

IMPACT STUDY REPORT

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| Topic | : Impact Study of Nutrimix Units |
| Year of commencement of the Project | : 2007 |
| Funded | : Kudumbashree |

Overview of the Project.

Kudumbashree enterprises produce ‘Amutham’ Nutrimix, the Take Home Ration provided through the Anganwadis in Kerala. As of now, 1569 NHG members are earning their livelihood through 241 Nutrimix units. An average of 23,000 metric tonnes of Nutrimix is being produced and distributed through these units (annually). Nutrimix units is one of the best government convergence programmes of Kudumbashree with an average yearly sales of Rs 169 crores

Children between the ages of six months to three years in all local self-government institutions get the supplement through anganwadis with the support of the Women and Child Development Department as part of the Union government’s Take Home Ration Strategy. Under the Integrated Child Development Scheme (ICDS), Nutrimix is provided as free take-home ration to children through anganwadis, fortnightly. A cereal-based powder mix, it was developed by the Central Plantation Crops Research Institute (CPCRI) at Kasaragod in Kerala. The first production unit was set up in the district in 2006 and within a year, all districts had Nutrimix units.

Neelofar Illiaskutty, chief technical officer, Krishi Vigyan Kendra (KVK)-CPCRI, who was instrumental in formulating the mix, efforts were on from 2002 to come up with a food supplement for children. A three-month trial at an anganwadis at Bedadukka Panchayath in Kasaragod with a mix containing wheat, soya, coconut sugar, jaggery, Bengal gram, groundnut and the like. It was found to be effective in improving the health of children, especially those with low birth weight. The Panchayath came forward to train self-help groups to make the mix. Then the project was rolled out across Kerala through Kudumbashree Mission. Now Kudumbashree network’s 241 Nutrimix units across the 14 districts have been manufacturing adequate quantity of the nutritious supplement for the children in 33,115 anganwadis in the State.

Objectives.

The objective of the study is to analyse the impact of Nutrimix units in the livelihood promotion and

Methodology: The study is based on the factual reports identified from analysing various relevant secondary documents, websites, newspapers etc and through interaction with District teams.

Amrutham Nutrimix.

Amrutham Nutrimix is a supplementary food provided to children in the age group of 6 months to 3 Years through Anganwadis. The Amrutham powder produced by the Kudumbashree units is made available as take home ratio through the Anganwadis functioning under the ICDs Department.

Distribution process: Kudumbashree unit collect amrutham requirement from ICDS supervisor. The wheat allotted from FCI is distributed to all units as per the Amrutham Requirement from each Panchayaths. After that our Units started production and distribute the Amrutham packets to anganwadis. Anganwadi teachers will distribute the product to the beneficiaries.

The ingredients in 100 grams of Amrutham Nutrimix are wheat (45 grams), soya chunks (10 grams), Bengal gram (15 grams), groundnut (10 grams) and sugar (20 grams). Currently each child is provided with 3.5 kg of Amrutham Nutrmix a month, at the rate of 135 grams per day for 25 days. Kudumbashree units supply Nutrimix to 33,115 Anganwadis in the state through 241 Nutrimix units in the state. The price is Rs.70/kg. The Mix has the following nutritional content

| Parameter | Amount per gram |
|------------------------|-----------------|
| Calorific Value (Kcal) | 391.00 |
| Carbohydrate (%) | 69.47 |
| Fat (%) | 5.44 |
| Crude fibre (%) | 1.05 |
| Calcium | 191.23gm |
| Iron | 8.9mg |
| Total protein (gm. %) | 16.14 |

| Micro Nutrients | |
|-----------------|-------|
| Carotene | 71.6g |
| Thiamine | 0.3g |
| Riboflavin | 0.1mg |
| Niacin | 5.3mg |

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, Panchayaths 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.

Grading and Fortification

Grading of Nutrimix units was introduced for ensuring the quality of the Nutrimix units. Grading was done by District mission in the beginning of every year. The units are graded to ensure the quality of the Nutrimix. This is done following a joint inspection by the Kudumbashree, Women and Child Development Department, and Food Safety officials to look into aspects such as hygiene, quality control, bookkeeping, production, and teamwork. A team consist of ADMC (Micro-enterprises), DPM (Micro enterprises) 2 officials from ICDS department and Food Safety officer visit all units and grade them according to the SOP formulated by Kudumbashree mission. After the grading process units were graded as A, B, C based on the marks received on grading. B, C grade units are allowed for a 3 month period for rectifying the problems and Regarding will be carried out after 3 months. The same situation is prevailing in the units after the stipulated period district mission has the right to shut down.

In 2019, Department of Women and Child Development, Government of Kerala, United Nations World Food Programme (UNWFP) and Kudumbashree Mission went for fortification of Nutrimix by adding 11 micro-nutrients to it. Fortification is a practice of deliberately increasing the micronutrient content of a food, so as to improve the nutritional quality of food supply and provide a public health benefit with minimal risk to health. The pilot study was done at mananthavady in wayand. 163.5 metric tonnes of fortified Amrutham Nutrimix has been produced by the Snehaddeepam unit in Wayanad and distributed to all 148 Anganwadi centres in the project area. The pilot project has efficiently demonstrated that, Take Home Ration can be easily fortified by addition of micronutrient premix to the existing recipe of Amrutham Nutrimix while using the same equipment's available at the Nutrimix production unit. The beneficiary response and acceptability of fortified Amrutham as observed during the pilot

project has been highly encouraging. As part of scaling-up the Take Home Ration fortification initiative across Kerala, the project will be initially extended to all Nutrimix production units in Wayanad district followed by other districts in the State² units in Malappuram have secured ISO certification in Food safety Management. Now Kudumbashree is supplying Nutrimix to 33,115 anganwadis in Kerala, covering nearly five lakh children. Each child is provided with 3.375 kg of Nutrimix, per month. Certain Nutrimix units are into production of therapeutic food for pregnant and lactating mothers in tribal areas of 11 districts. Ingredients of the mix include rice, wheat, black gram, soya bean, groundnut, sesame, Bengal gram and green gram.

Achievements

Nutrimix units have been started as micro enterprises units of Kudumbashree all over Kerala since 2006. Today there are 241 units operating in Kerala, providing a steady income to 1578 women with an average yearly sales of Rs.169 crores. Now it becomes one of the best government convergence program of Kudumbashree. One of the major advantages of Kudumbashree Nutrimix units is that there is a fixed market called Government for the Nutrimix product. So there is no need to worry about the marketing side. They have assured market. Nutrimix units have grown exponentially from 2006 to 2021. Many of the units that used to operate in rented premises are now operating in their own buildings. All units follows Standard Operating Procedures. Some of the units installed fully automatic machineries for the production this means that at no stage of production does the work have to be done by hand. Amritam Nutrimix comes to our homes with such quality. Presently not all units have this feature. But most probably all units can be fully automated within one or two years. Fortification of nutrimix by adding 11 micro nutrients is started in the year 2019. Two of Kudumbashree Nutrimix units have secured ISO (International Organization for Standardization) Certification. Sanjeevani and JARMS Nutrimix units from Malappuram district are the two units that have secured ISO 22000:2018 certification of ISO in Food Safety Management.

Current District wise Statistics of Units.

| District | No.of Units | No.of Women working |
|----------------|-------------|---------------------|
| Trivandrum | 18 | 93 |
| Kollam | 10 | 95 |
| Pathanamthitta | 8 | 49 |
| Alappuzha | 14 | 135 |
| Kottayam | 10 | 60 |
| Idukki | 13 | 71 |
| Ernakulam | 10 | 90 |
| Thrissur | 20 | 139 |
| Palakkad | 19 | 133 |
| Malappuram | 43 | 256 |
| Kozhikode | 26 | 189 |
| Wayanad | 10 | 63 |
| Kannur | 28 | 143 |
| Kasaragod | 12 | 62 |
| Total | 241 | 1578 |

Challenges.

1. Although there is an SOP for production, it is not possible to guarantee the same quality of product in all units.
2. All other ingredients except wheat are procured by the respective units. Bringing these into a unified system will be more beneficial to the units. Difficulties in bringing them into a unified system
3. Delay in Payment from ICDS.
4. Quality Assurance
5. Issues among the unit members badly affect the units
6. Although units are started as Group enterprises, in some units one person will act as the owner and others be treated as labour. This may leads to conflicts.