

## Analyzing the impact of Sindh Rice Industries on Economy of Pakistan

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**Abstract:** Rice milling is the oldest and the largest agro processing industry in Sindh province of Pakistan. In Pakistan, rice industries contribute 21.75 percent in the economy and production up to 29.5 percent. This research reveals that total quantities losses due to various post harvest operation vary from 3.12 to 21.4 percent. Rice crop in Sindh has been growing since centuries dates back even before the civilization of Moen-Jo-Daro. Sindh Province produces about 1.461 million tons from an area of 0.544 million hectares with an average yield of 2.686 tons rice per hectare. This research revealed that the quality of seed was not certified on the international standard. The growers and millers were crying about the availability of quality seed. If this position of seed would be continued in the Sindh, it will not only affect on marketing of rice in Sindh but per acre yield will be declined. It has also found that the most of rice industries in Sindh are using out-dated technology such as steel hullers or old rubber shellers for de-husking around 54 percent amongst 850 rice mills of Larkana district. The most of the owners of these rice industries became defaulters of various commercial banks. The data was collected from the primary and secondary sources.

**Key words:** Analyzing, Impact, Sindh rice industry, International standard, shellers.

### INTRODUCTION

Rice is consumed as a major food item after wheat and is third largest crop after wheat and cotton by acreage. It is annually cultivated on an area of around 5 million acres. The crop occupies about 10 percent of the total cropped area. Annual rice production averaged at 4.75 million tons in 2004-5. It accounts for 17 percent of value added by major crops. Punjab is the leading producer of rice in the country. It accounts for 59.5 percent of the total production. The next leading province is Sindh. It accounts 29.5 percent. The remaining provinces NWFP and Baluchistan contribute 11 percent of the total production.

Pakistan ranks 14<sup>th</sup> in rice production in the world. It is the 6<sup>th</sup> largest exporter of rice, holding 6 percent share in rice export of the world. Rice export lowered around 2 million tons in 2004. Pakistan basmati rice has been a favorite among international rice buyers. Following liberalization policy international trade after world trade agreement and China's interest of importing 2.3 million tons of grain rice from Pakistan 2004, Pakistan rice will become highly competitive and has been identified as one of the major commodities for export. This provides us with ample opportunity for development of rice based value added products for earning more foreign exchange.

Many of the rice processing units are traditional huller type and are inefficient. Therefore, there is dire need to establish modern rice mills through which entrepreneurs of rice mills can be able to produce the high capacity production.

#### ***The Production of Paddy in Sindh Province of Pakistan:***

In the Sindh province during the year 1998-2004, an area of 551,000 hectares has been reported under paddy crop. Total production was about 1.5 million tons. The nurseries for paddy start in the month of May and transplanted from 15<sup>th</sup> June to 15<sup>th</sup> July. The harvesting of the crop starts in the months of September and October.

IRRI-6 a heat tolerant variety is one of the major varieties, apart from this; DR-82, DR-83, DR-92 Sada Hayat and Roosi varieties area also grown. The Russian variety, which is originally, a basmati variety imported from Punjab and is being grown as fine type. The fine type variety has different names in Sindh such as Roosi, GM Basmati, Kernel, Supper, Dubai or Basmati-2000. The basmati field is transplanted during 2nd of July and continues till August 15th.

**Status of Rice Milling Units in Sindh:**

Rice crop Sindh has been grown since centuries as its cultivation dates back even before the civilization of Moen-Jo-Daro. Sindh province produces about 1.461 million tons from an area of 0.544 million hectares with an average yield of 2.686 tons rice per hectare. On Pakistan Basis, the percentage share of Sindh in area is 21.75 percentage and in production it is 29.5percentage (1998-2004).

Rice milling is the oldest and the largest agro processing industry in the province. There are nearly 850-registered rice mills as per Sindh Baluchistan Rice Millers Association which brings Rs25000 million in rotation and process milled rice up to 20 lakh ton in a season.

**Rice Milling Operation:**

Human beings cannot consume paddy in its raw form. It needs to be suitably processed for obtaining rice. Rice milling is the process, which helps in removal of hulls and barns from paddy grains to produce polished rice. Rice forms the basic primary processed product obtained from paddy and this is further processed for obtaining various secondary and tertiary products.

**The Basic Rice Milling Process Consists Of:**

Process Definition

1. Pre Cleaning: Removing all impurities and unfilled grains from paddy.
2. De-stoning: Separating small stones from paddy.
3. Parboiling (Optional): Helps in improving the nutritional quality by gelatinization of starch inside the rice grain. It improves the milling recovery percent during deshelling and polishing/whitening operation.
4. Husking: Removing husk from paddy.
5. Husk Aspiration: Separating the husk from brown rice/unhusked paddy.
6. Paddy separation: Separating the unhusked paddy from the brown rice.
7. Whitening: Removing all or part of the bran layer and germ from brown rice.
8. Polishing: Improving the appearance of milled rice by removing the remaining bran particles and by polishing the exterior of the milled kernel.
9. Length Grading: Separating small and large broken from head rice.
10. Blending: Mixing head rice with predetermined amount of broken, as required by the customer.
11. Weighing and Bagging: preparing the milled rice for transport to the customer.

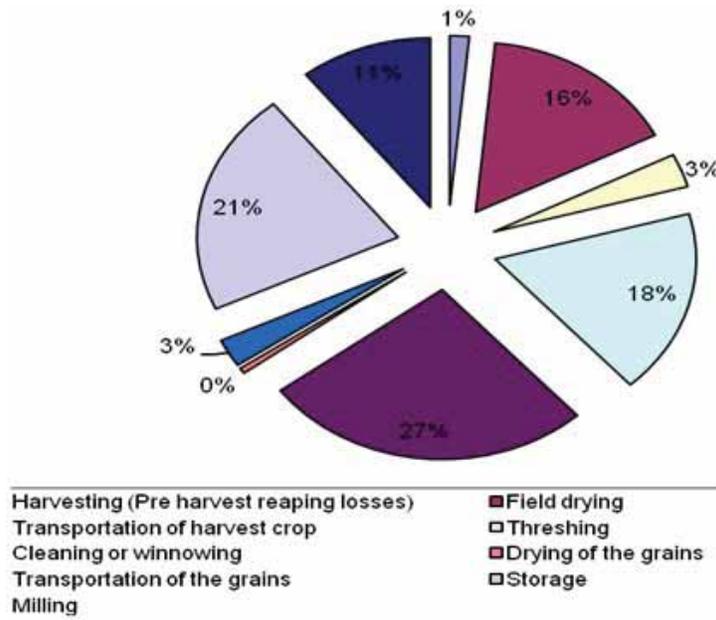
**Post Harvest Losses:**

According to research conducted the total quantitative losses due to various post harvest operation vary from 3.1 to 21.4percent as under.

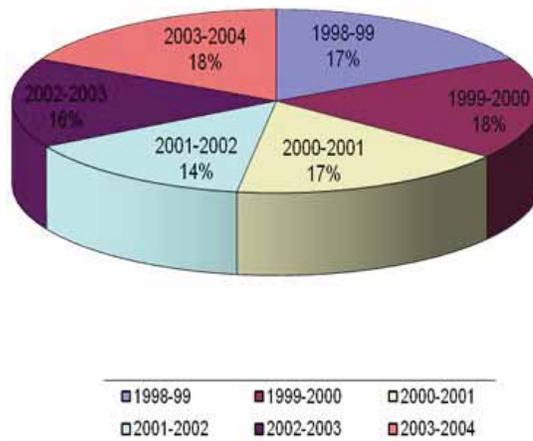
**Table 3.4:** Rice Area, Production & Yield of Sindh and Pakistan

Year	Area in million Hectares			Production in million tons			Yield	
	Pakistan	Sindh	percent	Pakistan	Sindh	percent	Pakistan	Sindh
1998-1999	2.424	0.704	29.04	4.647	1.930	41.29	1982	2741
1999-2000	2.515	0.690	27.43	5.155	2.123	14.18	2050	3070
2000-2001	2.377	0.540	22.70	4.803	1.682	35.00	2020	3115
2001-2002	2.004	0.461	23.00	3.782	1.159	30.60	1887	2514
2002-2003	2.208	0.488	22.10	4.414	1.299	29.43	1999	2662
2003-2004	2.439	0.551	22.59	4.868	1.432	29.42	1995	2599

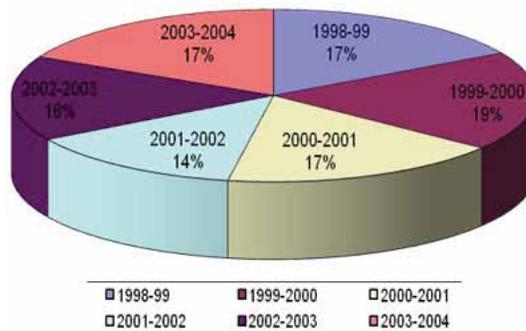
Source: Small Baluchistan Rice millers association



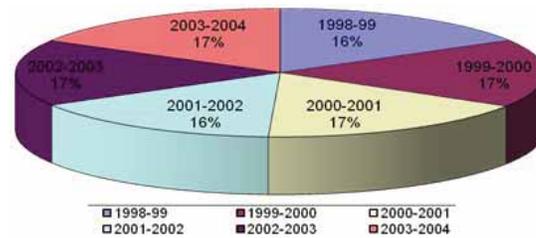
Graph 1: Losses in percent



Graph 2: Area in million Hectors



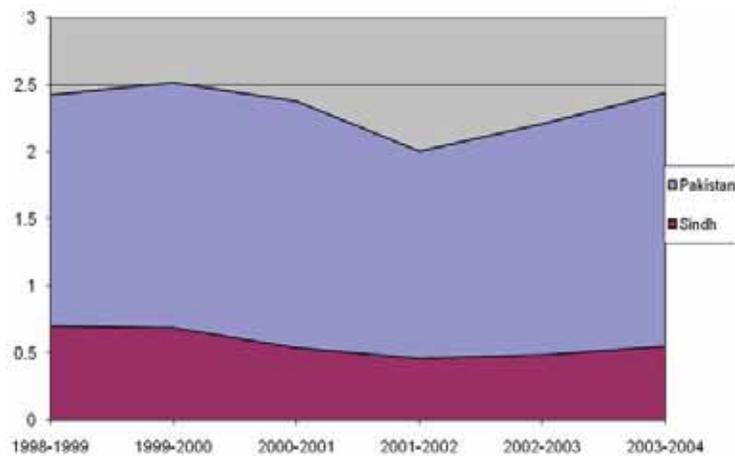
Graph 3: Production in million Tons



**Graph 4:** Yield

**Export from Sindh:**

Total export of rice from Sindh in 1998-2004 was 24lakh Metric ton. 117819 containers of small size were sent from Sindh, each container consists of 220 bags, each bag has weight of 90-100 kg. 58910 large size of container were sent from Sindh, each container consist of 440 bags.



**Graph 5:** Rice area in million Hecters

**Problems and Measures:**

Following are the problems identified during the study and under mentioned measures can be taken to increase the yield.

**Verities/seed**

- Problem of pre-basic quality seed supply.
- Check on the un-approved verities and unregistered seed companies.

**Measures**

- Increase the supply of pre-basic seed to the private sector by raising the credit facilities to seed companies and by providing relief in terms taxes.
- Proper measures should be taken to check the marketing of seed of un-approved verities and unregistered seed companies.

**Sowing/Transplanting**

- Lack of awareness about maintenance of plant population, presently plant population is 50000 per acre its almost half than standard.
- Efficient use of fertilizer, publication and distribution of literature is a major pre-harvesting problem.
- Facing constraints in the commercial adoption of mechanical transplanting.

**Measures**

- Proper Awareness should be created regarding plant population and the standard of plant population, which is equal to 100,000, plants per acre.
- Steps to be taken to create awareness by publishing written material and make it convenient for growers.
- Steps to be taken to encourage private sector and growers for the adoption of mechanical transplanting.

***Harvesting & Threshing:***

- Lack of awareness and habit of using modern combines as growers follow traditional methods specially the use of tractor that results in increase of break percentage.
- Lack of incentives to private sector for importing combines.
- Feasibilities are required for importing reconditioned combines.

***Measures:***

- Educating the growers for adopting the use of combines by arranging rice exhibition stall.
- Providing incentives to private sector for importing already tested head feeding combines developed in Japan and Govt should allow the import of lightweight reapers/combine harvesters from Japan, Korea and China.
- Feasibility of importing reconditioned combines be also studied as to its cost effectiveness and attract private sector in this business.

***Processing of Paddy:***

- Mostly millers and dealers are not using the paddy de-huskers and moisture meters, consequently leads towards the losses.
- Un-availability of loan facility and Taxes for import of modern machinery of processing/polishing etc. (up gradation)

***Measures:***

- For safeguarding the interest of growers, paddy de-huskers and moisture meters should be used in marketing of the paddy.
- Institutional credit for balancing and modernization of rice mills i.e. for installing paddy separators, cleaners, de-stoners and polishers etc be made available. Tax holiday should also be given for establishing such manufacturing industry.

***Issues of Rice Export:***

- Admixture of rice at various stages.
- Quality of rice during threshing of paddy at field level and processing of rice at shellers.
- Cultivation of basmati varieties in non basmati areas.
- Availability of quality seed.
- Pre-shipment inspection of rice.

***Seed:***

Seed is one basic component for cultivation of any crop. In Sindh as per field observation one could easily understand the position of quality seed. For instance it was difficult to identify paddy field in area visited where one could say that it has been grown from a certified seed. Most of the field contained mixture of so many other varieties ranging between low, medium and high. The growers and millers were complaining about the availability of seed. They complained that there was no alternative except this mixture of seed. If this type of situation continued then it not only affect marketing of rice crop in Sindh but per acre yield would further decline and the crop would be more susceptible to diseases.

***Recommendation:***

It is therefore suggested that more seed processing units should be installed, as there is only one seed-processing unit operating in Larkana by RRI Dokri. It hardly covers 2percent of total requirements of five rice-growing districts. Seed processing machinery can cost not more than 1 million. For this rice millers association will make full cooperation as far as land and construction is concerned. If such type of measures were not

taken then the next year crop would rather be a more admixture and prone to many types of disease and ultimately exports from region will be affected.

**Conclusion:**

Rice milling is the oldest and the largest agro processing industry in the province. There are nearly 850-registered rice mills in Sindh Baluchistan. Rice Millers Association which brings RS. 25000 million in rotations and process milled rice up to 20 lakh tons. Among these rice mills almost developed on modern pattern but many of them are using old rubber hullers. There is a dire need to up-grade them on modern pattern to increase the yield by preventing the break percentage. Millers of the area shown interest in, changing the present scenario by granting loan facility step by step. There is an extreme need of awareness program to farmers before harvesting so that moisture percentage may maintain at proper level which consequently decreases break ratio.

Technology awareness to millers is also needed. As many of them even don't know the progress made in the sector.

There is dire need of installing seed processing unit to control the mixture of so many verities. There is also need for installation of rice exhibition stall in collaboration with manufacturers, pesticide companies and agriculture departments to create awareness about new technology. Because due to the lack of awareness the percentage of rice break is 50percent, average recovery of traditionally rice mills using steel hullers for de-husking or old rubber shellers is around 52-54percent among 850 rice mills. Only four rice mills have parboiling unit. Therefore rice millers need more concentration to update the existing old technology into the modern rice mills technology. It is a fact that such technology is available in the international market but due to the lack of information the most of rice millers are not aware. And this happening is due to low educational base of the most of rice millers in Larkana district.

During the year 2000, 0.35 million tons of rice was laying in the rice mills and storages, if the stock was cleared the country could earn 95 millions dollar. But unfortunately, the concerned authorities of Pakistan were reluctant to sell the rice of Larkana in the international markets. It was really cold-shouldered attitude of the government authorities with the rice millers of Larkana. Due to U-turn of government an approximately 90 percent industrial units of rice mills were badly affected and the owners of these rice mills became defaulters of various commercial banks. In the year 2003-4 the trends of rice were downwards by the reason of high prices of IRRI-6 and Pakistan was offering IRRI-6 rice at the rate of \$165 per metric ton, while Vietnam was offering same quality of IRRI-6 at the rate of \$150 per metric ton, and Thailand was selling IRRI-6 best quality in the same market at the rate of \$178 per metric ton.

**REFERENCES**

- Pakistan Economic Review, 1998-2004.
- Sindh Baluchistan Rice Mills Association, various reports of 1998-2004.
- State Bank of Pakistan, various reports of 1998-2004.
- Export Promotion Bureau, various reports of 1998-2004.
- Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Towels and Cleaning Cloths, Revised on July 12, 2002.
- Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Bed-wear & Linen, Revised on July 12, 2002.
- Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Leather Footwear, Revised on July 12, 2002.
- Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Gems & Jewellery, Revised on July 12, 2002.
- Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Marine Fisheries, Revised on July 12, 2002.
- Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Finished Leather, Revised on July 12, 2002.
- Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Curtains & Furnishings, Revised on July 12, 2002.

Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Apparel, Revised on July 12, 2002.

Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Blankets, Revised on July 12, 2002.

Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Canvas, Revised on July 12, 2002.

Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Ceramics, Revised on July 12, 2002.

Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Horticulture.

Government of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), Sector Brief: Dairy.

Muzmdar, D., 1979. "A descriptive Analysis of the role of Small-Scale Enterprise in the Indian Economy", (World Bank).

Kilby. P., 1981. "Small-Scale Industry in Kenya, (development economics department, world banks).

Staley, E. and R. Morse, 1965. "Modern Small-Scale Industry for Developing countries (McGraw Hill).