very few are engaged in cultivation of lease in land. The sample households have good access to ground water irrigation. The above discussion reveals that farmers from TMC group are to same extent affluent but the farmers of EMC groups are relatively distressed.

3.3.1 Storage and Processing Devices

Selected crops for EMC and TMC i.e. Arum and Mustard respectively do not require any investment at growers' level. So far as marketing of Arum is concerned, as it is stated earlier that entire crop is being sold at field level, hence neither storage nor processing is required for the crop. The sample farmers take up mustard cultivation into their small proportion of land; hence production of the same is enough. The sample households use mustard mainly for consumption purposes. The crop generally stored into jute/polithin bags at their dwelling houses. So mustard also does not involve storage cost (**Area in hectare**) at farmer's level.

Table 3.17: Socio-economic profile of the sample households

Particulars	Arum (EMC)	Mustard (TMC)
Religion and Caste of Farm Households		
% Hindu Households	79	76
% Muslim Households	21	24
% Christian Households		
% Other Households	27	60
% SC Households		
% ST Households		
% OBC Households	73	40
Households Characteristics		
% Households Owning a Ration Card (years)	100	100
% APL Households	44	81
% BPL Households	56	19
% Pucca and Semi-Pucca Houses	69	71
% Kuttcha House	31	29
% owning Telephone Landline		5
% Households owning at least one mobile phone	55	48
% Households Owning a Computer		
% Households Having a Internet Connection at Home		
% Households Owning both computer and Internet Connection at Home		
Head of the Household		
Age of the Head of the Household (years)	50	49
% Female Headed Households	8.00	7.00
Education of the Household Members		
Years of Education of the Household Head	3.44	3.01
% household members who have completed primary education	49.00	47.88
% household members who have completed Matriculate	16.85	17.16
% Members who are Diploma Holders	1.33	1.06
% Members who have completed Under-graduation	3.99	3.60
% Members who have completed Post-graduation	0.22	1.27
Transport, Farm and Storage Assets		
% owning Bullock Cart	6.00	67.00
% owning tractor		3.00
% owning Trolley		3.00
% owning Harvester		1.00
% owning bicycle		
% owning motorcycle	5.00	5.00
% owning four wheeler		
% Owning Tractor		
% Owning Tiller		
% Owning Pump sets	15.00	63.00
Land Holding		
% marginal farmers	57.02	58.96
% small farmers	29.27	26.94
% medium farmers	13.28	14.10
% large farmers		
Minimum size of the farm (ha)	0.01	0.03
Maximum size of the farm (ha)	2.39	2.66
Median size (ha)	0.66	0.80
% own land	98.88	99.24
% leased land	1.52	0.76
% Dry Land Farmers	18.78	28.36
% Irrigated Farmers (from Groundwater)	82.22	71.64
% Irrigated Farmers (from Surface water)	0.00	0.00

3.3.2 Land Holding Pattern and Irrigated Area of Sample Household

Land holding pattern and irrigated area of sample household is given table – 3.18. The table indicates that total own land of the sample household for EMC is 141.83 hectares in which the area of Arum is 16.58 hectares. The proposition of irrigated area is comfortably high – 116.61 hectares and irrigated Arum area is 13.63 hectare. Similarly, own land of selected farmer of TMC is 159.43 hectares in which Mustard is 15.84 hectares. The proposition of irrigated area of TMC household is 114.21 hectares in which irrigated area is 11.40

hectares. The amount of lease- in-land of TMC household is 5.27 hectares in which Arum area is 3.2 hectares. In case of lease-in-land the proposition of irrigated area is also high. Net operated areas of sample household of EMC and TMC are 147.10 hectares and 166.69 hectares respectively. The area of selected crops for EMC

Table 3.18: Land holding pattern and irrigated area of sample household

(Area in hectare)

Sl. No	Particular Area in Hectare	EMC		TMC	
		Total Area	Arum Area	Total Area	Mustard Area
A.	Own land (Total)	141.83	16.58	159.43	15.84
	Dry land	25.22	2.95	45.21	-
	Surface irrigation well irrigation	116.61	13.63	114.21	11.40
B.	Lease in land (Total)	5.27	3.22	7.26	-
	Dry land	1.18	0.38	1.35	-
	Surface irrigation well irrigation	4.09	2.84	5.91	-
C.	Net operated Area (Total) Surface irrigation	147.10	19.80	166.69	15.84
	Well irrigation	26.16	3.60	97.32	-
		120.94	16.20	119.67	11.40
D.	Land holding Own Land	141.83	16.58	159.43	15.84
	Net Operated Area	147.10	19.80	166.69	15.84
	% Net Irrigated Area to net Cropped Area	82.22	81.81	271.80	71.97

and TMC are 19.80 hectares and 15.84 hectares. The table also shows that percentage of net irrigated area to the net cropped area of EMC and TMC farmers is 82.22 per cent and 71.79 per cent respectively.

3.3.3 Cropping pattern of the sample households

Table – 3.19 indicates that cropping pattern of the farmers selected for EMC is mainly dominated by Aman and Boro paddy which is occupying 64.23 per cent of gross cropped area. Shares of others crops in the gross cropped area are as follows: Arum - (13.46%) Potato - (8.29%), Mustard - (7.63%), Jute - (6.53%) and vegetable - (3.87%).

Table 3.19: Cropping pattern of the sample households

(Area in hectare)

Size-Class	No of sample Households	Kharif			Rabi			Summer	Total
		Arum	Aman paddy	Jute	Potato	Mustard	Vegetables	Boro paddy	
ARUM-EMC									
Marginal (< 1 ha)	80	12.82 (14.82)	31.41 (36.31)	2.20 (2.54)	4.60 (5.32)	5.12 (5.92)	3.10 (3.58)	27.25 (31.50)	86.5 (100.00)
Small (1-2 ha)	16	5.23 (12.23)	11.36 (26.55)	5.40 (12.62)	4.40 (10.29)	4.10 (9.58)	2.09 (4.89)	10.20 (23.84)	42.78 (100.00)
Medium (2-4 ha)	4	1.75 (9.82)	5.03 (28.23)	2.01 (11.28)	3.02 (16.95)	2.01 (11.28)	0.50 (2.81)	3.50 (19.64)	17.82 (100.00)
MUSTARD-TMC									
Total	100	19.80	47.80	9.61	12.02	11.23	5.69	40.95	147.10
Marginal (< 1 ha)	78	6.12 (6.29)	36.20 (37.22)	9.01 (9.26)	4.20 (4.32)	9.40 (9.66)	2.12 (2.18)	30.21 (31.06)	97.26 (100.00)
Small (1-2 ha)	17	3.01 (6.63)	16.01 (35.29)	4.12 (9.08)	1.39 (3.06)	4.54 (10.01)	1.10 (2.42)	15.20 (33.50)	45.37 (100.00)
Medium (2-4 ha)	5	1.75 (7.27)	8.06 (33.50)	2.50 (10.39)	1.55 (6.44)	1.90 (7.90)	0.80 (3.33)	7.50 (31.17)	24.06 (100.00)
Total	100	10.88	60.27	15.63	7.14	15.84	4.02	52.91	166.69

Note: figures in parentheses are percentage of total cropped area of each crop

The table also indicates that the proportion of paddy areas of marginal farmers is higher as compared to small and medium farmers while the later involves more area in potato and jute (commercial crops) as compared to the farmer. On the other hand, the gross cropped area of the farmers selected for TMC are also dominated by paddy – 67.30 per cent, the percentage share of other cropped are as follows 0 mustard (9.40%), jute (9.26%) Arum (6.53%) potato (5.10%) and vegetable (2.41%) the table 4.3 also reveals that crop pattern of the farmers of different size groups are more or less same.

3.4 Status of selected crop (Arum & rape seed Mustard) in West Bengal

West Bengal is one of the leading producers of rape seed and mustard. Total area and production of rape seed and mustard in West Bengal are 408 thousand hectares and 362 metric tonnes respectively year in the 2008-09. The share of West Bengal in total production of rape and mustard in India is more than six per cent.

Table 3.20 Share of West Bengal in Area and Production of Aram and Mustard

Particular	Aram		Mustard	
	Area (000 ha)	Production (000 mt)	Area (000 ha)	Production (000 mt)
India	NA	NA	6790	5800
West Bengal	NA	NA	408	362
% share of West Bengal	-	-	6.01	6.26
Selected District (Murshidabad)	-	-	81.28	93.82
Selected Block (Kandi) 2009-10	0.51	10.44	2.00	2.80
% share of Selected Block to District	-	-	2.46	2.98

Source: Bureau of Applied Economics & Statistics, Government of West Bengal

Table 3.21: Area under rapeseeds and mustard by major districts in West Bengal

(Unit in percent)

Year	Murshidabad	Nadia	24 Parganas (North)	U.Dinajpur	Malda	Birbhum	Others	West Bengal
1990-91	13.73	12.48	8.04	13.17	7.30	12.46	32.82	100.00
2000-01	14.91	18.72	9.24	7.87	7.98	8.19	33.09	100.00
2001-02	14.33	18.90	10.15	7.76	7.94	8.44	32.48	100.00
2002-03	15.18	20.92	7.96	7.64	8.55	8.45	31.3	100.00
2003-04	17.15	18.50	6.48	8.34	8.41	8.27	32.85	100.00
2004-05	16.63	18.27	6.89	8.26	8.37	8.59	32.99	100.00
2005-06	18.34	18.79	7.66	8.52	9.02	8.21	29.46	100.00
2006-07	18.36	18.88	7.85	8.40	9.23	8.23	29.05	100.00
2007-08	19.48	18.90	8.15	8.29	8.93	7.93	28.32	100.00

Table 3.22: Production of rapeseeds and mustard by major districts in West Bengal

(Unit in percent)

Year	Murshidabad	Nadia	24 Parganas (North)	U.Dinajpur	Malda	Birbhum	Others	West Bengal
1990-91	14.25	14.97	9.02	14.31	6.34	10.89	30.23	100.00
2000-01	16.07	17.41	8.49	6.47	9.04	9.90	32.61	100.00
2001-02	16.12	16.09	8.85	7.15	10.89	11.07	29.83	100.00
2002-03	15.62	23.38	8.77	5.14	7.91	10.68	28.49	100.00
2003-04	19.38	19.03	6.84	7.30	8.63	9.87	28.95	100.00
2004-05	19.11	19.08	7.53	6.77	9.57	9.02	28.92	100.00
2005-06	21.49	18.64	9.11	6.79	10.86	8.43	24.67	100.00
2006-07	21.06	20.41	8.18	5.76	11.72	10.45	22.42	100.00
2007-08	21.18	18.83	9.54	6.77	10.67	10.37	22.64	100.00

3.4.1 Area and production of major rapeseeds and mustard growing district in West Bengal

The leading rape and mustard growing districts of West Bengal are Murshidabad, Nadia, 24-Paragana (North), Uttar Dinajpur, Malda and Birbhum. Among the given districts, district Murshidabad has highest share in area and production of rapeseed and Mustard in West Bengal. The district is occupying 19.48 per cent at area and 21.18 per cent of production of the state. Next to Murshidabad the leading district is Nadia where area and production of rapeseed mustard are about 19 per cent each followed by Malda (8.93% of area and 10.67% of Production), Birbhum – (7.93% of area and 10.37% of production), 24-paragana (North) (8.15% of area and 9.54% of production) and Uttar Dinajpur (8.29% of area and 6.77 % of production) (Tables – 3.21 & 3.22). Secondary source data on area, production etc. for Arum is not available, hence we fail to analyse the status of area and production of Arum in West Bengal.

Chapter – IV

Comparison of Benefits and Constrain for Agents - in EMC and TMC

4.1 Introduction

The ministry of Agriculture Government of India amended the APMC Act in 2003 and advised the state to implement the same. The amendment helps complete transformation of agricultural marketing with a view to making the market growth oriented. The amended Act allowed the concerned authorities to set up new marketing establishment as well as contract farming so that the growers of agricultural, horticultural and other commodities could get access to efficient market.

In this proceeding chapter, an attempt has been made to look into marketing operations through TMC and EMC and work out the benefits as well as constraints of each TMC and EMC with the help of farm level data collected from the sample households.

Two crops, Arum and Mustard have been selected for EMC and TMC respectively. The comparison of market efficient of Arum and Mustard between EMC and TMC was not possible because cent per cent of Arum is marketed through emerging channel i.e. field level marketing before harvesting of crops. Similarly cent percent mustard is being marketed through traditional i.e. producers to local traders, local traders to whole sellers, whole seller to processing unit etc.

4.2 Distribution of land holding of EMC & TMC Crops

Before taking up the discussion of market operations of EMC and TMC, a resume of the farmer's profile is needed to be discussed. The sample farmers are classified by their size of land holding in table – 4.1. The table indicate that majority farmer of both the EMC and TMC group is marginal farmers. They accounts for 64.75 per cent and 59.34 per cent total area of arum and mustard respectively. However, the small and medium farmers are occupying 26.42 per cent and 8.83 per cent of the total area of arum respectively and 28.66 per cent and 12.00 per cent of total area of mustard respectively.

Table 4.1: Distribution of land holding of EMC & TMC Crops

Classification	EMC Arum)			TMC (Mustard)		
	No.	Area	% of Area	No	Area	% of Area
Marginal (< 1 ha)	80	12.82	64.75	78	9.40	59.34
Small (1 - >2 ha)	16	5.23	26.42	7	4.54	28.66
Medium (2 - >4 ha)	4	1.75	8.83	5	1.90	12.00
Other (>4 ha)	-	-	-	-	-	-
Total	100	19.80	100.00	100	15.84	100.00

Note: No (Number of sample households)

Some more characteristics of the sample household by their land holding size groups are as follows: the average age of the sample marginal farmers is 51 years for cultivators of EMC group and 50 years for cultivators of TMC group. The cultivators of EMC and TMC from small farm group are of 47 years and 48 years respectively while the farmers from medium farm group are of 45 years and 44 years respectively. Average number of family size of sample households of all size classes i.e. marginal, medium and small is three and above. As regards to main occupation of the sample farmers, it is noticed that majority of the marginal farmers of the EMC group have allied activities while agriculture the main occupation of majority of sample marginal farmers of TMC groups. In case of the small and medium farmers, the main occupation is agriculture for both the groups of sample farmers. On the whole, agriculture is main occupation of the majority (60.00 per cent) of the sample households, table-4.2.

4.3 Cost of cultivation of EMC and TMC Crops:

Crops considered for EMC and TMC are Arum and Mustard respectively. Cost of cultivation for arum and mustard of the sample cultivators of different size classes has been worked out in the table – 4.3. The table shows that per hectare cost of cultivations of arum of the sample farmers as a whole is Rs. 60071.98 which varies marginally across marginal, small and medium farmers. In cultivation of arum. Cost of seed is highest – Rs. 23248.63 per hectare followed by labour cost – Rs. 15563.80, irrigation cost – Rs. 9456.40, cost of fertilizer – Rs. 5183.84, costs of power tiller/tractor– Rs. 3479.66 and bullock labour Rs. 2005.08 respectively. The table reveals that each item of input cost, the small farmers are found to have spend more than that of marginal and medium farmers.

On the other hand, per hectare cost of cultivation, on and average, for mustard is Rs. 37913.80 in which cost of labour is highest – Rs. 15153.76 followed by cost of irrigation – Rs. 9036.58, fertilizer - Rs. 5321.07, power tiller/ tractor - Rs. 4107.94, compost - Rs. 2213.51, bullock labour – Rs. 1584.49 and seed cost - Rs.

508.43. The table reveals that the cost cultivation for mustard in case of small and medium farmers is more or less same while this costs are to some extent is lower in case of marginal farmers as compared to the former ones.

Table 4.2: Characteristics of sample household

Sl. No.	Characteristics	EMC (Arum)	TMC (Mustard)
1.	Average age of the head of the farmers (years)		
	Marginal	51	50
	Small	47	48
	Medium	45	44
2.	Years of Education		
	Marginal	3.35	3.45
	Small	3.25	3.50
	Medium	4.60	5.00
3.	Average Family Size		
	Marginal	3.50	3.65
	Small	3.70	3.50
	Medium	3.25	3.35
4.	<u>Main Occupation (% to Total)</u>		
	Marginal		
	Agriculture	30.77	60.00
	Allied	46.15	32.00
	others	23.08	8.00
	Small		
	Agriculture	88.88	100.00
	Allied	11.11	-
	Others	-	-
	medium		
	Agriculture	83.33	80.00
	Allied	-	-
others	16.67	20.00	
Total			
Agriculture	65.45	60.00	
Allied	30.00	28.00	
Others	4.55	12.00	

Table 4.3: Cost of cultivation (Rs./ha.) of EMC and TMC crops by size class of sample household

(Unit Rs)

Item	EMC (Arum)				TMC (Mustard)			
	Marginal	Small	Medium	All	Marginal	Small	Medium	All
Cost of labour	15267.86	16469.92	15023.82	15563.80	14160.89	16819.09	16083.96	15153.76
Cost of seed	22547.28	24929.32	23363.68	23248.63	472.36	570.01	539.61	508.43
Cost of fertilizer	5006.20	5512.13	5304.01	5183.84	4942.37	5968.16	5647.44	5321.07
Cost of compost fertilizer	1112.48	1193.71	1119.79	1134.58	2006.94	2459.97	2349.38	2213.51
Cost of power tiller/Tractor	3377.34	3671.40	3656.18	3479.66	3835.68	4565.83	4360.07	4107.94
Cost of irrigation	9158.33	10096.08	9728.24	9456.40	8411.48	10098.12	9590.99	9036.58
Cost of Bullock labour	1939.35	2126.34	2124.17	2005.08	1485.64	1748.32	1681.79	1584.49
Total cost of production.	58408.83	63998.89	60519.90	60071.98	35356.55	42229.95	40253.24	37913.80

4.4 Modern practices of cultivation of selected households

As regards to cultivation and farm practices of the sample farmers, the table – 4.4 reveals that most the farmers both of EMC and TMC groups are using chemical fertilizer and irrigation for cultivation of their sample visa-a-visa other main crops, like cereals, fibre and vegetables.

4.5 Production and productivities of Arum & Mustard of Sample Household:

It is evident from the table – 4.5 that production and productivity of Arum is 4792.33 (qtl.) and 242.04 (qtl. /hect.) respectively, while production and productivity of Mustard is 227.10 (qtl.) and 14.38 (qtl./hect.) respectively. So far as productivity figures of arum of the farmers of different size classes are concerned, the

same are marginally higher in cases of small and medium farmers as compared to marginal farmers. On the other hand productivity figure of mustard in case of medium farmers are significantly lower as compared to their counter parts.

Table 4.4: Modern practices and methods of cultivation of selected households

Particulars	Arum (EMC)	Mustard (TMC)
Average area under crop (ha)	19.80	15.84
Fertilizer used		
a) % of farmer to total	100.00	100.00
b) Per hectare use of fertilizer (Qtl.)	46.02	58.94
Usage of manure & Others (% of farmers)	71.12	81.92
Usage of Irrigation(% of farmers)	82.22	71.64

Table 4.5: Production of arum and mustard of the sample households

Item	EMC (Arum)				TMC (Mustard)			
	Marginal	Small	Medium	All	Marginal	Small	Medium	All
Cultivated area (ha)	12.82	5.23	1.75	19.80	9.40	4.54	1.90	15.84
Main product (qtl.)	3021.65	1329.13	441.55	4792.32	113.15	71.23	22.73	227.10
Productivity (qtl./ha.)	235.70	254.14	252.31	242.04	14.16	15.69	11.96	14.34
By product (qtl.)	-	-	-	-	-	-	-	-

4.6 Cost of Production and Return (Arum and Mustard)

Gross return per hectare from cultivation of arum is Rs. 132657.98 and per hectare cost of production including labour cost is Rs. 60071.98. Hence, the net returns with and without the cost of cost of labour are Rs. 72586 and Rs. 88149.80 respectively. Similarly, gross return per quintal is Rs. 548.09. Deducting paid out cost and labour cost, the net returns turn out to Rs. 318.55 and Rs. 299.90 respectively. Similarly, per hectare gross return from cultivation of mustard is Rs. 41373 and per hectare cost of production with paid out cost and labour cost is Rs. 37913.80, hence the net return with cost of labour results to Rs. 3459.51 while the same without the cost of labour turns out to Rs. 18613.27. As regards to the net returns per quintal, the table also reveals that the credited net returns with and without labour cost are Rs. 231.83 and Rs. 1288.58 respectively. Looking into cost and return of EMC crop (Arum) and TMC crop (Mustard) by size classes of the sample households, it is found that the cost and return are more or less same for the sample households belonging to different size classes of operational holdings. However, it is found that cultivation cost of arum in case of small farmers is slightly higher as compared to marginal and medium farmers. On the other hand, marginal and small farmers are found to have obtained some higher returns from cultivation of TMC crop (mustard) as compared to the rate of return of medium farmers, whose rate of return from the cultivation of mustard is disappointing, when their returns are considered in terms of total paid out and labour costs, table- 4.6.

4.7 Price spread and marketing cost of Arum and Mustard

In the agricultural commodities prices tends to change from producer (farmer) to consumer through different intermediaries. Price paid by the consumer and price received by the producer for a specific quantity of farm produce is known as price spread. In the tables – 4.7 and 4.8 an attempt has been made to work out the nature of price spread for the crops Arum and Mustard with the help of the data collected from field survey.

4.7.1 Price spread and market efficiency of Arum in EMC

It is observed from the table – 4.7 that by selling Arum in EMC, the sample farmers received an average price of arum at Rs. 548 per quintal from the contract traders, who purchase entire amount of Arum at post matured stage at field. In this process of transaction, no cost involves to farmer for harvesting and marketing of their cultivated crop. Hence, net profit (Rs. /Qtl.) incurs to the cultivators after deducting paid out cost is Rs. 364.20 per quintal.

Now, the trader makes arrangement to dig up arum and takes away to the whole seller for sale. The process involves cost of Rs. 54.68 per quintal which is 57.89 per cent of total market cost. Net price of arum per quintal received by the trader from whole-seller is Rs. 815.08. Deducting purchase price and market cost, market margin per quintal earned by the traders is Rs. 212.46. Next, the whole-seller makes arrangements to sell out Arum to the retailer. The selling price per quintal of arum of the whole-seller is Rs. 973.35 in which their shares of market cost and market margin are Rs. 21.89 and Rs. 136.38 respectively.

Table 4.6: Details of cost of production and net return (Arum & Mustard)

Item	EMC (Arum)				TMC (Mustard)			
	Marginal	Small	Medium	All	Marginal	Small	Medium	All
Per hectare cost of production (Rs.)	58408.83	63998.89	60519.00	60071.98	35356.55	42229.95	40253.24	37913.80
Gross return (Rs./ha.)	129171.99	139426.49	137844.00	132657.98	40739.39	45579.30	35506.65	41373.31
Cost of production with paid out cost (Rs./Qtl)	183.03	187.02	190.32	183.89	1496.20	1503.80	2019.96	1587.70
Cost of production with paid out cost and labour cost (Rs./Qtl.)	247.81	251.83	239.86	248.19	2496.26	2691.59	3364.77	2644.45
Prices per Qtl.	548.04	548.63	547.00	458.09	2876.28	2905.29	2968.00	2876.29
Per hectare net profit with paid out cost (Rs.)	86031.07	91897.52	92258.00	88149.80	19543.73	20168.44	11337.37	18613.27
Per hectare net profit with paid out cost and labour cost (Rs.)	70763.16	75427.60	77235.00	72568.00	5382.73	3349.35	(-) 4746.59	3459.51
per quintal Net profit with paid out cost (Rs.)	365.01	316.61	366.68	364.20	1380.21	1409.59	948.04	1288.58
Per quintal net profit with paid out cost and labour cost (Rs.)	300.23	296.80	307.14	299.90	308.14	213.70	(-)396.77	231.83

The retailer's selling price of Arum is Rs. 1079.90 per quintal. In which market cost is Rs. 16.88. By selling Arum to the consumers, the retailer is able retain market margin of Rs. 89.67 per quintal.

The farmers' shares, market cost and market margin of different trading agents to consumer price are as follows:

- 1) The share of farmer to the consumer price is 50.75 per cent.
- 2) Market cost turns out to 8.64 per cent
- 3) Market margins of different trading agents as a whole are 40.61 per cent and
- 4) Ratio of market efficiency is 1.03

Table 4.7: Price spread and marketing cost of Arum – an EMC Crop

		(in Rs./qt)
1.	Price received by the farmers from contract Trader Marketing cost of the farmers Net price received by the farmers Net profit (Net Price minus Paid up Cost)	548.09 Nil 548.00 364.20
2.	Market Cost and Margin of Traders Cost of lifting arum Packaging cost Pottering cost Transport cost Misc. cost Traders margin Purchase price, market cost and margin of traders	17.00 14.80 10.00 9.56 3.32 212.46 815.08
3.	Market Cost and Margin of Wholesalers Pottering cost Storage cost Mandi fee Misc. Cost Wholesalers margin Purchase price, market cost and margin of wholesaler	3.57 4.20 12.00 2.12 136.38 973.35
4.	Market Cost of Margin of Retailer Transport cost Misc. Expenses Retailers margin Sale price of retailers/ Consumers price	12.00 4.88 89.67 1079.90
5.	Farmers' Share in the Retailers' Price (%)	50.75
6.	Marketing Cost as % of Retailers' Price	8.64
7.	Market Margin as % of Retailers' Price	40.61
8.	Modified Measures of Marketing Efficiency [ME =FP/(MC+MM)]	1.03

4.7.2 Price speed and Market Efficiency of Mustard in TMC

Spreading of price and market efficiency of mustard in TMC has been worked out in the table - 4.8. The table indicates that selling price (Rs. /Qtl.) of mustard of the sample farmers a whole is Rs. 2876.28 and the marketing cost is Rs. 26.37 i.e. (20.53%) of total market costs. Hence, the net price realised by the farmer is Rs. 2876.29 and profit (net price minus paid up cost) is Rs. 1288.59.

The selling price (Qtl./hact.) of traders is Rs. 3184.34 which involves market costs of Rs. 30.59 (29.56% of total market cost) and the margin of the trader in the selling price is Rs. 277.45 per quintal. Now, the whole-sellers are found to have sold mustard to mustard oil processing unit at local level at the price of Rs. 3439.22 per quintal. The sale price involves market cost and market margin of the whole-seller. Marketing cost is Rs. 46.52 i.e. 44.95 per cent of total marketing cost of mustard from producer to process unit and the market margin of whole-seller is Rs. 208.36 per quintal. Finally, the shares of farmers to processor's price, markets cost and market margin are as follows:

1. The share farmers to the processor's price are 82.87 per cent.
2. Market cost is 3.00 per cent
3. Market margin of trader and whole-seller is 14.13 per cent and
4. The ratio of market efficiency is 4.88

Table 4.8: Price spread and marketing cost of mustard – a TMC Crop

		(in Rs./qt)
1.	Price received by the farmers from traders/ commission agents	2876.28
2.	Total Marketing Cost of Farmers	
	Transport cost	14.25
	Loading and Unloading	12.12
	Weighing and others	--
	Commission	--
	Net price received by the farmers	2876.29
	Net profit (Net Price minus Paid up Cost)	1288.59
3.	Purchase Price plus Marketing Cost and Marketing Margin of the Traders/ Commission Agents	3184.34
	Transport cost	
	Loading and Unloading	20.45
	Market Fee	10.16
	Traders margin	--
		277.45
4.	Purchase Price of Wholesalers plus Marketing Cost and Marketing Margin	3439.22
	Transport cost	23.52
	Loading and Unloading	12.00
	Storage	8.00
	Misc. Cost	3.00
	Wholesalers margin	208.36
5.	Purchase Price of Processing Unit	3439.22
6.	Share of Farmers to Processor Price	82.86
7.	Marketing Cost as % of Processor Price	3.00
8.	Marketing Margin as % of Processor Price	14.13
9.	Modified Measures of Marketing Efficiency [ME = FP/(MC+MM)]	4.88

The higher ratio of market efficiency in case of mustard a TMC crop does not reflect on the efficiency of market. Because, the consumer price of mustard is the consumer price of mustard oil. The processor converts mustard into mustard oil which reaches to the consumer through another set of marketing channels. The limitation of the study is that data for the second set of marketing channel are not collected for detail analysis.

4.8 Benefit cost ratio for Arum & Mustard

The table – 4.9 shows that benefit cost ratio tends to reduce with inclusion of imputed value of family labour. According to the table- 4.11 the BCR is almost same for both the EMC and TMC crop.

Table 4.9: Benefit cost ratio for Arum & Mustard

Particulars	Cost of production/ha of Arum for EMC with paid out cost	Cost of production/ha of onion for TMC only with paid out cost	Cost of production/ha of Arum for EMC with family labour	Cost of production/ha of mustard for TMC with family labour
BCR	2.38	1.24	2.21	1.09

4.9 Wastage of Crops

Crop cultivation inevitably involves some wastage during harvesting and storage of crops. In the present study an attempt has been to estimate the extent of wastage/loss of the crops; Arum and Mustard with help of data collected from the sample farmers. The table – 4.10 indicate that the extent of loss/wastage of Arum and Mustard during harvest, threshing, storage and transport etc. is 2.86 per cent and 0.55 per cent respectively. Wastage occurs for Arum during harvesting (2.61%), storage (0.20%) and retail marketing level (0.05%) while wastage occurs for Mustard during threshing (0.30%) and storage (0.25%).

Table 4.10: Per quintal post harvest loss

Causes of post harvest loss	Arum - EMC		Mustard - TMC	
	Quintal	%	Quintal	%
During harvesting	12.6	2.61	-	-
During threshing	-	-	0.68	0.30
During storage	9.78	0.20	0.56	0.25
During transport	-	-	-	-
At retails level	2.64	0.05	-	-
Total	12.42	2.86	1.24	0.55

The extent of such loss/wastage according to multiple response of the sample households are due to traditional method of cultivation (100.00 per cent), distance of market of Arum – (43.00% and Mustard - 62.00%) and storage for long time for better prices (Arum – 16.00%) and Mustard (8.00%) (Table – 4.11).

Table 4.11: Reasons for post harvest loss (% of multiple responses)

Reasons	Arum – EMC	Mustard – TMC
Traditional method of harvesting	100.00	100.00
Distance of market	43.00	62.00
Storage for long time better price	16.00	8.00

4.10 Reasons of Preferring Existing Marketing Channel

It is evident from the table – 4.12 that majority of the sample farmers of both the EMC and TMC inform the following reasons to word preferring marketing channels, which are habit (18.89% for EMC and 17.69 % for TMC) followed by higher/fair price (16.36 % for EMC and 15.44% for TMC), low cost of marketing (12.89% for EMC and 11.27% for TMC) and time taking in other channel (12.22% for EMC and 11.56% for TMC). Apart from these, other reasons for preferring this channels are less physical hazards in marketing commodities, proximity, absence hidden cost etc. supervising service and better infrastructure.

Table 4.12: Reason of preferring the marketing channel

Particulars	% of total response	
	Arum EMC	Mustard TMC
Habit	18.89	17.69
Influence friend, relative, others	8.21	10.54
Assured sale	16.36	15.44
Higher/Fair price	12.89	11.27
Low cost of marketing	5.38	8.17
Less physical loss	4.32	3.16
Proximity	7.90	6.19
Access to input	-	-
Logistical support	-	-
Hidden cost/bribes in other channel	3.59	2.06
Time taking in other channel	12.22	11.56
Supervisor service	5.66	8.91
Better infrastructure	4.56	5.01

Since, the trade of sample farmers of Arum and Mustard take place at farmers' house or at local weekly 'hats' (market place), market mechanism of regulated market – which is far from their residence - is almost unknown to them. It is, therefore, information's about regulated markets from the sample farmer's side cannot be incorporated in the study.

Finally, it might be noted that the sample farmers of Arum and Mustard do not have any access to either loan, input and agricultural tools and implements from the buyer. They also never avail any extension services from any formal or informal marketing agencies.

Chapter – V

Summary, Conclusion and Policy Implications

5.1 Introduction

Ministry of Agriculture Government of India amended the APMC Act in 2003 and advised the state to implement the same. The amendment helps complete transformation of agricultural marketing with a view to making the market growth oriented. The amended Act allowed the concerned authorities to set up new marketing establishment as well as contract farming so that the growers of agricultural, horticultural and other commodities could get access to efficient market. Thus it is obvious that due change in the market system, role of new or emerging channel of marketing is important. It is therefore, the present study, “Impact of Emerging Marketing Channels in Agricultural Marketing – Benefit to Producer-seller and marketing Cost and Margin of Major Agricultural Commodities” is assigned by the Ministry of Agriculture Government of India. The study is undertaken by the Agro-Economic Research Centre, Visva-Bharati for the state of West Bengal to assess the impact of emerging channel in the trading of agricultural commodities. To assess the impact a comprehensive analysis has been taken between existing and emerging marketing channel of agricultural commodities, the study involves two crops – Arum (A vegetable crop) and Mustard (the oil seeds) for Emerging Marketing Channel (EMC) and Traditional Marketing Channel (TMC) respectively for in-depth study.

5.2 Objectives

The specific objectives of the study are:

- (i) to explore the farmer’s share in the consumer rupee in emerging marketing models vis-a-vis the traditional marketing channels;
- (ii) to work out the degree of market efficiency and incidence of post-harvest losses in emerging marketing channels vis-a-vis traditional marketing channels;
- (iii) to find out the market practices and services provided by different agencies in the emerging marketing channels vis-a-vis traditional marketing channels;
- (iv) to examine the constraints faced by the farmers and different market functionaries in the emerging marketing channels vis-a-vis traditional marketing channels;
- (v) to suggest policies based on the findings of the study.

5.3 Data Base and Methodology

The study has been conducted in West Bengal based on both primary and secondary data. The reference year of the study is 2009-10. The study has been conducted in Murshidabad district. For primary survey two crops i.e. arum for emerging channels and mustard for regular channels have been selected for the enquiry and a comparison has been done in between the regular and emerging marketing channels. The detailed methodology of the study is as follows.

Table 5.1: Distribution sample farmers and other market intermediaries

	EMC	TMC
Farmers (Nos.)	100	100
Trader/Commission Agent (Nos.)	15	15
Whole-seller (Nos.)	5	5
Retailer (Nos.)	15	-
Consumer (Nos.)	15	-

Primary data has been collected from the farmers and market intermediaries. The farmers were stratified on the basis of their land holding i.e. marginal (up to 1.00 hectare), small (>1.00 – 2.00 hectare) and medium (> 2.00 to 4.00 hectare). Farmers having land more than 4.00 hectares was not available. The proportion of households from the give size group was selected on basis of incidence in the total population. Total number of households selected for in depth survey was 200 – 100 each from the Traditional Marketing Channel (TMC) and Emerging Marketing Channel (EMC). The numbers of other market intermediaries selected for in depth survey were given in Table –5.1.

Apart from that with a view to gather official information of the Agricultural produce Market Committee (APMC) opinion of the members of the APMC was collected from a focus group discussion.

A simple tabular analysis is taken up for to analyse the impact of traditional vis-a-vis emerging marketing channel for the crops, Arum and Mustard. The market efficiency of both the crops has been calculated by using Acharys’s method – the modified method of market efficiency.

The formula of the same is:

$$\text{MME} = \text{FP}/(\text{MC} + \text{MM})$$

Where, FP = Price Received by the Farmer
 MC = Marketing Cost and
 MM = Marketing Margin

5.4 Limitations of the Study

Though considerable precautions and thoughts have been exercised to make the study precise, objective and reliable, yet because of limited resources at the disposal, the study has been restricted to one district and two crops only and could not be extended to larger areas and more crops. Individual's biases and prejudices on the part of the respondents might have influenced the findings of the study because the field level investigation was based on individual's perception and expressed opinion of the respondents under study. However, from inter-checks of different elements of the data no systematic biases are, however apparent.

The present study has been restricted to the sample farms taken from the arum and mustard growing parts of Murshidabad district, West Bengal. Therefore, the results obtained are area specific. However, due to its demonstration of the various issues and aspects of the problem, the study might have much wide application and this could be extended to other similar areas.

5.5.1 Agricultural marketing Reform: Traditional and Emerging marketing Method

Regulated Agricultural Market in most part of the country was established under the regulation of state Agriculture Produce Market Committee (APMC) Acts. The APMCs were established at the places where bulks of agricultural commodities arrive for sell. The main role of APMC is to organize trade for the sellers and buyers. The assembling points of agricultural commodities where APMC exists are mainly big 'Madis'. The main object behind creation of APMC was to protect the farmer from exploitation of middlemen and ensure better price for their commodities. But the committee being operative for last fifty years, has yet to achieve any impressive success in this spheres has yet to achieve. Monopolistic character of the government regulated APMC prevents entry of intermediaries in the market consequently competitive marketing system could not be developed. The APMC also fails to provide farmers for direct marketing of commodities, organize retailing, smooth supply of raw materials to agro-processing industries and adaptation of innovative marketing system and marketing technology. Due that difficulties, the participation of private sector or corporate in the marketing system was tentative.

With a view to making agricultural marketing more competitive growth oriented the APMC was Act was amended 2003. It is expected that the amendment would encourage developing competitive agricultural marketing, deregulation marketing system and promoting private investment in the management and development of agricultural markets in India. The impact of this amendment is yet to achieve optimal result. It is evident from the fact that duly a few state have adopted it and that too partially. However, it is expected that they amendment will minimize the consumer prices and maximum farmers realisation. It is also expected that private investment also help to develop market infrastructure and improve the market efficiency.

5.5.2 Features of Traditional and Emerging Marketing Channels

Direct sale of produce to the consumer is obviously most preferred mode of sale as market efficiency as well as the producers' share in consumers' price is inversely proportional to the length of marketing channel. Stretching of marketing channel depends on the system of marketing and the system of marketing, which is operative through ages is traditional and reformative changes therein is emerging marketing channel. Higher the length of marketing channel lowers the market efficiency and vice-versa.

5.5.3 Traditional Marketing Channel

Traditional marketing channel is characterized by high trader's margin and several intermediaries each of whom add to cost. In West Bengal most of the agricultural commodities are sold through the traditional marketing channel. Hence, farmers share to the consumer's price is considerably low. The Mickensy report observed that in a developed marketing system, the farmers usually received 40 per cent to 70 per cent of final retail price but in India they receive as less as 25 per cent of final consumer price. On the whole the feature of Traditional marketing system of agricultural commodities in the state is that the existing market system is mainly dominated by the traders, appropriate and effective linkage between the producer and sellers continue to be weak, absence of rural road connectivity, poor access to market infrastructure, in proper management of existing available market infrastructure, lack of market intelligence and lake of credit support. Moreover, primary rural market (hats) is not equipped even with basic facilities like platform for sale and auction, electricity, drinking water, road linkage, etc. All most all agricultural commodities of rural areas in West Bengal are being traded in such traditional agricultural markets.

5.5.4 Emerging Marketing channel

With the latest amendment of APMC Act, it is expected that a right set of reform would, takes place in the existing (traditional) marketing system of agricultural commodities. So that price realization for farmers can be increased significantly through lowering market costs and market margin of the intermediaries. But marketing channel having such reformatory quality is yet to develop in West Bengal. However, in case of trading some fruit and vegetables there exists a different type of marketing system in which the farmers sell their produce like, Arum or Mango at field level. Then it is responsibility of the purchaser (Trader) to harvest and market the same. In this form of marketing the farmers not pay any marketing cost. But it is obvious that the same includes high market marginal (profit) of the trader. One of such trading system a vegetable crop has been considered for emerging channel of marketing of agricultural commodities for the study.

5.6.1 Main finding

Primary data for in-depth survey has been collected from farmers and market intermediaries Crop considered for looking into the efficiency of marketing are Arum and mustard. Arum is selected for emerging Marketing Channel (EMC) which mustard for Traditional Marketing Channel (TMC). Main findings of the study are follows:

Majority farmer of both the EMC and TMC group is marginal farmers. Their incidence in the sample is highest - 79.00 per cent followed by small farmers - 16.50 per cent and remaining 4.50 per cent is medium farmers.

Per hectare costs for cultivation of Arum and Mustard are Rs. 60071.98 and Rs. 37913.80 respectively. Out of the total cost, the share of paid out costs are 74.09 per cent in case of arum and 60.03 per cent in case of mustard.

Production and productivity of Arum is 4792.32 (qt.) and 242.04 (qt./ha.) respectively, while production and productivity of Mustard is 227.10 (qt.) and 14.34 (qt./ha) respectively.

Gross return per hectare from cultivation of arum is Rs. 132657.98 and total cost of production including labour cost is Rs. 60071.98. Hence, the net returns with and without the cost of labour are Rs. 72568.00 and Rs. 88149.80 respectively.

Similarly, per hectare gross return from cultivation of mustard is Rs. 41373.31 and costs of production with paid out cost and paid out plus labour cost are Rs. 22760.04 and Rs. 37913.80 respectively. Hence, the net return with paid out cost and paid out plus labour cost results to Rs. 18613.27 and Rs. 3459.51 respectively.

5.6.2 Price spread and marketing cost of Arum and Mustard

In the agricultural commodities prices tends to change from producer (farmer) to consumer through different intermediaries. Price paid by the consumer and price received by the producer for a specific quantity of farm produce is known as price spread. In the tables - 5.2 and 5.3 an attempt has been made to work out the nature of price spread for the crops Arum and Mustard with the help of the data collected from field survey.

5.6.3 Price spread and market efficiency of Arum in EMC

It is observed from the table - 5.2 that by selling Arum in EMC, the sample farmers received an average price of arum at Rs. 548 per quintal from the contract traders, who purchase entire amount of Arum at post matured stage at field. In this process of transaction, no cost involves to farmer for harvesting and marketing of their cultivated crop. Hence, net profit (Rs. /Qtl.) incurs to the cultivators after deducting paid out cost is Rs. 364.20 per quintal.

Now, the trader makes arrangement to dig up arum and takes away to the whole seller for sale. The process involves cost of Rs. 54.68 per quintal which is 57.89 per cent of total market cost. Net price of arum per quintal received by the trader from whole-seller is Rs. 815.08. Deducting purchase price and market cost, market margin per quintal earned by the traders is Rs. 212.46. Next, the whole-seller makes arrangements to sell out Arum to the retailer. The selling price per quintal of arum of the whole-seller is Rs. 973.35 in which their shares of market cost and market margin are Rs. 21.89 and Rs. 136.38 respectively.

The retailer's selling price of Arum is Rs. 1079.90 per quintal. In which market cost is Rs. 16.88. By selling Arum to the consumers, the retailer is able retain market margin of Rs. 89.67 per quintal.

The farmers' shares, market cost and market margin of different trading agents to consumer price are as follows:

- 5) The share of farmer to the consumer price is 50.75 per cent.
- 6) Market cost turns out to 8.64 per cent
- 7) Market margins of different trading agents as a whole are 40.61 per cent and
- 8) Ratio of market efficiency is 1.03

5.6.4 Price speed and Market Efficiency of Mustard in TMC

Spreading of price and market efficiency of mustard in TMC has been worked out in the table - 5.3. The table indicates that selling price (Rs. /Qtl.) of mustard of the sample farmers a whole is Rs. 2876.28 and the

marketing cost is Rs. 26.37 i.e. (20.53%) of total market costs. Hence, the net price realised by the farmer is Rs. 2876.29 and profit (net price minus paid up cost) is Rs. 1288.59.

The selling price (Qtl./hact.) of traders is Rs. 3184.34 which involves market costs of Rs. 30.59 (29.56% of total market cost) and the margin of the trader in the selling price is Rs. 277.45 per quintal. Now, the whole-sellers are found to have sold mustard to mustard oil processing unit at local level at the price of Rs. 3439.22 per quintal. The sale price involves market cost and market margin of the whole-seller. Marketing cost is Rs. 46.52 i.e. 44.95 per cent of total marketing cost of mustard from producer to process unit and the market margin of whole-seller is Rs. 208.36 per quintal. Finally, the shares of farmers to processor's price, markets cost and market margin are as follows:

5. The share farmers to the processor's price are 82.87 per cent.
6. Market cost is 3.00 per cent
7. Market margin of trader and whole-seller is 14.13 per cent and
8. The ratio of market efficiency is 4.88

Table 5.2: Price spread and marketing cost of Arum – an EMC Crop

		(in Rs./qt)
1.	Price received by the farmers from contract Trader	548.09
	Marketing cost of the farmers	Nil
	Net price received by the farmers	548.00
	Net profit (Net Price minus Paid up Cost)	364.20
2.	Market Cost and Margin of Traders	
	Cost of lifting arum	17.00
	Packaging cost	14.80
	Pottering cost	10.00
	Transport cost	9.56
	Misc. cost	3.32
	Traders margin	212.46
	Purchase price, market cost and margin of traders	815.08
3.	Market Cost and Margin of Wholesalers	
	Pottering cost	3.57
	Storage cost	4.20
	Mandi fee	12.00
	Misc. Cost	2.12
	Wholesalers margin	136.38
	Purchase price, market cost and margin of wholesaler	973.35
4.	Market Cost of Margin of Retailer	
	Transport cost	12.00
	Misc. Expenses	4.88
	Retailers margin	89.67
	Sale price of retailers/ Consumers price	1079.90
5.	Farmers' Share in the Retailers' Price (%)	50.75
6.	Marketing Cost as % of Retailers' Price	8.64
7.	Market Margin as % of Retailers' Price	40.61
8.	Modified Measures of Marketing Efficiency [ME =FP/(MC+MM)]	1.03

The higher ratio of market efficiency in case of mustard a TMC crop does not reflect on the efficiency of market. Because, the consumer price of mustard is the consumer price of mustard oil. The processor converts mustard into mustard oil which reaches to the consumer through another set of marketing channels. The limitation of the study is that data for the second set of marketing channel are not collected for detail analysis.

5.6.5 Benefit cost ratio for Arum & Mustard

The table – 5.4 shows that benefit cost ratio tends to reduce with inclusion of imputed value of family labour. According the table- 4.11 the BCR is almost same for both the EMC and TMC crop.

5.6.6 Wastage of Crops

Crop cultivation inevitably involves some wastage during harvesting and storage of crops. The extent of loss/wastage of Arum and Mustard during harvest threshing storage and transport etc. is 2.86 per cent and 0.55 per cent respectively. Wastage occurs for Arum during harvesting (2.61%), storage (0.20%) and retail marketing level (0.05%) while wastage occurs for Mustard during threshing (0.30%) and storage (0.25%).

5.6.7 Reasons of Preferring Existing Marketing Channel

The sample farmers of both the EMC and TMC inform the following reasons to word preferring marketing channels, which are habit (18.89% for EMC and 17.69 % for TMC) followed by higher/fair price (16.36 % for EMC and 15.44% for TMC), low cost of marketing (12.89% for EMC and 11.27% for TMC) and time taking in other channel (12.22% for EMC and 11.56% for TMC). Apart from these, other reasons for preferring this

channels are less physical hazards in marketing commodities, proximity, absence hidden cost etc. supervising service and better infrastructure.

Since, the trade of sample farmers of Arum and Mustard take place at farmers' house or at local weekly 'hats' (market place), market mechanism of regulated market – which is far from their residence - is almost unknown to them. It is, therefore, information's about regulated markets from the sample farmer's side cannot be incorporated in the study.

Finally, it might be noted that the sample farmers of Arum and Mustard do not have any access to either loan input and agricultural tools and implements from the buyer. They also never avail any extension services from any formal or informal marketing agencies.

Table 5.3: Price spread and marketing cost of mustard – a TMC Crop

		(in Rs./qt)
1.	Price received by the farmers from traders/ commission agents	2876.28
2.	Total Marketing Cost of Farmers	
	Transport cost	14.25
	Loading and Unloading	12.12
	Weighing and others	--
	Commission	--
	Net price received by the farmers	2876.29
	Net profit (Net Price minus Paid up Cost)	1288.59
3.	Purchase Price plus Marketing Cost and Marketing Margin of the Traders/ Commission Agents	3184.34
	Transport cost	
	Loading and Unloading	20.45
	Market Fee	10.16
	Traders margin	--
		277.45
4.	Purchase Price of Wholesalers plus Marketing Cost and Marketing Margin	3439.22
	Transport cost	23.52
	Loading and Unloading	12.00
	Storage	8.00
	Misc. Cost	3.00
	Wholesalers margin	208.36
5.	Purchase Price of Processing Unit	3439.22
6.	Share of Farmers to Processor Price	82.86
7.	Marketing Cost as % of Processor Price	3.00
8.	Marketing Margin as % of Processor Price	14.13
9.	Modified Measures of Marketing Efficiency [ME = FP/(MC+MM)]	4.88

Table 5.4: Benefit cost ratio for Arum & Mustard

Cost of production/ha of Arum for EMC with paid out cost	Cost of production/ha of onion for TMC only with paid out cost	Cost of production/ha of Arum for EMC with family labour	Cost of production/ha of mustard for TMC with family labour
2.38	1.24	2.21	1.09

5.7 Policy Implication

In West Bengal, trade of agricultural commodities takes place through traditional marketing channel, which is dominated by the traders. There is absence of appropriate and effective linkage between the producers and sellers. Market infrastructure are insufficient, even there is poor access to basic facilities at the market places. Since the market is mainly controlled by so major intermediaries, market costs and market margin are high. Hence, commodities become costlier to the consumer and this reduce producer's share to the consumer price. In this state of affairs government intervention through appropriate policies and development packages is essentially required [Attn. to the market Departments of the Ministry of Agriculture of both Central & State Government].

In spite of reformative changes in Agricultural Produce Market Committees Act, only a nominal action has been initiated for introducing the reform by the government of West Bengal. It may be due resistance from the traders and commission agents who fear for losing business and income, if an alternative marketing establishments are established. Some lobbies also stand at the back for giving support to the traders and commission agent for the same [Attn. Administrative Departments of Government of West Bengal].

Trade of vegetable crop, Arum takes place between trader and producer. Trader purchases entire cultivated crop at field level. The producer has nothing to pay for harvesting of Arum. Since number of

intermediaries in such trading is minimum market cost and market margin are to some extent lower. Through this channel in not very smooth and developed, yet it is to some extent is efficient in comparison with other traditional channels where numbers of market intermediaries are high. If this marketing system is made accessibility with warehouse, cold storage, financial support and transport facilities etc. it would be an efficient marketing channel for agricultural commodities in West Bengal [**Attn. marketing Department of the Ministry of Agriculture Government of West Bengal**].

The existing marketing of agricultural commodities are not fitted out with basic facilities like marketing platform, road connectivity, storage, electricity, drinking water, extra premise for buyers and sellers and post harvest management, etc. If these basic facilities are being provided, the existing market condition would improve [Attn. The local level Administrative body, panchayat, Zill Parishad, Block Development Officers,etc.]. Due to absence of basic infrastructure and positive policy of the government, participation of private sector in agricultural marketing in West Bengal is limited to warehousing, cold storage and pack-houses. Hence, there is a need for comprehensive policy to attract the private sector in trading of the core agricultural commodities and other marketing activities [**Attn. concerned Departments of the Central and State Government**].

Some of the co-operative societies set success stories in marketing of diary product, sale of fertilizer, disbursing of agricultural credit etc. but in the field of marketing core agricultural commodities, their role too much limited. If the cooperative societies are encouraged in the field of marketing of core agricultural commodities, the extent exploitation of famer by the traders in the existing traditional marketing system could be minimize [**Attn. department of co operative societies government of West Bengal**].

5.8 Conclusion

On the whole, the study conclude that by selling their produce (Arum) in the emerging channel of marketing, the farmer are found to have benefitted as they do not have to pay for marketing cost. On the other hand by selling mustard in traditional marketing channels, it is assumed - as the complete picture could not be obtained from the study - that the extent of exploitation the farmers by the market intermediaries is to some extent higher. Efficient marketing channel has not developed in West Bengal as yet, so, specific policy and development plans and programmes are required for creation efficient marketing channel of agricultural commodities.

Annexure – I**COMMENTS****IMPACT OF Emerging Marketing Channels in Agricultural Marketing: Benefits to Producer-Seller and Marketing Cost and Margins of Agricultural Commodities (Authors: Debashis Sarkar, Ramesh Chandra Mondal, AERC, Visva-Bharat, Santiniektan)**

1. The report lacks a proper preface with acknowledgement. Kindly make sure to mention Institute of Economic Growth and specifically to two coordinators Dr. Ananda Vadivelu and Dr. Nilabja Ghosh.
2. **In chapter 2:**
 - The market Act West Bengal APMA 1972 is provided at length and verbatim. The author's own assessment is also required. What changes are going on in the current scenario is not clear at all. Since the Project is about Marketing Reforms, it is very important to discuss the model Act and Specify if the new Bill is enacted in West Bengal, what changes are taking place and are expected to take place in the near future and what of factors constrain reforms.
 - A few lines should be written about the vegetables Arum, mentioning it's local name and importance.
 - Are the two crops Arum and Mustard substitute in production?
3. **In chapter 3:**
 - The researcher has considered the market for ARUM as the Emerging channel. Perhaps the author can suggest a name for this channel to describe the EMC's contribution and mention since when it has come into existence (table:3.16)
 - In all tables (such as table 3.19) please mention the units and explain the number in parentheses.
4. **In chapter 4:**
 - Table 4.3 gives information on input use and technology. The information may be provided by farm size classes. Also please mention if any organic certification is observed.
 - One weakness of the study is that the TMC data on Arum and EMC data on Mustard are not reported. This makes comparison difficult since two different crops are studied. If possible the author can provide the data. If not, the reasons for not providing the comparison may be mentioned in text.
 - Information provided in table 4.6 and 4.8 need to be provided by size classes also.
 - In page 64, table 4.6, kindly check entries in row 7 and 8 (for example, per ha net profit with paid out cost would be gross returns (Rs 132658) less paid out cost (R. 55558), which is different.
 - In table 4.3 also please note if there is any use of tractor, trolley, sprinkles, pump sets, tiller and any organic certification in EMC/TMC farm size class-wise.
 - In table 4.3 Mustard is noted as EMC
 - Page 66, there are mistakes in Table 4.7. please check Table 4.7, 4.8 and correct them as required.

Annexure – II**Action Taken Report**

- 1) Action taken by the authors on the comments and suggestion received by the coordinating centre of the study.
- 2) Coordinators comments of the study have been incorporated in the final report.

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