



IMPROVEMENT IN PUNJAB STORAGE MANAGEMENT FOR REDUCTION OF WASTAGES BY IMPROVEMENT IN COVERED AND PLINTH STORAGE

Gagandeep Singh

Assistant Professor in Commerce, Guru Nanak College, Moga.

Abstract

The study examines that Storage is important aspect in Distribution Channel of food grains and overall growth of economy. If it is lacking or led with defects may lead to lot of loss in storage. Present paper is focusing on defects in Open Storage System or popularly known as CAP bearing lot of deficiencies which are source of loss in quality and quantity during storage specially in Punjab.

Key Words:-CAP, FCI, CWC, SWC, SGA, LMT.

“**Warehouse** is a large building where raw materials or manufactured goods are stored until they are exported to their countries or distributed to shops to be sold.”

“**Warehousing** is the act or process of storing large quantities of goods so that they can be sold or used at a later date.”

-- “ COLLINS COBUILD ENGLISH DICTIONARY “

Warehousing is one of the most important ancillary activities in the field of agricultural activity as a whole. In a developing economy a warehousing system which can provide safe storage of agricultural surplus on scientific basis becomes instrumental in facilitating institutional credit at cheap rates of interest on the security of the produce can be immense help to the Agriculture sector

-----TRAINING MANUAL ON SCIENTIFIC METHODS OF STORAGE OF FOOD GRAINS

Warehousing in India is done through three tier system. Central Warehousing corporations, State Warehousing corporations and village or community cooperatives.

- Central Warehousing includes FCI, CWC
- State Warehousing includes SWC, State civil Supplies
- Cooperative and Private sector at village level.

Current Status of Warehousing Capacity in India

The warehousing capacity for storage of food grains available in India, in public, cooperative and private sector is about 108.75 million MTs. The warehousing capacity available in India, with various agencies/sectors is as follows:

| Sino. | Name of the Organization /Sector | Storage Capacity in Million MTs |
|--------------|---------------------------------------|---------------------------------|
| 1. | Food Corporation of India (FCI) | 32.05 |
| 2. | Central Warehousing Corporation (CWC) | 10.07 |
| 3. | State Warehousing Corporations (SWCs) | 21.29 |
| 4. | State Civil Supplies | 11.30 |
| 5. | Cooperative Sector | 15.07 |
| 6. | Private Sector | 18.97 |
| Total | | 108.75 |

Food Corporation of India (FCI) was incorporated under the Food Corporation Act,1964 under the control of Ministry of Consumer Affairs, Department of Food and Public Distribution Main functions of FCI are Purchasing, Storage, Transportation, Distribution and Sale of food grains for maintaining National Food Security, Price support operation, Caring weaker section.FCI is the main Government agency entrusted with management of food grains in the Central Pool held by SGAs and DCP states.

FCI, however, had to hire space from various agencies such as CWC, SWC, SGA and Private parties as its own storage capacity was insufficient to accommodate the Central Pool stock of food grains.

Table ,Total storage capacity available with FCI ,(Figures in LMT)

| As on 31 march | Owned | Hired | Total |
|----------------|--------|--------|--------|
| 2007 | 152.33 | 99.74 | 252.07 |
| 2008 | 151.54 | 87.40 | 238.94 |
| 2009 | 151.40 | 101.39 | 252.79 |



| | | | |
|------|--------|--------|--------|
| 2010 | 154.77 | 133.59 | 288.36 |
| 2011 | 156.07 | 160.03 | 316.10 |
| 2012 | 156.40 | 179.64 | 336.04 |

The stock of food grains is normally stored by FCI owned stores in

1. covered godowns,
2. silos and
3. Uncovered godowns called Covered and Plinth (CAP).

Procedure followed in case of CAP storage:

1. *Selection of Places*: avoidance of place with heavy rainfall, wind, cyclone and flood prone areas.
2. *Selection of Site*: must be at high place than that of adjoining ground.
3. *Preparation of site*: by raised concrete platform, removing weeds etc.
4. *Drawing of stacks plans* : advance 30' X 20' stacks will be drawn & numbered
5. *Provision of dunnage* : wooden/metallic/concrete crates, sleepers are used.
6. *Method of stacking* : criss cross method is adopted. First layer to 22nd layer about 3000 bags of 50 kgs can be placed
7. *Covering of stack* : it is covered with black low density polythene having dimensions of 32'X 21'X 17' lased by nylon ropes so that it will not be effected with wind. Generally Its durability is not more than 6 months.

Scope of Study

CAP storage is undoubtly trend in whole India, but majority of storage is concentrated in Punjab, Haryana, Andhra Pradesh, Uttar Pradesh and Chhattisgarh having Storage Capacity 214.33 LMT out of Total capacity of FCI 336.04 LMT (i.e.,64%). Thus present study is focused towards Study of CAP in region of Punjab.



CAP stands for cover and plinth which are mainly temporary storage method of storing food grains in bags in the open, it is an emergent, improvised, innovative and entirely indigenous method adopted for temporary storage as a stop gap management.

According to the storage guidelines of FCI, the food grains should be stored in covered godowns and silos. Normally, storage capacity in the form of Covered and Plinth (CAP) should be resorted to for storing wheat during peak procurement seasons. Subsequent storage should be in the covered godowns as storage in Covered and Plinth for long duration exposes the food grains to the risk of deterioration in quality. In view of the risks involved, this type of storage should be taken recourse to as a last resort.

Audit, however, observed that even after the procurement seasons, substantial amount of food grains was kept in the CAP due to insufficient covered storage capacity. The quantum of food grains kept in Covered and Plinth by FCI and SGAs in the country at the end of March 2010 and March 2011 was 66.43 LMT and 50.87 LMT respectively. This rose to 87.86 LMT at the end of March 2012.

In Punjab region, FCI and five SGAs¹⁴ procured wheat ranging between 67.80 LMT and 109.64 LMT during the period 2006-07 to 2011-12.

PUNSUP Sangrur stored 81 per cent to 92 per cent of wheat stocks available at the end of the procurement seasons in open/Covered and Plinth storage during the period 2006-07 to 2011-12. The quantum ranged between 1.20 LMT and 2.46 LMT.

PUNSUP Ferozepur stored 92 per cent to 99 per cent of wheat stock available at the end of the procurement seasons in open/Covered and Plinth storage. The quantum ranged between 0.43 LMT and 2.56 LMT.

PUNSUP Ludhiana likewise stored 0.51 LMT to 1.42 LMT of wheat which was 61 per cent to 89 per cent of wheat stock



available at the end of the procurement seasons in open/Covered and Plinth storage. In PUNSUP Amritsar, 82 per cent to 96 per cent of wheat stock available at the end of the procurement seasons was stored in open/Covered and Plinth storage. Hence, substantial food grains were stored in the Covered and Plinth storage.

The total wheat stock with SGAs in Punjab was 61.55 LMT, of which 15.68 LMT was in covered godowns and 45.87 LMT was under Covered and Plinth as on 31 March 2012. Hence, most of wheat stock was held in Covered and Plinth system. *Pungrain, Punjab State Warehousing Corporation (PSWC), Punjab Civil Supplies Corporation (PUNSUP), Punjab Agro and Markfed.*



Poor condition of storage facilities

Audit observed that poor conditions of storage facilities for the food grains stock of the Central Pool maintained by SGAs in Punjab and Haryana resulted in damage of food grains as indicated below:

Punjab Region

PUNSUP failed to maintain the food grains stock in proper health due to which stock of 17,423 MT of wheat relating to the years 2008-09 to 2010-11 was damaged. The damaged food stocks worth INR` 20.39 crore were not disposed of till March 2012. The Company obtained approval from FCI for disposal of 8,930 MT in October 2011. Failure to ensure early disposal of wheat stock led to loss due to blockage of storage space.



PSWC failed to take remedial measures to maintain the stock in proper health which resulted in damage of 666 MT wheat pertaining to crop years 2008-09 to 2010-11 valuing INR .77.80 lakh. Out of the above stock, wheat of 138.53 MT at Moonak was damaged due to flood.

Problems related to CAP Storage Method

1. Storage of food grains in open space

Normally storage in open in the form of CAP is supposed to be resorted to during peak procurement seasons. The storage in the CAP should not be more than a year with at least one turn-over of the stock every 6 months to retain the quality of the food grains. Further, for proper aeration, the cover is to be removed at least 2 to 3 times in a week.

Unfortunately, lot of stock is lying in the open where even the plinths are not available. During procurement season, for want of adequate CAP storage facilities, stocks are simply dumped/stacked on open spaces wherever feasible and much of these stock gets damaged because of seepage of water from the ground in the absence of proper plinth or height of ground or due to floods and rains.



2. Poor Condition of Storage Facilities

Utter disregard to safe and scientific storage practices have resulted in excessive damages to food grains in the central pool maintained by SGAs in Punjab and Haryana. In addition, failure to ensure early disposal of damaged stock led to blockage of storage space. The loss due to damaged stock in the Punjab and Haryana region amounted to 21.168 Cr INR and 13.09 Cr INR respectively.

3. Storage of old Crops Leading to Damage of Food Grains

As per the extant policy of issue of food grains of FCI, the principle of First-In-First-Out (FIFO) should be strictly followed with respect to the crop year as well as within crop year during which the stocks are accepted. The CAG report of 2013 brought out the non-adherence of this principle as a total of 125.99 LMT of food grains (including paddy) pertaining to crop years 2008-09 to 2011-11 was lying in the central pool as on 31 March 2012.

4. Efficient capacity utilization

For optimum capacity utilization of the existing capacity, timely and proper planning of movement and distribution of food grains across pan India is a pre-requisite. Despite storage constraints in FCI, the utilization of existing storage capacity in various states/UTs was less than 75% in majority of the months during the period 2006-07 to 2011-12. However, the capacity utilization may not be optimal due to reasons of sudden unanticipated increase in offtake for a particular region or due to unanticipated decrease in procurement.

5. Non-utilization of available Storage Capacity for Surplus Stock of Wheat

With proper planning of timely move of stock from the major procuring states to the consuming states, it is possible to make storage space available for the ensuing procurements and save on the carry over charges that FCI is required to pay to the SGAs beyond the prescribed time period. However, based on the CAG report of 2013, the aggregate wheat stock available with the SGAs of Punjab and Haryana at the end of each procurement season during 2006-07 to 2011-12 was 609.83 LMT, against which the aggregate vacant storage space available in the major wheat consuming states was 164.82 LMT.

6. Black covers Increase Temperature Upto 10 To 12 Degree .

It is noticeable that black colour of covers of plastic sheets increase temperature which can be reduced by using White Cover leading to decrease of temperature upto 6 to 8 degree In a gross misappropriation of silo storage facility available with FCI, out of a total of 4.62 LMT available with it, 3.52 LMT was lying unused for a period ranging from eight to 30 years.

7. Forced Storage on Unstorageworthy Kachha Grounds/Fields

Due to heavy receipts of food grains stocks during procurement seasons and non availability of storageworthy space the SGAs most of the time store food grains bags on unstorageworthy kachha grounds or even in fields which have no proper drainage system. Due to rains the crates used as dunnage beneath the stacks sinks into the ground . The bags come into direct contact with the ground and get damaged due to seepage.

Conclusions and Policy Implication

Covered and plinth (CAP) storage should be gradually phased out besides ensuring timely liquidation of food grains so that no grain stocks remain in CAP for more than 3 months. Silo bag technology and conventional storages where ever possible should replace CAP. No doubt that Government has taken steps to involve Private parties for development of Covered godowns but still covered space available is quite insufficient to accommodate total produce of food grains.

References

1. N. Rangasamy (2013) Performance of Agri- Warehousing in Maharashtra and Market Potential for Negotiable Warehouse Receipts Finance in India Indian Journal of Marketing, 12(1),(5-11)
2. Training Manual on Scientific methods of Storage of Food Grains, Ministry of Food GOI
3. Quality control Manual of FCI, 1993. FCI HQ New Delhi
4. Collins cobuild Dictionary.
5. M.Esther Magdalene Sharon,C.V. Kavitha Abirami and K. Alagusundaram(2014) Grain Storage Management in India ,Journal of Post Harvest Technology,1(12-24).
6. Dilip Jain and RT Patil,Modeling of Thermal Environment in CAP Storage of Wheat as effect of colour of Plastic Sheet.46th Annual Convention of Indian Society of Agricultural Engineers and International Symposium of Grain storage,2012.