

Western University

Scholarship@Western

---

Business and Social Enterprise

Western Heads East

---

2012

## **APYN/ Chemchemi Probiotic Yoghurt Malnourished Children's Feeding Programme (Aged 0-5) Report**

African Probiotic Yoghurt Network (APYN)

Follow this and additional works at: <https://ir.lib.uwo.ca/whebussoc>

---

## APYN/ Chemchemi Probiotic Yoghurt Malnourished Children's Feeding Programme (Aged 0-5) Report



### Background/Context:

Research evidence and current health reports clearly demonstrate that the prevalence of child malnutrition remains high in Tanzania, especially within the under 5 age group. In Tanzania, over half of all child deaths are attributable to malnutrition. According to data from the Tanzania Demographic and Health Survey (TDHS) 2004/05, about 40% of children under five years of age are stunted, i.e., they are short for their age, which is an indicator of chronic undernutrition. About 3% are wasted, i.e., they have low weight-for-height, which is an indicator of acute undernutrition (National Bureau of Statistics (NBS) [Tanzania] & ORC Macro, 2005). Approximately 22% of children are underweight (low weight-for-age), which is a composite measure of long- and short-term undernutrition. By geographic distribution, the nutritional status of rural children is significantly lower than urban children.

Extensive research has shown that malnutrition and lack of proper nutrients at an early age has long-lasting negative implications for a person's physical and cognitive development which are extremely difficult to reverse or overcome.

As the incidence of severe acute malnutrition in Tanzania remains a significant public health challenge, Chemchemi, a local, Tanzania organization that works towards improving the health status of under-five malnourished children through food supplementation programmes partnered with the African Probiotic Yoghurt Network (APYN) to address issues of malnutrition in the Buswelu and Buhongwa (Sahwa) Wards of Mwanza, Tanzania through the distribution of probiotic yoghurt food supplements.

### Chemichem

ChemChem is a registered non-government organization based in Mwanza, Tanzania that aims to reduce maternal and under-five and infant mortality rates in rural areas of Mwanza region. Specific activities implemented by the organization include improving the nutritional status of severely and moderately malnourished children, increasing the number of pregnant women who give birth at health facilities, providing health education to women attending antenatal and prenatal clinics, helping impoverished mothers develop small enterprises, intensifying networking on Early Childhood Development issues, educating women on their rights to live free from violence and increasing understanding amongst communities of the seriousness of issue violence against women, maternal death and undernourished children.

## **APYN**

The Fiti Community Health Probiotic Yogurt and Economic Empowerment Project is a collaborative effort between the University of Western Canada, Western Heads East Project (WHE), the Tanzanian National Institute for Medical Research (NIMR), Kivulini Women's Rights Organization, Tanzania (Kivulini) as well as various women's and youth groups and other community actors. In December 2011, the Kivulini Women's Rights Organization facilitated the registration of the African Probiotic Yogurt Network (APYN) through which probiotic kitchens are created, supported, and quality control is maintained. The aim of APYN is to improve community health and nutrition (especially people living with HIV/AIDS (PLAWs), malnourished children and pregnant mothers), empower disadvantaged women and youth economically, to provide information on HIV/AIDS, and to prevent and mitigate violence within the community. Local women's and youth groups receive training on how to produce nutritionally dense, health benefiting probiotic yogurt to sell to the community at a low cost and to distribute free of charge to PLWAs, malnourished children and pregnant mothers. The probiotic yogurt improves community health by providing a supplemented nutritious food option that has many proven health benefiting properties.



**Preparation of Probiotic Yoghurt for Malnourished Children, Buhongwa (Sahwa), Mwanza.**

## **Probiotic Yoghurt and Health Benefits of Probiotic Yoghurt**

Probiotics are "Live microorganisms which when administered in adequate amounts confer a health benefit on the host" and are used to both prevent and treat disease. Health benefits of probiotics include: reducing gastrointestinal disorders; increasing immune response; reducing diarrhoeal episodes; preventing urinary tract infections; reducing bacterial vaginosis, a condition which predisposes women to HIV/AIDS and other STIs; slowing the process of morbidity (sickness) and mortality (death) of people living with HIV/AIDS to name a few. Probiotics are especially beneficial for people living with HIV/AIDS who often experience disease symptoms such as low immune response, diarrhea and gastrointestinal difficulties

Although probiotics may be administered in various forms such as capsules, powders, enriched yogurts, yogurt-like products, and milks, yogurt was chosen as the delivery medium for the probiotic bacterium for the project as there has been a long history of fermented foods in Africa. Yogurt is also quite easily digestible and nutritionally dense as it is a good source of protein, fat, carbohydrates, calcium, magnesium, riboflavin, thiamine, as well as vitamins A, B-6, B-12, C, D and E. Probiotic bacteria are added to the yogurt in order to create an edible and digestible delivery medium.

Micronutrient fortified probiotic yogurt can improve nutritional status, especially among children and enhance immunity parameters in subjects with HIV/AIDS and other immunodeficiencies. Probiotic yoghurt has been proven to improve nutritional

measurement parameters such as height, weight, and BMI values of children. Evidence from various studies suggest that the inclusion of probiotic bacteria in therapeutic feeds may reduce the incidence and severity of diarrhea and other infections, and improve the rate of recovery from malnourishment.

### **Overall Goal of the Chemchemi/ APYN Malnourished Children Feeding**

**Programme:** To reduce the numbers of malnourished children and improve general health in the Buhongwa (Sahwa) and Buswelu Wards in Mwanza, Tanzania through the distribution of probiotic yoghurt to malnourished children under the age of 5 years while at the same time supporting the economic empowerment of women and youth through small-scale probiotic yoghurt economic enterprises.

### **Objectives of the Chemchemi/ APYN Malnourished Children Feeding Programme:**

1. To improve the nutritional status of 150 under-weight children in the two wards of Bugogwa (Sahwa) (85) and Buswelu (65) in Mwanza, Tanzania.
2. To increase the weight, height and overall BMI status of 150 under-five children who are receiving probiotic yoghurt.
3. To empower 21 women and youth economically through the production, sale and distribution of probiotic yoghurt from the Buswelu and Sahwa Groups.



**Malnourished children drinking probiotic yoghurt, Buswelu Ward, Mwanza, Tanzania**

### **Beneficiaries:**

Direct beneficiaries of this partnership project include 150 malnourished children and a total of 21 APYN Probiotic Yoghurt Kitchen Group Members. This includes 65 children from the Buswelu Ward and 85 children from the Buhongwa (Sahwa) Wards in Mwanza, Tanzania who regularly receive probiotic yoghurt free of charge. The malnourished children are provided 2 cups of probiotic yoghurt per week which greatly increases their caloric and nutritional consumption while at the same time providing many other health benefits. The incomes of 21 APYN Probiotic Yoghurt Group members (14 from Buswelu and 7 from Buhongwa (Sahwa)) are also increased as they are financed to provide the probiotic yoghurt to the malnourished children at market cost.



**Young boy drinking probiotic yoghurt in  
Buswelu, Mwanza, Tanzania**

**Results (so far):**

APYN/Chemchemi registered and enrolled a total of 150 malnourished children in the Malnourished Children Probiotic Yoghurt Feeding Programme, 98 who were categorized as moderately malnourished and 52 who were categorized as severely malnourished to receive probiotic yoghurt 2 times per week.

Preliminary reports from Chemchemi tell us that many of the children are recovering and progressing much faster than they were before they were consuming probiotic yoghurt. For instance, their weights and heights are climbing at a much steadier pace than before.

Also, there are less reports of other associated illnesses such as malaria and other diarrheal episodes. Further scientific measurements and results will be available after a longer period of consumption and monitoring.



**Children Drinking Probiotic Yoghurt,  
Buhongwa (Sahwa), Mwanza, Tanzania**

**Special Thanks:** Special to the Rotary Club of London South, Ontario, Canada for donating the funds to support the feeding of 150 malnourished children in the Buswelu and Buhongwa (Sahwa) Wards of Mwanza, Tanzania. Your kindness and generosity is improving child health and malnutrition in Mwanza, Tanzania and is supporting the economic empowerment of 21 APYN Probiotic Yoghurt members. The donation of \$1680.00 CAD will support 150 children, to receive probiotic yoghurt twice per week for a total of 11 months!

Special thanks also to the University of Western Canada, Western Heads East Programme for continually supporting the development and sustainability of the APYN probiotic yoghurt projects through the transfer of technology and education and through assistance with global networking.