

EXCELLENCE OF INNOVATION IN AGRICULTURE FOOD GRAINS

MARKETING MANAGEMENT

SASIKALA. R

Lecturer, Koneripatty, Rasipuram, Namakkal, Tamil Nadu, India

ABSTRACT

The term 'commodity' is commonly used in reference to basic agricultural products that are either in their original form or have undergone only primary processing. Examples include cereals, pulses, wheat maize, coffee beans, sugar, palm oil, eggs, milk, fruits, vegetables, beef, cotton and rubber etc.

KEYWORDS: Agricultural Products, Commodities, Food Grain

INTRODUCTION

Agricultural commodities are generic, undifferentiated products that, since they have no other distinguishing and marketable characteristics, compete with one another on the basis of price. Agricultural commodities include grains, food and fiber as well as livestock and meat, etc. agricultural commodities are "commodities that are, or once were, or are derived from, living organisms, including plant, animal and aquatic life, which are generally fungible, within their respective classes, and are used primarily for human food, shelter, animal feed, or natural fiber."

FOOD GRAIN MARKETING AND MANAGEMENT

Objectives of Food Grain Marketing

The objective of food grains management system covering public procurement, storage and distribution with a view to suggest reforms to make it more efficient and responsive to the food security needs of the poor.

QUALITY CHARACTERISTICS OF GRAINS

Consumers have become accustomed over the years to demanding grain with particular qualities. Where consumers are close to the source of the grain, e.g. in local markets, their own preferences and the laws of supply and demand will control the quality of the grain. However, where grain is traded over large distances, particularly internationally, the consumer will have no direct influence over quality, and regulatory standards must be established and imposed to protect consumer rights. Therefore criteria of grain quality must be established and accepted by all parties in the grain trade. The criteria assigned to grain are the intrinsic varietal qualities and those which are environment- or process induced. The more important quality criteria as they relate to grading of grain are described in the following sections.

Intrinsic Qualities

- **Colour**

Cereal grains are pigmented and range through the colour spectrum from very light tan or almost white, to black. Where extractive milling is required, highly-pigmented varieties may give low yields of white flour.

- **Composition**

Composition, e.g. protein, carbohydrate, lipids and their breakdown products, qualitatively influences product acceptability, by affecting texture and taste. Quality changes evolve slowly in stored grain and more rapidly in milled or processed intermediary products. Some grain components, for example husk, are inedible and quantitatively influence product yield and gross nutrient available to the consumer.

- **Bulk Density**

Each type or variety of grain when in optimum health, fully mature, etc. has a characteristic bulk density. This is defined as the weight per standard volume measured in a standard manner. The same characteristic is variously known as 'test weight', 'bushel weight' or 'specific weight'.

- **Odour, Aroma**

Most grain types, when fresh, have a distinctive natural odour or aroma. This is generally accepted as an indicator of good quality, although some people prefer grain which smells 'old' or even fermented. As with most natural produce, some grain varieties are better-liked than others because of their odors. Certain cultivars of rice, for example, possess aromatic qualities which are considered desirable by some consumers.

- **Size, Shape**

Rice, as a whole-grain food, is classified by size (length) and shape (length: breadth ratio). Other grains also have size considered in their specification. In general a small range in size assists with processing and handling.

INDUCED QUALITIES

- **Broken Grain**

Grain is marketed normally in whole grain form and is considered to be of inferior quality if broken. Breakage may occur from fissures as a result of excessive drying/weathering conditions in the field or during handling. Breakage reduces quality by reducing acceptability and by increasing susceptibility to infestation during storage. This affects milling yield by contributing to weight loss.

- **Chalky or Immature Grain**

Empty grains result from sterility and pre-harvest infections and insect attack. Immature grain content is affected by time of harvest. In rice, immature grains are greenish in colour. Thin white (usually opaque) grains are caused by incomplete grain filling and may result from pests or disease. Chalkiness is caused by incompletely filled starchy endosperm which disrupts light transmission, causing opaque regions. In most cereals, chalky areas have lower mechanical strength on crush tests and may break during handling. The broken portion is more easily invaded by certain storage pests.

- **Infested, Infected Grain**

Grain mass, and therefore yield, is reduced by infestation. Contamination not only has direct food hygiene implications but also indirect ones, as invading micro-organisms may produce toxins under certain conditions which may lead to acute or chronic illness.

- **Mixed Varieties**

A mixture is an indication of poor pre- and post-harvest management and supervision, e.g. seed selection, lot segregation and treatment, contamination, etc. Grains differing in size and other characteristics affect processing potential. Whilst preference for a particular variety may be influential nationally or regionally, internationally-traded grain is recognised usually by grain type rather than by variety e.g. yellow or white maize. Exceptions do occur, e.g. basmati rice, (see odour, aroma).

- **Moisture Content**

Moisture content (me) of grain plays a crucial role in post-harvest processing and is associated with most of the induced characteristics. Water vapour will diffuse throughout a bulk of grain and the mc will tend to equalise. 'Hot spots' may occur at a site of increased respiration (caused by sprouting, infestation or microbial activity), and condensation may occur on cold grain or containers.

Basis is a key component of all grain marketing and sales decisions. It is the difference between the cash (spot) price and a futures market price at the time and place where delivery is to take place. Basis is a term important to anyone involved in the grain industry, whether they are a farmer, grain merchant, miller, processor, broker, futures trader, etc. It is the difference between the local cash price and the futures price of a particular commodity (basis = cash – futures).

Grading of Grains

It is important to have a grading system which accurately describes products in a uniform and meaningful manner. Grades and standards contribute to operational and pricing efficiency by providing buyers and sellers with a system of communicating price and product information. Grading typically occurs at the assembly stage or when a product moves into storage, during storage, or just before it leaves storage. Grading may be undertaken by a member of the trade specializing in a particular commodity. Several lots of grain, oilseeds, and cotton are combined to produce a grade level required for a particular sale. This gives rise to what are known as house grades.

Typical variables used in grading grain include:

- The moisture content of the grain
- The percentage of broken kernels
- Degree of discolouration in the grain
- The percentage of material other than grain (MOG) in a sack or load

In Sub-Saharan Africa, for example, maize is received in 4 grades, A to D, with A being the highest grade and D the lowest. The system allows for the farmer to dispute the grade awarded to his crop. In such cases, the farmer has to submit a written request within a specific time to the depot through which his crop was delivered.

Grain Storage

Whether storage takes place on the farm or in silos off the farm, increases in the value of products due to their time utility must be sufficient to compensate for costs at this stage, or else storage will not be profitable. These costs will include heating, lighting, chemical treatments, store management and labour, capital investment in storage and handling equipment, interest charges and opportunity costs relating to the capital tied up in stocks. Among the less tangible costs is

the risks attached to storage.

Two types of storage facility are commonly found, namely:

- The bulk storage facility where cereals are stored in concrete and/or metal bins,
- The bag storage facility where the crop is stored either inside a warehouse or in the open and then covered by tarpaulin sheets. In comparative terms

The advantages of a bulk over a bag storage system are that it is more efficient because it:

- Reduces congestion at the depots by not allowing for bagged maize to be dumped all over the depot yard
- Reduces handling costs
- Saves foreign exchange on bags, tarpaulin and fumigation, and
- Lowers storage losses.

Advantages of Bag Storage over Bulk Storage

- The initial invest is high, with a significant foreign currency component
- It is inflexible in terms of not being easily expandable to cope with changes in intake and off-take levels
- It relies heavily on an efficient transport system because a silo complex is only economically viable when throughput is at least 1.6 times its capacity, and
- It needs skilled manpower to run and maintain the entire system.

GRAIN MARKETING SYSTEMS

Understanding the Relationship of the Farmer with the Market

To assess the benefit of post-harvest improvements for small and medium farmers we need to know the interrelationship between these farmers and the marketing system. Farmers may sell their crop immediately after harvest, they may keep it for a couple of months or they may store it for much longer. Sometimes farmers may want to sell it later when prices are higher but feel constrained by, among other things, poor drying and storage facilities. Farmers may sell to small traders, to cooperatives, to marketing boards or direct to mills or animal feed processors. The buyers may have minimum moisture standards for what they buy; they may offer premiums for well-dried produce or they may buy all the grain at the same price regardless of moisture content and dry it themselves.

After the Farmer

After purchase from the farmer nearly all grain is either stored or milled or both before reaching the final consumer. There are some marketing systems where grain is purchased by traders and immediately transported to urban markets where it is sold, unmilled, to consumers.

Depot network and distribution of production problems arise because crop production is rarely evenly distributed across a country. In most countries cereals production is concentrated in one or two regions of the country, and the remainder are cereals deficit areas. In these circumstances it usually becomes rational and necessary for the government agency handling grain distribution, where there is one, to construct intake depots in the producing region(s), and storage

depots in the major consumption areas.

The Importance of Agricultural and Food Marketing to Developing Countries

In many countries, and virtually every less developed country (LDC), agriculture is the biggest single industry. Agriculture typically employs over fifty percent of the labour force in LDCs with industry and commerce dependent upon it as a source of raw materials and as a market for manufactured goods. Economic development itself provides the impulse towards sophisticated and more efficient marketing systems. Whereas the rate of population growth, in developing countries, averages around three percent per annum, their cities and towns are increasing their populations at about four percent per annum. In essence, this means that the number of people, in urban areas, needing to be fed by rural people, will double within sixteen years. This has clear implications for agriculture production and the marketing systems that direct that production and distribute the output to the points of its consumptions. Subsistence farming is likely to diminishing importance as farmers responds to the increased opportunities that development and urbanizations create; farms are likely to decrease in number whilst increasing in size; and agriculture will probably become less labour intensive and more capital intensive.

Another development which has in recent times increased interest in marketing practices is the trend, in many developing countries, towards market liberalization as part of economics structural adjustment programmers' (ESAPs). The view that direct and indirect government participations in productions and distribution had brought about structural distortions include a return to market prices for all products and resources, the encouragement of a competitive private sector and the commercialization, and sometime privatization, of all or some of the functions of marketing parastatals.

The marketing mix of social marketing strategies is evaluated using quite different criteria from those employed in assessing purely commercial marketing strategies. Criteria such as the percentage of the target population reached with the technology, products, processes or services, quantities produced and distributed and uptake of the product, service or technology are more often employed. Benefits are measured in terms of development goals, Such as improved nutritional status or increased rural incomes. The use of economic criteria is usually limited to the latter and to selecting the least- cost strategies should not automatically be eliminated, because these improve the efficiency of some aspect of social marketing strategy without preventing the attainment of social objectives.

Responding to Today's Challenges and Opportunities

Indian food policy has evolved through various tests of time, including one of the Worst famines in known history, repeated bouts of droughts, and constant challenge of feeding a vast and growing population. The country's journey from being a Chronically food deficit country to becoming a food grains exporter is marked by waves of policy thinking, ranging from increasing public interventions in the early decades of independence to partial liberalization in the 1990s and a host of other experiments in between. At the centre of it all has been the agricultural price policies, implemented through the Food Corporation of India (FCI), the country's food logistic parastatal agency, with panoply of control over both domestic and international trade. The government follows a dual pricing policy in the agricultural sector, setting two prices – a procurement price at which it would purchase grains from farmers, and a ration price (lower than the retail price) at which it would sell limited quantities of grains as entitlement to households through Fair Price Shops (FPS). Such a system was thought to be the best way to balance the conflicting interests of farmers (who would want higher prices) and consumers (who would want cheap food). The government took upon itself the task of procurement, storage

and distribution, by dominating the entire marketing chain, with several self-serving controls on the private sector over both domestic and international trade.

The policy makers were convinced and, given the importance of food in the country's political stability, government pursued this policy with strong commitment that was fuelled by every sign of success in the early years of Green Revolution. The FCI grew quickly under a variety of regulatory supports and greater control over food grains markets. Since the safety net programs, especially the Public Distribution System (PDS) are closely related to the food grains markets and the functioning of the FCI, reforms to the food grains marketing system cannot be undertaken in isolation.

REFERENCES

1. Lee, C. Y. (1974), "Marketing Systems in Nepal", In: *Marketing Systems for Developing Countries*, INCOMAS Proceedings, Izraeli, Izraeli and Dafna.
2. Kohls, R. L. and Uhl, J. N. (1990), *Marketing of Agricultural Products*, 6th edition, Macmillan Publishing Company, New York, F p.385.
3. Sugiyama, M. (1990), "Innovative Approaches to Agricultural Marketing: Selected Cases". In: *Marketing Systems for Farm Products in Asia and the Pacific*, Asian Productivity Organization, Tokyo, pp.62-96.
4. Abbott, J. C. (1987) *Agricultural Marketing Enterprises for the Developing World*, Cambridge University Press, pp. 157-165.