Business Strategy & Agricultural Export: An Overview

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Abstract

Agriculture is different from industry and plays a significant role in the economic development of a nation. India's prosperity depends upon the agricultural prosperity. There are many kinds of agricultural products produced in India therefore it is necessary to study and understand the business strategy which is adopted for export of these products. The increase in production of fresh fruits & vegetables is a result of adoption of quality seeds, higher dose of fertilizers & plant protection chemicals, coupled with assured irrigation. As a result, not only the India has achieved self-sufficiency in fruits & vegetables but have adequate of them for exports. Maharashtra is one of the largest states in Production of Fruits & Vegetables. The Nashik District in Maharashtra is no exception to above facts as Grapes & Onions are produced in large quantities by the farmers. Hence the Business Strategy used by them for Agriculture Export as well as Common problems of farmers & Current Export Scenariois studied in this research paper.

KEYWORDS - Agriculture, Business Strategy, Export, Cultivation

Introduction:

The Indian Government promotes to expand export of agriculture products as a way of enhancing financial stability among the farmers as well as for international competitiveness of Indian agriculture. However, there are many difficulties in it because many countries set trade barriers to agriculture products from India. If we consider farmers and export situation in Nashik District of Maharashtra following problems and difficulties can be highlighted.

The Nashik district is one of the major producers of horticultural crops like Grapes & Onions. These crops are exported to the various parts of the world. While in the process of their growth & cultivation various difficulties & problems are faced by the agriculturists as follows:

Quality of the crop yield, many of them are not aware about Business Strategy for export of agriculture products, Lack of implementation of international standards & foreign Business Strategy, Restrictions on the use of certain pesticides & fertilizers, Uncertainty of climatic conditions, Competitive international pricing, Exchange rate & inflation rate, High cost of export transactions, Lack of infrastructure in terms of transportation, packaging, storage, distribution etc.

To overcome above difficulties adopting a business strategy becomes necessary. Here business strategy specifically means a pattern of activities that a business or a person implements to achieve its objectives by adopting a course of action & by proper allocation of its resources.

Objectives:

1. To Study Export situation in relation to Agricultural Products.
2. To study Problems of farmers in relation to export of certain fruits & Vegetables.
3. To study Business strategy for Agricultural Export of certain fruits & Vegetables.

Concept of Business Strategy:

A Business strategy is a long term plan of action designed to achieve a particular goal or set of goals or objectives. Strategy is an individual's game plan for strengthening the performance of the activity undertaken.

It states how a function should be conducted to achieve the desired goals. Without a strategy there is no roadmap to go ahead in a task.

Creating a business strategy is animportant function.It must be said that having a good strategy and executing the strategy well, does not guarantee success. An individual or an Organisation can face unforeseen circumstances and adverse conditions through no fault of their own.

Here in this study we will be concern with understanding such strategies which will help & guide the farmers regarding proper cultivation of the crops. Further to improve the quality so as to export them in the international markets.

Indian Agriculture at a Glance:

- Agriculture continues to be the backbone of Indian economy.
- Agriculture sector employs 54.6% of the total workforce.
- The total Share of Agriculture & Allied Sectors (Including Agriculture, Livestock, forestry and fishery sub sectors) in terms of percentage of Gross Domestic Product is 19.6 percent during 2018-19 [As per the estimates released by Central Statistics Office]
- For the 12^{th} Plan (2012-17), a growth target of 4 percent has been set for the Agriculture Sector
- As per the 4^{th} Advance Estimates of Production of food grains for 2018-19, total food grain production is estimated to be 377.82 Million Tonnes.

Indian Agricultural Exports: Current Scenario:

India's diverse climate ensures availability of all varieties of fresh fruits & vegetables. It ranks second in fruits and vegetables production in the world, after China. As per National Horticulture Database published by National Horticulture Board, during 2017-18 India produced 94.285 million metric tonnes of fruits and 189.19 million metric tonnes of vegetables. The area under cultivation of fruits stood at 7.48 million hectares while vegetables were cultivated at 9.81 million hectares.

The vast production base offers India tremendous opportunities for export. During 2017-18, as per the data of DGCIS India exported fruits and vegetables worth Rs. 9743.80 crores which comprised of fruits worth Rs. 4746.31 crores and vegetables worth Rs. 4997.49 crores. Grapes, Mangoes, Walnuts, Bananas, Pomegranates account for larger portion of fruits exported from the country while Onions, Okra, Bitter Gourd, Green Chillies, Mushrooms and Potatoes contribute largely to the vegetable export basket. The major destinations for Indian fruits and vegetables are UAE, Bangladesh, Malaysia, UK, Netherland, Pakistan, Saudi Arabia, Sri Lanka and Nepal.

Though India's share in the global market is still nearly 1% only, there is increasing acceptance of horticulture produce from the country. This has occurred due to concurrent developments in the areas of state-of-the-art cold chain infrastructure and quality assurance measures. Apart from large investment pumped in by the private sector, public sector has also taken initiatives and with APEDA's assistance several Centres for Perishable Cargoes and integrated post harvest handling facilities have been set up in the country. Capacity building initiatives at the farmers, processors and exporters' levels has also contributed towards this effort.

Specifically in the State of Maharashtra production of fruits & vegetables is constantly on a rise. The farmers in the Nashik District are ranked highest from all the Districts of the Maharashtra for cultivating & exporting large amount of Grapes & onions to the various parts of the world as mentioned earlier.

The Following tables will show three years export statement in relation to export of Onions & Grapesand Other fruits & Vegetables from India.

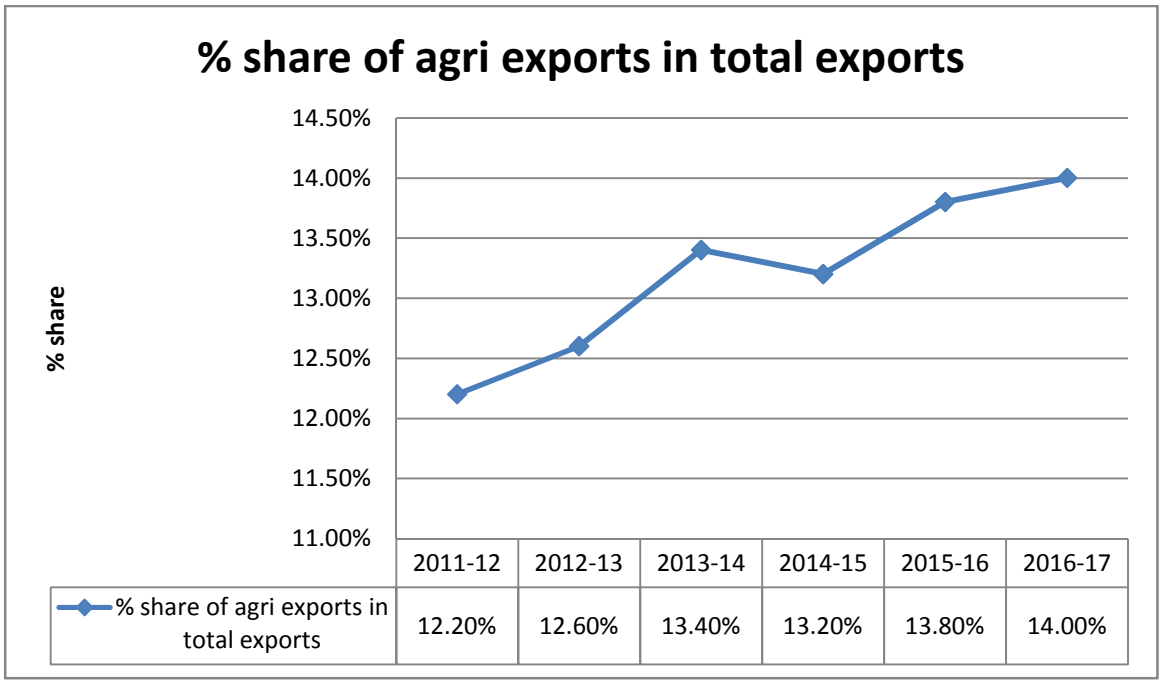
Value in Rs.Crores & Qty in MT

Product	2015-16		2016-17		2017-18	
	Qty	Rs.Crores	Qty	Rs.Crores	Qty	Rs.Crores
Onions	13,82,959.54	3144.72	24,15,739.05	3084.94	15,88,985.71	3191.94
Other Fresh Vegetables	7,07,518.24	2041.92	9,80,977.96	2573.88	7,35,198.86	1908.81
Grapes	1,32,647.60	1351.50	1,98,471.31	1784.73	1,88,221.16	1960.09
Other Fresh Fruits	3,62,954.09	1586.90	3,94,315.45	1622.53	3,20,900.90	1489.48

Share of Agriculture exports in India’s total export

Agriculture exports account for about 13 to 18 percent of total annual exports of the country. India’s agri-exports can be divided into three broad categories, i.e. export of a) raw products, b) semi raw products c) processed and ready-to-eat products. The major agriculture exports of India are cereals, fruits, vegetables, spices,

and cashew. Exports also include tobacco, tea, coffee and marine products. Agriculture export of India is considerably more significant for the upliftment of the farmers as exports results in better market price and eventually better earnings for the farmers. The chart shown below gives details about percentage share of agriculture exports in India's total exports during 2011-12 to 2015-16.



	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
% share of agri exports in total exports	12.20%	12.60%	13.40%	13.20%	13.80%	14.00%

(APEDA Stats/Reports)

Agricultural exports increased from Rs. 2, 26,651 crores in 2015-16 to Rs. 2, 50,272 crores in financial year 2016-17 with an increase of 10.42%. During 2016-17 marine products, non-basmati rice, spices, coffee, cashew, fruits and vegetables were top commodities of India's agriculture exports. The share of agricultural exports in total exports has consistently increased from 12.20% to 14.00% during 2011-12 to 2016-17 respectively.

Problems faced by Farmers during Export:

1. Lack of education and awareness about opportunities.
2. Lack of Market Knowledge and Marketing skills.
3. Lack of professionalism and small land holding.
4. Absence of innovative financing for agriculture.
5. Agriculture has become un-viable due to oversupply because new hybrids are giving excellent yield but due to oversupply, the price realization is very low.
6. Cost of transport to market, electricity for water pump, cost of fertilizers, cost of living is going up several times but the selling price of agriculture produce is stagnating due to oversupply and record productions.
7. Lack of reliable Agriculture publication and media to provide latest and reliable localized data.
8. Lack of proper knowledge regarding use of suitable fertilizers & pesticides for the particular crop.
9. Insufficient infrastructure for Climate forecasting.
10. Inadequate irrigation facilities.

Strategy for Exports of Grapes:

The quality parameters in export of grapes include bunch and berry size, colour, weight, shape, firmness, sugar content, acidity, absence of bruises or blemishes, no off flavour, odour or taste, absence of pesticide/chemical residue, stem colour, no split or damaged berry, no pest or chill damage, correct packing quality and average check weight.

Quality production requires activities including removing old growth from vines (pruning), tilling, fertilizing, trimming non-productive branches, monitoring blemishes and diseases, and applying pesticides bi-weekly, selecting the best bunches on each branch and culling the rest, trimming the bunches to export size, harvesting, grading and packing. In export-related production, thinning and dipping are done differently and more carefully, and these two determine the produce quality and amount of labour. Ensuring complex quality levels are met requires skilled labour. Work has to be performed precisely and on time and in the right season and at the right stage of the vineyards.

Following Strategies can be implemented for cultivating Standard quality Grapes -

- **Planting:**

Plants can be bought in the spring as bare-root or potted plants. Make sure that you buy dormant, bare-root grapevines from a reliable nursery or garden centre. When planting, set the plant in a well-prepared hole of the same depth as in the nursery.

- **Fertilisation:**

Soil fertility should be moderate for grapevines. Soil that is too fertile with subsequent excessive vegetal growth can be problematic; in contrast, impoverished soils can require expensive applications of nutrients. It is important for the farmer to know the recent status of soil, so test the soil/soil sample and make recommended amendments before planting.

- **Irrigation:**

Irrigation to supplement natural rainfall is a requirement for consistent, successful table grape production. Water must be available in adequate quantities when it is needed and the water must be of suitable quality for irrigation. Water quality concerns primarily involve salinity and the quantity of dissolved salts. Existing water wells should be tested for water quality to determine their suitability for grape production.

- **Weed control:**

Maintain a weed-free environment because during the growing season, weeds suppress the grape crops and this leads to competition for moisture and nutrients, especially if the plants are still young. For better growth, make sure that the yard is clean from early spring until midsummer. Removing perennial weeds from planting sites and keeping growing vines free of competing weeds are essential aspects of grape growing.

- **Pest control:**

Pesticides and fungicides are applied from early spring up to harvest. Grapes are frequently attacked by grape berry moth, whose larvae feed on grapes, and by birds, which are highly attracted to the grapes. It is difficult to control these pests.

- **Harvesting:**

Because of their high quality requirements at the point of sale, table grapes demand manual labour, technical knowledge and experience. Grapes should be harvested when fully ripe. Colour does not always indicate maturity, so taste-testing is often the best method. Grape clusters should be cut from the vines with a sharp knife.

- **Sorting:**

Sorting of grapes can be done by two different methods—by hand or electronically. For the grapes to be sorted effectively the grower has to use many workers. Sorting should always be done in the vineyard first. The grapes are destalked and then put onto the sorting table, which moves the berries by means of vibrations. During sorting, leaves, stalks, snails and uncoloured berries that come through the destemmer are removed. The grapes are then crushed and put into the fermenter without leaves and stalks.

- **Grading:**

The harvested bunches are graded according to the size of their berries and their colours. Before grapes are packed the decayed, undersized, broken and discoloured berries are removed by their pedicels from the selected bunches, using long scissors.

- **Packing:**

Grapes for the local market are packed into ventilated, corrugated boxes accommodating 2 kg to 4 kg of grapes. The boxes are lined with fine shredded paper, which is spread at the bottom and the top of the box for protection (cushioning). The open flaps of the box are secured firmly by means of adhesive tape. Grapes that are sent to foreign markets are packed in five-ply corrugated boxes, 500 × 300 mm in size to accommodate 5 kg of grapes.

- **Storage:**

The grapes should be precooled promptly after harvest in separate rooms with large refrigerating capacity, high relative humidity and high air velocity. They are normally precooled at 1 °C to 2 °C within six hours of harvest. After precooling, the dual releasing SO2 pads are placed with their coated surfaces downwards on the filled plastic pouches and covered with the polythene liner. The boxes are closed and shifted into cold storage. The arrangement of the boxes in cold storage is very important to ensure uniform cooling of all the berries in all the boxes.

Strategy for Exports of Onions:

The quality standards of onion have been fixed by Agmark although now it is not mandatory to obtain Agmark certificate for onion export. It is necessary to maintain the quality by observing the standards. The grades, big, medium, small and mixed are followed for different types of onions which depend on requirements from importing

country The demand in various countries is from February and up to May when it is very easily possible to cultivate onion in Nasik District of Maharashtra.

- **Crop Production Management:**

To harness the real genetic potential of a variety, the integrated approach in crop production system in terms of plant nutrients, irrigation and weed management is essential.

To get the quality bulblets (sets), sowing of Dark Red seed @ 15-25 g/m^2 are recommended for better germination and higher recovery of acceptable size (1.5 – 2.0 cm.) of bulblets.

The transplanting of 6-7 weeks old seedlings from 15th July and 31st August for kharif crop, 8-9 weeks old seedlings during October-November for late kharif crop and December-January for rabi crop at a spacing of 12.5 – 15.0 cm x 10.0 cm have been recommended.

The irrigation of field at 4 to 8 hours before transplanting is recommended during kharif season. The irrigation at 1.25 CPE (Irrigation Depth/Cumulative Pan Evaporation) is recommended for higher yield during Rabi season. The drip irrigation enhances the yield and quality of bulbs in onion and thus recommended to farmers.

The drip irrigation for one hour daily or 2-3 at alternate days is recommended under Nashik conditions of Maharashtra for higher yield.

Plant Health Management:

- **Damping off disease of onion nursery**

Soil solarisation using 250 pieces gauge transparent polythene for 25 days followed for soil treatment in nursery beds and seed treatment is recommended for effective control of damping off disease in nursery.

- **Bulb rot**

Spraying of Streptocycline @ 0.02at 10-15 days before harvesting is recommended for the control of bacterial brown rot in onion. Application of *Pseudomonas fluoresces* @ 5kg/ha in the soil before planting of seedlings is recommended for the management of basal rot and white rot of onion.

- **Post Harvesting Technology**

Post harvest losses in onion and garlic are remarkable which could be reduced considerably by adopting appropriate post-harvest management practices. The NHRDF has developed technologies for bringing down the losses in onion as well as garlic.

Withholding irrigation at 10 – 15 days before harvesting and harvesting at one week after 50% top fall are recommended to reduce post – harvest losses in onion. Windrow curing of bulbs till complete drying of tops and cutting of tops leaving 2.5 cm neck above the bulbs followed by shade curing for 10-15 days before storage reduces the losses and recommended to the farmers. Artificial curing of onion bulbs

in curing chamber with full load at 35^0C temperature and velocity of air flow at 3.2m/s cured the bulbs in 16 hours and recommended for adaptation to farmers.

- **Seed Technology**

Highest seed yield was obtained when 4.5 to 6.5 cm diameter bulbs were planted on 20th October at the spacing of 30 cm x 30 cm at Nashik was found best and economical. Dipping onion bulbs in 1% potassium nitrate and 0.1% Carbendazim before planting for seed crop in kharif season and dipping in 0.1% Carbendazim in Rabi season are effective for getting higher seed yield. Drip irrigation with wheat or paddy straw mulching has been recommended for effective weed management and getting higher seed yield.

Application of the above mentioned techniques & strategies will certainly improve the ultimate quality of Grapes as well as Onions such that the quality will be accepted worldwide and Exports can also be improved

Conclusion:

- Popularization of improved varieties, quality seed production and distribution, expansion of area in non- traditional pockets and contract production are must for export of Grapes & Onions.
- Unawareness of proper post harvest practices and quality Training of farmers and others involved in onion & Grapes production, post-harvest management and marketing are the reasons behind decrease in export quantities
- Developing more ventilated storage go downs for onions. Providing handling sheds and makes available modified containers with proper ventilation so that they can be stored without affecting the quality.
- To develop market intelligence for different seasons, quality of produce and corresponding season crop in other competing countries to spread awareness amoung the farmers.
- Successful implementation of the strategy will result in standard quality production of Grapes & Onions resulting in large amount of exports.
- Agricultural exports are essential for economic development of the country as well as fro the financial well being of the farmers at large.

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