Nutrition Education in the Context of Community Agriculture Programs

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ECHO shares information to help farmers grow food more effectively, with minimal purchased inputs. However, unless training is also given around nutrition, farmers and their families will not benefit optimally from changes that are made. At the November 2017 ECHO International Agriculture Conference, Kathy Bryson shared ideas for how to integrate practical nutrition education into community agriculture programs. Bryson is the International Training Director at SIFAT (Servants in Faith and Technology), and works in Central America. Information from her talk is summarized below. You can watch Bryson's presentation on www.ECHOcommunity.org (https://www.echocommunity.org); a pdf of the presentation is also available.

Global significance of malnutrition

Globally, one in three people suffer from malnutrition. Malnutrition takes a number of different forms, including stunting (being shorter than average), wasting (being thinner than average), and being overweight. Wasting is an obvious form of malnutrition, affecting about 8% of children globally. However, hidden hunger and micronutrient deficiencies are much more prevalent, affecting about 50% of children globally. In fact, economists at the 2012 Copenhagen Consensus (https://en.wikipedia.org/wiki/Copenhagen_Consensus) declared micronutrient interventions the most cost-effective way to address the world's biggest challenges. Vitamin A deficiency affects a third of children between 6 months and 5 years of age, including almost half of children in sub-Saharan Africa (48%) and Asia (44%). Vitamin A helps strengthen the immune system in the body, so supplementation can help reduce the number of deaths from infectious diseases. (Malnutrition and infection exacerbate each other; if you are malnourished, you will be more susceptible to infections. Similarly, if you suffer from an infection, you may have a decreased appetite and/or your body may have a more difficult time absorbing nutrients, increasing your risk of malnutrition.) Iron deficiency anemia, which causes a person to lack energy, is even more prevalent than vitamin A deficiency. Iodine deficiency can result in mental retardation.

Learning by doing through family gardens

One specific way to connect agriculture with nutrition is to promote nutrient-dense family gardens, which are often planted outside the house. The vegetables and fruits are easy to access and can be regularly incorporated into meals, directly impacting a family's nutrition.

Concepts to communicate

An agriculture program should be planned to include elements that relate to feeding children. The first 1000 days of a child's life are critical; nutrition in the womb and during the first two years of life will impact the rest of that individual's life. A pregnant woman needs to eat a sufficient quantity and variety of foods to support her baby's growth in the womb. Where possible, newborn babies should be exclusively breastfed for the first six months and then continue nursing with complementary foods. This involves support from the woman's family, but also from others in the community. If you introduce a community agriculture program, you may need to look for creative ways to allow for women's involvement that also enable them to breastfeed. When introducing gardens, encourage the planting and consumption of nutrient dense foods. Also consider food preparation and processing techniques: preserve seasonal produce, and look for ways to make nutrients more bioavailable (e.g. by adding oil to foods rich in Vitamin A). Finally, observe how water is supplied and used in the community. Many diseases are spread through contaminated water--mosquitoes that carry malaria breed where there is standing water; parasites often have part of their life cycle in water; and microscopic bacteria and parasites can be present even in water that looks clean.

Bryson also shared a list of her top 12 messages to promote good child nutrition (some of which were explained in more detail in previous paragraphs):

1. Promote exclusive breastfeeding for the first six months of a child's life.
2. Add complementary foods (weaning foods) (https://www.spring-nutrition.org/publications/training-materials/nigeria-complementary-feeding-and-food-demonstration-training) after six months.
3. Feed young children small meals, but feed them often.
4. Feed children a mixture of Go, Grow and Glow foods (https://naqld.org/app/uploads/2013/11/FSS_FS33a-Go-grow-and-Glow-Foods-Teachers-guide.pdf). *Go* foods give energy (i.e. carbohydrates), *Grow* foods help build muscle (protein and fats), and *Glow* foods contain essential micronutrients (vegetables and fruits). One way to ensure that children eat a variety of foods is to make their plate colorful.
5. Promote preservation of seasonal fruits and vegetables.
6. Encourage proper handwashing and sanitation.
7. Deworm children every six months by giving them a 400-g albendazole tablet.
8. Feed children extra when they are recovering from sickness. A good rule of thumb is to feed an extra meal for each day they have been sick.
9. Vaccinate against major childhood diseases.

10. Learn how to treat diarrhea using oral rehydration solution. Kathy shared that oral rehydration therapy (ORT) saves more lives than antibiotics! One simple recipe is 6 tsp sugar and ½ tsp salt in 1 liter of water.
11. Promote growth monitoring of children under five. Regularly plotting weight on a growth chart can help spot problems before a child becomes badly malnourished. Chart examples;
    1. A growth chart that can be printed (https://wikieducator.org/images/4/4c/Roadtohealthcard2.jpg) (for ages 1-5)
    2. An interactive growth chart (https://www.infantchart.com/child/) (for ages 2-20)
12. Use fuel-efficient cookstoves (https://www.echocommunity.org/en/resources/116af501-ac2e-4303-8c46-7a3d586a0818), to reduce the amount of smoke in the kitchen.

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