

Marketing of Fruits in India - Present Practice and Future needs



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Area, production and productivity of fruit crops in West Bengal



Crop	Area '000 ha	Production '000 tonns	Productivity t ha⁻¹
Banana	27	513	19.0
Mango	69	461	6.8
Pineapple	13	355	27.3
Papaya	9	258	28.7
Guava	9	141	15.7
Litchi	7	70	10.0

Major fruits produced in India (million tonnes)



	Production	% Share
Banana	16.45	36.2
Mangoes	10.50	23.1
Oranges	2.98	6.56
Apple	1.42	3.1
Grapes	1.20	2.6
Pineapple	1.10	2.4
Papaya	0.70	1.5
Total	45.5	



- **Rural population: 72%**
- **Depend directly or indirectly on agriculture: 72%**
- **Self sufficient in food grain production**
- **Contributing 30% GDP in agriculture from mere 8.5% area**
- **Second largest producer of fruits (10% of World's fruit production)**



**Yet..... The efficiency of the Supply Chain is not even
A patch on the Indian Manufacturing Supply
Chain**

Constraints in implementing post-harvest practices:



● Numerous intermediaries

● High level of wastage (30-40%)

● Lack of transparency – prices, availability, demand, customer preferences

● Poor infrastructure – storage, packaging, transportation/ no cold chain

● Poor linkage in the marketing channel



High cumulative wastages across the supply chain



Mango : 22%



Banana : 30%

Guava : 16%



Litchi : 25%

Pineapple : 20%

Jackfruit : 12%





Present practice in Harvesting, Packaging, Transportation and marketing



Harvesting

Time of harvesting-

- No scientific standards followed for determination of maturity
- Most based on experience, some times change of colour (litchi), softness (mango), attainment of size (banana, jackfruit).
- Harvesting before maturity due to sudden market demand (festival) or to get higher price early in the season (litchi, mango), avoiding pest incidence after rains (litchi, guava)

Result.

Inferior quality- ultimate low market price.



Method of harvesting-

- **Hand picking (guava, litchi, banana, mango)**
- **Harvesting by climbing on the tree (litchi, mango, jackfruit)**
- **Harvesting with a notched stick having a pouch (mango, guava)**
- **Mostly without stalk or leaves (except litchi).**





Results.



- ☀️ **Accidental falling of fruits, resulting bruising and cracking of fruits**
- ☀️ **Estimated loss between 5% (jackfruit) to 15% (mango)**
- ☀️ **Mechanical injury allows entry of pathogen thereby leading rotting during operations.**

Handling

- Assemble the fruits on the ground – in shade or even without shade
- Informal sorting and grading
 - removal of highly damaged fruits or very small fruits
- No desapping (mango, jackfruit)
- No precooling
- No fumigation (litchi)

Results

- Physiological and physical loss
- Low market price
- Black stains on the peel of mango and low market price
 - Lower the storage life
 - Peel browning (litchi)



Packaging at farm level

- ▶ In gunny bag- guava, mango, bael, ber
- ▶ In cloth bag – guava, mango
- ▶ In bamboo basket covered with leaves – guava, mango, litchi, papaya
- ▶ Without any packaging – banana, pineapple, jackfruit
- ▶ Wooden box – litchi, mango
- ▶ Plastic crate – litchi
- ▶ Cushioning materials – newspaper or leaves of the same fruit, covering with newspaper or banana leaves.





Litchi harvesting and grading



Litchi grading and box are ready for packing



Fruits are arranged carefully in the box



Box are ready for transport



Alphonso



Alphonso



Mango kept for ripening with calcium carbide

Transportation from farm to wholesalers:

- **Rikshow van – mango, banana, guava, jackfruit**
- **Trucks – banana, mango**
- **No control on temperature/ humidity**
- **Packaging bags/ boxes of different weight, size, commodity in the same carrier**





Banana on the way





Marketing of mango





Jackfruit transportation and marketing





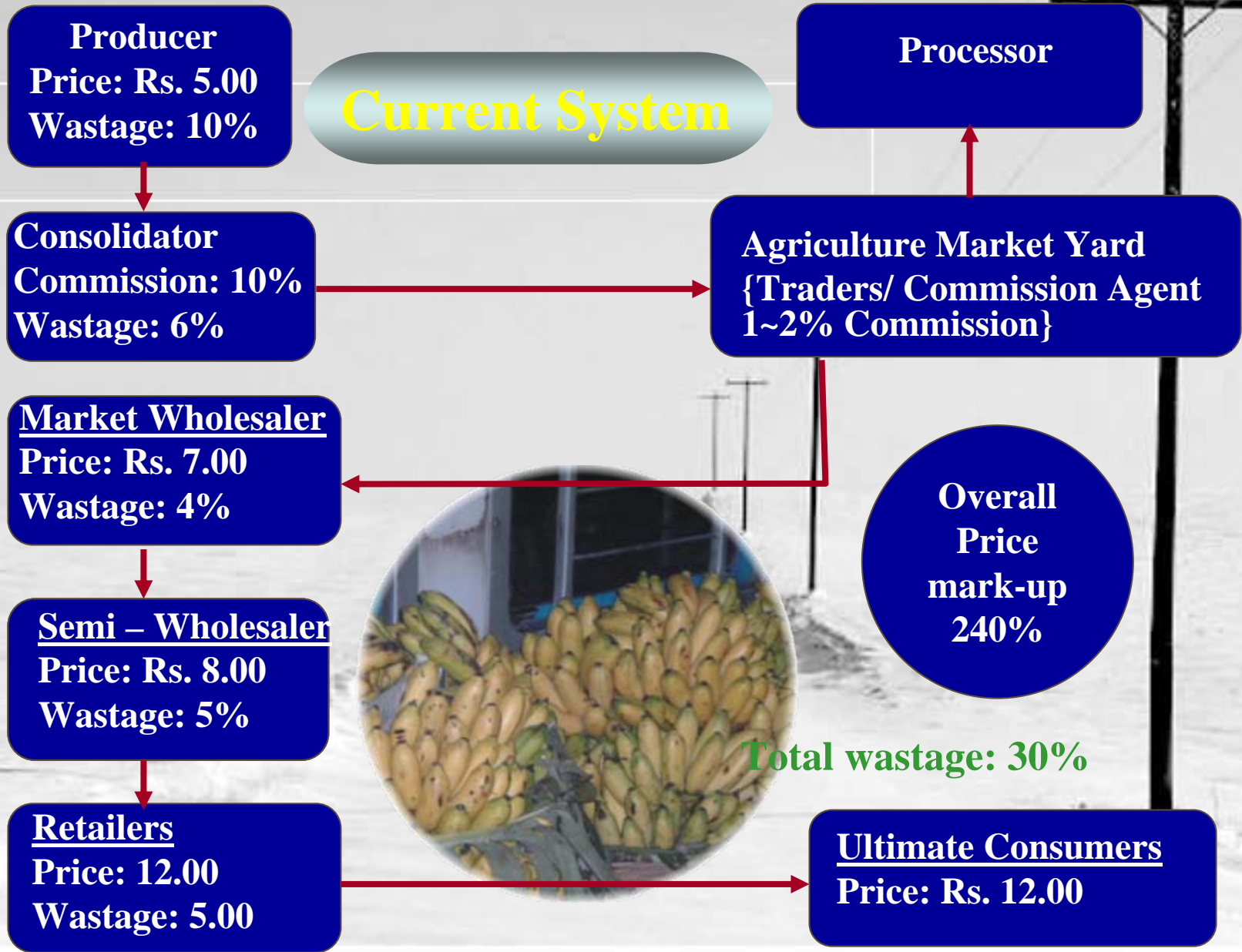
Transportation system of papaya

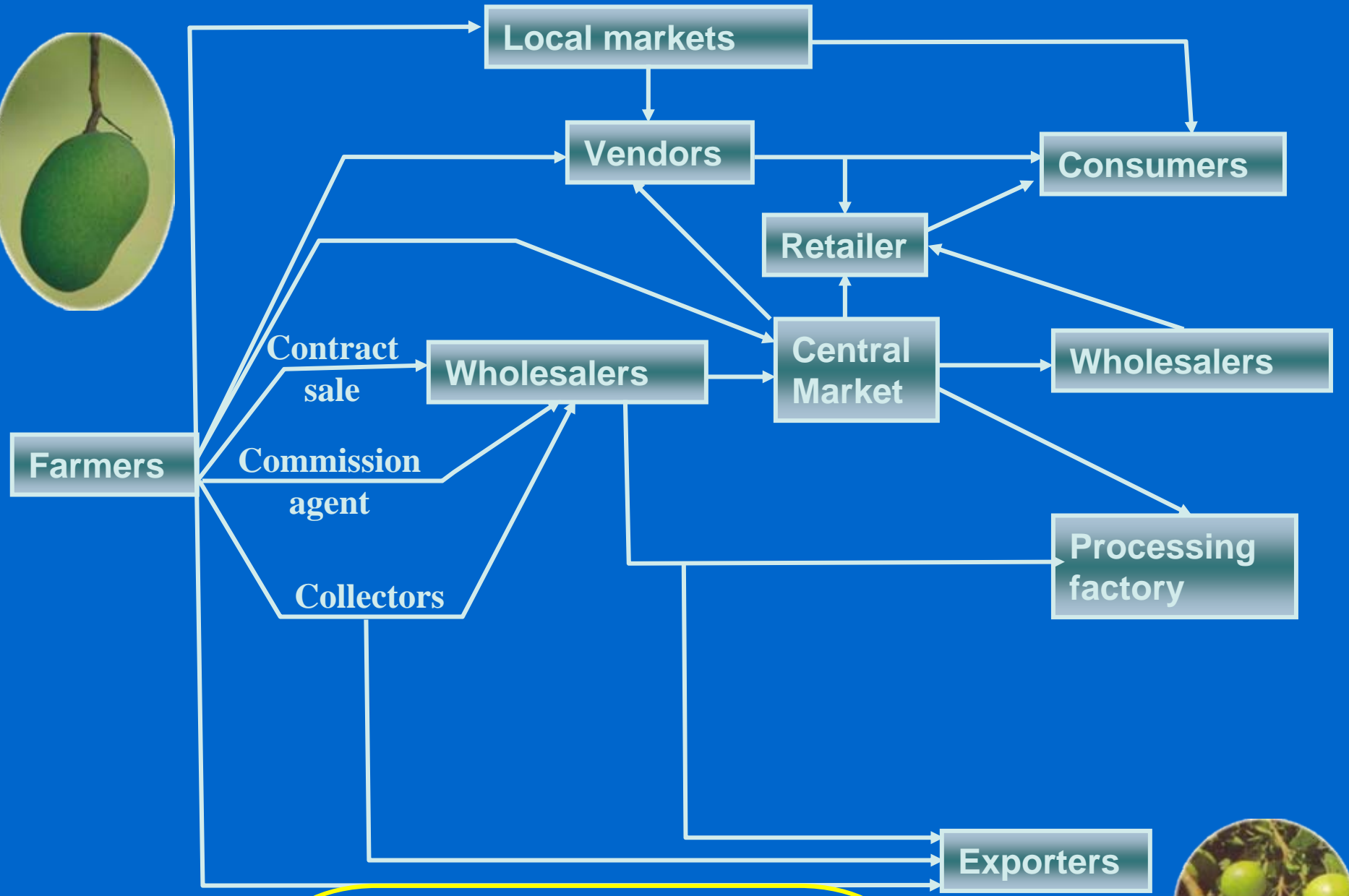


Transportation system of coconut



Illustrative example of banana for establishing the benefits of organized distribution formats





Marketing Channel



Different marketing channels



Channel 1. To central market by

- a) wholesalers through contract sale
- b) commission agents
- c) wholesalers who buy directly from orchards/ local markets.

Channel 2. Farmers/ contractors with big orchards send their produce directly to the central market (about 5%)

Channel 3. Farmers/ contractors bring their fruit to local wholesale markets where many vendors and even some consumers come to trade.

Channel 4. Directly to exporter without passing through any middleman. Exporter assign their agents or collectors to procure fruit of a specific grade.

Channel 5. Directly to processing unit with prior agreement on size, quality and price.



Modern System





Problems encountered by the farmers dealing with pre-harvest contractors

- **Delayed payment**
- **Damage of the trees while harvesting**
- **Breaking contract if the prices slash down**
- **Cut in the payment of farmer in the event of loss of fruit due to dropping.**



Problems encountered by the pre-harvest contractors from farmers and due to lack of infrastructural facilities

- Lapses on the part of farmers in the management of orchard resulting in deterioration of quality of fruits
- Problems of natural calamities (theft of fruits, losses due to rains, pest etc.)
- Inadequate storage facilities at local place
- Packaging problem (costly packaging materials and non-availability of skilled labour)
- High transportation cost and non-availability of refer van
- Non-availability of graders
- Non-availability of pre-cooling facilities



Lack of Transparency-Unacceptable Inequity in Farmer's Remuneration

Produce	Farm gate price (Rs.) kg⁻¹	Retail price (Rs.) kg⁻¹	Retail to Farm gate ratio
Banana	5.00	12.00	2.4
Mango	8.00	20.00	2.5
Guava	10.00	25.00	2.5
Litchi	25.00	50.00	2.0
Pineapple	4.00	12.00	3.0

One of the highest in the world!

Some observations on the current supply chain scenario:

- ❖ Primitive systems of cultivation
- ❖ No linkage between production and demand in the market - banana, pineapple, guava
- ❖ Poor on-farm practice in harvest and post harvest handling
- ❖ Poor infrastructure in terms of transportation, storage and marketing
- ❖ Difficulties in collection from numerous small farmers



🕒 **Negligent attitude towards post harvest losses**

🕒 **Lack of quality consciousness**

🕒 **Absence food processing units**

🕒 **Faulty power supply**

🕒 **Unavailability of modern cold storage**





An efficient marketing system can:

- **Reduce post-harvest losses**
- **Enhances farmers' realisation**
- **Reduce consumer price**
- **Promote grading and food safety practices**
- **Induce demand-driven production**
- **Enable higher value addition**
- **Facilitate export.**



Improvement in the distribution system:

Adopt the best practices

- **Storage**
 - Postharvest storage facilities
 - Collection centers
 - Cold chain
- **Packaging**
 - Special purpose containers to prevent transportation damages
 - Protection from contamination
 - Not imparting any toxic substance
- **Handling**
 - Speciality handling tools and equipments
- **Transportation**
 - Freighters
 - Multimodal transport services
- **Logistics service provider**
 - Storage, warehousing and material handling services



Value added services.

- Grading, sorting and packaging facilitates leading to standardization
- Ripening and primary processing facilities



India is a late starter in the area of organized retailing

- Opportunity to learn from experience of other countries
- FDI in retailing is not permitted which kept out the international chains
- Indian retailers were not very active until recently,



Retail markets:



✦ Entry of big retail names –

Reliance, ITC, Aditya Birla Group, Godrej, Bharati Group, Adani Group, Future Group.

✦ Retail and wholesale stores for F & V by these chains

- Big Bazar, Food Bajar, Reliance Fresh, Choupal Fresh, Namdhari's Fresh,

✦ FAO and MoA undertook the study to understand the ground situation

- Emerging models for backward and forward linkages
- Issues in setting up the chains
- Understand the role of the Govt., NGOs in donor agencies.

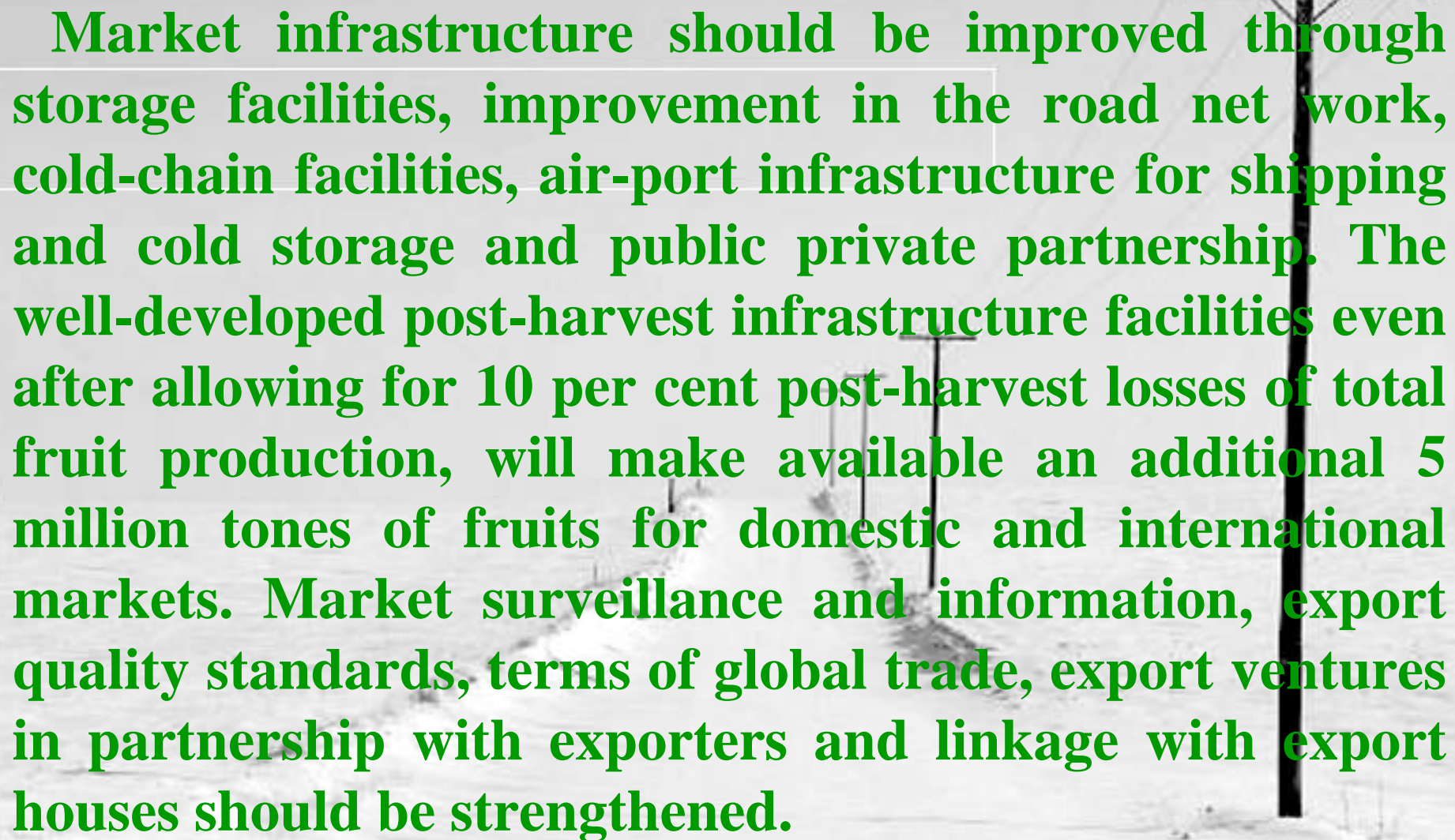
Government initiatives in the last 5 years

- I. Creation of Agri-Export Zones- 62 in different states**
- II. National level water conservation and micro-irrigation project**
- III. Creation of food park**
- IV. Creation of multipurpose cold storage**
- V. Regulated market**
- VI. Refer van**
- VII. Cold room at the airport**
- VIII. Encouraging corporate sectors to install food processing factory at the production sites**
- IX. Tax holidays**
- X. Cut in import duties of postharvest machineries**
- XI. Subsidy and soft loan for farmers**
- XII. Special subsidy for organic cultivation**

Conclusions

The domestic demand for fresh fruits has been steadily increasing during last few years due to many reasons such as rising incomes, increase in the number of middle and upper middle class households and negative attitude of consumers regarding soft and fizzy drinks. As per FAO study, fruit consumption in India is anticipated to increase by 4 per cent per year according to projected growth rates for income, population and trends in food preferences. This will result in demand for all fruits reaching 66 million tones by 2010. There is a great need to improve the marketing of fruits. One important measures could be efforts to bring more markets under regulation.

Continue.....



Market infrastructure should be improved through storage facilities, improvement in the road net work, cold-chain facilities, air-port infrastructure for shipping and cold storage and public private partnership. The well-developed post-harvest infrastructure facilities even after allowing for 10 per cent post-harvest losses of total fruit production, will make available an additional 5 million tones of fruits for domestic and international markets. Market surveillane and information, export quality standards, terms of global trade, export ventures in partnership with exporters and linkage with export houses should be strengthened.



Thank you