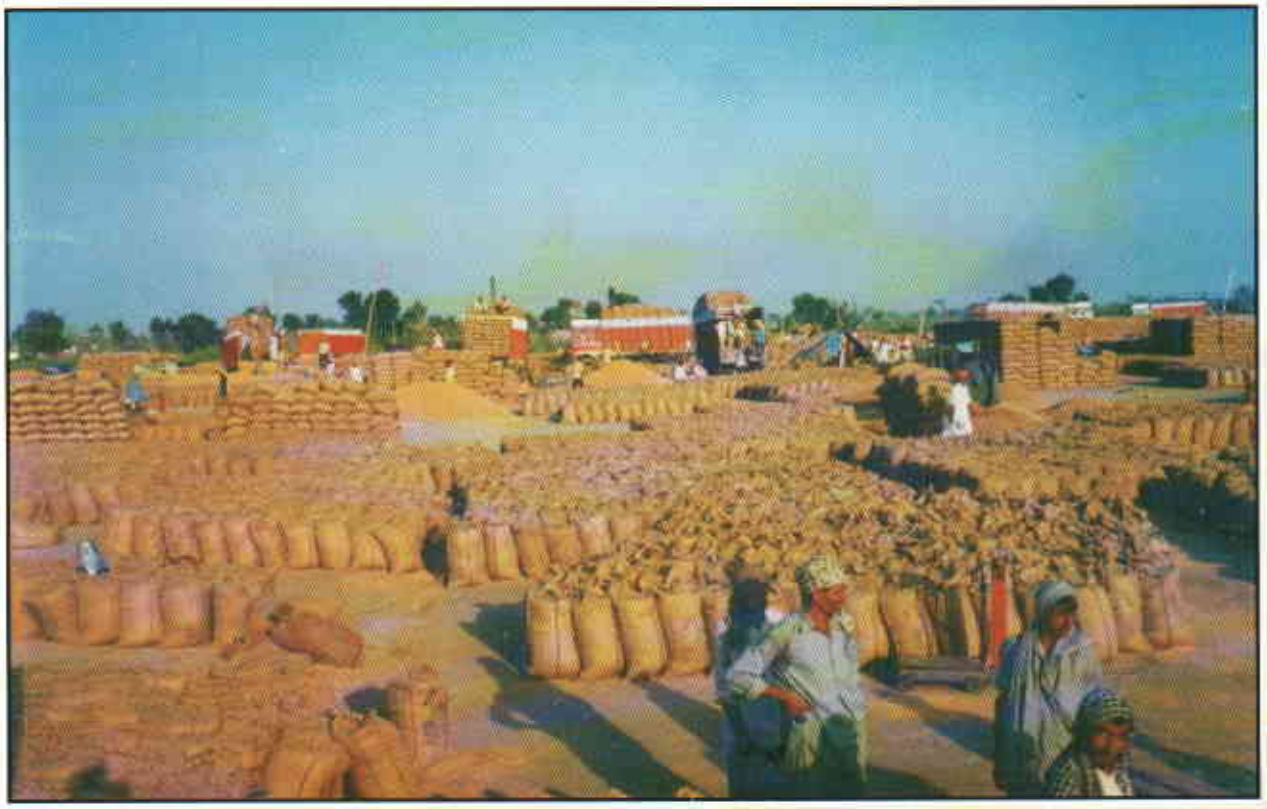
Rice Production Marketing And Export



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Foreword

Improved Agricultural Marketing Information system is key to the development of Pakistan's Agrarian Economy. Fully cognizant of the fact, Government of the Punjab in Agriculture Department is implementing a Programme for improvement of Agricultural Marketing Information System to facilitate Agribusiness with special emphasis on exports. The objectives are as follows:

- **Collection of data on domestic production to monitor the crop situation to find out estimation Marketable and Exportable Surplus.**
- **To collect information on International Production and Trade.**
- **To provide Information to the policy maker to facilitate export of Agriculture Crop/Produce to find out potential export markets to accelerate export.**
- **Maintenance of database on vital information regarding domestic and International Production, Trade, Consumption needs and quarantine requirements/ standards of Agriculture Crop.**
- **To discuss the WTO issues and Constraints under its regime.**

This report relate to Rice crop through a planned effort, keeping in view the above objective. Available information is updated, further required data has been collected and processed.

The information collected has been compiled into a booklet form to be used as reference/benchmark by all the stakeholders' viz. producers, processors, traders and exporters to enable them to plan an effective role in the World's production, productivity and export. The efforts made by Miss. Shakera subhani Agricultural Officer Headquarter office & Mr. Muhammad Irfan Bhatti analyses and composition to compile the information is highly acknowledged.

To update the information is regular activities. All the stakeholders can obtain the latest information from the Directorate through toll free telephone Number (0800-51111). Any suggestion for improving the format and the content of this publication would be welcome.

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INTRODUCTION

Rice refers to two species (*Oryza sativa* and *Oryza glaberrima*) of grass, native to tropical and subtropical southeastern Asia and to Africa, which together provide more than one fifth of the calories consumed by humans. Rice is an annual plant, growing to 1-1.8 m tall, occasionally more, with long slender leaves 50–100 cm long and 2–2.5 cm broad. The small wind-pollinated flowers are produced in a branched arching to pendulous inflorescence 30–50 cm long. The seed is a grain (caryopsis) 5–12 mm long and 2–3 mm thick. The word *rice* derives from the Tamil word *arisi*.

Rice is a dietary staple of more than half of the world's human population (most of Asia and Latin America), making it the most consumed cereal grain. Rice cultivation is well suited to countries and regions with low labour costs and high rainfall, as it is very labour-intensive to cultivate and requires plenty of water for irrigation. However, it can be grown practically anywhere, even on steep hillsides. Rice is the world's third largest crop, behind maize (corn) and wheat. Although its species are native to South Asia and certain parts of Africa, centuries of trade and exportation has made it commonplace in many cultures.

Rice is often grown in paddies—shallow puddles take advantage of the rice plant's tolerance to water: the water in the paddies prevents weeds from outgrowing the crop. Once the rice has established dominance of the field, the water can be drained in preparation for harvest. Paddies increase productivity, although rice can also be grown on dry land (including on terraced hillsides) with the help of chemical weed controls.
In some instances, a deepwater strain of rice often called *floating rice* is grown. This can develop elongated stems capable of coping with water depths exceeding 2 meters (6 feet).
Rice paddies are an important habitat for birds such as herons and warblers, and a wide range of amphibians and snakes. They perform a useful function in controlling insect pests by providing useful habitats for those who prey on them.

Whether it is grown in paddies or on dry land, rice requires a great amount of water compared to other food crops. Rice growing is a controversial practice in some areas, particularly in the United States and Australia, where rice farmers use 7% of the nation's

water to generate just 0.02% of GDP. However, in nations that have a periodical rain season and typhoons, rice paddies serve to keep the water supply steady and prevent floods from reaching a dangerous level

Many historians believe that rice was grown as far back as 5000 years B.C. To identify when humans first realised that the rice plant is a source of food and started cultivating it is impossible. The first recorded mention of rice originates in China 2400 B.C. Sheng Nung, the Chinese emperor, realised how important rice was to his people and as a result established annual rice ceremonies. Today the Chinese celebrate rice by the dedication of one of the days in the New Year.

WORLD RICE PRODUCTION

Rice is most important crop in world. There are 119 rice producing countries. China has major contribution to world rice production during 2005-06. She produced 184,254,000 Mt rice which is 30.01 percent of world production. Pakistan's share of world rice production is 1.20 percent and it stands at number 12 with other rice producing countries. The Production of other countries is 422,455,985 Mt, as shown below:

Major Rice Producing Countries

Sr. No.	Country	Production(mt)	% share
1	China	184,254,000	30.01
2	India	129,000,000	21.01
3	Indonesia	53,984,592	8.79
4	Bangladesh	40,054,000	6.52
5	Viet Nam	36,341,000	5.92
6	Thailand	27,000,000	4.40
7	Myanmar	22,000,000	3.58
8	Philippines	14,800,000	2.41
9	Brazil	13,140,900	2.14
10	Japan	10,989,000	1.79
11	United States of America	10,012,190	1.63
12	**Pakistan**	**7,351,000**	1.20
13	Korea, Republic of	6,418,000	1.05
14	Egypt	6,200,000	1.01
15	Cambodia	4,200,000	0.68
Sub Total		**564,744,682**	**92.13**
Other countries		**48,316,303**	**7.87**
Total		**614,060,985**	**100**

Source: FAO

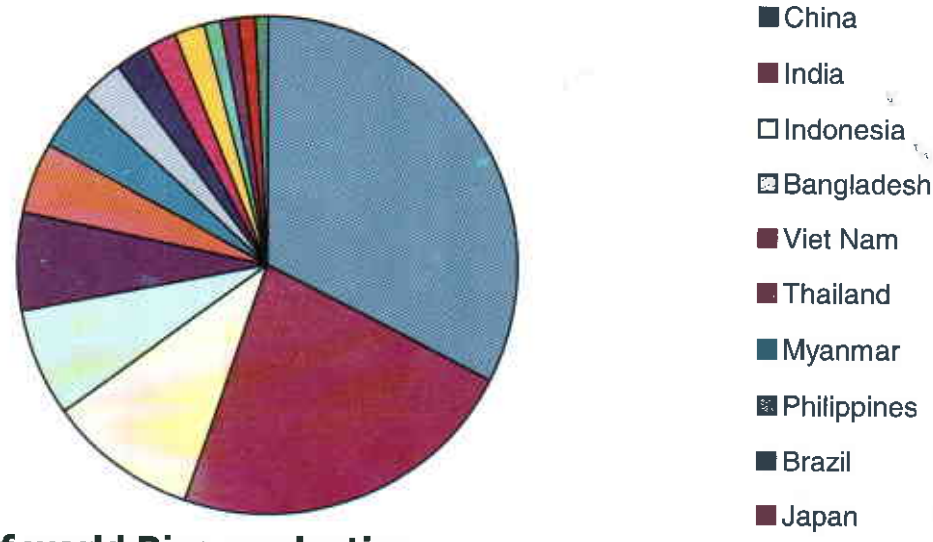

Chart of world Rice production

World Rice Production Trend

The world rice production increased during last five years as shown below

(Million Tonnes)

Year	World	Pakistan	% share
2000-01	598.03	5.82	0.99
2001-02	578.09	6.72	1.06
2002-03	583.02	7.27	1.25
2003-04	606.65	7.53	1.24
2004-05	614.65	7.35	1.2

Source: FAO

World Rice Yield

The world average yield of rice during 2005-06 was 40.51 kg. per acre whereas Pakistan stands at Sr. No. 62 in rice producing countries having average yield of 29.75 kg per acre as shown below;

World Rice Yield during 2005-06

Sr. No.	Country	Yield 40 Kg. Per Acre
1	Egypt	96.50
2	Australia	87.01
3	United Stats of America	74.87
4	Morocco	74.34
5	Greece	73.35
6	Spain	73.14
7	Uruguay	68.50
8	Peru	67.93
9	El Salvador	67.21
10	Turkey	66.39
11	Korea, Republic of	66.26
12	Japan	66.18
13	Argentina	64.14
14	China	63.62
15	Italy	62.43
62	Pakistan	29.75
World Average Yield		**40.51**

Source: FAO

PRODUCTION OF RICE CROP IN PAKISTAN

Like many other developing countries Pakistan is also land of villages with small holdings subsisting on agriculture. Even rapid industrialization has made no significant dent on agriculture and crop production is major sector of Pakistan's agricultural economy. Among crops, rice (*oryza sativa*) has predominant position. It feeds a considerable portion of our population.

Pakistan has 6.2593 million acre of rice fields producing million tonnes of rice during 2005-06. Area and production of rice increased during last three years. The province wise contribution fluctuated. Punjab stands at top as far as production concerned as shown below;

Province wise Area and Rice Production Trend

Year	Pakistan		Punjab		Sindh		N.W.F.P		Balochistan	
	Area	Prod.	Area	Prod.	Area	Prod.	Area	Prod.	Area	Prod
1989-90	5206.4	3220.1	3167.0	1482.2	1619.3	1340.0	152.7	114.6	267.4	283.3
1990-91	5220.4	3260.8	3118.0	1422.3	1680.1	1433.0	153.9	118.0	268.6	287.1
1991-92	5181.6	3243.1	3042.9	1342.2	1711.0	1454.5	155.9	123.0	271.8	290.4
1992-93	4876.5	3116.1	3018.9	1403.9	1405.6	1272.8	153.5	111.9	298.5	327.5
1993-94	5404.5	3994.7	3213.9	1588.2	1736.9	1954.9	154.9	118.4	298.8	333.2
1994-95	5250.1	3446.5	3308.1	1684.0	1478.5	1406.7	156.4	118.2	301.2	237.6
1995-96	5342.0	3933.5	3281.1	1803.0	1587.2	1697.2	157.4	118.2	316.3	348.1
1996-97	5562.7	4304.8	3347.0	1864.0	1734.2	1961.5	159.9	123.5	321.5	355.8
1997-98	5726.3	4333.0	3484.0	1948.0	1703.3	1840.9	165.1	130.2	373.9	413.9
1998-99	5989.0	4673.8	3689.1	2176.0	1739.9	1930.3	168.5	133.6	391.4	433.9
999-200	6215.8	5155.6	3977.0	2481.0	1706.0	2123.0	165.8	129.2	367.0	422.4
2000-01	5872.8	4802.6	4021.0	2577.0	1334.6	1682.3	164.1	131.2	353.1	412.1
2001-02	5224.4	3882.2	3647.1	2266.0	1139.4	1159.1	150.0	121.7	287.9	335.2
2002-03	5498.7	4478.0	3737.0	2579.7	1206.6	1299.7	150.7	131.7	404.3	467.4
2003-04	6080.4	4847.6	4170.9	2871.4	1362.0	1432.8	152.47	130.8	394.88	412.6
2004-05	6182.7	4992.0	4292.3	2949.0	1344.3	1499.0	148.3	123.0	397.8	421.0
2005-06	6259.3	5000.0	4275.0	3000.0	1430.8	1450.0	158.2	135.0	395.4	415.0

Source: Market Committees

Provincial Share in rice Production

EXPORT OF RICE

Rice it is an important export item of Pakistan. She is contributing 3.25 percent to the total share of world rice export. World total export is 56,100,707 mt and Pakistan's Portion is 1,822,739 mt. She holds almost monopoly in export of aromatic basmati rice. It fetches three to four time higher prices than other rice varieties of world.

Rice Exporting Countries

Sr. No.	Country	Export--Qty(Mt)	% Share
1	Thailand	9,989,730	17.81
2	India	4,794,539	8.55
3	Viet Nam	4,086,700	7.28
4	United States of America	3,066,765	5.47
5	Pakistan	1,822,739	3.25
6	China	897,100	1.59
7	Egypt	836,941	1.49
8	Italy	668,935	1.19
9	Uruguay	609,169	1.09
10	Spain	346,003	0.62
Sub Total		**27,112,651**	48.33
Other countries		**28,988,056**	51.67
Total		**56,100,707**	100.00

Source: FAO

Recently the government has asked Mexico to send a delegation of experts to Pakistan for talks on rice export resumption. Mexico stopped importing Pakistani rice over a decade ago. Mexico banned rice import from Pakistan after its authorities alleged that Pakistani rice was infected with a kind of virus.

Pakistan is taking the step after 10 years as rice exporters hold the Pakistani authorities responsible for the very long delay in taking up the issue with Mexican authorities. Mexico banned the rice import from Pakistan after its authorities reported that the rice was infected with khupra beetle virus. The move was taken as non-tariff barrier as every country of the WTO are authorized to take such step, which is generally aimed at saving people from diseases, which could spread with virus.

However, the official said that Mexico's fears are based on mere hypothesis. Acutally, around 1995, the Mexico government put a number of countries on a list and were denied access to the market under the SPS measure. Sri Lanka, India, Thailand, Pakistan and a number of other countries were put on the list. Pakistan was included in the list without having its rice tested by the Mexican authorities separately. It was a general assumption, the official said. The official said that the ministry of food, agriculture and livestock (MINFAL) has written a letter through proper channel to Mexican authorities to send a delegation of experts to hold meetings with the Pakistani authorities on the issue. They will be informed about the exact situation. No khupra beetle has ever been found in Pakistani rice, the official said. Before the ban, Pakistan's rice export to Mexico amounted to 273 million dollars. Mainly Basmati was exported to that market. The official admitted that it is not money that concerns us. The actual concern is the bad name Pakistani rice is getting in the international market

Rice Importing Countries

Nigeria and Saudi Arabia are major rice importing countries having 1,398,287 and 1,207,265 tonnes import respectively. Other countries have 23343754 tonnes imports during 2005-06.

Rice Importing Countries

Sr. No.	Countries	Quantity(Tonnes)	%Share
1	Nigeria	1,398,287	5.39
2	Saudi Arabia	1,207,265	4.65
3	Philippines	1,049,165	4.04
4	Bangladesh	991,810	3.82
5	Iran, Islamic Rep of	985,998	3.80
6	Chine	928,207	3.58
7	Cote d'Ivoire	868,321	3.35
8	Brazil	852,079	3.28
9	Senegal	822,545	3.17
10	South Africa	744,839	2.87
11	United Arab Emirates	717,710	2.77
12	Korea, Dem People's Rep	702,000	2.71
13	Japan	662,022	2.55
14	United Kingdom	569,560	2.19
15	Malaysia	523,662	2.02
16	United states of America	480,754	1.85
17	Benin	476,488	1.84
18	France	474,266	1.83
19	Mexico	459,207	1.77
20	Russian Federation	454,712	1.75
21	Ghana	448,430	1.73
22	Indonesia	390,832	1.51
23	Singapore	346,702	1.34
24	Canada	334,319	1.29
25	China, Hong Kong SAR	326,226	1.26
26	Yemen	322,241	1.24
27	Cameroon	301,102	1.16
28	Haiti	298,756	1.15
29	Belgium	298,324	1.15
30	Germany	297,618	1.15
Sub Total		**18,733,447**	**72.19**
Other Countries		**7,215,859**	**27.81**
Total		**25,949,306**	**100**

Source:

DOMESTIC MARKETING OF RICE

The government annually reviews the support prices of major varieties of rice paddy. The support prices are designed to provide a floor to the market during the post harvest period when the market price tends to crash. These are meant to correct the shortcomings of the market and not to replace the market price

The government decided to maintain the indicative prices for various varieties of paddy for the 2005-06 crop at their level fixed crop as given below: -

Variety	Rs./40 Kg.
Super Basmati	560
Basmati-385	460
IRRI-6	360
KS-282, DR-82, DR-83 & DR-92 (FAQ)	360

Marketing Channels

Agriculture can be divided into two equal important phases, namely production and marketing. Scientific crop production and organized marketing are the two pillars on which the success of profitable farming hangs. There are various market intermediaries involved in the marketing of paddy – rice. For the purpose of simplification the marketing process can be divided into two parts.

Producer to Processor

a) Producer → Village Dealer → Commission Agent → Processor.

b) Producer → Commission Agent → Processor

Processor to Consumer

a) Processor → Wholesaler → Retailer → Consumer.

b) Processor → Retailer → Consumer

Marketing Problems

a) At the time of harvest, the price of paddy goes down and in the absence of any Govt. procuring agency it goes even below the support price. Being small in size, farmer's are bound of sell their produce to meet their financial needs. Once the crop is out of the hands of producers, the price starts stabilizing. In this manner, the benefit neither goes to the producer nor to the consumer.

b) Illegal deduction in the name of moisture is made from the producer and other malpractices like chung etc. are also made by the commission agent.

c) Less holding and storage capacity force the producer to bring their produce to the market which creates glut in the market and price goes down.

d) Much delayed payments to the producer by the commission agent or other buyers of the produce.

PROBLEMS OF RICE EXPORTERS AS SEEN BY REAP

a) Export of rice is declining due to absence of long-term policy.

b) The SBP governor had given assurance that rice exporters would have the facility of export refinancing in the US dollar but no such facility was being provided by any bank on the pretext that they had not yet received any circular or directive from the State Bank.

c) The Reap members emphasized on the need that government should announce long-term policy so that Pakistani exporters could survive in the tough competition particularly with India, which is facilitating its exporters by giving them heavy subsidy.

d) The members said in order to promote rice exports the withholding tax may be fixed at 0.75 per cent instead of 1.25 per cent. They said that the war risk surcharge was uncalled for as the ports of Pakistan are functioning in routine.

e) The Reap members also said that they were not getting their due share from EDF due to which their programme of sending delegations to foreign countries and R and D were not being materialized.

PROPOSED MEASURES TO IMPROVE PRODUCTIVITY AND MARKETING

Improved Seed

To enhance the production and distribution of certified seed of rice, the Government should arrange to: -

a) Increase the supply of pre-basic seed by providing additional facilities to the research stations and to allow the private seed companies to produce pre-basic seed to meet their own requirements.

b) Increase credit facilities to seed companies.

c) Provide relief in term of taxes (custom, import duties, income and local taxes) to the seed companies;

d) Check the marketing of seed of unknown quality by un-registered seed companies.

Mechanical Transplanting

To facilitate the introduction and adoption of mechanical transplanter by growers so as to increase plant population in rice field, it is suggested that farmers be trained in raising nursery in plastic tray to facilitate machine transplanting of seedlings.

Soil Management – Use of Gypsum

To encourage the use of gypsum for ameliorating the condition of the marginal lands and blackish tube well water: -

a) Growers be educated about the importance of the use of gypsum by launching promotional campaigns.

b) To reduce the cost of gypsum, incentives in the form of rebates in taxes be provided to the gypsum suppliers.

Use of Zinc Sulfate

a) Extension Wind of Agriculture Department should educate the growers about the benefits of the use of Zinc Sulfate in rice cultivation;

b) Public sector fertilizer distributing agencies be asked to arrange the supply of Zinc Sulfate and propagate its use through aggressive marketing.

Harvesting and Threshing of Rice

Reportedly, harvesting and threshing losses are as high as 15 to 20% with conventional method of harvesting (manual using sickles) and threshing through beating. To check the deterioration of quality and harvesting losses due to poor threshing practices, it is suggested that:

a) The growers be educated for the use of head feeding combines or resorting to manual threshing of the crop immediately after harvest.

b) Incentives be provided to private sector for importing already tested Head Feeding Combines, developed in Japan for supplying to growers on custom hire rates.

c) Feasibility of importing re-conditioned combines be studied and their import allowed, if cost effectives.

Storage

Storage losses incase of paddy food grains in Pakistan is estimated to be about 7 percent. There are six types of organisms associated with storage which can cause losses which are bacteria, fungi, mites, insects, birds and rodents. The activity of these organisms depends on the temperature and moisture content of seed and relative humidity of the environment.

Measures to be taken before storage

a) Clean all storage areas before use. All storage structures should be cleaned and sprayed with an insecticide (e.g., Malathion, I part in 25 parts of water at a rate of 5 litres/100 m2).

b) Fumigate raw seeds at reception, in particular seed of pulses where insect infestation (bruchids) comes from the field.

c) Processed seed should be kept separate from unprocessed or carry-over seed.

Measures to be taken during storage

a) Store cleaned and non-cleaned seed separately.

b) Store different types of seeds, in particular, pulses and cereals will apart for better insect management.

c) Check and monitor seed conditions regularly.

d) Inspect the incoming seed for insects.

e) Inspect stored seed at regular intervals for fungi, insects, rodents, and birds. Insects that grow inside the seed are often not seen until after they have caused damage.

f) Test seed for germination and viability (germination test, Tetrazolium test, accelerated aging test).

g) Keep the storage areas clean at all time.

Weed Control

Agricultural research institutes should undertake the testing of all available weedicides and publicize the use of those weedicides that have minimum impact on growth and other characteristics of rice plant.

Power duster

Power duster