Introducing millets into Public Distribution System (PDS): A Pilot project by WASSAN in Andhra Pradesh

WASSAN has initiated a pilot to introduce millets into public distribution system (PDS) in Anantapur district of Andhra Pradesh in 2009 with the financial support from World Bank under Andhra Pradesh Drought Adaptive Initiatives project (APDAI) with the support from Department of Civil Supply, Government of Andhra Pradesh and District Administration of Anantapur district.

Millets are highly nutritious and contain high amounts of fiber, vitamins and minerals. The grains also have low cholesterol. These are non acid forming soothing food and are easy to digest. Moreover, millets are best suited to rainfed/ dry land conditions. Less water consumption, low external inputs because of fewer incidences of pest & diseases are the additional benefits with millet production. The byproducts/ residues may also be used as fodder/ feed for livestock.

In spite of several health and economic benefits, millets are disappearing from the people’s diet and farm lands. It is the same case with Anantapur, as with the other backward districts in Andhra Pradesh. Three decades back, 75% of the cultivated land was under millet crops in Anantapur district. It was drastically reduced and reasons for fall in cultivation and consumption could be attributed to:

- More emphasis on rice for ensuring food security as part of Public Distribution System (PDS)
- The launching of Rs.2/ kg rice scheme in 1984 by the then Government of Andhra Pradesh
- Centralized nature of the PDS design
- Government support to groundnut crop in terms of subsidies

The easy availability of ready to cook, low cost rice influenced the consumption pattern in the rural areas. This in turn influenced the cropping pattern from millet based subsistence farming to groundnut based monocropping. The continuous monocropping of the Groundnut has endangered the soil fertility and consequently the productivity of the Groundnut crop on which the economy of the district is dependent.

Rice production needs large quantities of water, which has resulted in overuse of precious ground water. The continuous consumption of polished rice has also led to increased incidence of diseases like diabetes. This resulted in huge financial burden on the rural communities. Supply of rice at subsidized rates is also heavy burden to the Government. The cost of production of rice and subsidies in the form of electricity, fertilizers etc. are comparatively higher.

In view of nation’s food security and the declining ground water scenario, Dr. M.S. Swaminathan’s report on ‘National Commission on Farmers’ suggested for bringing in the millets under the purview of the PDS. Once the millets are made available for consumption to the public, it was envisaged that it may trigger the production of the same.
A target of 10-20% of the food grains substituted with low cost and highly nutritious millet food grain would ensure the following **multifarious benefits:**

- Food and nutritional security of the households
- Price support/ demand augmentation to rainfed farmers for cultivation of millets
- Substantial savings on water as no special irrigation is required for majority of the millets
- Saving on land – as most of the millets are intercrops with pulses/ other crops
- Savings in the public expenditure in terms of subsidies like electricity, fertilizers etc.
- Promotion of diversification of the rainfed agriculture

In this context, a pilot programme was proposed under the Andhra Pradesh Drought Adaptation Initiative (APDAI) with the support of Department of Civil Supply, Government of Andhra Pradesh and District Administration of Anantapur district.

**Objectives of the Pilot Project**

1. Promoting the millets food to ensure the food as well as nutritional security of the households through the Public Distribution System.
2. Exploring the possibility of evolving a decentralized multigrain and need based PDS suiting to the local conditions.
3. Bringing back the millets in the production system and to make the agriculture in the district more economical and sustainable.
4. Developing rural entrepreneurship development and creation of rural employment, In the long run, through millet processing.

**Piloting millets in PDS:**

It was decided to take up the pilot in two mandals, covering a total of 2157 households with a population of nearly 8000, under the purview of 5 Fair Price Shops. A need assessment for millets grains was undertaken in the jurisdiction of three fair price shops in Nallacheruvu and two fair price shops in Gandlapenta mandals, covering 20 villages.

**Details of PDS Area Covered under Millet PDS**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the Mandal</th>
<th>Name of the village with Fair Price Shop</th>
<th>Fair Price Shop No.</th>
<th>No. of habitations covered under the Fair Price Shop</th>
<th>Total no. of Households covered under each Fair Price shop</th>
<th>Total population covered under Fair Price Shop</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nallacheruvu</td>
<td>Nadimpalli</td>
<td>17</td>
<td>4</td>
<td>412</td>
<td>1466</td>
</tr>
<tr>
<td>2</td>
<td>-do-</td>
<td>Ubicherla</td>
<td>16</td>
<td>3</td>
<td>482</td>
<td>1749</td>
</tr>
<tr>
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<td>-do-</td>
<td>Pallevandlapalli</td>
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<td>4</td>
<td>422</td>
<td>1618</td>
</tr>
<tr>
<td>4</td>
<td>Gandlapenta</td>
<td>Tallakalva</td>
<td>2</td>
<td>5</td>
<td>485</td>
<td>1700</td>
</tr>
<tr>
<td>5</td>
<td>-do-</td>
<td>Somayajulapalli</td>
<td>1</td>
<td>4</td>
<td>356</td>
<td>1465</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>20</strong></td>
<td></td>
<td><strong>2157</strong></td>
<td><strong>7998</strong></td>
</tr>
</tbody>
</table>

Household level requirement of millet grains per month was worked out. Details of households covered under the respective Fair price shops were collected from the Mandal Revenue Officer of the respective Mandal. Meetings were held in the villages with fair price...
shop dealers, MMS & VO representatives and community to explain the millet promotion plan. Under each fair price shop 40-70% households were surveyed. Household wise millet food grain indent was drawn as per pre-designed format and finally, finger millet, sorghum and bajra were selected for promotion.

**Status of House Hold Food Needs:**

It has been estimated from a preliminary study that in the rural areas an agricultural family of 5 member food grain requirement ranged from 75kgs – 90kgs of Rice per month. Millets consumption varied from house hold to house hold. The main millets consumed in this area are Ragi and Sadda in the order of priority, Jonna consumption was limited. The Ragi was requested by 98% and Sadda by 90% of the households surveyed.

The proportion of millets consumption for household food needs varied from as low as 1% to 10% of the total monthly food grain requirement. Monthly requirement for Ragi was estimated to be on an average 5kgs, Jonna & Sadda consumption was on an average 2–3 kgs.

**Choice of Food grains for Distribution:**

From the house hold level survey conducted the monthly millets grain supply was decided as follows.

- Finger millet : 5 kgs/Household
- Bajra : 2 Kgs/Household
- Sorghum: 1 kg/ Household

**Steps followed in Millets PDS implementation:**

While the survey was under taken in the villages, permission to pilot the distribution of millets through the PDS was taken from the Commissioner civil supplies. The permission was provided by the Commissioner to involve the local officials of department of civil supplies to facilitate the pilot.

**Implementing the Pilot**

A meeting was conducted at Kadiri in Anantapur in which MMS representatives, local Mandal Thasildars, Fair Price shop dealers and also the person in charge of the local Mandal level stock point from both mandals have participated. It was to orient them and also to discuss about the modalities for the implementation of the Millet PDS Pilot. As per their suggestion, an intensive campaign to reach the people in all the 20 habitations was planned through various means like;

- Wall writings
- Village level meetings
- Pamphlet distribution to all the House holds
- Habitation wise campaign about the millet PDS through Auto with mikes.
- Banners in the FP shops.
- House to house coupon distribution to reach all Households under each of the Fair price shops.
Modalities for ‘Introduction of Millets into the PDS’
All the households irrespective of type of ration cards were eligible for the millets. It was decided that procurement of millets was to be done through a committee, consisting of MMS representatives (2), VO representative (1), and one representative each from District Civil Supply department and WASSAN. Procurement was to be either from the whole sale market/ directly from the farmers. Millets from whole sale shops in Anantapur/farmers would be transported to Mandal Level Storage (MLS) points. MLS point for Nallacheruvu is Tanakallu; and for Gandlapenta is Gandlapenta. APDAI project contributed for the cost of purchasing of millets, transport, loading & unloading costs. Transportation from MLS (Mandal Level Stock) point to fair price shop by end of every month along with the transport of regular commodities of PDS would be taken care by the Civil Supplies department. Transport, loading & unloading cost were borne from APDAI project.

Records maintained:
- Coupon for each HH to claim the monthly allocation of millets grains.
- FP shop wise sales register to record the House hold wise millets grain distribution details.
- FP shop wise monthly consolidated grain distribution record.

Respective Village Organization (VO) would distribute coupons to the households. The millets would be distributed from fair price shops to the households against these coupons, along with other commodities, from 1st to 18th of every month. MMS would engage a Community Resource Person (CRP) to distribute the coupons and to document the required data for the study in prescribed formats. A banner about the sale and a brochure were made available in the village before the sale started. The sale was also announced by way of Tom Tom.

Issue Price/ Subsidy:
The millets were supplied at Rs. 3/- less per kg on the market price. Care was taken that the supply cost was Rs. 3/- less than the cost of each grain in the local market. Accordingly the subsidy cost was decided irrespective of the purchasing cost, transport cost, loading unloading cost etc. Total subsidy per kg of millets supplied is as follows:

a) Cost subsidy on actual price
   (Rs. 3/- less than local market price) (Rs) : 3.00/-

b) Total Loading & Unloading charges
   (From trader to MLS point 8 paisa + MLS point to fair price shop 8 paisa per Kg) (Rs) : 0.16/-

c) Transportation charges
   (From trader to MLS point Rs.1/- + MLS to Fair price Shop Rs. 0.7/-) (Rs) : 1.07/-

d) Commission to dealer /kg (Rs) : 0.30/-

Total subsidy per kg (Rs) : 4.53/-

Grain supply arrangement:
A grain purchase committee was formed with the MMS representative, local MMS Staff, and the resource person from WASSAN to organize the procurement and supply of grains to the FP shops. The traders in different parts of the district were contacted for the supply of
Millets grains as per specification in sacs printed with the details of grains. The average supply price from different sources was ascertained. Ragi and Bajra procurement was done locally. As jowar is not produced locally in the Kadiri region it was decided to procure the same from traders in Anantapur. The Seed bank established as part of the APDAI project in one of the villages came forward to supply the grains. The seed bank was provided with a revolving fund.

The price for the supply was worked out based on the local market price and also other handling cost. Since the quantities supplied are small compared to the rice distributed through the PDS, it was decided to provide the transport charges as per the prevailing local charges. The loading and unloading expenses were borne by the project.

**Responsibilities of Dealer:**

- Grains will be released against the DD submitted in advance to MMS
- Responsible for handling and storage loss beyond 2%
- Show the left over quantity against the supply and this left over grain to be returned to MMS.
- Maintaining SALE REGISTER in the shop.
- Cooperating with APDAI project in providing the required data/information regarding the study
- Publicity of the programme in the village

**Entitlements**

- 2% additional quantity of each type of grain will be given towards handling losses (without charging)
- Commission @ 30 paise per kg of each grain sold will be given from APDAI
- MMS will supply the sale registers

**Price and Grain off take:**

In the first 2 months the grain was distributed at Rs.8 per kg. During the period of the pilot on an average approximately 38% of the households took grains. The average quantity of grains taken was 45%. Based on the response from the people during the interactions the price was reduced to Rs.6/kg from the third month. The reduction in price had direct influence on the off take. In the Nallacheruvu mandal the off take reached nearly 100%, however, in Ubicherla it was only 40%.

**Response from different stake holders:**

Interactions were organized with people from different sections of the society, of different social and economic backgrounds. Most of the people felt it was a very good initiative. The poorer section was happy that they were getting millets at an affordable price. Because of this, the regularity of use of millets in the daily food consumption has improved. In Pallavandla pali, earlier the villagers had to go nearly 10 kms to Nallacheruvu to buy Ragi and Sadda. And this was for purchase of ½ kg or 1 kg at a time. Because of the pilot, they were able to get monthly millet grain requirement at one time. It was interesting that 1 out of 4 wanted raise in the quantity of Sadda provided. Dealers were satisfied with the quality
of grain supplied. However, they were not happy with the partial off take of the monthly allocation.

**Impact on the local production system:**
As part of the pilot it was attempted to work out mechanism for the local procurement of millets from the farmers within or neighbouring areas of each mandal. Ragi and Sadda were thus procured by the seed bank from the farmers in the pilot villages. The assurance to the farmers of farm gate procurement and advance announcement of minimum support price resulted in farmers taking up cultivation of Ragi and Sadda in their irrigated fields. Production of Ragi increased 3 times in Gorantlavari palli and other nearby villages due to the assured market support for supplying to the PDS. Nearly 40 tons of ragi was procured from the farmers.

The initial survey during the planning phase recorded nearly 95% of the household inclined to purchase the millets. On the other hand the data collected from the individual FP shops have shown lot of variation in the sales of the millets grains. It was expected that the off take will match with the requirement recorded. Following reasons were identified for the gaps noted above, from the interaction with the villagers:

- The main reason was millets distribution did not match with the timing of paddy rice distribution. Due to this, people had to visit the FP shop many times. This was difficult as some of the habitations were 2 to 4 kms away from the FP shop.
- One of the members of the household needed to come to purchase the grain and they had to sign at the time of grain purchase. During the peak of the kharif cropping the members had difficulty in visiting the FP shop due to work pressure.
- Some of the households, especially those with 2 or 3 members, felt that 2 - 3 kgs Ragi and 1 – 1.5 kgs of Sadda per month were too small a quantity for the extra time & effort to visit the FP shop to purchase.
- Some of the people felt that the millets grains introduction was fairly new and also they are priced higher than the paddy rice.
- Some families having cards are currently not staying in the village as they have migrated for work.
- Millets grain sales are not a priority for the dealers, and there was delay in the payment by the dealers.

**Emerging Framework for Promotion of Millets:**
The pilot experience has provided a basic proof of concept of the feasibility of inclusion of millets into a decentralized Public Distribution System. Millets can be produced, procured and distributed locally within a district. The process is much easier in case of millets like Ragi (finger millet), Bajra and Sorghum where processing is not involved. Decentralised operations in this pilot experience, has made the process quicker, less transport intensive and minimizes the storage requirements. The procurement operations can also be decentralized to community based organizations. It has also generated local employment and incentives to the farmers.

The elasticity of supply is also substantial as the local demand at a remunerative price has given spurt in allocation of productive agriculture land and irrigation to millets. This may eventually lead to increase in area under millets and diversity in crop systems. The following broad
elements of a framework are emerging for a comprehensive program to revive millets in consumption and crop systems.

**Introducing Millets into PDS:**
The country must seriously consider improving nutritional standards of its food grain operations. An additional 15 kgs of millet grain in PDS allocation will bring in several nutritional benefits to the poor who are depending substantially on PDS rice. A planned geographical spread in the introduction of millets into PDS may be a good strategy - starting with presently millet consuming areas and expanding to areas which have shifted recently and to the new areas. Millets should be introduced into the PDS in a comprehensive package that includes – consumer awareness campaign, production enhancement - including appropriate system for easy access to seed, price incentive and local procurement, storage and supply systems. Piece meal introduction would not serve any purpose.

Millet production and consumption has lot of diversity in the country. It is important to consider locally consumed millets be giving prominence in the PDS operations.

Millets introduction into PDS should be taken up in a phased manner – starting as an additional allocation over and above the allocation of rice/wheat and gradually substituting rice to certain percentage, if required.

The system works the best in a Decentralised Public Distribution System – where the operations of enhancing production, procurement and distribution are localized (within a block or at the most in a district). This will also enable locally preferred millets to be part of the PDS and opens up diversity within the PDS in the country. Introduction of processed millets like Rawa will increase the consumption substantially. Decentralised PDS will open up several employment and business opportunities locally.

**Pricing and Production**
The issue price can be pegged above rice (Rs.2 per kg) but, substantially below the market price (i.e. 3 to 4 rupees below the local wholesale market price). Equating the subsidy to paddy rice would increase the consumption to a higher level.

Price incentive for farmers will bring additional area, allocation of good land and irrigation for millets. The crops will find their own niche production sites once the prices are remunerative. The cost of operations will be lower, as no processing is involved in some of the millets.

In the field experience it is observed that offering wholesale market price at farm-gate and assuring procurement in itself has driven the production. The response of production to price incentive is reasonably high. Many of these crops being short duration can be quickly taken up by farmers. *Establishing easy access to quality seed systems is a key determinant of success.*

Several experiences and research by various organizations across the country shows the desirability and, social and economic benefits of introducing millets into PDS. The Millets Network of India (MINI), a national network anchored by the Deccan Development Society, has been campaigning for the purpose.
The experience in Anantapur shared in this document, brings out the consumer acceptance, economic viability and administrative feasibility of introducing millets into PDS and also brings out the possibilities of surplus production through area expansion (into quality lands) within the district given a price incentive.

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