

Dr John E. Orchard
External Consultant

Tel: +44 (0) 20 7242 8444
E-mail: cwa@cwa.uk.com
Website: <http://www.cwa.uk.com/>

Qualifications BSc Applied Biology (Hons): Plant Physiology & Biochemistry
PhD, Plant Physiology & Biochemistry
Liverpool University

Affiliations Member of Tropical Association of Agriculture

Languages Spanish & Portuguese

Date of Birth 15 December, 1950

Nationality British

Current Position at CWA

External Consultant. Biochemistry and plant physiology. Food technology.

Specific Expertise and Experience

Twenty five years experience working in the field of biochemistry and physiology of beverage, horticultural and cereal crops with recent emphasis on their post-harvest management, of which ten years spent on beverage crops in S America and Africa. Considerable experience in research project formulation, administration, management and appraisal.

Recent project experience includes:

- **Uganda** (2003). Leader of project to review of the status of the horticultural strategy in Uganda and suggest modalities/ recommendations on how the horticultural export sector can be strengthened (DFID-funded).

- **Sudan and Ethiopia (2003):** Team member of CFC project to assess the needs and feasibility of commercial production of tropical fruits and vegetables for diversified exports in Ethiopia and Sudan.
- **World-wide (2003):** Team member in World Bank consultancy to review the role of grade and standards in the world trade of food commodities, with particular emphasis on the impact of regulations and trade agreements on horticulture exports (Client: World Bank/FAO).
- **Mauritius (2003 - 2005).** Project manager of team to enable the horticulture sector to produce and export high quality products (EU-funded).
- **Kenya (2002 -2003).** Team member of project to develop crop cultivation protocols for export horticulture crops to Europe as part of the EU-funded Pesticide Initiative Programme
- **UK (2001-3).** Leader for private sector support project to develop, test and implement technical and managerial quality assurance systems, particularly post-harvest handling operations, to optimise supply chain management of horticultural produce in the commercial sector.
- **Colombia (1994-2001).** Leader of post-harvest fruit and vegetable training programme aiming to enhance the capacity of trainers to analyse the post-production commercialisation system and to deliver appropriate technology to end users in the chain (DFID-funded).
- **Morocco (2002).** Consultancy to undertake feasibility studies on the need for cold storage infrastructure in Morocco to stimulate exports: activities to evaluate the existing situation of cold storage and transportation (imports and exports).

Summary of Previous Employment

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|---------------------|---|
| 2001–Present | Leader of Food Management and Marketing Department |
| 1996–2001 | Deputy Head of Food Systems Department and Head of Horticulture Group |
| 1996 | Acting Head of Crop Utilisation Department |
| 1994–1996 | Natural Resources Institute
Principal plant physiologist/biochemist and manager of fruit and vegetable projects. Head of Post-harvest Horticulture Group. |
| 1991–1993 | Head of Food and Processing Section. In charge of two groups of staff (10 in all) dealing with processing of cereals and legumes and the impact of plant breeding on post-harvest storage and utilisation of cereals and legumes. |

- 1988-1991** Overseas Development Administration
Technical Co-operation Officer (Biochemist/Plant Physiologist), Kenya Tea Research Foundation. Investigating more efficient methods of tea manufacture in Estate and Smallholder factories, and yield and physiology of the tea bush under different environment.
- 1986-1988** Senior Research Officer, Liverpool University. Contract research on physiological plant pathological problems of cacao for chocolate industry.
- 1980-1985** Overseas Development Administration
Technical Co-operation Officer (Plant Physiologist) at the Agricultural Research Institute of Ecuador undertaking research in the yield reductions of cocoa due to drought and influence of irrigation.
- 1978-1980** National Cacao Research Centre, Brazil
Experimental Officer, studying fruit growth and development.

Other Professional Experience

Management of section and research group activities including research projects, overseas assignments, feasibility studies, project identification, administration and management. Subject areas include cereals food processing and biochemistry of cereals and legumes in relation to resistance to storage pests and biodeterioration.

Experience of setting up and management of research projects in developing countries. Most recently the setting up of a research programme to study the physiology and biochemistry of the leaf from the bush through the manufacturing process with the main objective of improving the efficiency of smallholder factories, particularly during withering, without loss of tea quality. Laboratory studies identified new processes for collaborative trials in the industry's factories which were assessed in economic, biochemical and organoleptic terms. Extension seminars given to factory managers in Kenya and Malawi.

Postgraduate Research Supervisory Experience

A full list of PhD and MPhil supervision subjects is available on request, along with a list of John's 50 publications.

Overseas Experience

- Australia** 1999, to attend the FAO Intergovernmental Group on Bananas and Tropical Fruits, Gold Coast, Australia

- Bolivia** 1994, assessment of Bolivian tea industry for UNIDO, looking at both agronomic and black tea manufacturing, and the development of a business plan for expansion.
- Brazil** 2004, to analyse the food safety and quality regulatory authorities in Brazil.
- Brussels** 1998, to attend the International Banana Conference on Sustainable Banana Production, and to provide a briefing paper for DFID on current developments in the banana sector with regard to ethical trading and sustainable production systems
2002, to participate in consultative meeting to discuss progress on the EU-funded Pesticide Initiative Programme.
- Chile** 1998, to establish a collaborative research programme with the post-harvest horticulture unit of the Chile National Agricultural Research Institute to develop storage and transport systems for perishable commodities.
- Colombia** 1994, monitoring visit as project manager, to review progress of Technical Co-operation Project on Training in Post-Harvest Technology & Marketing of Fruit and Vegetables.
1995, mid-term review mission to assess the progress of the ODA/NRI Fruit & Vegetable Training Project
1996 & 1999, member of ODA planning mission to determine the needs of a second phase to the SENA/ODA Post-Harvest Fruit & Vegetable Training project.
1999, attended the II International Symposium held on “Contracts - Key to Competitvity in Fruit & Vegetables actor for competitive horticulture” organised by the Post-Harvest Fruit & Vegetable Training Project.
- Dominican Rep** 1999, to present a paper and participate in an international workshop on the sustainable production of organic bananas.
- Ecuador** 1998, to review progress of research being undertaken by an MSc student working on storage and packaging systems for the export of pineapples.
- Ethiopia** 1996, visit to establish survey of urban & peri-urban horticulture in Addis Ababa as project leader of ODA funded project.
- Germany** 1995, European Symposium on Health & Tea Biochemistry
- Ghana** 1994, discussions with Council for Scientific and Industrial Research and other Ghana institutes to initiate adaptive research and technology transfer.

1995, to review progress in vegetable farming systems project in Brong Ahafo and plan activities for the coming year.

1996, to monitor progress and discuss new project proposal for the Integrated Food Crops System Project, Brong Ahafo funded by the ODA's Renewable Natural Resources Research Programme.

1996, to monitor progress and plan research activities for the Integrated Food Crops System Project, Brong Ahafo funded by the ODA's Renewable Natural Resources Research Programme.

1998, Visit to monitor progress and plan research activities for the Integrated Food Crops System Project, Brong Ahafo funded by the DFID's Renewable Natural Resources Research Programme.

1997, to monitor progress and plan research activities for the Integrated Food Crops System Project, Brong Ahafo funded by the DFID's Renewable Natural Resources Research Programme.

1997, to monitor progress and plan research activities for the Integrated Food Crops System Project, Brong Ahafo funded by the ODA's Renewable Natural Resources Research Programme.

1998, to take part in a workshop to review progress and plan activities for the Integrated Food Crop Systems Project (1996-1999), Brong Ahafo, Ghana.

2000, to establish a technology transfer project for low-cost rural tomato paste processing for US NGO.

2000, to assess completion of the technology transfer project for low-cost rural tomato paste processing for US NGO.

Honduras

1994, Monitoring visit to ODA-funded project on Post-Harvest Characterisation of Plantain and Cooking Banana.

1993, monitoring visit to ODA-funded project on Post-Harvest Characterisation of Plantain and Cooking Banana.

India

1999, to present a paper and participate in the cold chain management seminar for Indian Horticultural Sector.

2000-2002, three yearly visits to evaluate progress and refine work programme for the CPHP project "Optimisation of horticulture research and uptake in India".

2002, to act as facilitator and resource person for a workshop to prepare research proposals for DFID research programme.

Jamaica

1998, to undertake a monitoring visit to the Jamaica Quality Improvement Project to discuss overall progress and make a preliminary assessment of the training needs to be met by the Project.

1998, to participate in a mid-term review by DFID of the Jamaica Quality Improvement Project and to discuss overall progress and assess the activities to be completed until the end of the Project.

Jordan

2004: to evaluate the export logistics chain for horticulture produce.

Kenya	2003, to undertake surveys of pesticide use for export horticulture produce as part of the EU-funded Pesticide Initiative Programme.
Malawi	1995, visit to the Tea Research Foundation of Central Africa, Malawi to assist the Director in addressing staffing needs and training and to develop a processing work plan and identify research priorities for black tea biochemistry.
Mauritius	2003, to review progress of the horticulture quality improvement project
Nigeria	1996, visit to collaborators as project leader of ODA funded project researching constraints to horticulture in urban and peri-urban environments in Africa.
Pakistan	1995, to evaluate fruit & vegetable drying project and determine constraints and training needs in horticultural export system
Portsmouth	2002, to undertake survey of damaged kiwi fruit
Rome	1998, World Horticulture Congress. Reviewed current status of horticulture research and policy. 2000, Expert Meeting on Socially & Environmentally Responsible Banana Production & Trade. At Food & Agriculture Organization of the United Nations. 2004, to participate in a workshop on underutilized crops
Sudan	2003, to assess the needs and feasibility of commercial production of tropical fruits and vegetables for diversified exports. 2004, to develop a proposal for CFC to promote export diversification of vegetables
Uganda	2003, to review of the status of the horticultural strategy in Uganda and suggest modalities/ recommendations on how the horticultural export sector can be strengthened.
West Africa	1992, leader of a three-person-team assessing post-harvest problems of sorghum in the semi-arid regions of Nigeria, Ghana, Cameroon and Chad.
Zimbabwe	2001, two visits to evaluate progress and refine work programme for the CPHP project on indigenous vegetable promotion and marketing.