Impact of Technology Innovations on Food Security in India with reference to Nashik District

Dr.Jayshri .J.Kadam
Associate Prof. Institute of Management Research and Technology, Nashik

Abstract: Technology swiftly entered into the life of mankind, it impinges into the all type of field obviously technology adopted in the agriculture and methods and types of cultivation progressively changed particularly in means of transport, types of storage, grading and packaging of agriculture commodities. It consequences that agriculture commodities i.e. food got secured by technological innovations. In the rural area of India large number of farmers uses traditional methods for storage to acquire better prices results damage distortion and slippage in the food. It makes the losses of food producers ultimately nation's food stock and very few farmers store their produce in government owned and private warehouses where food got security. It demonstrate that the need of technological food storage methods. The storage facility and scientific method as well as location and rent amount is easily available on the internet.

Key Words; Technology, Agriculture

REVIEW OF LITERATURE

Today social technology infrastructure represents new process of economic development and has been used as a tool of regional development. It is a region that generated sustained economic activity through the creation and commercialisation of new knowledge.

FAO also monitors market prices for staple foods, the food insecurity situation and the impact of high food prices through its Global information and Early warning system on food and agriculture known by its acronym GIEWS .A new database, the national basic food prices data and analysis tool was launched in 2009.

Information Technology changes the corporate world around us has never before been so fascinating. Perhaps, the only constant we are sure to confirm in the otherwise unpredictable future is the reality of accelerating changes most of which are severe and stressful.

The new platform technologies applied in fostering FNS (Food and Nutrition security) include information and communication technologies (ICT) for the agricultural sector, biotechnology, and nanotechnology. ICT have been widely applied by many of the farmers nowadays for enhancing better market access, as well as empowering local farmer organizations. Many risks and uncertainties are normally faced by most of the farmers before, during and after production can be overcome via mobile phone information, accordingly boosting their production. The mobile phone services are proved beneficial on several fronts, ranging from providing market and price information to knowledge sharing, insuring crop production to monitoring children's nutrition status as well as information of weather conditions to control the risk associated with and spraying fungicide weedicide etc. In the application of biotechnology, bio fortification is among the most cost-effective ways of improving nutritional outcomes.

The internet is an amazing development of our times founded on the convergence of computer and communication technologies. The traditional constraints of space and time are no more there and the whole is almost being a global electronic village. It is transforming the choice of market place World.

Storage of agriculture commodities:

In the Sinnar region of Maharashtra in Indiathe farmers uses following types for storage of their agriculture produces

Type of storage	No of respondents	%
Traditional	210	60
Government warehouses	35	10
Cooperative warehouses	0	0
Private	35	10
No Need of storage	70	20
Total	350	100

(Field Survey 2018-19)

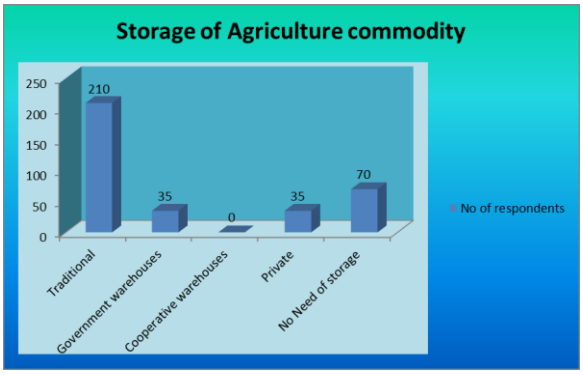


Table No 1 shows that 20% respondents give their preference for storage of agricultural commodities that they have not any need for storage there is no production remains for storage60% respondents use traditional methods for storage and storage in government and private warehouses is 10% each. It shows that lack of security to the food in rural area as proper storage methods and facilities to the farmers can store their produce and get a good return by selling it whenever demand arises but they could not achieve this. Farmers capacity to pay for storage ranges from Rs 100 to Rs 2000/-

Opinion of farmers regarding storage of Agriculture Commodities:

- Did not get expected prices
- Immediate sale of produces
- Burden of loan
- No commodity remains for storage
- Economic condition
- No space for storage, No warehouses I the area, unknown about storage methods, problem from rats
- Farmers did not have knowledge about storage and loan facilities on storageof produces for getting the right prices

The rent for storage of Wheat, Jowar, MaccaBajra and Rice are Rs.3.50 per kg per monthand for black gram, Horse Gramthe rent is Rs 5/- per kg permonth. The rent for soybean is Rs 4 Perkg per month.

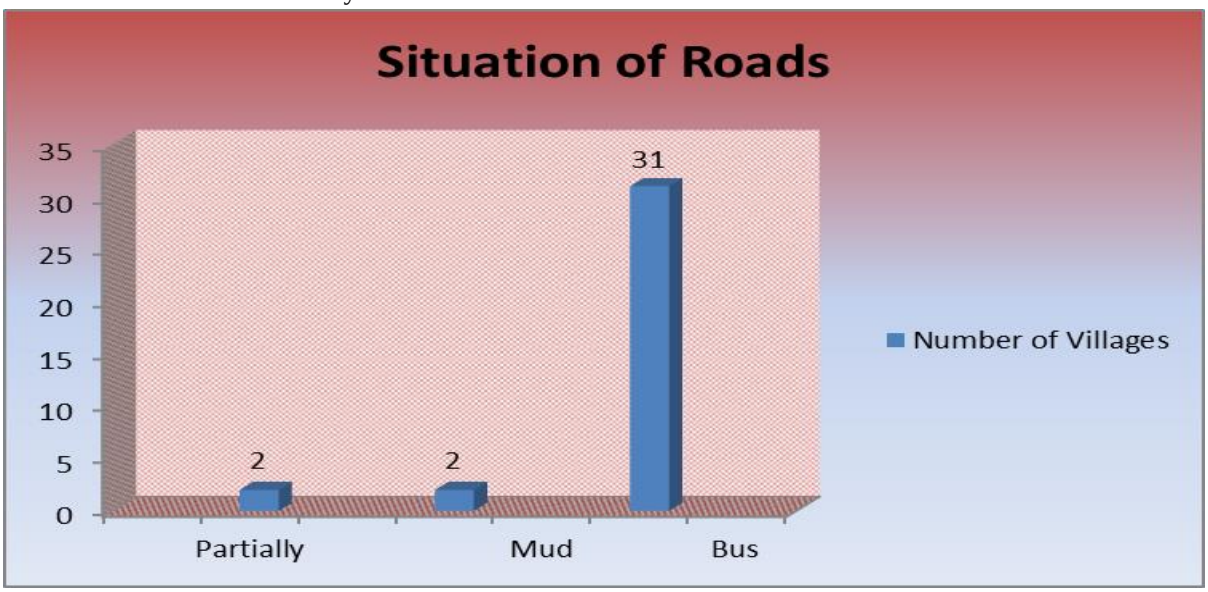
As per sinner Market committee ‘s report for 2011-12 a go down is built at sinner in 1960 of 300 MT capacity(40*70)and in 1987 a godown is built by receiving a grant of Rs2,70,717/- having the capacity of 400 MT (40*100).Total storage capacity of 700 MT which is insufficient to sinnar region

Transportation of Agriculture Produce:

The transportation facility in the Sinnar region of Maharashtra in India information regarding the situation of road is collected as follows

Type of Road	Number of Villages	Total Number of Villages Surveyed	%
Partially	02	35	5.71
Mud	02	35	5.71
Bus	31	35	88.57

Table No 2: Source-Field Survey 2018-19

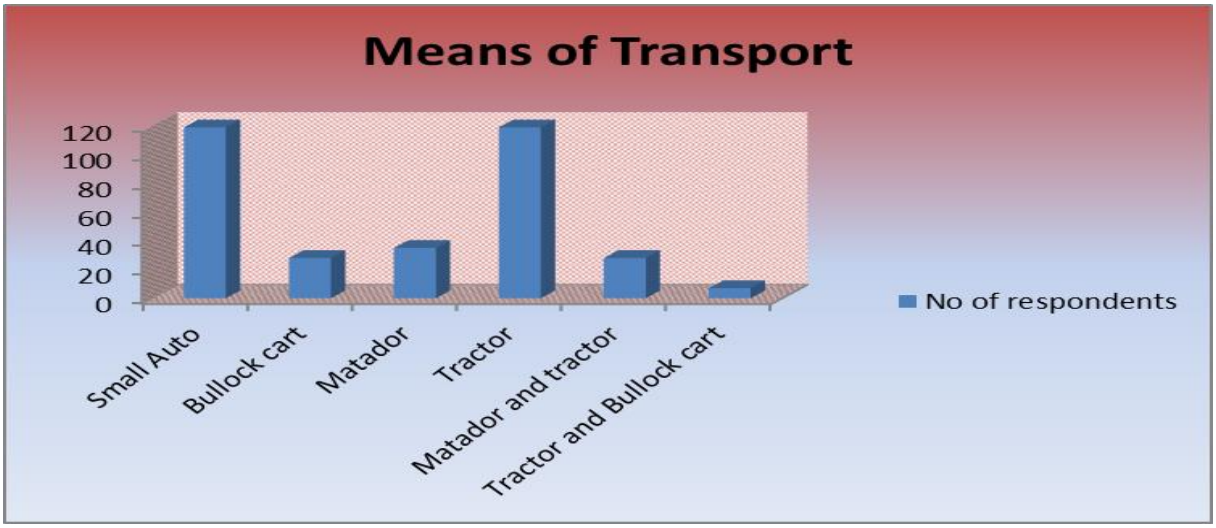


The above data shows that most of the villages (88.57%)in the region are connected with bus route and this is not a proper means of transportation of agricultural commodities.

Means of Transportation in the region:
Following are the means of transportation in the region:

Means of transport	No of respondents	%
Small Auto	119	34
Bullock cart	28	8
Matador	35	10
Tractor	119	34
Matador and tractor	28	8
Tractor and Bullock cart	7	2
Total	350	100

Table No 3 : Source- Field Survey 2018-19



Graph No 3: Vehicles used for transportation in Sinnar Region

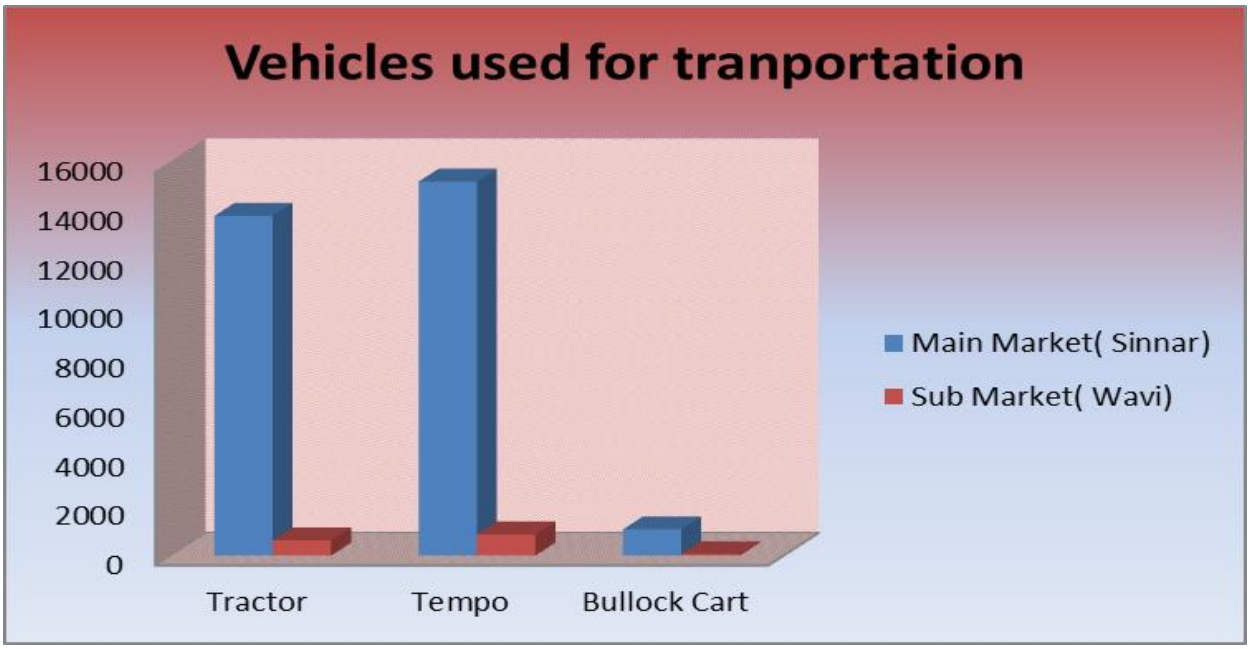
In the era of technological revolution still 8% farmers are still using bullock carts, whereas majority i.e 34% of farmers are using small auto and tractors for transportation of farm produce which may damage the quality of produce. Truck is used by rich farmers whose production is on large scale. Farmers pay Rs 335 to 500 per quintal for transportation.

Following are problems of transportation

- Vehicles are not available on time
- Heavy charges of vehicle owners in peak periods.
- Agriculture produces are damaged during transits
- Hamals do not take proper care while uploading the produces.
- As per the report of Sinnar Market committee in the year 2018-19 following vehicles are used for commodities transportation by the market committee.

Market	Tractor	Tempo	Bullock Cart	Total
Main Market (Sinnar)	13785	15178	1064	30027
Sub Market (Wavi)	615	853	59	1527
Total	14400	16031	1123	31554

Table No: Vehicles used for transportation in sinnar region (Field Survey 2018-19)



Graph No 3

Above chart shows that 51% transport takes place by way of tempo whereas 46% transport takes place with the help of tractors and 3% transport takes place by means of bullock carts. Due to hiking prices of transport most of the farmers are facing problem while selling their produce.

Grading of Agriculture Commodity in Rural India:

The Agriculture produce (Grading and Marking Act 1937 empowers the central government to fix quality standards known as AGMARK standards and to prescribe terms and conditions for using the seal of AGMARK. Grade standards have been notified for 159 agricultural and allied commodities. Grading as AGMARK practice is not done in Sinnar region and grading is done by separating agricultural produces depending upon quality cleaning the produces and it gives food security.

Grading is not done by 13.14 % farmers in the region as it is totally depend upon the agent and trader.67% respondents have not got the reasonable price as their commodities were cleaned on the following reasons:

- Agent say different reasons
- No adequate rate for good quality produces
- Deceived by Market functionaries.

As per the Annual report of Sinnar Market committee in the year 2018-19, 72710 farmers sold their agriculture produces of 4,35,336 quintals haves cost of Rs.45,79,183/-and market committee receive fees of Rs.40,09,665/- grading was done on 25.45% (22.68%on onion) on market arrivals. It shows that grading is done only on onion commodity.

Grading was done on 10.990(48.98%) on macca and 1028(2.36%) on Green Gram which totally came from co-operative society. It shows that only co-operative societies done grading.

The cold storage act is applicable in the country. Cold storage facility is not available in proper quantity in Sinnar region and it affects thefoods which require cold storage.

Position of Packaging In Agriculture Commodity at Rural part of India:

Gunny bags are used for packing the agriculture commodity. Only 0.05% farmers use chemical powders during packaging for storage. It provide food security in rural area to prevent damages and losses.

Facilities available in market committee:

26 farmers i.e. 76% are not satisfied with the facilities provided by the market committee. The reason are as follows

- Water is not provided
- Exploitation of farmers
- Losses of 2-3 kg per quintal
- Farm produces to be collected from farm
- Administration is not good.
- No water for animals

- Fear of stealing and damages to the produces
- Misbehaviour by market functionaries.

CONCLUSION

By using an agility means of transportation Motor, Small Auto, Tractor and trucks are used for transportation of agriculture produces in rural part got security to the food as quickly carriage accrued and food got security. Grading practice is not adopted in the rural part. It is done by segregation of produces depending upon quality, cleaning the produces at local level. It results low grade or defeated food mixed and the quality or life of food decreases. By using the internet one can get knowledge about recent techniques of grading as well as food security. Gunny bags are used for packaging the agricultural commodityit results in insecurity. Only 0.05 farmers use chemical powder during packaging for storage. Hence for food security transportation, storage, grading practices and packaging methods are used for food security in rural India.

REFERENCE

1 South Asian Journal of Management Vol 3Issue 2 April –June 2016
2.ftp://ftp.fao.org/docrep/fao/012/i1023e00.pdf
3.Indian Journal of Marketing Vol XXXVI No. 10 October 2016Page No20e Business organisational and Technical Foundations, Micheal P Papazoglou and Piter Ribbers, Wiley India, NewDelhi 2006, PAGE NO 71