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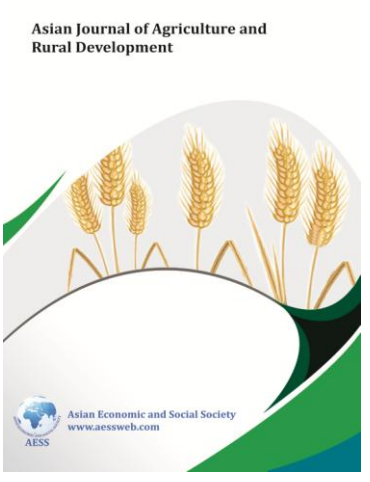

A Case on Problems in Quality and Reasons in Rice - Under the Scheme of UPDS in Tamil Nadu

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A Case on Problems in Quality and Reasons in Rice - Under the Scheme of UPDS in Tamil Nadu

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Abstract

The annual subsidy for the Universal PDS in Tamil Nadu was around 5,000crore, and adding that there was a strong administrative monitoring, vigilance and grievance redresses mechanism operating in the state in respect of UPDS. But the quality of rice distributed through the universal pubic distribution system under the free of cost as on 01 June 2011 scheme was of poor quality and unfit for consumption by the public in the state. Also the price of essential commodities such as Pulses, groceries such as cooking oil and chili powder and vegetables had gone up. As the rice bags were stored by the TNCSC in open granaries, they were exposed to the elements. According to public assessment, the quality of PDS rice was not satisfactory, but it was fair quality rice, as per the Food Corporation of India's standard. But this case focuses on why rice is poor quality and processing paddy to rice methods, value added rice, and some other issues in Universal PDS in the state.

Keywords: Universal PDS, Rice processing methods, Poor Quality, Rice consumption, Smuggled

Introduction

Food is basic need for all human beings and animals. Food security is access to enough food by all people at all time for an active and healthy life. In the past concentrated efforts were made to achieve food security by increasing food grain production. Thanks to the impact of green revolution in India.

Nutrition and food security involving physical, economic and social access to balanced diet, clean drinking water, sanitation and primary healthcare for every child, woman and man is fundamental law in our citizens. But India ranks 94th in the Global Hunger Index of 119 countries in the world, more than 27% of the world's under nutrition population lives in India while 43% of children (under 5 years) in the country are underweight. The proportion of anaemic children has actually increased by 6% in the past six years with 11 out of 19 states having more than 80% of its children suffering from anaemia.

Some developing countries like in China and Brazil have been successful through the progress they have achieved in providing access to food for their people and reducing poverty and improving healthy lives.

A case study of Amartya Sen in his groundbreaking work *Poverty and Famines*, in which he showed that famine was rarely the result of a lack of food, but rather the result of intervening economic factors, such as unemployment, declining wages, and poor food distribution systems and quality of products etc,. The current problem in India is of that nature, it's not so much a lack of nutrient-rich food, but rather a weakness in the food supply chain and low quality of food distributed in India's states.

Public Distribution System in India

Public Distribution System is considered as principal instrument in the hands of government for providing safety net to the poor and the downtrodden. The system serves triple objectives namely protecting the poor, enhancing the nutritional status and generates a moderate influence on market prices. The focus and coverage of PDS have changed widely over the years. FPS was opened to distribute the items of mass consumption in urban areas. Thereafter, it was extended to rural areas. From

the year 1992 Revamped PDS was introduced in those areas where Drought Prone Area Programme and Dessert Development Programme were in operation. Under this system people were allowed to purchase essential items from the FPS at relatively much lower subsidized rates. After, the Chief Ministers Conference held in July 1996, a revised scheme known as Targeted PDS was introduced countrywide with a network of 4.74 lakh FPS. The Targeted Public Distribution System (TPDS) was introduced with effect from June 1997 and recently opined, "There has been an impressive revival in the TPDS across the country that the estimates in the Economic Survey for 2010-11.

UPDS in Tamil Nadu

The Government of Tamil Nadu is implementing PDS since the year 1964. The scheme Village Shop Programme was introduced by the State with the intention to have one shop for one village in order to feed essential articles to rural public. Subsequently the scheme was converted into PDS with the intention of providing essential commodities to the public both in rural and urban areas at concession rate. Since the introduction of TPDS from 1st June1997 the universal PDS is in operation in Tamil Nadu with the Antyodaya Anna Yojana and the expanded Antyodaya Anna Yojana schemes. Under the universal PDS there is no discrimination of families on APL and BPL lines based on income.

The total family cards under the Universal PDS in Tamil Nadu are 1.97 crores as on 31March 2011. There are 30432 (full time 22879) FPS run by co-operatives. More than 96 per cent of the fair price shops of Tamil Nadu are managed by co-operatives. It shows the extensive involvement of the co-operative societies in serving the rural people by taking steps to supply essential commodities in the right time at affordable prices. In addition to the regular and fulltime FPS and Department of Cooperation has established (part time 7553shops) run by FPS in villages. It helps the villagers to purchase the essential commodities in the nearby places. There are 1370(Part time123 and fulltime 1247) TNCSC, 529 women shops and 11 mobile FPS and others 141 shops functioning in Tamil Nadu (Statistical Hand Book of Tamil Nadu 2012).

The goal of the Public Distribution System in Tamil Nadu is to ensure food security to all citizens, particularly poor people, by making available essential commodities of good quality at affordable prices for every month, through fair price shops. The important objective of the UPDS in elimination of chronic hunger and starvation in Tamil Nadu, and ensure availability of essential commodities at the right time, good quality of rice, and other welfare schemes, for every month and years distributed in the state. The annual subsidy for the UPDS in Tamil Nadu was around 5,000crore, and adding that there was a strong administrative monitoring, vigilance and grievance redresses mechanism operating in the state in respect of UPDS.

The quality of rice distributed through the universal pubic distribution system under the free of cost as on 01st June2011 scheme was of poor quality and unfit for consumption by the public in the state. Also the price of essential commodities such as dal, groceries such as cooking oil and chili powder and vegetables had gone up. As the rice bags were stored by the TNCSC in open granaries, they were exposed to the elements. According to public assessment, the quality of PDS rice was not satisfactory, but it was fair quality rice, as per the Food Corporation of India's standard (The Hindu Chennai 2011). But this case focuses on why rice is poor quality and reasons in UPDS in the state of Tamil Nadu.

Rice Production and Distribution

Rice, (*Arisi in* Tamil) also known as Paddy, a raw crop (*Nel* in Tamil*)* is a pre-dominant food for half of the population in the world. It constitutes the staple diet of many of the Asian and African countries. Rice is the most important crop of India and second most important one in the world.

World area under rice cultivation is around 152 million hectares. With an average per hectare productivity of 3.88 metric tons, the global rice production is 628 million metric tons. India and china are the biggest rice producers in the world with a share of 32.12 per cent and 29.68 per

cent of world production in 2011 respectively (World Rice Production Report 2011).

Total rice production in Tamil Nadu during the year 2010-11 is 57, 92,415 tonnes. Production of rice has reduced to 5792 tonnes during 2010-11 from 6611 tonnes in 2009-10. Thanjavur district is at the top with production of 166209 tonnes followed by Thiruvarur district is 160237, tonnes as on 2010-11 (Statistical Hand Book of Tamil Nadu 2012).

Rice is being distributed to the family card holders who have exercised option for rice and to the Anthyodaya Anna Yojana Card holders. Rice is supplied free of cost with effect from 01.06.2011.

The Present Month of March 2011 allotment of rice is Anthyodaya Anna Yojana scheme 65,262 tonnes, BPL: 1, 04,936 tonnes, APL: 1, 26,255tonnes, Annapoorna scheme 454 tonnes, and the rice allotted from the Central pool through Food Corporation of India.

Rice Consumption in UPDS

According to a latest report of the National Sample Survey Office (NSSO), the incidence of PDS purchase of rice was highest for Tamil Nadu 91percent of households, followed by Andhra Pradesh 84percent, Karnataka 75percent, Chhattisgarh 67percent, Kerala and Odisha 51 and54percent and Maharashtra 47 percent in rural pockets.

For the urban sector, this incidence was again highest for Tamil Nadu 67 percent households, followed by Andhra Pradesh and Kerala about 43 percent, Chhattisgarh 35 percent, and Karnataka 25 percent. Interestingly, in all four Southern States, less than 10 percent of rice consumption in the rural sector was home produced.

Tamil Nadu scored the highest rank as UPDS here offered greater cost advantage than the market rates. Tamil Nadu ranked highest in terms of both incidence of Universal PDS use and share of Universal PDS in consumption, the ratio of unit values (market unit cost to PDS unit cost) was 19.7 in the rural sector and 25.6 in the urban sector.

The PDS share in total rice consumption in 2010-11 was about 23.5 percent in the rural sector and about 18 percent in the urban areas, a sharp increase from 13 percent in the rural sector and 11 percent in the urban during the year 2009-10. Universal PDS is more effective in the State.

Problems in Paddy to Rice

Direct purchasing centre of paddy in Tamil Nadu should be a user friendly to the farmers during the raining season. But the humidity of paddy should be 17 to 20 percent as per the government order at the time of purchasing. It is meaningless because raining session it’s not possible why? Because the humidity of paddy will be 20 to 24percent during the raining season and farmer’s side do not have adequate place to dry the paddy, and storage, need more manpower of farmers. To maintain all those things during the heavy rain period it’s not possible.

The purchasing centres are not accepting above 20 percent humidity paddy. So paddy packs are immersed in the water and started sprouting in the agriculture land areas. Farmers are pushed to sale the paddy with minimum price because of their loan problems and poorness.

The purchased paddy is not go to the direct rice mill, because it is storage to keeping the paddy for long period will be spoiling the quality of paddy, because the rice is bad smell, colour, taste, etc. It is main problems in long period storage. Something it was issued the consumers by ration shop they are not using the less quality of rice. So some persons and block dealers buying the low price of rice and (some mortgage their ration cards for money) to smuggling the ration rice products from the place to another place particular in Tamil Nadu to Kerala, Andhra Pradesh, Karnataka neighbouring states.

Due to hilly terrain, paddy cultivation is less in Kerala, leading to shortage and ‘Boiled rice is sold at Rs 2 through the PDS in the State, but the people seem to like our variety in Kerala. In Andhra Pradesh, raw rice was the main crop. But, people in the coastal areas prefer the boiled variety. A “big fish” owns mills in places like Bangarpet in Karnataka, where the PDS rice is

taken for polishing to get rid of the brown stains on the grain. Once polished, this rice is brought sold in the open market in Bangalore cites (The New Indian Express and Dinamalar Tamil daily news papers 26 July 2011).

What lures black marketers to Tamil Nadu is the abundance of rice in the State and low cost, as well as free of cost in rice. For instance, a total of 3.5 lakh tonnes of rice were made available to all the ration shops in every month. "Over the decades, the loopholes in the system have led to a flourishing black market, which in turn made ordinary men into millionaires" (Dinamalar Tamil daily news paper 2012).

The another reasons the paddy go to grinder section in rice mills, rice is damaged too small and rice to spoil the total rice production. At this rice mills is also very old machines, shortage of power problems, need more labour work, and no proper way of processing.

In Tamil Nadu warehousing centres owned 55 and hired 3 and then the storage capacity total is 638686mts as on 31.3.2011. This is very low level warehousing centres and capacity of storage in the state.

How to Secure the Paddy to Rice

Above 100 ton purchasing centre should have machine to remove the dust, straw, mate, stone, and other inside, must to clean the proper way of paddy. The centre those who are doing less than 100 ton, they should send the paddy to the big centre with is 18 hours. They should not keep more than 18 hours. Because immediate start with processing.

Paddy (rough rice) must be milled after harvesting and drying. In milling process Uneatable hulls and bran are removed from paddy and white rice is produced. Paddy to rice milling process consists of five main operations: It is Cleaning, Shelling, Parboiling, Drying, and Grinding systems.

Cleaning

Paddy comes to the milling system it may contain some traditional Indian materials such as stones, stalk, dust, soil particles, and weed seeds; therefore, it is necessary to pass the paddy though a cleaning system. This cleaning system can be a simple sieve or a progressive system.

Shelling

In this stage, the most outer rough shell of paddy is removed. Rubber roll sheller is the most common machine that is used for paddy shelling; however friction type whitener is sometimes used as a Sheller. Paddy goes between two rubber rollers that are rotating in opposite direction with different velocities. There is a small clearance between the rollers so that when paddy passes through, it is subjected to some shear forces.

Parboiling

In this stage, streaming section, there is no standard technique of parboiling in relation to water temperature and length of time of the process. Parboiling originated in the Indian Sub Continent about 2,000 years ago and the technique was carried out by Indian migrants and communities wherever they went.

Techniques in which the paddy rice is steeped in hot water for a long time impart a strong flavor and yellow color to the product. In other areas where these characters are not required, the paddy rise is simply boiled until the husks burst, after which the product is dried. This technique only partly gelatinizes starch in the rice grains so that the grains are not fully hardened.

Parboiled rice offers a number of advantages over and above untreated milled rice. Parboiling hardens grain and thereby decreases susceptibility to breakage during the de-husking process and damage by insect pests in store. In addition, it enhances the nutritional quality and value of rice by promoting movement of nutrients from the outer coverings (bran) and into the grain, so they are not removed in the bran during de-husking. On the other hand, oil inside the grain moves out. The reduced oil content lowers the risk of rancidity and improves storage life.

Drying

Drying was carried out in two passes using a cross-flow dryer. The drying experiment in thin layer was conducted as per a central composite rotatable design in response surface methodology with 3 factors (drying air temperature, tempering time and moisture

reduction in first drying pass) at 5 levels. The variables chosen for the experiment were drying air temperature (40–70 °C), tempering time (60–240 min) and moisture reduction percentage (3–10%) in the first pass of drying. Optimization of drying variables was done through the use of a desirability function by combining all responses into one measurement.

The desirability functions were minimum drying time, maximum brown rice yield and head rice yield. Total drying time ranged from 35 to 132 min in two stages of drying, while in continuous drying it varied from 41 to 204 min. Head rice yield ranged from 39.77 to 71.56%. Optimum conditions for drying of paddy grains were found to be temperature of 58.3 °C, 7.13% moisture reduction and 148 min tempering time. At optimized conditions, total drying time and head rice yield were calculated at 53.1 min and 54.53%, respectively.

Grinding

And final grinding section (rice mills) the machine will remove stone, soil then it goes to dust removing machine. There are machine will separate the head rice and broken rice and dust, then it send to another machine to separate rice and paddy dust. The unpolished rice will be packed and kept whenever necessary; the rice will be polished and used to any time as old rice. This rice is good quality and reliability to all customers.

Advantages

The purchasing centre should accept farmers above 20 percent of humidity paddy, it will be solve the problems of poor farmers and start with immediate processing. Because this processing method to more increasing rice production and quality of rice distributing in rations shops.

The quality rice will be issued by ration shop. The consumer uses the price less rice without waste and they are ready to buy the rice at fixed price so the smuggling will be prevented through this method.

It will reduce the economical crisis of government of Tamil Nadu.

Drawbacks

The purchased paddy is not send for grinding section soon; instead they kept it for long time in godowns.

The paddy packed kept one by one for a height. This is will increase the pressure over the packs, its leads to change in colour, taste, block colour of paddy, etc. It affects the quality of paddy and also the rice.

Usage of polythene covers to pack the paddy with no ventilation in godowns also affects the paddy quality and reduction in rice weights.

Because of above said the reasons, rice will be broken, and useless, during the grinding and it affects the rice production and customers are not like in ration products of rice.

Godowns will not have adequate place to store the paddy packs.

If any problems in rice mills like shortage of power and repair of machines etc, during grinding which affects monthly and yearly targeted rice production.

Do not continue periodic checks of paddy stored in godowns to prevent pest attack. They should not be careful while procuring paddy as rice.

Guidelines for Food Grain Storage

Keep storage areas clean. This means sweeping the floor, removing cobwebs and dust, and collecting and removing any grain spills.

Clean storage rooms after they are emptied and this may include spraying walls, crevices and wooden pallets with an insecticide before using them again.

Placing rat-traps and barriers in drying and storage areas. Cats deter and help control rats and mice.

Inspect storage room regularly to keep it vermin proof.

Inspect the stored seeds once a week for signs of insect infestation. When necessary and only under the direction of a trained pest control technician, the storage room or the seed stock may be sealed with tarpaulin and treated with fumigants.

Solution to the Problems

Purchased paddy should send for cleaning, streaming, drying, grinding, and production of rice soon. It prevents economical loss.

Modern rice mills will be opened in remote villages.

So the unemployment problem will be solving in villages.

Many workshops will be developed for maintenance in modern rice mills.
By doing all these measures the transportations and road facilities also increased in rural areas.

Rice Delivery Mechanism in Tamil Nadu

The Department of Civil Supplies involved in the implementation of universal PDS in Tamil Nadu. In Additional two systems run in the Tamil Nadu Civil Supplies Corporation (TNCSC) and the Registrar of Cooperatives implemented by the state. TNCSC plays an active role by procuring, storing and processing the paddy required in addition to the FCI allotment of food grains. The Universal PDS channel is unique in a couple of respects. First, private parties are not allowed to run FPSs and 96 percent of operate in the co-operative sector and most of the rest are TNCSC run. In the second unique feature is the extension of cash credit facility through District Central Co-operative Banks to the lead societies. This cash credit system limit to fix at Rs 140/- per card to lead societies. The everyday sale proceeds of FPSs are remitted by the link to their cash credit account with district central cooperative banks. Third method also introduced in the state it is 'option card system'. Under this system the cardholders who do not require rice would get additional qualities of sugar or kerosene. The sugar option cardholders would be entitled to 3kgs of sugar in addition to their regular quota and foregoing their rice quota and kerosene option cardholders would get 5liters of additional kerosene in lieu of rice.

Value-added Rice Products

Rice is an important of value added product because waste products can be put to a huge variety of uses. Usually broken rice grains is convert in to biscuits, snacks, breakfast-cereals, beers, wine and distilled spirit in to by product of rice. A wasted rice meal is used for animal feed. Rice hulls with their high silica content have been used in a wide variety of situations including cement tiles and cement breeze blocks and glass industry. Rice straw is used to straw-board of building industry.

Conclusion

The success of the scheme in Universal PDS in the state relies heavily on groundwork. Consumers' expectations were rising day by day, as their living standard had improved. The basic quality norms should be increased to meet their expectations. Rice is reaching 317,000 tonnes more than 1.97 crore cardholders and 31,439 outlets in 33 districts in the state. Paddy to rice went through several layers of processing after it reached the universal public distribution system as rice. Quality experts from central institutions explained the measures to be taken to maintain the quality of food grains in India.

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