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Profile of Different Commodities Stored and Composition of Users Group in the Selected Cold Storage Units in Hyderabad *

The growth of cold storage industry in India is significant keeping pace with its demand to match the production. Nearly 92 per cent of the cold storage capacity is being utilized for storage of potatoes alone, while for the fruits and vegetables, the share in the total cold storage is just one per cent. Therefore, cold storage industries are popularly known as agriculture service oriented industry, in general and horticultural service oriented industry in particular. Thus, cold storage serves as a vital link between the production and consumption of fruits and vegetables. The importance of cold storage of fruits and vegetables is to achieve the twin objectives of price stabilization and fair prices to producers and consumers which have been recognized since long (Lingamurthy, *et al.*1981).

Hyderabad district was purposively selected for the study, which contributes proportional share to the total installation capacity and working nature. Four cold storage units were selected from Hyderabad district to study the profile of different commodities stored and composition of users group i.e., both farmers and traders. The data pertaining to the study has been taken up from farmers, traders and cold storage operators. To analyse the profile of different commodities stored and composition of users group in the selected cold storage units, simple tabular analysis was followed. The data collected was presented in tabular form to facilitate easy comparison and it was summarized with the help of statistical tools like averages and percentages to obtain meaningful results. The results of tabular analysis of different stored commodities and users group presented in Table 1 reveals that apple, orange, grapes, plum fruits, potato, chilli, jaggery, tamarind, turmeric, dhaniya, dry fruits, butter, ice cream, processed cheese, meat products and milk and milk products were the major essential commodities that were stored in the cold storage units with varied temperatures, relative humidities and duration of storage operated almost throughout the year in order to meet supply and demand. The major commodities were stored in the selected cold storage units to its full capacity during the months of February, March, April and May and remaining months the unit was not fully utilized, because their supply into the market was low i.e., lean period and fruits like apple, orange, grapes and plums for a period of 1 to 3 months. The other commodities' shown in the table were stored for a period of more than three months, where these commodities consumption requirement was spread over longer periods.

It was also found from the selected cold storage units that the capacity utilization would be almost 70 to 80 per cent from the months of January to October i.e., full season and remaining other months showed comparatively less usage. The temperatures and humidity maintained for different commodities in the selected cold storage units in Hyderabad district indicated that there were variations in maintenance of temperature and humidity for the same commodity in all the selected cold storage units.. There appears to be no uniformity in the temperature and

Table1. Profile of different commodities stored in the selected cold storage units of Hyderabad district (2004-05)

Sl. No.	Name of the commodity	Storage duration (months)	Temperature (^{0}C)	Recommended Temperature (^{0}C)	RH (%)	Recommended RH (^{0}C)
1.	Apple	1	2 – 5	-	90	-
2.	Orange	3	6	-	90	-
3.	Grapes	1-2	2	-	90	-
4.	Plum fruits (Aalbukar, Naspathi, Cherry, Pears etc.)	0- 1	4	-	90	-
5.	Potato	6 – 7	6 – 8	3—10	85 – 90	90
6.	Chilli	9	4 – 6	0-10	65 – 75	90
7.	Jaggery	3 – 9)	5 – 6	-	65 – 75	-
8.	Tamarind	9 – 12	4 – 7	4-6	60 – 70	90-95
9.	Turmeric	9	3 – 5	-	65 – 75	-
10.	Dhaniya (coriander)	9	3	-	90	-
11.	Dry fruits (Kishmish, Acrots, Anjeer, Jeera, Kurbani, Lavanga, Kaaju and dry grapes)	6 – 9	3 – 4	0-9	50 – 60	85-90
12.	Butter	9 – 12	-5 – -10	4	90 – 100	65-70
13.	Ice cream	3	-10	-	100	-
14.	Processed cheese	3	-5	4	100	65-70
15.	Milk and other milk products	3 – 4	-5	-	90 – 100	-
16.	Meat products	3 - 4	-5 - -15	-	100	-

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humidity maintained for different commodities and they differ from the recommended temperature and humidity (Agarwal, 1976). It was observed during the study that cold storage units do not have any mechanism for measuring the relative humidity. Our enquiries however revealed that such variations from the recommended temperature did not seem to contribute much for the spoilage of the commodities stored. Incidentally, percentage of spoilage observed was found to be within the normal limits. However, it is recommended that storage owners should have complete knowledge on storage conditions, storage techniques, storage structures and maintenance to run them on scientific way and also noteworthy to indicate that to measure the humidity and temperature in the storage units regularly. It could be observed from the Table 2 a & 2 b, that the composition of users group which included both farmers and traders and it was also observed during investigation that the farmers in selected cold storage units had stored major part of the produce and the percentage of farmers was less when compared to the traders. However, it was also observed that farmers' share was higher in all the selected cold storage units. When the personal interview was conducted with the farmers, it was noticed that medium and small farmers were not utilizing the storage facilities mainly because of high charges (Table 3), poor financial background and lack of awareness among the farmers regarding the benefits of storage. The traders were also the customers in all the selected cold storage units. Chilli, jaggery, tamarind, turmeric and potato were the main commodities in the cold storage units. During last few years, traders mainly stored apples, oranges, grapes and dry fruits etc., but this trend has been continuing at present also. As we have already discussed, small and medium farmers share in the total was less. However, these farmers can be encouraged to store their produce by advancing loans either on pledge of produce in the cold storage or on pledge of cold storage receipts in organized financial institutions.

Table 2(a). Composition of users group in the selected cold storage units in Hyderabad district (2004-05)

Sl. No.	Selected units											
	Cold store 1			Cold store 2			Cold store 3			Cold store 4		
Users group	No. of users	Qty stored (MT)	Storage period (months)	No. of users	Qty stored (MT)	Storage period (months)	No. of users	Qty stored (MT)	Storage period (months)	No. of users	Qty stored (MT)	Storage period (months)
1. Farmers	30	500	6 - 9	50	2000	6 - 9	60	2500	6 - 9	30	6200	6 - 9
2. Traders	90	1000	1 - 3	100	1500	1 - 3	80	2000	1 - 3	70	2900	1 – 3
Total	120	1500	6 – 9 1 - 3	150	3500	6 – 9 1 - 3	140	4500	6 – 9 1 - 3	100	9100	6 – 9 1 - 3

Note :Cold store 1= Pavitra Agro-fresh cold storage Pvt. Ltd. (1500MT) Cold store 2= Verdant cold storage Pvt. Ltd. (3500MT)

Cold store 3 = Foster cold storage Pvt. Ltd. (5000MT) Cold store 4= Samyukta cold storage Pvt. Ltd. (9230MT)

Table 2(b). Composition of users group in the selected cold storage units in Hyderabad district (2004-05)

Sl. No.	Users group	Selected units															
		Cold store 1				Cold store2				Cold store 3				Cold store 4			
		No. of users	Item stored	Qty stored (MT)	Storage period (months)	No. of users	Item stored	Qty stored (MT)	Storage period (months)	No. of users	Item stored	Qty stored (MT)	Storage period (months)	No. of users	Item stored	Qty stored (MT)	Storage period (months)
1.	Farmers	30	Jaggery	150	3 - 9	50	Chilli	750	9	60	Tamarind	800	12	30	Tamarind	1200	9 - 12
			Potato	50	6 - 7		Jaggery	600	3 - 9		Chilli	600	6 - 9		Chilli	750	9
			Chilli	200	9		Tamarind	650	9 - 12		Potato	400	4 - 6		Jaggery	1450	6 - 8
			Tamarind	100	9 - 12						Jaggery	700	6 - 9		Potato	800	6 - 7
															Turmeric	2000	9
2.	Traders	90	Turmeric	150	9	100	Potato	100	6 - 7	80	Jaggery	620	9	70	Potato	600	4 - 7
			Potato	40	6 - 7		Jaggery	400	6 - 9		Turmeric	260	6 - 9		Chilli	1400	6 - 9
			Tamarind	100	9 - 12		Apple	250	1 - 2		Apple	350	1 - 2		Oranges	175	3
			Apple	150	1		Orange	175	2 - 3		Plums	150	1 - 2		Plums	175	1 - 2
			Orange	175	3		Grapes	125	1 - 2		Orange	150	1 - 3		Apples	250	1 - 2
			Grapes	150	1 - 1.5		Plums	150	1 - 2		Grapes	200	1 - 2		Grapes	150	1
			Plums	75	1		Dry fruits	200	9		Dry fruits	150	6 - 9		Dry fruits	100	6 - 9
			Dry fruits	100	6 - 9		Others	100	9		Dhaniya	20	6 - 9		Others	50	9
			Dhaniya	10	9						Others	100	6 - 9				
			Others	50	6 - 9												

Note: Cold store 1= Pavitra Agro-fresh cold storage Pvt. Ltd. (1500MT) Cold store 2 = Verdant cold storage Pvt. Ltd. (3500MT)

Cold store 3 = Foster cold storage Pvt. Ltd. (5000MT) Cold store 4 = Samyukta cold storage Pvt. Ltd. (9230MT)

Table 3. Cold storage charges for different commodities

Commodity stored	Charges (Rs/Qtl/Month)
Potato	10.00
Chilli	12.00
Jaggery	9.00
Tamarind	8.75
Fruits (per box)	
Apple, Orange, Grapes, Plum	2.50
fruits, Dry fruits	
Milk and Milk Products	-
(Butter, Ice cream, processed cheese)	

Note: 1 box = 20 kg

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