The Amrutham Nutrimix Consortium

Decentralized Production and Distribution of Supplementary Nutrition by community-based Enterprises in Kerala

The Integrated Child Development Services (ICDS) provides Supplementary Nutrition for children in the age group of 6 months to 3 years in the form of Take Home Ration (THR). The Social Welfare Department, Government of Kerala has adopted the decentralized model of production and distribution of the THR in collaboration with Kudumbashree – State Poverty Eradication Mission.

From 2006 onwards Kudumbashree collaborates with the Social Welfare Department for the supply of Take Home Ration for Supplementary Nutrition in the Anganwadis in the State. The Amrutham Nutrimix is a cereal-based powder mix developed by the Central Plantation Crops Research Institute (CPCRI) Kasargode, Kerala. It's constituents are:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>100 gms of Amrutham Nutrimix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>45 gm</td>
</tr>
<tr>
<td>Soya Chunks</td>
<td>10 gm</td>
</tr>
<tr>
<td>Bengal Gram</td>
<td>15 gm</td>
</tr>
<tr>
<td>Groundnut</td>
<td>10 gm</td>
</tr>
<tr>
<td>Sugar</td>
<td>20 gm</td>
</tr>
</tbody>
</table>

The mix has nutritional contents as follows.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Amount per 100 grams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calorific Value (Kcal)</td>
<td>391.00</td>
</tr>
<tr>
<td>Carbohydrate(%)</td>
<td>69.47</td>
</tr>
<tr>
<td>----------------</td>
<td>-------</td>
</tr>
<tr>
<td>Fat(%)</td>
<td>5.44</td>
</tr>
<tr>
<td>Crude fiber(%)</td>
<td>1.05</td>
</tr>
<tr>
<td>Calcium</td>
<td>191.23 mg</td>
</tr>
<tr>
<td>Iron</td>
<td>8.9 mg</td>
</tr>
<tr>
<td>Total protein (gm %)</td>
<td>16.14</td>
</tr>
</tbody>
</table>

**Micro Nutrients**

<table>
<thead>
<tr>
<th>Carotene</th>
<th>71.6ug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiamine</td>
<td>0.3g</td>
</tr>
<tr>
<td>Riboflavin</td>
<td>0.1 mg</td>
</tr>
<tr>
<td>Niacin</td>
<td>5.3mg</td>
</tr>
</tbody>
</table>

- Fortification of Nutrimix is under progress with the support of WFP.

Currently, each child is provided with 3.5 kg of Amrutham Nutrimix a month, at the rate of 135 grams per day for 25 days. Kudumbashree units supply Nutrimix to 32,922 Anganwadies in the State at the rate of Rs. 70/- per kg.

**Amrutham Nutrimix Enterprises and Common Facility Centres**

- 248 Micro Enterprises units owned and operated by 2023 women.

**Amrutham Nutrimix Consortium**

- Registered Society - the State level network of Nutrimix Units started in Feb 2011
- A self-governing, democratically functioning producer collective with the purpose of strengthening the Nutrimix entrepreneurs and their businesses.
- Responsible for ensuring quality of the Nutrimix product and dealing with issues related to procurement, storage, production and payments.
Production

- Own storage, processing and packaging facility, built to specifications provided centrally.
- “Nutrimix Production Protocol” – Standard Operating Procedures developed jointly by the Social Welfare Department, CPCRI and Kudumbashree lays out the processes to be followed by production units.

Infrastructure for storage and production

- Storage space for raw-materials, separated from the production facility
- Washing and drying facility
- Roaster
- Pulverizer
- Sifter
- Cooling tray
- Packing table
- Band-sealing machine
- Storage space for packed product

Procurement

- District level procurement of wheat through SJD and FCI.
- Consortium facilitating bulk procurement of other raw materials.

Quality Control

- Unit follows the Govt. Approved SOP to ensure the quality.
- Kudumbashree District Mission & Amrutham District Consortium conduct first level periodic checks on raw materials and production facilities.
- Joint Inspections, as surprise visits are conducted by an approved committee consists of SJD Programme officer and Kudumbashree District Mission Team.
- Food and Safety officials conduct regular visits in the units and assist them for improvement
- District wise Food and Safety Trainings are periodically given to all unit members
- Sample test from each batch is tested at the Government Analytical laboratory by the concerned ICDS Supervisor.
- Introduced grading system of Nutrimix units in which units are evaluated as per the rating scale.
- Units are categorised as A, B &C grade and assistance given for upgrading the lower level units.
Distribution

- District Mission assigns service area- Panchayaths to each unit.
- Division of service area is proportionate to group capacity
- Monthly indent given by ICDS Supervisor
- Payment released by Gram Panchayath/Municipality and delivered through ICDS supervisor to individual units.

Capital Investment

- Fixed capital investment, at current rates, needed for setting up an Amrutham Nutrimix Unit is minimum Rs.7 lakh (Excluding building).
- Working capital requirements are estimated to be about Rs.6.5 lakh for handling volume of 10 MT per month

Capacity Building and Support Services provided by Kudumbashree Mission

Kudumbashree Mission has provided a wide range of services to initiate and nurture the Amrutham Nutrimix enterprises. Some of the key initiatives of the Mission in this regard are listed below.

Training & Capacity Building

- General Orientation and Entrepreneurship Development training to the entrepreneurs
- Skill Training in Nutrimix Production in collaboration with CPCRI, Kasaragod
- Performance Improvement Training on a periodic basis; on issues such as Business Management, Accounting, Production Protocol, Product Diversification etc.

Monitoring and Support Mechanisms

- District level Monitoring Committees under the leadership of Social Justice Department for supervision of functioning
- Supervision by Kudumbashree Community Development Society (CDS) at the LSG level
- Liaison with Social Welfare Department at the State level and ICDS Project functionaries at District and sub-district levels
- Support of Kudumbashree Micro Enterprise Consultants (MEC) for streamlining business operations
- Support of Kudumbashree Accounts and Audit Services (KAASS) for regular audit of the enterprises
Networking

Three tier system, Unit level representatives / District / State level consortiums governed by elected members in association with Kudumbashree Mission facilitate the smooth functioning in each layer.

Future plans

• Nutrimix fortification is piloting in Wayanad district and need to be expanded to all districts after feasibility analysis.
• Value addition and business expansion
• Accreditation of labs for sample testing need to be finalised from SJD
• Implementation of Raw materials purchase from Supplyco/ Govt sector
• Baseline Study for strengthening the activities of Nutrimix