



Beans and corn



Drying millet



Dried fish



Vegetables at Bwaliro School



Cabbage and avocado

### January 2014 Children of Bukati (COB) Newsletter

Dear Donor, thank you so much for your support of the children at the Bwalio Primary School, the High school and University Students and the community development projects. The summer of 2012 was a busy one at the Bwaliro Primary School. Through a CIDA funded grant called Students for Development, three University of Guelph students lived and worked in the community for three months. Each student had area of personal expertise that they used as the focus on their work (to see a fabulous video about their trip, go to this link <http://www.youtube.com/watch?v=74UINIggzQ>). I am pleased to share some of their research findings.

Saqib Mannan is a MSc student in nutrition. The information provided came from his work. Saqib wished to determine whether or not the children in the community were meeting their nutritional needs. He worked with 22 community health workers in the villages to gather information from the mothers and guardians about what the children ate at home. The women provided a 24 hour recall of what the child ate during the previous 24 hours.

The lunch program added to the children's home meals did help the children meet many of their nutritional needs. Compared to eating only at home, on school lunch days, orphaned and vulnerable children were more likely to meet their nutritional needs for protein, all essential amino acids, carbohydrates, vitamins B1, B6, folic acid, and iron. However, even with the lunch program, the children were still deficient in energy, fat, fat soluble vitamins, vitamin B12, calcium, zinc, and iodine.

The children's nutritional needs could be met if the lunch program is changed. Important changes could include adding animal sourced foods such as milk and small fish to the lunch. While these are expensive additions to the lunch program, we must consider doing so if we are to maximize the benefit of the lunch program.

Other key changes are to add locally grown vegetables such as kale, cowpea leaves, sweet potato leaves, and/or millet to the diet. The advantages of these changes are that these are currently being grown at the Bwaliro Primary School compound. It will be important to work with the Program Committee at the school to redesign the lunch program to meet these nutritional needs. We can also investigate how to include additional fat, energy, and fat soluble vitamins to the diet. It is possible to purchase cooking oil that is enriched with vitamin A. That is likely a good first step. Also, we need to find a source of iodized salt that can replace the salt that is currently being used at the school.

On days when there was no lunch program at the school, more orphaned and vulnerable children were deficient in essential amino acids (building blocks of protein) than the non-orphaned and non-vulnerable children. However, many children in both groups were deficient in fat, fat-soluble vitamins, and many minerals. The local marketplace does sell nutritious foods that would address the nutritional deficiencies of the children but there could be several reasons why the mothers and guardians did not purchase these foods. Perhaps the families are eating only food that is grown on their farms and there is no money available to buy additional food. Some families may purchase food but still have a limited budget, therefore meeting all nutrient requirements impossible. For example, oil fortified with vitamin A is available in the market place but is definitely more expensive than non-fortified oil. Animal and fish based proteins are seen as too expensive to include in the diet even when, by our standards, powdered milk seems inexpensive. We also have to consider the family's food preferences. Finally, we need to investigate whether it is simply a lack of knowledge that is driving the nutritional deficiencies. Ideally, nutrition education will be provided to the school children, school staff and parents and guardians about these nutrition deficiencies and how they can be addressed both at home and at school.

In May and June 2014, two other University of Guelph students will live and work in the Bwaliro community. One student is studying International Development and the second student is in Biomedical Sciences. These students will complete the next phase of Farming for the Future project and follow-up on the findings of this nutrition study. Together they will investigate the opportunity to ensure that the lunch program provides a diet that meets all of the children's nutritional needs. The second step will be to share the results of this study with the school members and the broader community to raise awareness and hopefully improve the diets of all of the children.

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If you have donated through Canada Helps, you will have already received a tax receipt by email. Otherwise, your receipt is enclosed. Donations are accepted by cheque made out to Stone United Church with COB on the memo line. Please mail the donation Marg Baker (see address in paragraph above). Credit card donations are accepted through Canada Helps, on-line via the website. Thank you for your ongoing support of these children.

We at the Children of Bukati teams, in Kenya and Canada wish everyone a New Year of peace, joy, love, laughter and good health.

Sincerely Cate Dewey ([www.childrenofbukati.com](http://www.childrenofbukati.com))