ARTICLE ON BASMATI RICE: PRODUCTION, PROCUREMENT, PROCESSING AND MARKETING

Navneesh Sharma
RESEARCH SCHOLAR
DEPARTMENT OF HUMAN SCIENCES (SOCIAL SCIENCES)
SINGHANIA UNIVERSITY
PACHERI BARI, Distt- JHUNJHUNU, (RAJ) 333515, INDIA

Dr. P. Pillaiyar

1. Abstract:

Basmati rice is one of the most well-known and internationally recognized geographic indications that comes from Indian sub-continent. Basmati rice has certain unique characteristics, which owe their origin to the genotype and special agro-climatic conditions prevailing in the Indo-Gangetic Plains. Therefore, legislation approved in the Parliament is to own the Trade Mark or Geographic Indication of Basmati for the benefit of the users and fight for the infringement of the word Basmati. In today’s scenario better quality high yielding varieties are available, the area under Basmati rice has gone up and accordingly the production has also increased. The farmer continues to suffer today because he is not getting the correct prices. Today, the need of the hour is bypassing the mandi and thus avoiding extra logistics and tax based costs resulting in the strengthening of the supply chain. The Green Revolution was a golden era in Indian agriculture. Today, the sector requires another similar upheaval. The present scenario looks grim; cereal yields are rising slowly, ground water tables are plunging, and agricultural growth is also very low. Therefore, Indian agriculture needs to change over to better methods in production, sales of Basmati and on the intermediate supply chain to help ride the wave of the rising global food demand.

2. Key words:

Basmati rice, Geographical indication (GI), Production, Procurement, Processing and marketing.
3. Introduction:

India is the home for the aromatic rice. The foot hills of Himalayas in the states of UP, Bihar and Terai Region of Nepal are considered to be the centre of diversity for aromatic rice. A large number of aromatic rices are still grown in these areas. From this region, aromatic rice spread east wards to Orissa, Bengal, Assam, Manipur and Myanmar, west ward to Rajasthan, Madhya Pradesh, Maharashtra and Gujarat and towards north-west through Punjab in India to Pakistan, Afghanistan, Iran and Iraq (Khush-2000).

All the major rice growing countries have their own traditional and evolved aromatic rice varieties. Aromatic rice fetches higher premium in domestic as well as international market. Largest collection of aromatic rice (over five hundred) has been made and being maintained by the International Rice Research Institute, Los Banas, the Philippines. Eighty six of the accessions have the prefix of Basmati in their name irrespective of grain dimensions, kind and intensity of aroma: Pakistan (67), India (9) Bangladesh (2) and Sri Lanka (1). Comparing these with Basmati standards, only 15 qualify as Basmati. India has the largest number (175) of traditional aromatic rice including Basmati. Some of the short grain aromatic rice varieties like Dubraj (Chhatisgarh), Katarni (Bihar), Randhunipagal (West Bengal), Badshahbhog and Kalijeera (Orissa), Kalanamak (UP), Tilak Chandan (UK) and Bindli (West-UP) are famous for their aroma, taste and other cooking quality characteristics (Singh 2000). Any aromatic is not accepted in the trade as Basmati Rice. A harmonious combination of minimum milled rice Kernel dimension (milled rice kernel length >6.61mm, breadth <2.00mm), kind and intensity of aroma, texture of cooked rice, high volume expansion during cooking made up by linear Kernel elongation with minimum girth expansion, fluffiness, palatability, easy digestibility and longer shelf-life after cooking qualify a rice to be Basmati in consumers’ and traders’ view (Singh et al 1988).

The word Basmati has been derived from two Sanskrit roots (Vaas = aroma) and mat -up = ingrained or present from the beginning. While combining matup changes to Mati making Vasumati. Generally people pronounce it as Basmati. The earliest mention of Basmati rice is available in the epic "Heer and Ranjha" composed by Punjabi poet Varish Shah in 1766 (Thakarar and Ahuja 1993). One of major thrust area of Indian Council of Agricultural Research (ICAR) was to develop high quality and high yielding Basmati rice varieties. It has resulted in the development of a good number of such varieties. In this article an effort has been made to present the information and find out the lacunae in production, procurement, processing and marketing of Basmati rice and remedial measures have been suggested.

4. Materials and Methods:

Results:

In the Basmati growing region Punjab Agri. University , Ludhiana, Sher-E-Kashmir University of Agri. & Tech. Chattha, Jammu, Rice Research Station , Kaul ( CCS HAU Hissar) S.V.B.P. University of Agri. & Tech. Modipuram, UP, G.B. Pant University of Agri. & Tech. Pantnagar, Uttarakhand and Indian Agricultural Research Institute, New-Delhi have been working on basic and applied aspects of Basmati rice.
About a score of modern rice mills to name a few i.e. Tilda Riceland (P) Ltd. (brands – Riztorante, Rizbrationz, Rizfeast), LT. Foods Ltd., (brands – Daawat, Royal, Heritage, Devaaya), Sun Star Overseas Limited (brands – Hello, Gateway of India) Kohinoor Foods Ltd. (brands – Super, Premium), Bush Foods Overseas Pvt. Ltd. (brands – Neesa) and KRBL Ltd (brands – India Gate, Doon, Nurjahan, Aarti, Bemisal) have been established. In all the basmati growing states Krishi Vigyan Kendras are working for the transfer of technology. Around 100 grain markets have come up in the last two decades. All the above sources have been thoroughly surveyed for collecting the data and needed information.

Production:

Area of Cultivation:
Basmati rice has been in cultivation in the states of J&K, Himachal Pradesh, Punjab, Haryana, Uttarakhand and Western UP in India and four districts of Pakistan, i.e. Gujranwala, Hafizabad, Sheikhupura and Sialkot from time immemorial.

Due to increase in domestic and international demand, Basmati rice area has been increasing under its cultivation. During Kharif, 2010, 1.91 million hectare was covered under Basmati. Out of this 1.2 million was under Pusa Basmati 1121 followed by Taraori Basmati and Pusa Basmati -1.

Rice kernels of major Basmati varieties

Basmati Varieties:

Basmati rice from the Indian sub-continent is highly priced in the international and domestic markets for its unique quality. The traditional Basmati varieties are tall, prone to lodging, photoperiod and thermo sensitive and very low yielding. Therefore, in order to combine the quality attributes of traditional Basmati rice in high yielding background, a systematic Basmati improvement programme was initiated by Dr. M.S. Swaminathan at the Indian Agricultural Research Institute (IARI), New Delhi in the mid sixties. Later on, other State Agricultural Universities followed the programme. As a result, at present 15 varieties of Basmati rice have been developed, released and notified for commercial cultivation under Seed Act 1966 (Siddiq et al 2009; Shobha Rani et al 2009). This has helped the farmers in
having a varietal choice for cultivation and the rice industry to make available the rice to the choice of the consumers.

Numbers of varieties of Basmati rice are available in India and Pakistan. But, India is the largest producer and exporter of Basmati rice in the world. India produces more than 70% of the total world Basmati rice production and the rest is produced by Pakistan.

Based on the breeding methodology these varieties have been divided in two categories. The first group is popularly known as traditional varieties. Since these have been developed through pure line selection from the original local Basmati varieties, these are grouped as traditional Basmati rice varieties.

Second group is the evolved Basmati varieties. These have been developed through hybridization by combining the desirable traits of traditional Basmati rice and semi-dwarf, high yielding varieties followed by selection in subsequent generations.

At present, there are 15 varieties of Basmati rice, which have been approved under the Seeds Act, 1966. (Table-1)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Varieties</th>
<th>Date of Notification</th>
<th>Name of the Institutions</th>
<th>Parentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Type-3 (Dehraduni Basmati rice)</td>
<td>13 – 19.12. 1978</td>
<td>Rice Research Station, Nagina, UP</td>
<td>Pure line selection from Dehradun traditional Basmati</td>
</tr>
<tr>
<td>3.</td>
<td>Taraori Basmati (HBC-19 or Karnal Local)</td>
<td>1 (E) 01.01.1996</td>
<td>Rice Research Station, (CCS-HAU), Kaul, Haryana</td>
<td>Pure line selection from Karnal local</td>
</tr>
<tr>
<td>4.</td>
<td>Basmati 217</td>
<td>4045 24.09.1969</td>
<td>Punjab Agriculture University, Ludhiana (Punjab)</td>
<td>Pure line selection from traditional local variety</td>
</tr>
<tr>
<td>5.</td>
<td>Ranbir Basmati</td>
<td>1 (E) 01.01.1996</td>
<td>Sher-e-Kashmir University, Regional Agriculture Station, R.S. Pura, Jammu</td>
<td>A spontaneous early maturing mutant from Basmati-370</td>
</tr>
<tr>
<td>6.</td>
<td>Basmati – 386</td>
<td>647 (E) 09.09.1997</td>
<td>Rice Research Station, Kapurthala, Punjab Agriculture University, Ludhiana, Punjab</td>
<td>Pure line selection from Karnal local</td>
</tr>
<tr>
<td>8.</td>
<td>Pusa Basmati – 1 IET – 10364</td>
<td>915 (E) 06.11.1989</td>
<td>IARI, New Delhi</td>
<td>Pusa 150 / Karnal local</td>
</tr>
<tr>
<td>11.</td>
<td>Mahi Sugandha IET – 12601</td>
<td>408 (E) 04.05.1995</td>
<td>Rice Research Station, RAU, Banswara, Rajasthan</td>
<td>BK 79 / Basmati 370</td>
</tr>
</tbody>
</table>
The details on the yearwise increase in the area and production in the Indo-gangetic plains for the total Basmati are represented below.

**TOTAL AREA AND PRODUCTION OF BASMATI RICE**

**Kharif 2003-2010**

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>2004</td>
</tr>
<tr>
<td>2009</td>
<td>2010</td>
</tr>
</tbody>
</table>

**Processing:**

In all agricultural produce, there is no legal framework for contract farming except for mill linked sugarcane production under the Sugarcane Act. Currently, all rice is produced under the traditional farming method and goes into the supply chain through the market yards (mandies) established under the Agriculture Produce Marketing Act and orders of various State Governments. The produce is brought to designated market yards and sold by open auction, enabling the farmers to get the best price.
Depicts the over-view of the regulated market in Karnal.

Over the years, this system which was initially designed to save the farmers from exploitation by the traders has become highly bureaucratized and flawed, even though it still serves the purpose of avoiding canalization by the traders. The market yards are ill-equipped to properly handle and store the produce. There are huge delays. Entry of several levels of intermediaries has started to defeat the very purpose of remunerative return to farmers. The Central Government has taken up the task of total overhaul of the APMC Act to make system more efficient and reduce the number of intermediaries so that the end user is able to pay the best price which goes directly to the farmers. However, this is a long drawn process and with the involvement of so many State Governments in the Indian federal structure, the hope of immediate overhaul of the system is far away and we have to continue with the existing structure.

Farmer to processor supply chain in Basmati rice

Agriculture is vital to India. It produces 23% of GDP, feeds a billion people, and employs 66% of the workforce. Because of the Green Revolution, India’s agricultural productivity has improved to the point that it is both self-sufficient and a net exporter of a variety of food grains. Yet most Indian farmers have remained quite poor. The causes include remnants of scarcity-era regulation and an agricultural system based on small, inefficient landholdings. The agricultural system has traditionally been unfair to primary producers.

Ninety per cent of the crop is sold by farmers with small holdings to traders, who act as purchasing agents for buyers at a local, government-mandated marketplace, called a mandi. Farmers have only an approximate idea of price trends and have to accept the price offered them at auctions on the day that they bring their grain to the mandi. As a result, traders are
well positioned to exploit both farmers and buyers through practices that sustain system-wide inefficiencies.

Indian potential farmers who have been trapped in a vicious cycle of low risk taking ability > low investment > low productivity > weak market orientation > low value addition > low margin > low risk taking ability. This has made him and Indian agribusiness sector globally uncompetitive, despite rich & abundant natural resources.

Such a market-led business model can enhance the competitiveness of Indian agriculture and trigger a virtuous cycle of higher productivity, higher incomes, and enlarged capacity for farmer risk management, larger investments and higher quality and productivity.

Further, a growth in rural incomes will also unleash the latent demand for industrial goods so necessary for the continued growth of the Indian economy. This will create another virtuous cycle propelling the economy into a higher growth trajectory.

A schematic representation of farmer to processor supply chain and processor activities, Basmati are indicated below:
Farmer to Processor Supply Chain

Paddy Harvesting and Winnowing

Loading in open Tractor trailers / Other modes

Mandi Kacha Aditia
Commission agent lends mainly to farmers

Pacca Adatiyas
Buyers agent finances the purchase on behalf of the buyer

Winnowing, bagging, transportation (usually by trucks) to Rice Mills

Source: ITC Ltd
Processor Activities

Basmati Paddy

Drying for Moisture Loss

Cleaning and Shelling          Parboiling

Dehusking (only outer husk), Germ and Bran retained

BROWN RICE

Warehousing and Ageing (8-9 months)

Pre Cleaning and Milling

Polishing          Bran and Husk

Thickness and Length Grading

BRAN OIL

Colour Sorting

BASMATI RICE
Marketing:

The paddy is bought from various Mandies across the State of Punjab, Haryana, Uttar Pradesh, Delhi etc. The rice produced out of such paddy is sold at different times and different years due to ageing requirements. Backward traceability is not practical and also non-achievable.

Rice is sold for export through the following means:
- Direct Export out of India by Rice Miller.
- Export of Rice indirectly through recognized Export House, Trading House, Star Trading Houses etc.
- Export of Rice indirectly through registered Exporters traders.
- Export of Rice indirectly through other Rice Millers Exporters.

90% of the crop is sold by farmers with small holdings to traders, who act as purchasing agents for buyers at a local, government-mandated marketplace, called a mandi. Farmers have only an approximate idea of price trends and have to accept the price offered them at auctions on the day that they bring their grain to the mandi. As a result, traders are well positioned to exploit both farmers and buyers through practices that sustain system-wide inefficiencies.

Branding

Rice is sold more as a commodity than as a product. This makes it difficult for a consumer to differentiate between rice of company from rice of another company and also rice of one type from another type, except for difference in price. Absence of branding in the rice industry also leads to short charging the consumers who may be palmed off a cheaper variety as a superior variety because consumer goes by the physical parameters which are smaller in many cases. The need to promote brands is even more to get better realization for export. More than 90% of Indian rice is sold in the world under private label of the foreign companies who get the rice packed of their own brand and enjoy the premium by such branding. In addition to generic Indian name of Basmati, it is necessary for companies to promote the individual brands. Unfortunately Indian rice companies lack the understanding between branding and packaging. Some companies like Kohinoor, Daawat, KRBL Ltd, India Gate, Lal Mahal, Lal Quila, etc., have made a foray in branding rice with considerable good results but the effort is too little and is almost negligible when it comes to exports. None of the Indian brand, not even in the countries which are our predominant buyers like Iran, Saudi Arabia and UAE, Indian rice is not sold under an Indian brand but in the brand of the importer.

Basmati rice is exported to over 100 countries in the world major markets being UAE, Saudi Arabia, Iran, Yemen AR, and European Union & USA. APEDA is continuously working for exploring new markets. Recently Mexico has permitted import of Basmati rice from India. The approval from Plant Quarantine Authority in China is expected soon. During the preceding decade Basmati rice exports have increased from 0.852 to 2.18 mt. with a corresponding increase in forex from Rs. 2166 to 10,582 crore.

5. Discussion

Cultivation of rice is very labour intensive and from an employment perspective, cultivation of rice provides assured employment.
Productivity:

M.S. Swaminathan Research Foundation is a research oriented (NGO) registered in 1988. MSSRF’s mandate is the promotion of agricultural and rural development through the conservation and enhancement of natural resources, promotion of sustainable livelihoods, gender equality and skills enhancement. MSSRF has also introduced the concept of precision farming which is suitable for small and marginal farmers. Precision farming makes optimal and efficient use of available resources to achieve and increase productivity.

Farmer Empowerment:

Group and cluster formations encourage the formation and mobilization of social and financial capital enabling the poor to interact with other social groups from an enhanced position of strength. By encouraging savings and internal lending among the members of the group augmented by revolving fund grants from the government and linkages with banks and other credit agencies would greatly enhance their prospects of creating sustainable enterprises. This would ensure a minimum level of employment and stability to the incomes of the poor giving them the opportunity to develop their collective strength and improve their economic position to reduce their vulnerability.

When private firms enter into contracts that are favorable to both parties, supply enough inputs, offer fair contract prices, and conduct their dealings in an open and transparent manner, farmers are more likely to benefit. Legal protection to farmers as a group is essential to protect them from exploitation and procedures should be put in a place for resolving disputes expeditiously.

Contract farming has the ability to eliminate constraints associated with rural extension, introduction and application of modern technology, finance and marketing and has become a necessity for the supply of high quality agricultural produce. Given the infancy of contract farming in India and its potential for agriculture development and rural poverty reduction, it is recommended that in collaboration with the private participants, a program is formulated which may accelerate contract farming in India. Thailand such as shrimp cultivation, high value crops, such as – coffee, tobacco, seed, etc. In the Philippines and Indonesia poultry, egg and pig farms have benefited from contract farming.

The objectives of biocentres would be to:

- Provide necessary production and Market information
- Enable efficient production through centralized services
- Confer on small-scale producers the power of marketing
- Provide necessary facilities for effective functioning of Bio Village societies
- Serve as a meeting place for entrepreneurs to exchange experiences and ideas

In order to strengthen to supply chain for the export of Basmati rice:

- The government should promote the Indian Basmati brand in the international market.
- An increase in supply would also help sell more Basmati rice.
- The three most important features of Basmati rice are that it is long grained and it has a mouth-watering aroma and superb taste. Basmati is sold in three forms varieties,
Parboiled, brown (after dehusking) and white (after dehusking and milling). Parboiled rice loses the aroma. Despite that, Saudi Arabia uses parboiled Basmati rice because it is more useful in the cooking process of their dishes.

- The milling capacity in India is impressive. But power-breakdowns pose a regular hazard. Producers use generators, but this is expensive in the long run.
- The farmers switch between Basmati rice and non-Basmati rice. Non-Basmati is preferred over Basmati since the yield in Basmati rice production is low because of (i) lack of technology advancement regarding efficient harvest of Basmati rice and control of insects, pests and diseases, (ii) lack of irrigation facilities and (ii) lack of access to information on Basmati rice export potential and price trends. More research and development is required for Basmati rice.

Poverty is adversely affected by low productivity. There is considerable scope for increasing agricultural productivity through provision of high quality seeds and inputs, expansion of irrigation, better land and water management practices and infrastructure support. Small land holdings is not conducive to high productivity, hence the importance of promoting the formation of groups and clusters comprising a number of small farmers to take advantage of economics of scale in buying inputs and marketing.

Will Bio Village design would provide the efficient and sustainable use of natural resources using recent advances in bio technology to achieve a continuous and steady growth of agricultural production while protecting and improving the environment. The methods to be used to achieve the objectives are knowledge, skill information and organizational empowerment of rural families based on a blend of traditional wisdom and frontier technologies such as bio information, renewable energy and communication technologies.

Industry’s effort to involve farmers in the development process faced several problems such as non-availability of institutional finance to farmers and their consequent exploitation by intermediaries and evasion of tax by small players making value chain operations by the corporate sector unviable.

Risk taking capacity of farmers is low and therefore insurance has to play a vital role in risk mitigation emanating from weather as well as from markets. There is a need to promote auction houses and aggregating units at farm gate level and tax incentives provided on extension services.

Investment credit in the agriculture sector has been decreasing recently. To reverse this trend, there is a need to connect farmers with the corporate sector in contract farming to facilitate larger flows of credit to them. Technical expertise in banks needs to be strengthened to handle finance to farmers through self help groups.

**Processing:**
The Green Revolution was a golden era in Indian agriculture. Today, the sector requires another similar upheaval. The present scenario looks grim; cereal yields are rising slowly, water tables are plunging, and agricultural growth is also very low. A number of issues need to be worked out, and a common sense of commitment must prevail amongst all the stakeholders in the food value chain. Cultivators, especially those of rice and wheat, need to expand their roles, from being grain producers to agro-food processors, giving value addition and solving the issue of constrains in raw material procurement.
The Government has been active in bringing a much desired vibrancy to the sector. But the scale of this initiative needs to become much bigger for the food processing sector to reach a high-growth trajectory. A significant change can be brought about in overcoming the long and fragmented supply chain through contract farming. Companies can create direct farm linkages to source appropriate quality, quantity and varieties of inputs. In fact, some have been successful in linking up with farmers, and some models of contract farming based on profit sharing or social investment may emerge in the future. Currently, this phenomenon is limited to a few key producing states in the country.

At each level, deficiencies have been detected in technical know-how and support. A root cause is inferior quality of planting materials and lack of High Yielding Varieties of commercially important crops. Even cultivation in many cases is improper and there is an inadequate availability of inputs. Other issues include a lack of modern farm machinery, inadequate extension efforts and unclean harvesting methods.

Despite rigorous research, laboratory results rarely reach the industry. In addition, knowledge flows from the academic circles or centres to the commercial centres, of manufacturing primary or tertiary processed food. Thus, at the farm level, farmers are unaware about the types and timing of crops and the chemicals to be used. Channel managers are unaware of managing storage conditions and handling of the ultimate produce at the customer end.

To build a strong, public-private partnership, it is imperative to find the right balance between applied research, capacity building, training and development of policy and regulatory frameworks. This would help in identifying additional resources and making technologies more accessible to the workers.

As the world’s second most popular crop, rice will always have an unflinchingly regular demand. Globally, India’s Basmati is accepted as the best quality rice. But there is a need to improve its availability in the domestic & international market. There are several means to this end, accessibility of genetically pure and healthy seeds and other farm inputs, extension services to take the new technology to farmers and improve Basmati paddy production and bringing down the cost of cultivation; development of infrastructure at village and grain market-level; minimising the paper work; removing the hassles of the trade and a liberal export policy need to come in place.

**Marketing:**

Efficient marketing is crucial for the future growth of agriculture. Issues facing this sector of low productivity, high wastage, low value addition and absence of linkages in the markets could be effectively dealt with by encouraging private sector investments in infrastructure projects followed by reforms in the market.

While several steps have been taken by the Government to introduce a more liberalized market regime such as liberalization of the Essential Commodities Act, introduction of the negotiable warehouse receipt system, opening up of future markets, risk management, formulation of integrated food laws and a Model Act on Agricultural Marketing.
The agriculture sector has to be transformed from supply driven to demand driven to make it cost competitive. Soft infrastructure to facilitate flow of market information and agricultural knowledge to farmers need developing alongside physical infrastructure.

Representatives from the private sector expressed the opinion that the market place was not always the most efficient way of handling trade in foodgrains. In several instances farm gate procurement was a better option and eliminated the need for double handling. Market yards function without any forward and backward linkages and were causing obstacles to establishing value addition.

**Five steps of the international marketing process:**

The international marketing process comprises of five steps which marketers have to take as part of their integrated marketing effort;

1. Analyzing international marketing opportunities to identify unfulfilled or under fulfilled needs that a marketer may satisfy through its products or services. This analysis can be done through information seeking and analysis or through market research (secondary or primary data collection and analysis). A marketer may have a product or service concept developed first and looks for the needs in the market that can be satisfied by these products or services. The marketer may also first identify unfulfilled or under fulfilled needs in the market and then develop a suitable product or service offer to satisfy these identified needs.

2. Once the marketer has identified the potential opportunities in the first step now is the time to select the groups of potential international customers (target markets) to whom to sell the products or services. This step also involves identifying the potential buyers, demand measurement & forecasting, market segmentation, market targeting & market positioning. Segmentation involved identifying groups of potential customers from the total potential market that are homogeneous on certain aspects of identity and behavior and are heterogeneous on the same aspects from others in the target population. The aspects on which the segments are based must be relevant for the marketer to develop its products and services and the marketing programs. This step also requires the marketers to decide what key benefits in a product or service to offer to the selected target customers and on what aspects to differentiate from the competition.

3. Since a firm needs to offer best value to the potential customers to make its products and services more salable compared with competitors, firms have to adopt appropriate business and marketing strategies. Many activities are to be undertaken in a firm by many people and in a number of departments to produce and deliver final products and services to its customers, this requires aligning and coordinating numerous activities and efforts. At the same time to achieve best value for the buyer and bet profits for the firms, the firm needs to optimize all the activities, efforts undertaken and resource utilization. This requires the firm to adopt a coherent and appropriate logic or strategy to direct and control the alignment, coordination and optimization of its business and marketing effort. Various researchers have studied successful companies around the world and attempted to identify how these firms have aligned and coordinated their activities and efforts. Porter has concluded that successful firms have adopted one of the three strategies, i.e., cost leadership, differentiation or focus. Other scholars have identified that successful firms adopted strategies that were...
aligned with their market position, i.e., a market leader, challenger, follower & nicher strategies. Other researchers have asserted that firms have achieved success in markets through adopting one of the three value discipline strategies, i.e., operational excellence, customer intimacy or product leadership. Details on these strategies may be found in strategy subject and books.

4. The fourth step in the marketing process is developing the international marketing mix, product, place, price & promotion. Marketing mix identifies four key areas for developing a well coordinated marketing strategy. To create a strong marketing impact a firm needs to develop appropriate programs in these four key areas and also need to ensure that all these four aspects of a firm’s marketing program are well coordinated and in conformity with each other to give a clear image to the target market of the firm’s brands and its products.

5. Developing a good marketing program is not good enough for success. A firm also needs to manage the international marketing effort properly. Quite often firms fail not because they did not have a viable marketing program, but that they failed in properly implementing their well designed plans. Firms also need proper analysis, planning, implementation and control of their marketing programs.

Proposed Operational Model for Procurement of Paddy:

Setting up facilitation center at the production centers will go a long way in providing good quality produce to the millers / consumers; this will also enable the producer to get a fair share of the price. Today, the need of the hour is bypassing the Mandi and thus avoiding extra logistics and tax based costs resulting in the strengthening of the supply chain. The model proposed is as under:

![Proposed Model for procurement of Basmati paddy](image)

It is proposed that a Facilitation Center should be set up by a farmer co-operative at the Khatua district of Jammu & Kashmir State. At least 100 acres of land, which is under cultivation of Basmati rice, can be considered. The facilitation can include individuals, group of farmers / growers / consumer, partnership/ proprietary firms, companies etc. This will link...
the farmers to the markets/ millers/other stake holders by shortening the supply chain. This facilitation will drive reforms in the agriculture marketing sector and will also bring transparency in the market transactions. The facilitation centre will establish a backward linkage with farmers and a forward linkage through other interested exporters including millers. This will provide real time prices which can be quoted for buying through a transparent system, while at the same time providing a complete back up of traceability.

To achieve this, a study was undertaken analyzing the existing scenario in the production, processing and marketing of the Dollar earning Basmati crop. The lacuna existing at each phase has been initially analyzed. Based on this, a model has been developed to bring in more awareness among producers. Producer-processor linkage is to be strengthened in the supply chain by establishing a facilitation centre in the production belt at district Khatua of Jammu and Kashmir state to begin with. The role of each stake-holders including the participation of the State and Central Governments has been defined for strengthening of supply chain for the export of Basmati rice.

6. **Acknowledgements:**

The Chairman & officers of the Agricultural and Processed Foods Export Development Authority (APEDA), President, All India Rice Exporters' Association (AIREA) New Delhi are thanked for their support for undertaking this program. Heartfelt thanks are due to Dr. V.P. Singh for his keen interest in this study, and constant encouragements, to Dr. N.K. Chopra, Scientist, IARI, Karnal (Haryana) and the staff of this organization for their consistent encouragement and cooperation Special thanks are due to Shri A.K. Gupta, Director In-charge of Basmati Export and Development Foundation(BEDF) New Delhi, Dr. Anupam Dixit, Chief Scientist & Station in-charge, and other Scientists of the BEDF Lab Modipuram and to Dr. Ritesh Sharma Scientist, Demonstration & Training Farm of the BEDF Modipuram for their unstinted cooperation in the field survey. Special thanks to the guide Dr. P. Pillaiyar Consultant (Food Processing), Madurai. The assistance rendered by Mr. Devki Nandan, Personal Executive, APEDA in typing and graphical work is greatly acknowledged.
7. **References:**

1. Agmark Grading Statistics, 2001-02, Directorate Marketing and Inspection, Faridabad
2. Agmark Grade Specification, Agricultural Produce (Grading and Marking), Act, 1937, Rules, made upto 31st December, 1979 (Fifth Edition), (Marketing Series No.192), Directorate of Marketing and Inspection
3. Export, Import and Inter-state movement, Directorate General of Commercial Intelligence & Statistics (DGCIS), Kolkata
10. Websites:
    - [www.agmarknet.nic.in](http://www.agmarknet.nic.in)
    - [www.agricoop.nic.in](http://www.agricoop.nic.in)
    - [www.fciweb.nic.in](http://www.fciweb.nic.in)
    - [www.ncde.nic.in](http://www.ncde.nic.in)
    - [www.apeda.gov.in](http://www.apeda.gov.in)
    - [www.icar.org.in](http://www.icar.org.in)
    - [www.fao.org](http://www.fao.org)
    - [www.codexalimentarius.net](http://www.codexalimentarius.net)
    - [www.nabard.org](http://www.nabard.org)