Def Sci J, Vol 34, No. 2 April 1984, pp 149-154

Procurement, Storage and Distribution of Foodstuff in the Armed Forces

LT GEN Y. D. SAHASRABUDDHE
Director, Supplies & Transport, New Delhi.

Received 11 April 1984

Abstract. The problem of procuring, storing and distributing foodstuffs to the Armed Forces in India is a stupendous task because of the wide variations in terrains and climatic conditions and the varied food habits of the people. It is all the more exacting as the processed food industry is still in its infancy. Because of the stringent quality control requirements of the Armed Forces, the food processing industry in India is not willing to undertake supplies to the Defence services. The problems and how they are handled are briefly reviewed.

1. Introduction

The job of ensuring that the Armed Forces remain in perfect physical condition at all times and are provided with a balanced diet, wherever they are located, can be a very exacting one. Feeding such a large force deployed throughout the country over varied terrain and climatic conditions throws up problems which have little commonality between them. India, in its vast size, has all types of terrain and climatic conditions ranging from arctic, temperate, tropical and desert. Procurement, movement, storage and distribution in such conditions presents a varied panorama requiring all ingenuity to ensure proper feeding of the troops.

The communication system in the country, developed as it is, presents varied problems. One can perceive this by imagining goods being moved on broad gauge fast railway system to its transhipment to a relatively slower metre gauge system and at times to even narrow gauge system. From the railways to lorry system and then to lighter vehicles and further from jeeps to ponies and ultimately by a porter to the actual consumer. In the present distribution system, all means of transportation are at times involved in totality.

No two storage conditions involving the climatic and environmental conditions in India can be the same. A product may have to withstand the blistering heat of the

Rajasthan desert to the sub-zero climatic conditions in the Himalayas to 90% humidity conditions in the East.

On an average, the Armed Forces consume annually approximately 4 lakh tonnes of dry supplies, which consists of grains, pulses and animal food, thirteen thousand tonnes of processed and other foodstuff and about two lakh tonnes of fresh items including fruits, vegetables and meat. This accounts for a total of 175 crores of the Defence Budget. It would thus be seen that feeding the Indian Armed Forces is a stupendous task requiring very close appreciation of the problem involved in procurement, transportation and storage to ensure that the items reach the troops in palatable conditions and that they are provided with diet, commensurate with their physical fitness in all climatic conditions.

2. **Problems in Procurement**

2.1. *Production Pattern in the Country*

Some years back, we were deficient of foodstuff and a large portion of it used to be imported by the country. However, due to Green Revolution, the country has become near-self-sufficient as far as food grains are concerned. Because of various factors, while certain States became surplus of foodstuff, others are still deficient. This perforce confines procurement from surplus States only and is mostly carried out in the States of Punjab, Haryana, Rajasthan, UP and MP. This involves transportation from these procurement areas to consumption centres all over the country. If production was uniformly surplus in other States too and items could be procured in areas of consumption, the problem of long haulage would have been avoided. Armed Forces procure their food grains from the Food Corporation of India which has a net-work of depots throughout the country. Though the FCI is required to give the grains to us according to the schedule provided by us, it is seldom able to adhere to the schedule due to its own constraints.

2.2. *Standardisation*

ASC specifications existed and still exist for all the food items to be consumed by the Armed Forces. These are much older than the Indian Standards specifications. However, with the formulation of Indian Standards specifications for a large number of items which are required to be consumed by the Service. Armed Forces have switched over to these specifications wherever they exist to fall in line with the national policy. As these specifications are not mandatory to be followed by the producers in the country, these are generally not adopted by the private sector. Obtaining goods, therefore, according to these specifications becomes problematic and barring a few high standard firms which have strict quality conrrol systems in their factories, most of the products procured hardly come up to the specifications.

Armed Forces have special requirement of sturdy and robust packing to withstand transportation hazards. Besides this, there is the need for longer shelf life required for storage. On both the issues ISI specifications are silent and this requires amalgamation of product specification with packing and warranty.

2.3. *Monsoons*

Most of our economy and production of food grains is based on the monsoon. A good monsoon provides ample surplus and the requirements are met easily, while a lean monsoon creates all related problems and imports have to be resorted to. Untimely rains can also cause considerable damage to food grains.

2.4. *Flush Season*

Because of the infancy of organised storage system in India, farm products are marketed in very limited periods, known as flush season. If the product is not procured during the flush season vigorously, it will not be possible to procure these at economical rates later. The high rate of inflow of such products during very limited period and their procurement within the time frame causes its own problems.

2.5. *Limited Choice*

As procurement of rice, wheat, animal grain, pulses and dals are to be channelised through a single agency, i.e. Food Corporation of India, there is very little option and choice left with the Armed Forces and perforce these are accepted in whatever conditions FCI offers them. In case the FCI is unable to meet the commitments, the Armed Forces have no other source to bank on, and at times are put to severe constraints. This results in failure to meet the troops' requirements through the central sources resulting in procurement of these items by local military commanders at considerable extra expenditure to the exchequer, waste of time and not according to the specifications.

2.6. *Development of Food Industry in India*

Because of the food habits in our country, the processed food industry in India is still in its infancy. However, there is a marked development in the last few years and large number of new industries have come up. India being a seller's market, the processed food industry is not willing to undertake supplies to the Armed Forces because of stringent quality control requirements. Enforcement of quality control standards for foodstuff is of paramount importance as it would affect the health of troops. Most of the suppliers are unwilling to produce products to meet such stringent specification requirements as their products are readily sold in the market without any such test. They naturally do not wish to get involved in supplies to the Armed Forces. This limits the sources of supply to us.

2.7. *Fresh Supplies*

By and large, except for certain sectors in the country, items of fresh supplies are generally available locally. However, in certain items like fruits, eggs, onion and potatoes, long transportation to consumption areas is involved. In this connection, the Eastern Sector is particularly vulnerable. In case of meat, the major production area is Rajasthan and animals are transported over long distances to ensure supply to the troops. Even in the case of poultry, which does not require grazing grounds, production development has not been uniform throughout the country and is again limited to very small areas in the North and Central India. It is revealing to note that eggs are transported all the way from Punjab and Delhi to the North Eastern parts of the country.

Meat constitutes one of the major items of fresh supply. Because of change in eating habits of the people and higher living standards, consumption of meat in the country has generally gone up as is evident from the galloping increase in the price rates of meat throughout the country. This has resulted in supply of lower standard meat to the Armed Forces because of uneconomical rates being offered by us. Meat costs in the Army have been escalating over the years and will keep escalating till the production picks up. Added to this is the scarcity caused due to exports.

3. **Problems of Transportation**

3.1. *The Railways*

Though the railways have a total meterage of 61230 Kms as on 31 March 82 in the country, it is not of one standard gauge but has three gauges. Our consumption centres are served by all the three above. The three systems of gauge in the country involve transhipment of goods from one system to another before the item reaches the consumer. Though efforts are made to move stores in such a way that the transhipments are avoided, because of a large portion of troops being deployed in sectors served by meter gauge only, it becomes unavoidable to undergo this time-consuming and wasteful effort. Transhipment has its own problem leading to losses, pilferage and item becoming unfit for human consumption due to vagaries of weather and unhygienic conditions at the time of transhipment.

Movement over the railways especially in smalls is extremely uncertain. Goods do not reach in time. While the movement by the special rake system is fast and assured, it cannot be undertaken because firstly our depots are not designed to handle rakes and also because the requirement of large number of depots do not constitute a rake-load.

Pilferages on the railways have been steadily increasing year by year and there is no abating in this respect. The total transit loss due to pilferages is considerable.

While the movements on the broad gauge system is fast, movement on the meter gauge is not only slow but circuitous. This leads to inordinate delays resulting in the items sometimes becoming unpalatable by the time it reaches the troops. The construction of goods wagons leaves much to be desired and there is a need to evolve a proper rain-proof wagon to avoid losses. Though containerisation has made a slow beginning with the railways, it can be used profitably for movement of smalls and processed foodstuffs with advantage. There is also need to develop refrigerated wagons for movement of perishables. Salt is very corrosive and eats away the metal easily. The recent decision of the Railway Board to move salt in open wagons is not pragmatic and will lead to considerable amount of loss due to pilferage and contamintaions.

Movement of foodstuff over the railways must be accorded due priority because of its nature. Presently, the FCI is provided with this priority, while the Armed Forces are not. Movement of food grains, irrespective of who is moving it, must have the same priority throughout.

3.2. *Roadways*

Roads in our country have not been uniformly developed and except for certain trunk routes are still in bad state not only as far as repairs are concerned but even for routine maintenance. While movement of goods by road has considerably picked up in the civil sector, the same has not been ultilised by the Armed Forces, because of economy. Our roads have various bottle-necks like bridges and culverts which have not been designed to undertake extra heavy trucking as practised in the West. Conveyance of goods by road can be considerably economical if our roads are made fit to carry heavy loads. Road transportation is definitely fast, assured, less prone to losses and pilferages and is labour intensive. If properly utilised, it can overcome most of our transportation problems.

In large parts of our borders, where troops are deployed, road communications have not developed to the extent where they are accessible to them. This involves employment of mules, ponies, yaks and even porters for carrying of stores. Besides imposing considerable restrictions on build up of stocks and maintenance, the system requires establishment of transfer points at each change in mode of carriage, involving re-packing leading to delays, breakages and losses. Packaging of stores has to fit the weakest link in the chain of carriage.

3.3. *Air Transport*

Large number of troops are deployed on our borders where the food supply can be made only by air either by air landing, para-dropping or free dropping. The number of flying days in our NE region are limited. Besides we do not have unlimited air transportation capability. This constraint not only limits build up of stores but seriously affects the daily maintenance. Para-dropping and free dropping over restricted dropping zones in the mountains leads to considerable losses and is

extremely expensive. It also requires special equipment and costly parachutes in delivering the foodstuffs to the troops.

Certain mountain passes get blocked for as long as six to eight months. This puts a heavy premium on air maintenance and with the lack of air resources, advance stocking of all such troops have to be made for the duration that the roads are closed. Stocking for such prolonged periods makes processed and tinned food unpalatable and monotonous. Shelf life of most of our canned products is limited to six months, and by the time it reaches the troops nearly half of its life is lost. This puts extra limitations on the system. There is an urgent need to improve our canning process so as to increase the shelf life.

3.4. *Storage*

As stated earlier, we have all varieties of climatic and environmental conditions prevailing in the country; from the arctic to the desert. All these climatic zones have their peculiar requirement of storage and the product procured has to withstand all these conditions because it is not possible to produce goods only for particular climate and environment. While in high altitude areas one requires underground, well protected and small storage sheds, one requires a well ventilated, over-ground, well drained shed in the East. Goods once carried into high altitude areas automatically get a longer life because of the prevailing preservative nature of the climate. The same cannot be said for the goods which are stored in tropical and humid conditions. Special requirements of sheds thus become axiomatic in different terrain conditions.

The nature of precautions to be taken to ensure proper life to the foodstuff also varies from climate to climate. The type of dunnage required for storage also undergoes change. Working conditions in the storage sheds being very different, leads to under-utilisation of human resources especially in conditions of arctic and desert conditions. Considerable problem is faced by the Army in storage of hygroscopic materials, like sugar, salt, rice and grains especially in very humid climate. Products become insipid and unpalatable within very short time. Certain climatic conditions provide ideal environment for pest infestation. This would not only make the product unfit for human consumption but will lead to losses. This requires constant vigil and demands a proper stores preservation system.

4. Conclusion

Feeding the Armed Forces is a ticklish problem. It requires careful planning, provisioning, movement, storage and assured distribution system so that troops, wherever they are deployed, are fed properly. The magnitude of this task can only be perceived if one visualises the length and breadth of the country and the deployment of our troops throughout the borders. Our troops are deployed all along our borders ranging from the desert to the Himalayas to the thick tropical forest of the East. Providing rations to them is a stupendous task which the Army Service Corps is meeting without any failures.