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Commercial Horticulture: World Hunger – Africa

When asked, “What is the current issue of most importance in global horticulture”, I would say world hunger. With today’s technology in agriculture research, there should be no reason for anyone to be hungry due to poor quality food. This is especially true in the lesser developed countries such as Africa. According to the 2010 census, Africa is a heavily populated continent consisting of approximately 930 million people. Although with Kenya’s horticulture export industry valued over 1000 million U.S. dollars¹, there should be no reason for malnourished people in Africa, but there is.

Unfortunately, despite Kenya’s productivity, the element of hunger is still an epidemic.² In fact, the common term for the hunger situation used in Africa is “*Hidden Hunger*”. A western misconception is that severe malnutrition is simply about not getting enough to eat.³ Hidden hunger does not make reference to volume of food consumed; it refers to a condition that is brought on as a result of absence of micronutrients in food. The micronutrients such as iron, zinc, vitamin A, and iodine are needed in small amounts in people’s diet to maintain good health. Americans don’t have this problem for reasons of the foods that they consume are fortified with micronutrients.⁴ Supplementing and fortifying foods

¹ Mkindi, J. (2009). Horticultural Constraints and Challenges in Tanzania. Tanzania Horticulture Association. <http://www.tanzaniahorticulture.com/TAHA%20REPORTS/PRESENTATIONS/HORTICULTURAL%20DEVELOPMENTS,%20CHALLENGES%20AND%20OPPORTUNITIES1.pdf>

² GLOBALHORT NEWS. (Oct. 2010) Smallholder Horticulture: A Proven Path to Entrepreneurship and Wealth Creation in Africa. <http://www.globalhort.org/news-events/news/>

³ Kristof, N. D. (5/23/2009) The Hidden Hunger. The New York Times. http://www.nytimes.com/2009/05/24/opinion/24kristof.html?_r=1

⁴ Kristof, N. D. (5/23/2009) The Hidden Hunger. The New York Times. http://www.nytimes.com/2009/05/24/opinion/24kristof.html?_r=1

are only short-term remedies whereas by increasing consumption of more vegetables, fruits, and legumes this would represent a more sustainable method of reducing and controlling micronutrient deficiencies in especially resource-poor communities.⁵

If micronutrients are not present in a diet, a person would most likely suffer and experience long-term problems for the rest his or her life.⁶ Growth abnormalities and blindness are a few medical conditions that can occur. This problem occurs in mostly urban areas of Africa where the people who are poor live.

Hidden hunger exists due to the daily consumption of the traditional basic staple crops, such as rice and beans. The monogamous uses of these crops, that are deficient in the recommended micronutrients, eventually result in the condition of hidden hunger. Unfortunately, these staple crops are basic and major diet food in everyday life.

My opinion is the availability of volume of food is not the only issue for the lesser developed countries, such as Kenya, but the quality and diversity of the kinds of food are very critical as well. Generally speaking, the most important global horticulture crop is one that will supply the quality nutritional value to consumers.

With this stated, changing the countries diet habits are easier said than done. For instance, recently an introduction of exotic vegetables, such as asparagus and broccoli, had a negative response and, therefore, a negative acceptance in Kenya, Africa.⁷ So, the remedy to this problem would seem to be to include a more diverse diet including higher quality staple foods rich in micronutrients. This approach would seem to be more acceptable. Scientist are therefore, making the

⁵ Global Horticulture Assessment (6/30/2005). Nutrition and Human Health. http://pdf.usaid.gov/pdf_docs/pnadh769.pdf

⁶ Worldwatch Institute(7/14/2010). "Biofortification" Boosts Nutrients in Africa's Staple Crops. <http://www.worldwatch.org/node/6471>

⁷ Fresh Produce Journal (12/26/2010) Vegetables can improve food security. <http://www.freshproducejournal.com/2010/12/26/vegetables-can-improve-food-security/>

attempt to improve the quality of food through conventional plant breeding techniques. The term used is called biofortification. Here, the objective is that through research, scientist (i.e. plant breeders) attempt to incorporate richer micronutrients in staple foods through conventional plant breeding techniques. Through research and discovery of seeds containing desired genetic characteristics, plant breeders are using these plants in hope to incorporate the desired characteristic, to obtain an improved staple commodity that would be accepted in the African community.

One of the current products of the biofortification process and therefore an improved staple crop in Africa is the orange sweet potato. The traditional sweet potato varieties grown and consumed in Africa for years were the white and yellow varieties. These white and yellow varieties are low in vitamin A. On the other hand, the improved new orange sweet potato variety has more benefits than the traditional sweet potatoes. The orange sweet potato was conventionally bred by the Centro Internacional de la Papa (CIP) by scientists in Uganda and Mozambique. Its benefit is that, through the efforts of plant breeding, the new orange sweet potato is far richer in vitamin A. With this fact women and children, who are prone to vitamin A deficiency, will benefit greatly. Another benefit of this sweet potato is that it is virus resistant, high yielding, and having the additional environmental factor of being drought tolerant.⁸ What I consider one of the first important global horticulture crops is the recent biofortified sweet potato. The reason I consider this the most important horticulture crop is that it's an important accepted stapled crop with daily consumption from so many people and the improved nutritional value it possesses targets women and children.

In the marketing of horticultural products, the initial concept is to identify the most cost-effective strategies for farmers to adopt and consumers to accept this new nutrient biofortified food. Illustrate the nutrient value and health benefits regarding the orange sweet potato. Next, to establish a smooth production to

⁸ Harvest Plus (11/24/2010). Orange Sweet Potato Faces a Bright Future in Africa.
<http://www.harvestplus.org/content/orange-sweet-potato-faces-bright-future-africa-0>

market strategy eliminating bottleneck delays. Then, to develop effective strategies for stakeholders' acceptance.⁹

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⁹ Orange Fleshed Sweet Potato - The HarvestPlus Reaching End-Users (REU) Project.
<http://www.ugpulse.com/articles/daily/Health.asp?about=Orange+Fleshed+Sweet+Potato+%2D+The+Harvest+Plus+Reaching+End%2DUsers++%28REU%29+Project&ID=1002>