

Horticulture for Health: the Knowledge Management Platform Hort-e Aims at Filling the Gaps Between Nutrition Requirements, Good Practices and Public Awareness

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HORTICULTURE FOR HEALTH GETS ON THE GLOBAL AGENDA 2002-2008

The World Health Organization (WHO) developed, under a May 2002 mandate from Member States, a Global Strategy on Diet, Physical Activity and Health, which was endorsed by the May 2004 World Health Assembly. Recognizing the increasing scientific evidence that low fruit and vegetable intake is a key risk factor for several non-communicable diseases, The World Health Organization (WHO) and The Food and Agriculture Organization of the United Nations (FAO) launched a joint Fruit and Vegetable Promotion Initiative in Rio de Janeiro in November 2003. The overall goal of this initiative was to strengthen, promote and protect health in the context of a healthy diet by guiding the development of sustainable actions at community, national and global levels that, when taken together, would lead to reduced risk of chronic diseases through increased fruit and vegetable consumption. In September 2004, the first Joint WHO/FAO Workshop on Fruit and Vegetables (F&V) for Health was held at the World Health Organization Kobe Centre for Health and Development in Kobe, Japan. This workshop brought together more than 50 experts from the fields of health, nutrition, agriculture and horticulture, mainly from developing countries, that developed a framework to promote fruit and vegetables at country level.

Within the context of fruit and vegetable promotion for health, the Global Horticulture Initiative (GlobalHort) emerged. GlobalHort was launched 22-24 March 2006 in Montpellier, France. At the launch Dr. Denis T. Kyetere, representing the Forum for Agricultural Research in Africa (FARA) stated that the "Consumption of a wider range of vegetables and fruits will improve the health of people in Africa who often eat far less than the minimum amount of 400 g per day recommended by WHO and FAO". Dr Thanwa Jitsanguan of Kasetsart University, Thailand added "We must all work together to solve these issues, which are also a serious concern for developing Asian countries. Improved diets resulting from a dynamic horticultural sector can prevent vitamin A and other micronutrient deficiencies and therefore help the poor to fight diseases which are endemic and cause terrible suffering. In many cases children's learning skills can be improved by the simple addition of adequate quantities of safe fruits and vegetables to their daily food." (<http://www.globalhort.org/media/uploads/File/news/Release2006-03-29.doc>) In April 2007 Remi Kahane was selected as its first Executive Secretary. The new website was launched at the CGIAR Annual meeting in Beijing and the first webmaster started work January, 2008.

GlobalHort supported a Workshop on the Promotion of Fruit and Vegetables in Francophone Sub-Saharan Africa, October 23-25, 2007, Yaounde, Cameroon. The Institute for Agricultural Research for Development (IRAD) and The Centre of International Cooperation in Agricultural Research for Development (CIRAD), on the initiative of the FAO and WHO, organized this workshop. 76 experts from 16 African countries, and many representatives of international organizations were present. The conclusion was that horticulture, health and education must work together to mitigate poor nutrition and poverty in Africa. GlobalHort will be in attendance at the International Fruit and Vegetable Summit, May 27-30, 2008, Paris, France. For the first time WHO, FAO and the United Nations Educational, Scientific and Cultural Organization (UNESCO) will be sponsors. The focus will be on a global and multi-sectoral approach geared to increase F&V consumption. For many years, there have been parallel efforts across sectors to increase F&V consumption, with research and education campaigns by the public health and scientific communities and non-governmental organizations on the one hand, and marketing campaigns by the F&V industry on the other. Building upon the strength of the EGEE and the International Fruit and Vegetable Alliance (IFAVA) conferences and symposiums, this joint international conference will gather key stakeholders to capitalize on cross-sectoral expertise to find solutions to this important issue.

GLOBALHORT'S ROLE IN PROMOTING HORTICULTURE FOR HEALTH

"This is an extremely important initiative. Currently there is no coordinating organization to bring together the fragmented and disconnected institutions, private companies, non-governmental organizations and donors who support horticulture development", said Thomas Lumpkin, Director General of AVRDC - The World Vegetable Center in the press release launching the Global Horticulture Initiative in 2006. "The patchwork of projects currently in place is often ineffective and wasteful due to a lack of perspective on the complete system required from production, transport, processing and marketing of a horticultural product." (<http://www.globalhort.org/media/uploads/File/news/Release2006-03-06.doc>)

1. Networking Fragmented Communities

Horticulture is highly diverse covering a huge variety of fruit, vegetables and specialty crops. Research communities are small and often isolated with limited data sharing particularly for tropical crops. Innovations from one part of the developing world such as Asia are not readily transferred to other parts such as Africa where access to international literature can be limited. Language barriers such as those between Anglophone and Francophone Africa can be significant. At GlobalHort we have developed Hort-e, the GlobalHort web-portal, (<http://www.globalhort.org>) in order to provide a knowledge hub for dispersed cooperating horticultural communities. We try to add value to existing websites and databases by providing a development-oriented platform, an electronic newsletter to connect existing horticultural research and development actors, an online facilitation service and a recognized place where research and development actors can interact.

Hort-e Phase I

Hort-e is not complete. We are just in the first phase of its development. In its present form it is an international aggregator of horticultural information. It provides the largest access to the most focused information in horticulture and horticultural products. The phase 1 portal site includes: a news and events module, A Real Simple Syndication (RSS) feeds generator for distributing news and events on external platforms and personal feed-readers, and includes an RSS feed aggregator for capturing external feed streams from our partners such as the International Society for Horticultural Science (ISHS) and other relevant and reliable sources. There is also information from "some" development databases (projects, organizations, experts and best practices). We have only been in operation for a few months and we have already produced our first quarterly newsletter and in our "Network & Communities" section we have created web-pages on the demand of practitioners for such thematic horticultural areas as: High-Value Crops Challenge Program; Herbal Medicinal & Aromatic Plants; Tropical Fruits; Underutilized Crops; Urban Horticulture; and the Promotion of F&V for Health. For each of these areas we attempt to keep up to date with the happenings and the major resources in these areas in an attempt to add value and linkages with the public and private partners and other relevant organizations. Our credibility comes from our partnerships with the most highly regarded agricultural organizations in the world: The World Vegetable Center (AVRDC), The Consultative Group on International Agricultural Research (CGIAR), Centre of International Cooperation in Agricultural Research for Development (CIRAD), Technical Centre for Agricultural and Rural Cooperation between Asian, Caribbean, Pacific (ACP) and European Union (EU) countries (CTA), The International Society for Horticultural Science (ISHS) and The Global Forum for Agricultural Research (GFAR) representing FARA, FAO and others.

Hort-e facilitates access to the nutritional value of traditional food by providing links to nutritional tools such as INFOODS (International Network of Food Data Systems), HORTIVAR and PROTA databases (Plant Resources of Tropical Africa). It is hoped that FAO will be convinced to revise their statistics so as to take into account traditional food and informal markets. We hope to be able to highlight the real need in training of private companies, review and connect resources for capacity building, stimulate producers to choose for sustainable practices and decision makers to encourage high quality production and higher consumption of the locally/regionally produced fruits and vegetables.

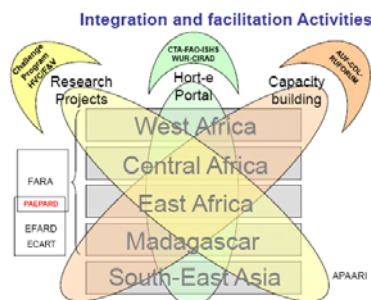
2. Facilitating Training, Education and Capacity Building

Horticultural production is technologically complex, requiring significant skills to manage well. Some problems such as excessive pesticide use have implications for public health as well as for production, so a lack of skills affects the whole community. In many developed countries university enrollment in horticulture are dropping and horticultural facilities are being combined with others or lost altogether. So the ability of developed countries to share horticultural expertise with developing countries is dropping at the same time that global trade in horticultural products is expanding. There is a need for access to more online summarized research findings for universities in developing countries without full access to key journals. There is a need for support for developing horticultural curricula for universities in developing countries. Experts in both public and private institutions need to work together for training purposes. More ready access to training opportunities and funding sources are also required.

Hort-e Phase II

This phase calls for the design of a full production version of a comprehensive and functional GlobalHort information and management platform. The “Knowledge Base” already has been established but there needs to be a thorough survey of the capacity building needs of the sector, the best venues for delivery of services, the partnerships that need to be created, the knowledge sources needing to be tapped and the information management and technology issues needing to be resolved. Not only a virtual platform is required but also sub-regional and autonomous innovation hubs to link the expressed needs of all types of horticultural stakeholders and their knowledge resources together. A physical hub where human resources, communication facilities and information are gathered, combining documentation and training on technical and organizational topics. A cluster of public and private partners based on education, innovation and transfer potential. Hort-e also needs to include collaborative software that will make it easier to exchange information amongst its constituents.

There are already some national African agricultural extension networks that include horticultural crops such as VERCON: The Virtual Extension & Research Communication Network (http://www.vercon.sci.eg/Vercon_en/Vercon.asp#). These parochial networks and databases however do not communicate with one another, duplicate effort, and do not deal with the continental problems posed by language and communications technology. A good regional example is RAIN, the Regional Agricultural Information Network, which is a network of agricultural information organizations and professionals operating in 10 countries in eastern and central Africa (ECA)—Burundi, Democratic Republic of Congo, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania, and Uganda. (<http://www.asareca.org/rain/index.php?Itemid=1&lang=eng>) In “Framework for African Agricultural Productivity” there is a proposed baseline survey and clustering effort described and targeted in the Forum for Agricultural Research in Africa’s (FARA) agenda for the next 10 years. This is part of the objective of the Comprehensive African Agricultural Development Program (CAADP) endorsed and supported by the African Union. A regional network of innovation hubs is also suggested in the Platform for African-European Partnership on Agriculture Research for Development (PAEPARD) and Horticulture would be one of the first demonstration sectors. (http://www.fara-africa.org/media/uploads/File/FARA%20Publications/FAAP_English.pdf)

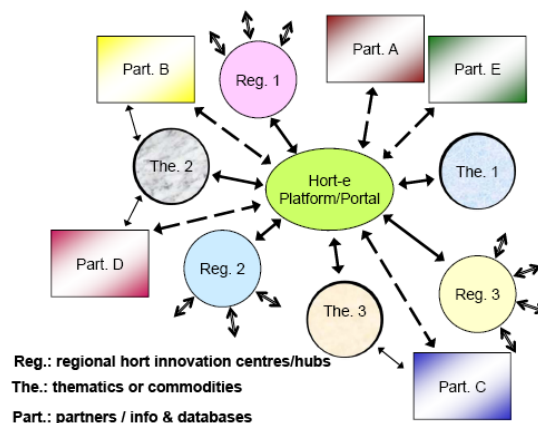


Africa is a huge continent with limited human resources which means that distance education is a very important solution available for increasing the capacity of its citizens, scientists, decision makers and producers; for changing the attitudes towards horticulture and attracting younger generations; and making horticulturists dynamic entrepreneurs. Unfortunately very little has been done in this area. The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is an initiative by a consortium of 12 universities in east and southern Africa to develop and strengthen human resource capacity for inter-disciplinary problem-solving. (<http://www.ruforum.org/index.php>) It achieves its goal through grants programs to support research and to address rural (agricultural) development issues, especially community and smallholder farmer needs. GlobalHort will work to encourage more such networking and to include horticulture. In a preliminary survey we could find no distance education courses specifically offered in horticulture however we were able to find many venues where such courses could be created and offered. The Open University of Tanzania (<http://www.out.ac.tz/>) offers degree and non-degree courses at the undergraduate and graduate levels. The Global Open Food and Agriculture University (GO-FAU) (<http://www.openaguniversity.cgiar.org/>) is in the process of being developed by The Consultative Group on International Agricultural Research (CGIAR); the Commonwealth of Learning (COL) (http://www.wikieducator.org/Tech-MODE_Synthesis) is working with the CGIAR, FARA, and other African institutions (with the help of WikiEducator) to develop and encourage open learning initiatives; L'Agence Universitaire de la Francophonie (AUF) (<http://www.auf.org/>) supports open learning initiatives in French-speaking African countries; and there are open learning courses available in some other African institutions. (<http://communicationculture.freeservers.com/institutions.htm>).

GlobalHort will work to try to bring these stakeholders together to establish an African network to increase the consumption of fresh fruits and vegetables, particularly dense in micronutrients to reduce nutrient deficiencies and related diseases and the adoption of value-added crop management systems to reduce technical barriers to trade, promote quality production systems, reduce health risks associated with harmful products and microbial contamination. The Pesticide Initiative Programme (PIP) Toolbox is an excellent model already in place that is intended to raise awareness of quality and conformity issues for fruits and vegetables among (ACP) farmers about (EU) food safety and traceability issues. (http://www.coleacp.org/FO_Internet/Pip/Default.asp?ai_IdSection=5&ai_IdParent=&ai_IdContent=&ai_IdDetails=763&ai_Language=1) There needs to be an African horticultural network that coordinates what educational opportunities are required and at what levels, and marketing/extension information. Such a network, AfroHort, has been proposed by GlobalHort to the Microsoft Corporation. Due to the huge number of small scale entrepreneurs and market opportunities in the horticultural sector, and also due to the need to preserve diversity, nutritional value, cultural identity, and ecological systems there must be a public-private partnership in place to make it work. GlobalHort is well placed to act as the conduit between the horticultural public and private sectors.

Virtual and spatial networking

<p>Regional hort innovation centres/hubs</p> <ul style="list-style-type: none"> • West Africa: Dakar (UCAD – CORAF/WECARD – ISRA/CDH – IAGU – Private sector) • Central Africa: Yaoundé (Universities – IRAD – Polytechnic schools – CARBAP) • East Africa: Arusha (SUA - OUL - Horti-Tengeru – AVRDC – TAHA – Horticulture Task force – private sector) • Madagascar, Hanoi, Bangkok, Fortaleza, Lima ... 	<p>Partners / info & databases</p> <ul style="list-style-type: none"> • ISHS • AVRDC – WVC • FAO • CTA • PROTA • ECART/EIARD • GFAR and CGIAR...
<p>Thematics or commodities</p> <ul style="list-style-type: none"> • Tropical fruits • Urban Horticulture • HMAPs • PROFEL • Organic Horticulture • Protected Horticulture • Waste management... 	



Hort-e Phase III

As quality horticultural open learning packages become available GlobalHort will make them available to their constituency through Hort-e. Horticultural databases will be linked together to provide a one-stop shopping centre for international horticultural information of all kinds. In the meantime GlobalHort is working hard to convene meetings of key players to work on common curriculum needs in horticulture, locate or encourage the creation of quality knowledge products that are compatible with one another and look at ways to break down the communication barriers that prevent access to horticultural products, horticultural knowledge and horticultural health. By connecting trainees, funders and trainers to work together we can solve major training needs. GlobalHort strongly believes that horticulture and health are synonymous and that globally everyone deserves to have access to both.

MAKING INFORMATION EASY AND FOCUSED

“Too much information kills information” is a phrase that was understood even before the Internet’s inception, and has been confirmed since then. However, “information is power” is also true in any type of society. As far as human health is concerned, “information is life”, and reaching the poorest or most remote population must be the target of experts in Information and Communication Technology (ICT) for developing countries. Disseminating intelligible data on the nutritional value of F&V to overcome deficiencies and malnourishment is an absolute priority. Food quality and food habits can prevent and combat chronic diseases better and more cheaply than any expensive and sophisticated pill. Good production and post-harvest practices that ensure food safety, and optimal shelf life and appearance must be promoted beyond the traditional actors of the horticulture value chain. Consumers and policy makers must be informed as well. GlobalHort has been created under the request of the horticulture stakeholders to deliver clear, consensual and global messages. Using appropriate and universally accessible information and dissemination tools is still an objective of Hort-e. Exchanging views, data and experience through interactive tools will not prevent us from meeting regularly with the ICT and knowledge management communities to avoid redundancy, to sharpen the focus and to be more visible and hence more impactful.

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