NUTRIMIX: A SUCCESS SAGA

The food supplement industry in Kerala is growing at a very fast pace especially with Multinational companies coming to the forefront and it is at this juncture that Kudumbashree came up with the innovative idea of making the production of baby food a micro enterprise activities. Amrutham Nutrimix is a food supplement suitable for six months to three year old children prepared by the Kudumbashree microenterprise units, consisting of NHG members, prevailing in every district of Kerala with the patronage and guidance of Kudumbashree Mission. It has been pioneer initiative in the field of rural development, financial inclusion and most importantly in the battle against malnutrition.

The Integrated Child Development Services (ICDS) provides Supplementary Nutrition for children in the age group of six months to three 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 of Kudumbashree-State Poverty Eradication Mission from 2006 onwards.

Amrutham Nutrimix as a Take Home Ration (THR) is supplied to Anganwadis by the units, from where the children get it for free. On the other hand, the units get paid by the ICDS supervisor through Panchayath. Nutrimix’s popularity has increased over the years for the standardised quality and the unit’s capability to meet the demand with adequate supply under all circumstances.

And as a remarkable achievement Kudumbashree has delivered 4050kg of Nutrimix to the Child Fund India, a global child development organisation representing the voice of the deprived, excluded and vulnerable children in India, regardless of their race, creed and gender, for their Jhabua Centre located at Madhya Pradesh. It is for the first time that Kudumbashree is receiving an order from outside the state.

Evolution
Nutrimix is a cereal-based powder mix developed by Central Plantation Crops Research Institute (CPCRI), Kasargode. Kudumbashree started to give nutritious food through the Nutrimix units since 2007. Before that a private company called Christy Fried gram Industries, supplied food supplement to some districts. When Kudumbashree took over the supply, Government cancelled the order from outsiders. In 2005 Government calculated that, Kerala has 5, 80,000 children belonging to the age category of 6 month to 3 years, and thus aimed to provide 2.5 kg nutritious food per month to each child estimating 14, 50,000 kg to be produced, and for that purpose planned to set up 1500 units across the state and each unit to produce 1000 kg per month. Kudumbashree mission started training the interested members in 2005. Initially they created 2 training centres at Kasargod and Kayanna (Kozhikode) and gradually increased the number in other districts also. Through those centres training was given to 2500 members. It was held during December 2005 to August 2006. Nutrimix production was officially started in December 2006 onwards with some units. In the beginning they sold products on door to door basis and collected payment from customers only. Parents were reluctant to take product as they were concerned about the quality of product. After 3 months Kudumbashree Mission and Government came with an idea to supply Nutrimix through ICDS and payments were facilitated by Panchayaths itself.

1. Started in 2006 in Kasaragod, with the help of Central Plantation Crop Research Institute (CPCRI), where 10-15 MECs got required training to start the enterprise. Kudumbashree has decided to start Nutrimix units across the state hence they had implemented MEC groups and trained them and send them across the Kerala to give training. They went to various parts of Kerala and counselled the beneficiaries on how to start a unit. According to their
initial calculation Rs 2, 20,000 rupees was needed to start a unit. The First Nutrimix unit has started in Kasargod named Keerthi.

2. From 2007-2011 units got established across of Kerala.

3. In 2011, the concept of Consortium got introduced in the structure of Nutrimix. It acts as a self-governing, democratically functioning producer collective with the purpose of strengthening the Nutrimix entrepreneurs and their businesses. And it is responsible for ensuring quality of the Nutrimix product and dealing with issues related to procurement, storage, production and payments.

4. Soon after building the consortium, the state of Kerala got saturated with the supply of Amrutham Nutrimix by the existing units.

Timeline

- 2006: Nutrimix units started functioning
- 2007-2011: Units got established throughout Kerala
- 2011: Nutrimix Consortium Started
**Product Profile**

The Amrutham Nutrimix supplement is provided to all Anganwadis of Kerala under the THRS scheme on a fortnight basis for children of 6 months to 3 years age group. The product is available in 500gm packets. Nutrimix can be used without any age limit. It can be having either directly or to mix milk or water. The main 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>

**Tested components in a Government Lab**
- Protein & Moisture Standard value- Protein 12-15 gm and moisture should be less than 4.5.

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>Fat (%)</td>
<td>5.44</td>
</tr>
<tr>
<td>Crude fibre (%)</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>Nutrient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carotene</td>
<td>71.6ug</td>
</tr>
<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 Anganwadis in the State. Price per kg is Rs.70.
A nutritious food should satisfy the following parameters-

1. The content should be nutritious.
2. It will be pre-cooked.
3. It must be ready to eat.
4. It must be digestible.
5. It should be within reasonable price.

CPCRI has considered these parameters before making the product and has proved to be very successful in the pilot survey when it was supplied to the underweight children in Anganwadis of Bedadukka Panchayat. The children were able to gain normal weight within four weeks of the course and they have also made some changes according to the responses.

Current district wise statistics of units

<table>
<thead>
<tr>
<th>District</th>
<th>No of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVM</td>
<td>18</td>
</tr>
<tr>
<td>KLM</td>
<td>10</td>
</tr>
<tr>
<td>PTA</td>
<td>8</td>
</tr>
<tr>
<td>ALPY</td>
<td>14</td>
</tr>
<tr>
<td>KTYM</td>
<td>10</td>
</tr>
<tr>
<td>IDK</td>
<td>13</td>
</tr>
<tr>
<td>EKM</td>
<td>10</td>
</tr>
<tr>
<td>TSR</td>
<td>20</td>
</tr>
<tr>
<td>PKD</td>
<td>19</td>
</tr>
</tbody>
</table>
In Kerala, currently **232 Micro-Enterprise units** are there owned and operated by **1680 women**.

### Production and Financial Status of past 3 years

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity of Nutrimix Supplied per month</th>
<th>Quantity of Nutrimix Supplied</th>
<th>Turn Over per month</th>
<th>Total Turn Over</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2014-March</td>
<td>1300000</td>
<td>15600000</td>
<td>72800000</td>
<td>873600000</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 2015- March</td>
<td>1300000</td>
<td>15600000</td>
<td>72800000</td>
<td>873600000</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
### Procedures to start a Nutrimix Unit

- Those who belong to the age group of 18-35 can apply for this. There was no discrimination in candidature on gender, caste or any other basis. The basic norm of starting a unit is, there should be at least 5 members in a unit and if it is 10 or more, they will be insisted to start a Common Facility Centre (CFC).

- To start the unit, the members will need to have business plan, through which they will get the loan from bank. Trained Micro Enterprise Consultants or MECs help the unit members to make this business plan.
Of the total project cost, 10% will be the investment of the members, 50% will be bank loan and the balance amount will be given by Kudumbashree as subsidy. Initially they gave 50,000 rupees per unit to promote the programme, as Start up Fund.

- To start a unit three kinds of license would be needed, such as, Panchayath license, Small Scale Industry license and Food Safety and Standards Authority of India’s License.

- Among the unit members there would be one president, one secretary and three other members in charge of raw materials, marketing and quality control respectively.

- To start a unit, first thing that needs to be shaped is land. Unit members do not get any help in form of loans or subsidies to purchase land or building. It’s completely on their own, and that’s why most of the units are running in rented buildings or land.

- Unit purchases the machineries most of the times from the local dealers. To run a standard unit, following machineries will be needed; roaster, pulveriser, sifter, cooling tray, packing table, band sealing machine and storage space for packed products.

- Before the consortium came into existence the units used to procure raw material by themselves but now consortium helps to procure the raw material with the help of FCI, which supplies wheat. Other raw material units can buy as per their convenience either from local dealer or in accordance with the consortium.

**Activities of group members**
**President**- Looks after all activities of the enterprise and will presided in the meetings.

**Secretary**- Looks after all financial activities and calls meetings which will be held once in a month. **Raw Material Procurement**- Looking after the raw materials needed for the production and purchasing according to the requirements.

**Quality control**- Kudumbashree mission has strictly ordered all the units, that they will have to get a sample tested from each batch of product from a recognised laboratory.

**Marketing**- To distribute the products to the Anganwadis and she is also looking if it any other product produced by the unit.

**Training**

**GOT** – It is the training program will be happened in Panchayat level it has a 2 day training attended by members.

**EDP**- It is organized in the district level. In this module 2 days training would be given to the members

**Production**

**Pre-production**
- District level procurement of wheat through 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.

Production
- Each unit set up own storage, processing and packaging facility
- Production has been going according to the SOP

Post Production
- Distributing to Anganwadis
- Payments given by panchayat through ICDS supervisor
• 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

**Nutrimix Grading**

Grading is being conducted in the month of October 2017 to improve the functional efficiency of the units bringing in transparency in various areas connected with the manufacture of the product. Grading will help foster healthy competition and professionalism needed for self-employment initiatives. Only units that secure ‘A’ grade as per ratings given jointly by Kudumbashree, Social Justice Department and also by the Food and Safety Department will get an opportunity to manufacture and distribute Aamaritham Nutrimix. Units that get ‘B’ and ‘C’ grades will stop getting subsidised wheat. These units will be allowed to function in some other operational area. The guidelines include basic facilities, clean surroundings, cleanliness in units and equipment, electrification, hygiene, proper records, price hike, functional excellence and team spirit. Units that get B and C grades will get another opportunity to improve their performance.

**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 Grama Panchayath /Municipality and delivered through ICDS supervisor to individual units.

**Capital Investment**

• Fixed capital investment, at current rates, needed for setting up a 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.

1. Training & Capacity Building
   
   • General Orientation and Entrepreneurship Development training to the entrepreneurs

   • Skill Training in Nutrimix Production in collaboration with CPCRI, Kasargode

   • Performance Improvement Training on a periodic basis; on issues such as Business Management, Accounting, Production Protocol, Product Diversification etc.

2. 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

3. 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**

• Price revision of Nutrimix including GST.

• Upgrade all the Nutrimix units to ‘A’ grade.

• Nutrimix fortification is piloting in Wayanad district and need to be expanded to all districts after feasibility analysis.