

TROPICAL AGRICULTURE ASSOCIATION

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NEWSLETTER

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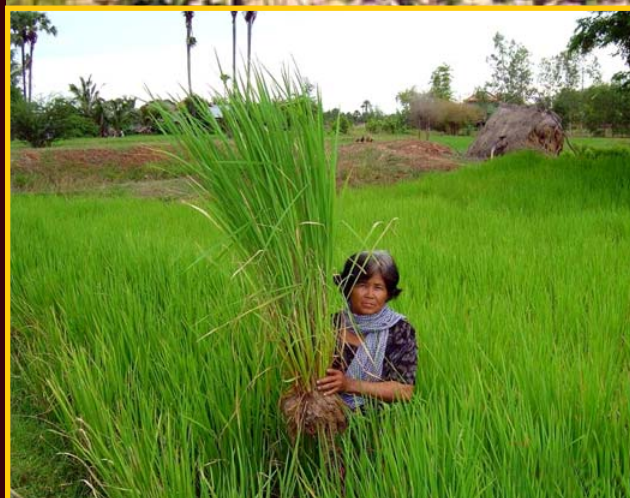
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Cover picture: Weeding a rice paddy in Madagascar (Norman Uphoff) of pp. 13-19. Lower picture courtesy of Dr Koma Yang Saing, Director, Cambodian Center for the Study and Development of Agriculture.



Taking a step or two in the right direction

TAA was heavily involved in the organization of the workshop, held in March at the University of Newcastle to discuss improving soils to sustain agricultural growth under the pressure from a rising world population and climate change. This will lead to an international conference next year at the World Agroforestry Centre in Nairobi. TAA has previously collaborated with other institutes and universities in organizing scientific meetings; this type of involvement illustrates the hidden expertise within our Association and is bringing TAA due recognition within the wider scientific community. It is something that has to be capitalized on. We need more of this is the type of activity.

The international meeting in Nairobi will likely follow the theme of 'Investing in Soil Systems for Agricultural Development in Africa.' Although as a plant pathologist I spent many years studying diseases and their control in Africa, I am a firm believer in good agronomy, and I include soils in the agronomic package. One can get better productivity using so-called local varieties without chemical sprays – many farmers cannot afford these in any case – if the crop is grown properly, provided there is adequate rain or irrigation. More importantly, for Africa, is the fact that its soils are very fragile and need to be managed properly. Let's hope the Nairobi conference can come up with positive pointers on how to make soils more productive so that Africa can better feed its growing population.

At this juncture, I want to turn to the Bunting Memorial Lecture by Norman Uphoff on 'What lies beyond Modern Agriculture' in the Agricultural Futures series. He pointed out areas of concern including available land per person with rising population, water availability, energy costs up, and environmental concerns under the influence of climate change. The pressures on productivity in the coming decades is a situation that Hugh Bunting would have relished as a scientist, and one that present-day researchers and agricultural technologists will have to overcome to make certain that food security will not become the Number One issue confronting Third World people.

TAA Online Directory of Consultants

Members of the TAA offering their expertise for consultancy or employment

I am delighted to advise that the new TAA Online Directory of Consultants is now up and running at www.taadirectory.org.uk

You will notice a few changes to the site:

We are now providing access to a list of all registered consultants with a summary of their expertise/ experience (see Consultant list which can be accessed from the Directory homepage). Where people have worked in numerous countries, we have listed the countries in alphabetical order, but had to limit each entry to 7 lines. If you would like to highlight particular countries in your 'summary profile' (other than those countries currently shown), please let us know and we will make the necessary amendments.

To improve viewing of your CV on the web, we have reformatted the one-page CVs to 'Verdana' (minimum font size 7). Please use the reformatted version of your CV (which can be downloaded from the Directory website) to make changes/send us updates. Any changes should be marked in red.

We have replaced the database search with a Google custom search facility which allows for more tailored/specific searches. We will be reviewing a database option as part of the broader TAA e-communications strategy, but in the meantime, suggest that you review your CV and pay particular attention to the inclusion of key words/search terms which potential employers might input in the Google search box. (e.g., if you have listed Department for International Development, Asian Development Bank, etc, have you also included the acronym DFID/ ADB, which might be the more commonly used search term?)

We are intending to promote the TAA directory more widely, and recommend that consultants use an email icon/badge for their online CVs to help protect personal email addresses from email harvesting software/spammers. A 'badge' similar to the one displayed below can be created freely and quickly and inserted into your CV. Instructions are provided below the registration form, but for consultants already registered with us, please email me if you would like us to do this on your behalf.

Keith Virgo, Directory Editor



Synopsis of a Workshop on The Importance of Improving Soil Conditions for Water, Plant Nutrients and Biological Productivity to Sustain Agricultural Growth under Rising Population Pressure in a Changing Climate

*at The Institute for Research on Environment and Sustainability,
University of Newcastle, 30th - 31st March 2007*

Organized by:

*The Tropical Agriculture Association
in collaboration with the
World Agroforestry Centre,
Association of Applied Biologists,
University of Newcastle,
University of Reading,
University of Nottingham,
University of Durham*

Summary

The agro-ecologic and socio-economic aspects of sustaining landscapes' capacities to yield vegetation and water – thereby supporting people's livelihoods – was discussed by an international group at a Workshop in the University of Newcastle, UK, on 30th and 31st March 2007.

Three keynote presentations provided examples of sustainable land-husbandry practices, from Latin America, Asia, and Africa, complemented by an overview of other positive advances in the tropical and sub-tropical regions. These described and showed positive examples of principles and practices of how degradation of land and livelihoods might also be reversed elsewhere.

Rising populations and climate change on the one hand pose dangers of decline in quality of land and of livelihoods dependent upon it, but on the other hand offer provocations and opportunities for positive innovations, adaptations and inventiveness in both thoughts, policies, programmes and actions.

The present condition, and requirements for assuring future sustainability, of productivity of both

“Despite the artistic pretensions, sophistication and many accomplishments of mankind, we owe our existence to a six-inch layer of topsoil and the fact that it rains”.

Pinned on Don Meyer's office wall/? Confucius

land and livelihoods were discussed in four specialised sessions and jointly in two plenary sessions.

Key factors determining sustainability were identified as (a) biological activity in the soil which, with adequate and ongoing provision of organic materials, is capable of maintaining its porosity on a recurring basis; and (b) decision-making, by farm-families, which determines their management of the land they rely on for their livelihoods.

Farm-families' rationality of internal decisions and actions for sustaining their livelihoods, and the lands on which they depend, operates within a multi-faceted and changeable external context framed by features of political, economic and environmental forces and the policies which are promulgated to affect them. The two-way inter-dependence of these two aspects of rural reality is not yet understood sufficiently well.

Developing a means of raising mutual awareness of the interacting effects of disparate areas of knowledge, concerns, preferences, aims and requirements of the different stakeholders in natural



resource management – among whom farm families are the key actors – would be an important step forward.

To this end, Workshop participants considered that an innovative, interactive and interdisciplinary meeting of farmers and their representatives, governments, policy-makers, international aid agencies, private-sector entities, researchers, extension agencies, civil society organizations and others should be an important focus for a follow-on international meeting to be hosted by the World Agroforestry Centre (ICRAF) in Nairobi, Kenya in 2008. A possible title of the conference could be along the following theme: *Investing in soil systems for agricultural development in Africa*.

1. Background

In the majority of rainfed areas of the tropics and subtropics, the agricultural productivities of soils, water, nutrients, and hence of the rural livelihoods that depend on them, are declining. For those already poor, their livelihoods are becoming increasingly insecure. Increasing pressure of population on land, plus effects of climate change, will make matters even worse in this century, when population will continue to grow, particularly in the poorest and most vulnerable areas, and when climates are becoming more adverse.

The causes of decline in productivity and of ongoing problems of runoff, gulying, downstream sedimentation and flooding have commonly been attributed to soil erosion. The policies, plans and actions to tackle these problems have not been markedly successful in either physical or economic terms, because they have not addressed adequately the agro-ecologic and socio-economic roots of the problem.

The record to date indicates that this past sequential combination of concepts, policies, plans and actions no longer provides an adequate template for the future. Governments, donor agencies and others are now committing increasing attention and funds to solving these inter-related problems. It is, therefore, more important than ever that future programmes and projects be firmly based on policies and strategies which address simultaneously the agro-ecologic and socio-economic realities in each situation, so as to ensure that improvements in environmental management, in yields of plants and water from landscapes, and in livelihoods, are not only achieved but also sustained.

Impressive examples of good land husbandry in the field, which demonstrate its principles, are already scattered through a number of countries in South

America, Asia and Africa, and across many eco-zones. The features which these varied positive examples have in common provide a firm basis for generating positive and sustainable results from combining the land's capacities, rural people's skills, knowledge and enthusiasms, and the external assistance on offer.

2. The Workshop

In light of the above, the Tropical Agriculture Association in collaboration with the World Agroforestry Centre, the Association of Applied Biologists, the University of Newcastle, the University of Reading, the University of Nottingham and the University of Durham held Workshop on 30th and 31st March 2007 at the Institute for Research on Environment and Sustainability, University of Newcastle, to plan an international 'conference' on the title-subject, to be held in early 2008 at the World Agroforestry Centre, Nairobi, Kenya. Its objectives were:

1. To bring to light examples of lasting success in land-resource management with sustained results from a wide variety of different situations. What and where are **good examples** of stable forms of land use and conservation (re **sustainability** of provisions of vegetation and water) not requiring ever-rising levels of external inputs to keep going?
2. To discuss and clarify the features and underlying principles – both agro-ecologic and socio-economic – which these examples appear to have in common, and to consider the implications for future directions for building on these understandings. What features make them **different** from 'conventional' systems which do not fit those criteria, at the level of the soil itself and the farmers themselves? What aspects have led/can lead to **widespread adoption**?
3. To define the mandate and scope for a follow-on conference in 2008 to widen the discussion and to consolidate the emergent 'Community of Practice' for future action on a wider scale.

Participants were invited to attend the Workshop on a self-funded basis, except for the keynote speakers from Latin America, Africa and Asia who were supported from a small grant from the Bill and Melinda Gates Foundation. About half of those who attended the Workshop were from overseas – Latin America, North America, Africa, Asia, Europe, and Australia. Participants were from national and international institutions from the North and the South, covering a diverse set of disciplines and experience. Several donor representatives also attended.



The meeting's Agenda comprised three parts: (i) Introduction and keynote presentations on experiences in Latin America, Africa and Asia; (ii) syndicate discussion sessions on agro-ecological and socio-economic sustainability – science and future directions in technology and enabling environment; and (iii) planning the proposed follow-on conference.

3. Keynote Presentations

Experience in Latin America with integrated soil-system management using zero-tillage (Speaker: John Landers)

The benefits and pervasive spread of mulch-based zero tillage (ZT) farming systems in Latin America over the past 30 years from first use (e.g., more than half Brazil's annual crop production now under ZT production systems) indicate that this approach to soil-system management has matured and provides insights to how benefits are generated, and to objectives and pathways for such action elsewhere. Direct and indirect impacts indicate its potential contributions to alleviating poverty in small-farm situations, whose principles are universal, and whose applications are local. The presentation stressed the applicability of zero-tillage in all land conditions and farming systems, and the key benefits of improving soil-carbon levels by not disturbing the soil once brought into good condition, and by simultaneously maintaining its crop-residue cover.

The process of spread of such systems must be farmer-led, including the definition of research-priorities. For individual farmers it 'takes off' once perceived gains exceed perceived costs. The 'downstream' environmental services produced by zero-tillage farming (estimated value to Brazil is US\$2 billion per year) warrant focussed practical recompense by society as a whole to those who operate these systems and thus provide such benefits. The advantages of this 'organic-rich' form of soil-system management in providing agro-ecologic and socio-economic benefits are markedly greater than those offered by 'organic farming' (low external input technologies, as commonly characterised).

Experience in Africa with integrated soil-system management: reviewing the success and spread of various forms of conservation-effective agriculture systems (Speaker: Paul Mapfumo) (Contributions: Paul Mapfumo, Mateete Bekunda, Andre Bationo, and Freddie Kwesiga)

On a continent where rural poverty is intensifying and agriculture becoming more extensive, sparks of hope derive from the example and increasing

adoption of the 'Zai'-type of pitting system originated in drier parts of West Africa. This exemplifies the beneficial effects of concentrating water and applied organic matter at each planting station thus formed. This has resulted in significant increases in yield, where both necessities have formerly been key limiting factors. In such situations, response to any applied N-fertiliser is greater than to either of these alone, emphasising the need for optimising management of soil organic matter and of water to achieve such responses to N as are now being seen in millet and maize systems in West, East and Southern Africa. Nitrogen-fixation by indigenous and introduced legumes is capable, with the greater levels of soil-water and organic matter, of 'kick-starting' a self-multiplying improvement in soil productivity. This provides the basis for development of appropriate systems of conservation-effective agriculture, when supported by broader initiatives that improve rural infrastructure, increase accessibility of inputs, improve marketing facilities, make re-investment in farming more worthwhile, and agriculture more productive and sustainable.

Experience in Asia with integrated soil-system management strategies (Speaker: Mushtaq Gill)

In the irrigated rice-growing areas of the Indo-Gangetic Plains across India and Pakistan, the potential for satisfying the food-requirements of a rising population – already precarious – is constrained by insufficient water availability, poor water management, inappropriate plant populations, inefficient use of fertilisers, declining soil productivity, and unnecessarily laborious transplanting methods. These problems are compounded by declining levels of soil organic matter and phosphorus, multiple nutrient deficiencies, soil erosion by wind and water, and polluted ground-water recharge. Possibilities for improvement lie in adoption of practices such as the System of Rice Intensification (SRI), direct seeding of rice, zero tillage with dry sowing, co-culture of *Sesbania* with rice for 'brown manuring', improved management of crop residues, and laser land-levelling for optimum water-distribution.

Such actions variously give advantages of significant increases in efficiency of use of water and fertilisers, large reductions in needed quantities of seed, reduced costs of production, and improved soil conditions. Since 1997 in Pakistan there has been exponential growth in area of wheat under zero-tillage management, such that by 2003/4 this had spread among small farmers to over 1 million hectares.



Strategies for ensuring agro-ecological and socio-economic sustainability: evidence of progress and challenges for the future (Speaker: John Gowing)
(Contributors: John Gowing and Mike Palmer)

While it is anticipated that the Millennium Development Goal of halving the number of people who suffer from hunger will be reached by 2015 in East and South Asia, Latin America and the Caribbean, this is not the expectation in sub-Saharan Africa, South Asia and West Asia. In these regions, increasing agricultural productivity offers the best prospect for ameliorating this problem. Evidence from a purposive sample across 57 poor countries, covering 286 recent interventions across 37 million hectares, showed that, in 'bright spots', mean relative yields were on average 79% higher where technologies which conserved land and water resources had been adopted than where they had not been used. These included integrated nutrient management, 'conservation tillage', agroforestry, water harvesting, livestock integration, and integrated pest management.

Such successes, which effectively reversed the downward spiral of poverty, had generally been characterised by combinations of leadership, aspiration to change, participatory approaches, increase in social capital, innovative and appropriate technologies, quick and tangible results, low risk of failure, a supportive policy environment, secure property rights, and attractive markets opportunities. In the majority of cases, these successes had been 'primed' by an external agent providing financial and non-financial contributions.

Thinking Outside the Box (Speaker: Francis Shaxson)

Many attempts at improving the conservation of soil and water have not been notably or widely successful in sustaining landscapes' productivity for plants and water. The thinking about resolving such matters needs to explore beyond the bounds of the 'conventional wisdom' on the subjects and consider them from less-common viewpoints in the search for potential alternative understanding of field observations. Such 'outside-the-box' thinking can suggest routes to more effective solutions to the ongoing and widespread problems. The titles of the pictures (shown in the slide presentation)—showing aspects of landscape, soil conditions, water-flow—posed questions: Is there another way of viewing this problem? What is the real reason for this? Are the assumptions justified? Are there other possibilities? What is needed in reality? Does a simile help to explain it? What does it look like close-up? The captions beneath each offered some unexpected and non-conventional explanations that opened the way to new perceptions of some common conditions in the field.

4. Syndicate Discussions

Agro-ecological sustainability

Science: Participants concluded that agro-ecological sustainability depends on soil-system health, which derives from ongoing interactions between soil-living biota, soil organic matter, soil physico-chemical and -hydric properties, available plant nutrients, and adapted germplasm, as affected by resource-conditions in each locality. It is also influenced by the ways that new technologies are integrated into farmers' practice, which can be seen as a matrix of farmer assets – both capital and knowledge (poor, medium, rich) in a time-frame (now, intermediate, long-term). A range of countries' different agro-ecologic situations provide many examples of successful conservation-effective integrated farming systems involving varied combinations of crops, livestock, trees, pastures. These suggest both principles and best entry-points for the spread of comparable systems elsewhere.

Two underlying sets of principles for sustainable soil management were identified:

- (a) The enhancement and maintenance of soil structure/porosity and soil organic matter and associated living soil biota, for water and nutrient storage and retention, for water flow and filtration, for soil aeration and gaseous exchanges. These are necessary for healthy root growth and soil biological processes of nitrogen fixation, phosphorus mobilization and various symbiotic processes involved in natural control of pests and diseases.
- (b) The protection and anchoring of soil surface and top soil including soil biota through residues, mulches and cover crops, with zero or minimum tillage, to eliminate rainfall runoff and soil erosion, maximize water infiltration, maintain and enhance soil carbon stocks and maximize soil carbon sequestration, and to enhance and maintain soil porosity.

Future directions: A paradigm-shift towards conservation-effective agricultural systems, as exemplified by well-managed mulch-based, rotational zero-till systems, is required for agricultural growth to be achieved and sustained. Approaches need to be different from those that have proved inadequate in the past, and should start from principles, rather than from copying practices alone.

Also, it was considered important that a number of specific issues be addressed: (a) nutrients and fertiliser; (b) interaction and integration of livestock; (c) planning horizons and empowering of farmers;



(d) promoting farmer innovation, knowledge and learning; (e) communication and networking; (f) clarification of principles; (g) appropriate technologies; (h) enabling-environments for farmers' decision-making about change; (i) scaling-up of positive examples; and (j) factoring-in of likely climate-change effects.

In addition, it is important that economic and environmental analysis be conducted of any integrated soil system management, factoring in site and landscape specificity, e.g., environment and plant nutrient requirements, before a particular set of approaches is recommended for testing. Such analyses should incorporate assessments of economic impact of soil improvement or degradation arising from any proposed technological system. There is a need to raise the asset base of farmers and/or provide external support if farmers are to improve their situation and protect their resource base and the environment.

Socio-economic sustainability

Science: Principles – both underlying and practical – more than imputed solutions alone need to be identified in considering the great diversity of conditions, but it is not always clear how to move from principles to the solutions they indicate. There however is much evidence that participatory investigation, learning and decision-making is valuable in achieving this transition. Questions arise as to how innovations can be identified and promoted, in which facilitators are useful and entrepreneurs are needed, to drive chosen solutions forward. The development of mulch-based zero-tillage in Brazil exemplifies both these aspects. It is important to recognise what emboldens farmers to copy other farmers, and to adapt suggested improvements to their own situations.

Policies may be developed at local, national and/or international level, but attempts to implement them depend on how rural people react in terms of their personal decision-making. On one hand Government policies have often proved to be disincentives to farmers, but links with markets frequently are incentives to altered production. For long-term sustainability, it is therefore important to ensure that the policy-makers are well-informed and then get policies and supporting programmes right. While there may be in-depth understandings and relevant policy-making at local community levels, this often diminishes in the wider context. It may take particular problems to concentrate necessary focus.

Future directions: As is the case with agro-ecological sustainability, the basis of socio-economic sustainability in this context can be described as the

need for 'environments' which are favourable for people to be able effectively to express their capacities for perpetuating sequences of actions that provide and maintain dynamic stability, resilience and productivity in the preferred systems, and livelihoods.

Sustainability in both socio-economic and agro-ecologic terms is mutually interdependent. For humanity to cope with the future pressures posed by population increase and climate change, soil-plant systems across the world would have to become: (a) sustainably productive of plants and water; (b) resilient in the face of 'shocks' from changes in climate and/or of their management; (c) capable of biological self-recuperation of water-infiltration capacity; and (d) capable of supporting other non-agricultural functions.

Looking back from this ideal situation in say year 2050, particular requirements would have had to be satisfied already with respect to (a) soil characteristics (e.g., adequate knowledge and understandings to predict responses to change, and capacity to recognize and maintain soil health); (b) diverse sustainable systems of production of food and other land-based goods (supported by markets, rural infrastructure, resources); and (c) ecosystem services (information based on knowledge, responsible organizations, recompense systems for private maintenance of supplies to public, etc.).

All would be facilitated by multi-faceted enabling-conditions which favour, encourage, assist and do not impede rural people in safely managing their natural environment – forests, grazing lands, cropping lands, wild lands, water-sources, and the species that inhabit them – in such ways that sustain their capacities to yield 'interest' on their 'capital'.

Key Points

Participants in the Workshop warmly endorsed the basic background thesis from which the Workshop originated. Out of the presentations and discussions was developed an active overview of future needs if the implications of the concepts and field observations are to be brought into practice.

In the face of growing pressures caused by ongoing population expansion and increasing effects of climate change, it is essential to improve sustainability of landscapes' productive capacities to yield plants and water, as basic components of livelihoods. This awareness must become an ongoing commitment at all levels, from global institutions to individual farmers.

The dynamic biotic component of soils' productivity, nurtured with organic matter and interacting with



the physical, chemical and hydric components, is the vital core of agro-ecological sustainability. It is this component that links high yields and sustainability. As this is not widely understood, the nature of, and support to, formal research into such factors merit strengthening.

Policies and economic forces can have significant effects on farmers' decision-making about their use and management of land, with repercussions on both the socio-economic sustainability and management of their farming systems.

Good land husbandry, and the sustained productivity that it can ensure, is underpinned by clear principles derived from agro-ecologic and socio-economic realities, both of which acknowledge the possible benefits of external inputs as complements to, not substitutes for, their basic features. To improve, stabilize and sustain soils' productivity into an uncertain future it is essential that these principles become widely known, invoked and acted-on in the planning of policies, programmes and actions to secure the agricultural resource base and improve people's livelihoods.

The varied, scattered but clear examples of good land husbandry cited during the meeting share core features between themselves as well as with the established characteristics and effects of well-managed rotational mulch-based zero-tillage systems. Many more comparable examples of sustained productivity need to be brought to light, characterized and publicized, and many more initiated.

In so doing, the already-incipient 'Community of Practice' (CoP) will expand, and the pool of knowledge be both widened and deepened, through sharing of experiences, observations and research results.

The urgent necessity to provide lasting conservation-effective changes in management of soils and the catchments they inhabit indicates that, among others, the following actions will be needed:

- ❑ Education of young people, as decision-makers of the future, about the principles and practices of sustainable land use, and the forces which affect them.
- ❑ Fully involving farmers, as the primary land-managers, in decision-making about ways forward, in both research and practice, and adding knowledge to their capacities to innovate and adapt both new and older technologies.
- ❑ Promotion of appropriate research to fill gaps in knowledge and understanding of sustainable land-use systems and methods.

- ❑ Bringing the results of well-founded tropical soil investigation and observations – and their varied implications – to the attention of policy- and decision-makers, as well as potential investors and aid agencies, indicating to them the need and advantages of promoting changes in favour of agro-ecologic and socio-economic sustainability across all rural areas.
- ❑ Identify the replicable technologic options and practical field experiences with improved soil-system management, particularly those with wide-scale adoption, that best illustrate how to marry the concerns, skills, enthusiasms and capacities of farming communities with the dynamics of the natural resource systems which they manage, and which would merit external support.
- ❑ Development of policies, institutions and financial arrangements responsible for supporting such change.
- ❑ Devising of incentives for land-users to change.
- ❑ Identifying blockages to land-users making such change.
- ❑ Provision of mechanisms to cushion farmers against added costs and risks during the period of change-over.
- ❑ Setting-up of systems of monitoring and active feedback to make relevant adjustments in policies, programmes and other arrangements.

It was agreed that these matters could form the basis of the envisaged conference in 2008.

5. Planning the Conference

The purpose of the conference would be to formulate and implement a regional strategy responding to opportunities for better land management for sustainable agricultural intensification that would complement the Abuja Summit process. This would involve the establishment of an investment opportunity dialogue, the consolidation of the CoP, and the implementation of participatory action. The regional approach would start with Africa and be followed by Asia and Latin America. There would be a synthesis of scientific evidence, case studies and field evidence involving farmers, to map out a scheme of opportunities for investors, policy-makers, research and development institutions to involve all relevant actors with farmers to establish better land management practices to underpin agricultural growth and intensification.

A possible title of the conference could be along the following theme: **'Investing in Soil Systems for Agricultural Development in Africa'**.



The World Agroforestry Centre (ICRAF) as the host of the investment meeting in Nairobi, sometime during the first half of 2008, was seen as being fully conducive to the overall purpose of the meeting. It was suggested that: ICRAF should become involved straight away in conference planning; there should be a coherent message linking the design workshop and the conference; and that a conference proposal be prepared to mobilize financial and technical sponsorships, and for co-conveners (including ICRAF, FAO, FARA, CIRAD, TAA) to support a small organizing committee).

The participants would be the engagement group comprising representatives from several stakeholder categories making up the CoP. These would be (i) international and national investors (donors, politicians, policy-makers, corporate production and service sectors), (ii) research, development and education community, and (iii) farmers and their service organizations.

The arrangement for the conference could involve (i) convening institutions, (ii) technical sponsors, and (iii) financial sponsors. An organizing committee comprising of representatives of the convening institutions plus others as appropriate should be formed to prepare a conference proposal, facilitate resource mobilization and organize the conference. Seed funds would be required for the organizing committee to become operational.

The outline structure of a 4 to 5 day conference could be as follows:

Day 1 & 2 (am): Research and development stakeholders to illustrate evidence of success to investors and policy-makers through well-analysed and well-presented case studies, of different types of interventions in the different regions that have led to improved soil systems management linked to agricultural intensification, strengthening of supply chains, and poverty alleviation. Two to three parallel workshop sessions would provide an assessment of what kind of investment opportunity is suggested by each case study.

Day 2 (pm): Plenary session to receive and discuss summary reports from the parallel workshop sessions.

Day 3: Field visits to study successful arrangements illustrating generic and replicable examples for scaling.

Day 4 & 5: Panel discussions to identify 'investment opportunities and subsequent action strategies', incorporating views from private sector, farmers, donor agencies, government policy-makers, etc. There would be several panels on such topics as research needs, 'enabling environment', institutional

strengthening, and adoption and adaptation, and their integration for action.

There would a 'Declaration' at the end to formalise the outcomes.

Acknowledgements

The Tropical Agriculture Association is grateful to all the participants and supporters of the Workshop for their time, effort and enthusiasm. Special thanks are due to all the speakers, session chairs, convenors and rapporteurs, and the members of the Workshop Planning Team for their cooperation and help. John Gowing and Mike Palmer from the School of Agriculture, Food and Rural Development, and Henry Gunston from the Tropical Agriculture Association deserve particular thanks for the effective management of the Workshop arrangements and facilities. The Association expresses its appreciation to Alan Younger, Head of School of Agriculture, Food and Rural Development, to Tony O'Donnell, Director of the Institute for Research on Environment and Sustainability, and to Eric Evans, Chairman of the Newcastle Agriculture Society for their generous support and for hosting the Workshop. The support provided to the Workshop and in particular to the overseas keynote speakers by the Bill and Melinda Gates Foundation is gratefully acknowledged.

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Cambridge Conservation Forum

The Cambridge Conservation Forum (CCF) exists to strengthen links and develop new synergies across the diverse community of conservation practitioners and researchers based in and around Cambridge, working at local, national and international levels in order to promote the conservation of wildlife. The TAA is one of over thirty organizations that are currently members of CCF.

The main initiative is a developing vision for conservation in Cambridge overall, through the closer integration of policy development, research and training. Integral to this vision are plans for new facilities, which would house organizations and individual researchers interested in collaborating, and the university is now proceeding apace with physical scoping and development of a financial model. The university is committed to working collaboratively with the CCF organizations. The role of CCF in these initiatives is to act as a channel for communication from the university, but also to provide a voice for those conservation organizations not represented directly on the university committees developing these initiatives.

There is also a proposal for a Masters-level course in conservation. The aim of this would be to equip young conservation professionals with the knowledge, understanding and capacity to become the next generation of global conservation leaders. One innovative aspect of this course will be partnership with local conservation organizations in the design and delivery of the course. The university is currently developing an outline proposal for an interested funder, which it is hoped will secure sufficient resources to recruit a leader for the course and to engage the CCF member organizations in an exciting partnership.

**More information about CCF can be found on their website
at www.cambridgeconservationforum.org.uk**



The Second Hugh Bunting Memorial Lecture

INTRODUCTORY ADDRESS:

Remembering Professor Hugh Bunting

R.D.W. Betts

I was very touched when the Tropical Agriculture Association and the School of Agriculture invited me to reminisce a little this evening about Hugh. He was a much-loved and respected tutor, mentor, guide and friend of many of us gathered here to honour his memory.

I had hoped to play you an excerpt of my recorded chat with Hugh that resulted from Hugh's first encounter with our previous Vice-Chancellor, Sir Roger Williams, in 2002. Hugh was by then 85, and so impressed Williams that he asked Hugh if he would agree to be interviewed so that his fascinating story could be kept for posterity in the University's Archive. Sadly that interview was my last meeting with Hugh. He died suddenly and peacefully at his home in Caversham the following month. I hope you will be patient and return for our 2008 memorial lecture to hear something of Hugh's early life before I met him.

Now let me turn the calendar back more than half a century to the day of my first meeting with Hugh, after his outstanding maiden lecture in the old Soil Science Lecture Theatre on our London Road campus in 1956. Hugh had just returned to England after a distinguished decade of scientific work, first in Tanganyika and then in what was Anglo-Egyptian Sudan. His first academic appointment was to the Chair of Agricultural Botany in this University. His course to the B.Sc. Agriculture finalists was in Plant Ecology, covering aspects of grassland and weed biology. Not only did Hugh cover the prescribed subject very thoroughly and provocatively, he drew many relevant examples from his native South Africa and from his other African experiences. In doing so he made us very conscious of the great challenges and opportunities that existed in Africa, Asia and the Caribbean.

At that time, Britain still had an Empire and recruited officers for the Colonial Agricultural Service from eligible graduates throughout the Commonwealth. Undoubtedly as a result of Hugh's inspirational teaching, this was, by far, the most

sought-after career opportunity. In 1957, no fewer than twelve of Hugh's students were awarded Colonial Office Postgraduate Studentships at the University of Cambridge, followed by a further year at the Imperial College of Tropical Agriculture in Trinidad, known widely as ICTA. This extraordinarily large Reading contingent was always very prominent on both courses – the next largest groups were mere pairs from the Universities of Edinburgh, and Natal in South Africa. In 1959 the ICTA postgrads produced the best results ever recorded by the College – testimony to the solid foundations laid by Hugh in one third of the whole cohort whilst at Reading. The Colonial Secretary of the day, Alan Lennox-Boyd, was so impressed by these results that he cabled the Principal of ICTA, "Congratulations to you all. Send my men home First Class". This was on the "Antilles", a French luxury liner cruising the Caribbean – a brief taste of the good life before the start of our more spartan lives in remote corners of the Empire

A decade later, the University of East Africa, with its three constituent colleges in the now independent Kenya, Uganda and Tanzania was preparing for its agreed dissolution in 1970; coupled with the creation of three new universities based on the three colleges. The Faculty of Agriculture was located at Makerere College in Uganda and the Veterinary Faculty was in Kenya. Kenya's Minister of Agriculture, Bruce McKenzie, said, "Let's not just crack this particular problem, let's get some wise men together to assess Kenya's agricultural manpower needs at every level, in both the private and public sectors, for as far into the future as they can reasonably predict; and then draw up a realistic plan to meet those needs".

Hugh by then was in his second term as Dean of Agriculture at Reading when he accepted the invitation of the Kenya Government to become a member of its Agricultural Education Commission, and I was appointed as its Executive Secretary. Our reunion, ten years after my graduation, took place in



HUGH BUNTING



1967 over a few cold Nile beers on the verandah of the Speke Hotel in Kampala, Uganda. The Rockefeller Foundation funded the work of the Agricultural Education Commission and this enabled Hugh to commute between Reading and Nairobi to work, particularly, on the University section of the Commission's report. The report of the Commission was duly accepted by the Ministries of Agriculture and Education, and finally by the Kenya Cabinet. Hugh remained with me on the project to complete a successful bid to the World Bank that included funding for a new Faculty of Agriculture alongside, and in partnership with, the existing Veterinary Faculty at Kabete, near Nairobi. Then came the matter of staffing the new Faculty. Again, Hugh stepped up with an offer to help. He served, in effect, as the Faculty's ambassador in Europe and was successful in persuading several distinguished European agricultural scientists to seek chairs in the Faculty of Agriculture of the new University of Nairobi. An international team of British, German, Dutch and Kenyan professors duly got the new Faculty off to a flying start with a syllabus largely custom-built by Hugh to meet Kenya's needs. This was probably unique, as most new Faculties of Agriculture in Africa at that time were following syllabuses that were almost direct transplants from universities in Wyoming, Wisconsin or Alabama. [I don't think Cornell was ever guilty of this].

By now, Britain had ceased being an imperial power. The need to staff a Colonial Agricultural Service had disappeared, and the postgraduate courses at Cambridge and Trinidad were discontinued. ICTA was handed over to the new University of the West Indies as a ready-made Faculty of Agriculture.

Hugh's teaching continued to fire up young British agriculturalists with the desire to serve overseas with international bodies such as the World Bank, FAO and UNDP, and also with British aid organizations like DFID, Oxfam, ActionAid, Tear Fund and CAFOD. But no longer was there anywhere in Britain where they could go for a postgraduate course to prepare them for a career in tropical agriculture.

During his two terms as Dean, Hugh had built up a substantial body of tropical experience in the Faculty by persuading the University to appoint more people like himself, people who had sound British academic qualifications backed up by substantial senior-level scientific experience in the tropics. Thus Reading attracted to tenured posts in the Faculty of Agriculture people like Walter Russell from Kenya, Eric Roberts from Sierra Leone, Peter le Mare from Tanganyika and Peter Ellis from Latin America.

With this strength, together with the Plant Environment Laboratory that he had successfully established at Shinfield, Hugh felt confident that the University of Reading could offer a set of worthy postgraduate courses in Tropical Agriculture. He planned the syllabuses with great care, and a lectureship in tropical agriculture was created for a course tutor.

By 1972 I had a young family and was still working in Kenya when Hugh encouraged me to apply for the lectureship. I had no home in England but learned that the University was also seeking a Warden for its new Wells Hall. So I applied for that post as well and was fortunate to be appointed to both. Professor Richard Ellis, now Head of this School was also a founding member of Wells Hall. He was a member of the first JCR committee and helped to develop the Hall Library. Hugh Bunting was a very convivial person who contributed to the social life of the University and was a generous host at the two great international conferences he convened here. He was always a welcome guest at Hall dinners and Richard may recall a very amusing after-dinner speech that Hugh gave in 1974 on the quaint traditions of some English universities.

At the time of my return to Reading, Hugh Bunting had completed two terms as Dean, and had become the Chairman of the University's International Committee. This was mainly concerned with the welfare of our many overseas students and articulating the University's contributions to the development of new academic departments in some of the fledgling universities of the Commonwealth. One of these, Ahmadu Bello in Nigeria, awarded Hugh an honorary doctorate in recognition of his great contribution to their development.

Hugh soon had me appointed to the International Committee and in due course I became its Secretary. Hugh and I were working in double harness once again, and so it continued until Hugh's retirement from the University in 1982, when I was delighted to be asked to arrange his farewell dinner in Wessex Hall where he had served for many years on the Hall Committee.

Hugh and I also worked together for the Tropical Agriculture Association. Although Hugh was not an alumnus of the Imperial College of Tropical Agriculture, he was one of its greatest friends, and many of the College's alumni were among his closest friends. Hugh duly became a member of the Executive Committee of the ICTA Association. By the 1970s the membership of the ICTA Association was shrinking rapidly, with no new hatchings and the older birds falling off their perches. It was facing extinction, as a dwindling old boy's drinking club.



Hugh encouraged the Committee to widen the membership and transform the ICTA Association into a learned society open to all professionals engaged in tropical agriculture. Thus the idea of the Tropical Agriculture Association was conceived in London. Hugh and I were asked by the Committee to return to Reading to draft a constitution and make a bid to the Charity Commissioners for charitable status for the TAA.

Hugh would be pleased that the constitution we drafted some thirty years ago has stood the test of time, with the minimum of subsequent tinkering; and the TAA's principal charitable activity, its Award Scheme, continues to flourish. This provides funding and assistance for young British graduates to travel to the tropics to gain practical experience in development work, as a first step towards a career in tropical agriculture. Hugh would certainly have

enjoyed the afternoons we now have each year in the Linnean Society in Burlington House in London when our returned Awardees make their presentations to the TAA on their projects and experiences in the tropics.

Looking back on life, I realize that meeting Hugh in 1956 was probably one of my most fortunate moments. He gave me a great stimulus, a wealth of useful knowledge, a ready source of advice and encouragement, opportunities to serve and, above all, a much-treasured friendship. It is very fitting that members of the University of Reading and the Tropical Agriculture Association should gather this evening to honour the memory of Hugh Bunting with a lecture on a topic very much in keeping with his own farsightedness and deep concern for the future welfare of mankind; and then to enjoy some food, wine and conversation together.

THE SECOND HUGH BUNTING MEMORIAL LECTURE DELIVERED AT THE UNIVERSITY OF READING, 4 JUNE 2007:

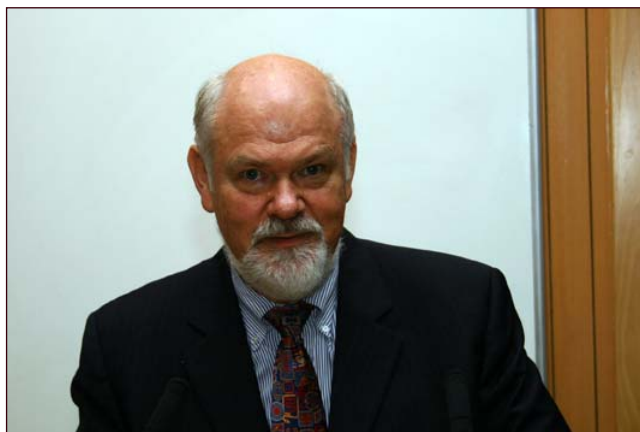
Agricultural Futures: What lies beyond 'Modern Agriculture'?

Norman Uphoff

Introduction

What is known now as 'modern agriculture' has been the most successful system of production in history, so the observations and suggestions that follow are not to be taken as a criticism of this technological mode. Between 1961 and 2001, while the world's population doubled, the world's food production increased by 180%, an expansion attributable more to gains in productivity than to expansion of cultivated area. However, as we embark on a new century, we should ask: how advisable is it to continue along this present technological path in agriculture – doing essentially more of the same, only better – or should we considering other directions?

Modern agriculture as developed and practiced in the latter half of the 20th century culminated in 'the Green Revolution,' which greatly increased world production of cereals. This is commonly regarded as the key indicator for assessing agricultural sector performance because it reflects our cumulated ability to meet basic food needs. Should Green Revolution technologies be extended, and even intensified, or are there other alternatives to be considered? This is a timely question because the Green Revolution has been losing momentum. Figure 1, constructed from FAO and USDA data



through 2006, shows that on a worldwide scale, the production of cereals plateaued about ten years ago, in the mid-1990s. And in per capita terms, cereal production peaked actually about a decade earlier and has been declining since.

It is certainly true that more grain could be produced with available and new technology than grown in recent years if there were high prices offered for cereal production. But this would be done only at higher unit cost, and the higher prices would worsen rather than reduce the hunger of the 800 million persons who are not currently adequately fed. So this strategy would be nugatory if combating hunger and poverty is the objective. Moreover, the hundreds of millions of small and



marginal producers who constitute the core of persistent world poverty would find the more costly technologies inaccessible. So there are reasons to seek productivity gains rather than to use price incentives to move the agricultural sector forward.

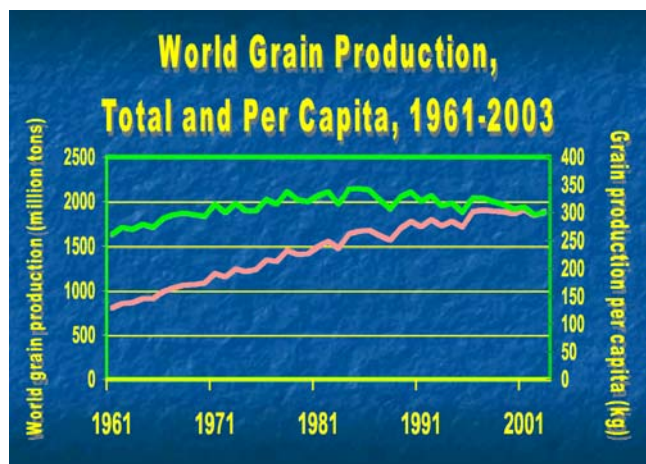


Figure 1. World grain production, 1951-2006: total (left axis/red) and per capita (right axis/green). (Sources: FAO and USDA data, in Worldwatch Institute data archive)

While acknowledging the successes of modern agriculture to date, we should look at its essential features analytically and critically, asking:

- ❑ How well-suited is this mode of production for the conditions that we anticipate facing in this 21st century? It turns out that there are many objective trends which prompt certain apprehension, which leads to the question:
- ❑ What might lie beyond modern agriculture? In other words, what might 'post-modern agriculture' look like? This will be the main focus of the discussion here.

'Post-modern agriculture' is a challenging and provocative concept that deserves serious consideration. To begin, it should be said that this concept differs from 'post-modernism' in the humanities and social sciences because it entails *no rejection of science*. Indeed, post-modern agriculture aspires to build upon the most current knowledge and insights of contemporary science, i.e., to be the 'most modern' agriculture. Further, it rejects the nihilism that has often been characteristic of 'post-modernist' philosophy. There are some similarities, however, in that both post-modern perspectives are critical of what has emerged in the name of 'modernity.' Classifying something as 'modern' has become a self-justifying means for establishing and maintaining a hegemony that puts down alternatives by deprecating or simply ignoring them. In the agricultural sector, there clearly has been a dominant 'modernization project' which has shaped not only research, evaluations and investments but also the distribution of benefits.

The concept of 'post-modernism' is ambiguous because it has two different meanings. 'Modernity' can be used either *descriptively*, as a neutral term referring to whatever currently exists, whatever is most recent; or *normatively*, as a value-laden term referring to what is considered good and superior because of certain characteristics that are deemed 'modern.' From the first perspective, 'post-modernism' is an impossibility; from the second, it is a reality.

Modern Agriculture

During the first half of the 20th century, the initiatives associated with modern agriculture aimed to 'industrialize' agriculture, making it more and more like the manufacturing enterprises and processes that had been transforming Western economies and societies since the start of the Industrial Revolution. Key elements included:

- ❑ *Standardization* of operations according to the latest available scientific knowledge, even though variability in soil and climate created a strong logic in agriculture of site-specific adaptation;
- ❑ *Mechanization* of operations, making larger scale of production possible and promoting consolidation of production units into ever-larger entities. This was linked then with
- ❑ *Labour-saving technologies*, that raised labour productivity and reduced the need for labour; plus
- ❑ *Use of chemical inputs* to enhance soil fertility, achieve weed control and crop protection.

These trends were set back by the economic disruptions of worldwide economic depression in the 1930s, which was worsened (or in part caused) by adverse climatic conditions affecting agriculture. But there was no loss of confidence in this strategy, which resumed after World War II.

In the latter half of the 20th century, modern agriculture was increasingly shaped according to what were regarded as 'scientific formulations' of agriculture:

- ❑ *Genetic potentials* were more emphasized, although breeding 'better' plants and animals had been important already in the first half of the century. Varietal and breed improvement became evermore central in agricultural thinking, linked with
- ❑ *Input utilization*, once breeding had enhanced the input-responsiveness of genotypes, which made the use of fertilizer and agrochemicals more profitable. This combination of thrusts was accompanied by



- ❑ **Energy-intensity**, with growing substitution of fossil-fuel inputs for human energy; and
- ❑ **Capital-intensity**, which became ever-greater, further displacing for labour and making for larger-scale operations.

After World War II, a global policy objective was established for modern agriculture, the expectation that it would 'feed the world,' helping nations avoid famine and promoting their economic and social development. Fears in the 1960s and 1970s that there would be widespread famines if population continued to grow ahead of food production capabilities, prompted a fixation on yield as the overriding goal and criterion of success. While *total factor productivity* was preferred by economists as a yardstick, it was eclipsed in policy and practical terms because it was difficult to measure. Yield, on the other hand, was a simple, physical standard for measuring success. This tension between agronomists and economists was never really resolved. More production could always be stimulated if higher commodity prices would prevail, but this strategy would not contribute to reducing poverty or to accelerating economic growth, which would be spurred by lower food prices.

What took shape by the latter decades of the 20th century was a consensus on agriculture which stressed mechanization, reliance on genetic enhancement and exogenous inputs, and increasingly the influence of market forces and globalization. Land-extensive, capital-intensive and large operations were favoured, with labour-saving technology that was genetically-focused and chemically-intensive as well as energy-dependent and water-consuming.

Monoculture was a natural concomitant of these trends, with specialization of production units and intensified division of labour, seeking to lower costs of production and extend the international division of labour with long-distance trade, not just in commodities but eventually also perishable crops. This system of production became for many reasons politically-favoured and influential, with major institutions of all kinds aligning with the assumptions and values that this system represented.

The terms used here to characterize 'modern agriculture' are descriptors, not value judgements. These factors shaped the dominant patterns of production, although the majority of agricultural producers in the world still have not become full (and many not even partial) participants in this system. Is it their fate to be absorbed into this system, or to be further estranged from the sector? A

decade ago, the answer seemed to be yes; all agricultural producers must become part of 'the modern agriculture project' or exit from the agricultural sector. Now the answer is not so certain.

21st Century Realities

In this new century, there are a number of objective forces and trends that are changing the conditions under which food and fibre are produced.

- ❑ **Arable land available per capita will decline**, given that (a) *population* will continue to grow at least through mid-century, and (b) *cultivable land area* has little scope for expansion and is more likely to decline, due to land degradation or urban expansion. This means that the kind of large-scale, land-extensive production that was ascendant in the 20th century will be less appropriate in the future, as productive land will need to be used more intensively, to maximize output per unit of land, increasingly a limiting factor.
- ❑ **Water available for agriculture will also decline**, given population growth and competing alternative demands for water from industrial and domestic-use sectors. The effects of any climate change that reduces rainfall or makes it so unreliable as to be less productive for agriculture will exacerbate the predictable competition from other uses. Where agriculture depends on groundwater rather than surface flows, this becomes more serious as water tables are dropping in many agricultural areas.¹
- ❑ **Energy costs are rising**, and are unlikely to return to their relatively low 20th century level. 'Modern agriculture' was developed with petroleum prices around \$25/barrel, whereas they are now three times as much, and could go even higher. The era of 'cheap energy' that subsidized large-scale, mechanized production is literally now 'history.' This shift is also likely to affect the economic viability of a radical global division of labour where agricultural goods are produced far from their point of consumption and transported long distances.
- ❑ **Diminishing returns to inputs are starting to set in.** Nitrogen fertilizer in particular is now being used so abundantly that its productivity is declining. In China, where farmers could get 15-20 kg of rice by using 1 kg of N fertilizer at the start of the Green Revolution in the mid-1960s, today they get only about 5 kg of rice per kilogram of fertilizer (Peng et al., 2004), and this ratio continues to fall. Worldwide, as seen in Table 1, the growth of fertilizer use for grains has started declining even



in absolute, not just relative terms. Pimentel (1997) reports that while pesticide use in the United States has gone up 10-fold since World War II, total crop losses in America due to insect damage did not decline but instead went up from 7% to 13%. Thus, chemical inputs have not evidently reduced pest damage in the aggregate and may have added to this, perhaps explainable by the theory of trophobiosis (Chaboussou, 2004).

Table 1. World grain production and fertilizer use, and cumulative increases by decade, in million metric tons

<i>Year(s)</i>	<i>A</i>	<i>B</i>	<i>C%</i>	<i>D</i>	<i>E</i>	<i>F%</i>
1950	631	-	-	14	-	-
1961	805	174	28	31	17	121
1969-71	1,116	311	39	68	37	113
1979-81	1,442	326	29	116	48	70
1989-91	1,732	290	20	140	24	21
1999-2001	1,885	153	9	138	-2	-1.4

A Grain production

B Decadal increase in production

C Percent increase

D Fertilizer use

E Decadal increase in use

F Percent increase

Sources: FAO and USDA data, in Worldwatch Institute data archive

These three major trends are not matters of opinion, but rather well-established facts. There are also other objective considerations that add impetus for a rethinking of 'modern agriculture' and for charting some new directions.

- ❑ While there is not yet any full consensus on the causes and extent of **climate change**, this will, to some extent, have very disruptive impacts on 'modern agriculture' because (a) monoculture is less resilient than more diverse associations of plants (and animals), and (b) farmers when they have more capital tied up in production processes are at greater risk from variations in temperature and precipitation.
- ❑ **Stagnation of yield improvements** attained by plant breeding and genetic modification is also a fact to be reckoned with in the present and at least near-run (Figure 1).
- ❑ So is the bypassing of many millions of **poor households** by Green Revolution technologies that are input-dependent. The current refocusing of development policies and efforts on *poverty reduction* is less favorable for 'modern agriculture.'
- ❑ **Environmental concerns** continue to mount as global warming, pollution and other hazards

increase, many traced back to agriculture. In this century there will not be the same freedom to ignore ecological impacts as there was in the 20th century.²

So, there are many reasons why a 'more of the same' strategy for agricultural development makes less and less sense. The underlying propensity of changing factor proportions to drive the transformation of technology over time has been well documented by Hayami and Ruttan (1985). Their *post hoc* analysis revealed dynamics and incentives that were not evident to practitioners or even theorists at the time (the 19th and early 20th centuries). But thanks to their work, we can now have a better idea of what technological changes might emerge and become prevalent in the future.

The System of Rice Intensification and Beyond

This is not the place to offer any full exposition on the System of Rice Intensification (SRI) which has emerged very opportunely from work done over half a lifetime by a French priest who lived and worked in Madagascar from 1961 to 1995, Pere Henri de Laulanié (1993, 2003). There is now an increasing published literature on SRI to which readers can be referred.³

SRI represents a kind of agroecological approach to agricultural production (Altieri, 1995; Gliessman, 1997; Uphoff, 2002) that is quite different from the premises and practices of 'modern agriculture.' Its most prominent example, the Green Revolution, proceeded on the basis of two interlocking strategies: (a) investing in improving the *genetic potential* of crops through conventional plant breeding or genetic modification, and (b) increasing the *external inputs* that the plants were bred to be responsive to – water, fertilizer, agrochemical protection. SRI achieves higher rice yields with (a) *no change* in the varieties used – SRI methods work well with both improved and 'unimproved' cultivars, and (b) with a *reduction* rather than an increase in water and chemical inputs.

Instead of changing varieties and investing in more inputs, SRI *changes the way that plants, soil, water and nutrients are managed*, with the result that (a) plants' root systems grow much larger and remain healthier, and (b) populations of soil *biota* – bacteria, fungi, protozoa, earthworms, etc. – become larger, more abundant, more active and more diverse, rendering a variety of beneficial services and protection to crops.

An analysis of results from 11 evaluations undertaken in eight countries by a variety of Universities, International Research Centres, donor



agencies, NGOs and private sector organizations shows the following results (with even incomplete use of SRI practices – transplanting very young seedlings singly, carefully and with wide spacing; not keeping fields continuously flooding; doing soil-aerating weeding; and enhancing soil organic matter):

- ❑ Average increase in yield (t/ha):
52% (range: 21 - 105%)
- ❑ Average reduction in water use:
44% (range: 24 - 60%)
- ❑ Average reduction in costs of production:
25% (range: 2.2 - 56%)
- ❑ Average increase in net income (ha-1):
128% (range: 59 - 412%) (Uphoff, 2007).

The most extensive evaluation of SRI results has been done in eastern Indonesia, over nine seasons (2002-2006) under the supervision of a Nippon Koei technical assistance team, with 12,133 on-farm comparison trials evaluated across eight provinces on an area totaling 9,429.1 ha:

- ❑ 78% average increase in yield (3.3 t/ha)
- ❑ 40% typical reduction in water use
- ❑ 50% recommended reduction in fertilizer use, and
- ❑ 20% calculated reduction in costs of production per ha (Sato and Uphoff, 2007).

Such increases with reduced inputs is unprecedented, reflecting the dynamics of a production process where rather than rely on external inputs, the management practices mobilize endogenous soil processes and potentials and symbiotic relationships between plants and soil organisms (Randriamiharisoa et al., 2006).

Modern agriculture has regarded crops in a mechanistic way rather than in their ecological context, of myriad interactions among species. It has sought to redesign plants, like machines, to certain specifications, rather than study how to provide the most favorable growing environment for plants and their symbionts. This is not the place for an extended discussion of plant-microbial interactions, but citing a single piece of recent research will make the point.

Researchers who studied the movement of soil bacteria (rhizobia) into rice plant roots and then up through the roots and stems into the plants' leaves (phyllosphere) found that in controlled experiments that evaluated the effects of presence vs. absence of rhizobia in rice plant leaves, the presence of these soil organisms significantly enhanced (a) chlorophyll levels, (b) rates of photosynthesis, and (c) yields – all other conditions being equal (Feng et al., 2005). We

have only begun to penetrate slowly into the complexities and productive potentials of the many interdependencies among plant and other organisms that have co-evolved for over 400 million years (Margulis and Sagan, 1997).

The System of Rice Intensification has been illuminating these productive potentials with results that are hard to accommodate within the orthodox theorizing and practices of 'modern agriculture.' So far we have been seeing what can be done with rice genotypes to produce super-productive phenotypes, such as the rice plant shown in Figure 2, grown from a single seed in the middle of his field by a Nepali farmer in the terai (plains) near Biratnagar.



Figure 2. Nepali farmer holding up an SRI rice plant grown from a single seed in his unflooded paddy field in Morang district. (Picture courtesy of Rajendra Uprety, District Agricultural Development Office, Biratnagar.)

Similar enhancement of phenotype expression has been seen also with finger millet (*Eleusine coracana*), known as *ragi* in much of India. Staff of the NGO PRADAN working in Jharkhand state have adapted SRI concepts and methods to this crop, with the result seen in Figure 3.

Practically by definition, one cannot fully specify or even imagine what 'post-modern agriculture' will look like when we are just entering the development of this alternative production system, responding to



Figure 3. The finger millet (*Eleusine coracana*) plant on the left was grown with an adaptation of SRI practices, while the plants in centre and on right were grown with conventional practices. The finger millet plant on the right is a traditional local variety, while the plants in centre and on left are an improved variety (A404). (Picture courtesy of PRADAN.)

the conditions that will propel, shape and constrain agricultural development in the 21st century. What I have tried to do in this lecture is to sketch out reasons why we should be considering alternative paths for agriculture in this new century, not just projecting past assumptions and technologies into the (changing) future. The System of Rice Intensification and its derivations may also apply to other kinds of crop production (wheat, sugar cane, cotton, etc.) so that there are reasons to be optimistic about a very productive and sustainable agriculture in the future, provided we can advance our knowledge and practice with regard to growing crops in consonance with biologically-rich and -active soil systems, understanding 'soil' in a different and more dynamic way (Uphoff et al., 2006).

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Notes

- 1 The Department of Agriculture in the Indian state of Punjab, considered a 'breadbasket' for that populous country, assesses the water table in that state to be now at 70 feet, having been at 30 feet just 33 years ago. The area affected by water shortages due to declining water is now 30% compared with 3% in 1973-74. By the year 2023, just 16 years from now, the whole state is expected to be affected by water shortages as the water table will drop to 160 feet.
- 2 John Lawton, former chief executive of the U.K. National Environmental Research Council, has called the rising application of N fertilizer "the third major threat to our planet, after biodiversity loss and climate change" (*Nature*, 24 February 2005), referring to the adverse impacts that reactive N has on water quality and aquatic ecosystems.
- 3 For interested readers, the following publications are suggested, following up the first one by Laulaniè (1993): Rabenandrasana (1998), Uphoff (1999), Berkelaar (2001), Stoop et al. (2002), Uphoff (2003), Anthofer (2004), Husain et al. (2004), Zheng et al. (2004), Horie et al., (2005), Ceesay et al. (2006), Randriamiharisoa et al. (2006), Kabir and Uphoff (2007), Mishra et al. (2007), Ngo (2007), Sato and Uphoff (2007), Sayanarayana et al., (2007), Sinha and Talati (2007), Uphoff (2007).



Will you volunteer to help run the TAA?

The Executive Committee is looking for members to volunteer for a number of positions that are important for managing our Association and to become involved with expansion of its activities.

Webmaster: We urgently require a person to take over the management of the website from Tony Smith. The site is our window to the world, enabling outsiders to learn about TAA and its activities. Initial steps have been taken to get the website redesigned, to change its appearance and widen the scope of its content, so it would be advantageous for the new webmaster to be available when the new site comes on stream, hopefully, early next year.

Regional Group Convenors:

We need a member to fill the vacant post for the Scotland/Borders Group and someone located in Wales or the Midlands to look into the possibility of setting up a new group for this geographical area.

TAA Sub-Committees and Regional Committees:

A call is made for members to volunteer to join sub-committees managing the affairs of our Association and regional committees to assist with organizing meetings and other activities.

Members interested in any of these positions should contact our Chairman Amir Kassam



*South-West Region Seminar on Malawi held at
Bicton Agricultural College, Budleigh Salterton, Devon, 18th May 2007*

Agriculture in Malawi - a summary

John Crossley

A historical perspective

The Kushite people came into Africa about 5,000 BC. They briefly established suzerainty over Egypt but were expelled by the Assyrians and retreated to the Upper Nile where they founded the state of Meroe in about 600 BC. Here their iron-smelting industry by which they sought to rival the Assyrians, set the environmental clock ticking, a paradigm for succeeding cultures in Africa and elsewhere. Vast quantities of charcoal were extracted from the surrounding forests – one ton of charcoal is used in the smelting of enough iron to make three hoes. Overgrazing compounded the loss of trees, and by the second century AD, Meroe was ‘burnt out’, its legacy amounting to pyramids built on the Egyptian model and vast heaps of slag from the iron works.

The Meroe/Bantu Link

Before Meroe collapsed, it passed useful elements of its culture to the Bantu peoples who, after moving out of the West African forests, had settled in the area stretching from the Great Lakes to Katanga. The growing of cereals and the smelting of iron were arts which enabled the Bantu to establish themselves in the unfamiliar savannah country and then move into all of southern Africa. These skills almost certainly came to them from the ‘men of Kush’.

Agriculture reaches Malawi

By the 3rd century AD, Bantu people were moving into Malawi. John Illiffe, Professor of African History at Cambridge, describes these arrivals as “...mobile pioneers probably still highly reliant on foraging and hunting who selected only land best suited to their farming technology....and abandoned fields ruthlessly once their virgin fertility had been lost”. With some exceptions, the evidence generally points to the destructive nature of primitive African agriculture. The 1930s and 1940s saw the so-called “War of the Ridges” when the Protectorate Government tried to impose soil conservation measures. Opposition to this innovation centred in the south of the country round the mythical figure of Mbona. Mbona communicated with people through a medium and in 1964 he explained the attitude of farmers. “The resistance of the growers”, he said, “was directed at the practice of having to ridge their gardens which they thought both useless and time-

consuming”. They motivated their refusal to comply by pointing out that “Mbona, when blessing gardens at night, could only walk through them with difficulty, and might possibly break a leg.” A severe drought affected the country in the 1948/49 season. It was attributed to Mbona’s disapproval of the inconvenient ridges.

How can the clock of environmental destruction be stopped or at least slowed down a bit?

In spite of protests, ridging of gardens has been generally adopted but this is a partial and, by itself, inadequate answer to the problem. In many cases, ridges are not properly aligned with the contour and left open at the end to enable water, after heavy rainfall, to pour between the ridges carrying topsoil, nutrients and organic matter with it. This is the treatment applied to most of the land in Malawi. The rivers still run brown, carrying, according to a World Bank survey, 20 tons or more of soil from every hectare of land annually; almost a form of national suicide. All the subsidised fertilizer in the world will not support crops once the soil has gone.

Here and there are small islands of hope. The Anglican Church runs a demonstration garden at Chiwowa in Nkhata Bay district. A hectare of steeply sloping and eroded land is now protected by substantial marker ridges reinforced with vetiver grass. A system of parallel crop ridges and raised paths combines to hold all the rain where it falls evenly distributed over the land. Villagers come from the neighbourhood to assess what this has for them. Not far away two village clubs have taken the conservation programme one step further by constructing permanent deep beds between contoured marker ridges to ensure decompaction of the soil and complete infiltration of the rainfall. They are already noting encouraging results from land which had been written off as worked out and useless. And a recent issue of the widely circulating magazine “Lamp” had a cover depicting a group of children crossing a fiercely eroded piece of ground and asking, “Where can we play?”

Where there is awareness there is hope!

John Crossley was sometime Administrative Officer in Malawi, now usually resident at Mzuzu in the Northern Region.



Fashions in Extension Objectives: Crops, Conservation and Community

Ted Wilmot

Introduction

In the early days of Colonial/Protectorate Administration, the priority was to raise sufficient funds to meet the cost of keeping the peace in the aftermath of the Slave Trade. Thus, emphasis was on the production of crops, which could either be utilised in Government use (i.e. for feeding in the army and prisons) or for export. Beverage crops were favoured by expatriates and cotton and rice for the locals; tobacco growing began soon after. It was generally accepted that the local people knew perfectly well how to grow crops for subsistence.

During the 1930s, a series of surveys were carried out to look at village life as a whole, and this led on the concept of Jeanes' Workers who were specially trained to facilitate Community Development. At the same time it was realised that continued use of soil led to erosion, and this had to be counteracted by conservation. As a result of natural fecundity, and hastened by introduced health services and relative absence of wars, there had been a steady increase in population. This had been compounded by the use of imported labour from outside the natural area. The general result was that whereas in the early part of the century a single family could have access to 20 acres (10 ha) of land, by the beginning of the 1950s this was down to 8 acres (4ha). Indigenous systems of land management, which had been based on the bush fallow, were no longer effective, and fertility and harvests were markedly decreasing.

Soil and cropping in the 1950s

In 1949 there had been a severe famine in Nyasaland that could have been mitigated to some extent by early planting. Hence it became government policy to encourage early garden preparation and early planting, and at the beginning of the 1950s two campaigns were in force: "Early garden preparation" and "Contour Ridging" for soil protection. There was also a drive to purchase maize (to feed the growing urban population) and to step up the commercial production of cotton and tobacco, and later groundnuts. At a later stage contour ridging (with or without tie-ridging) was modified by the introduction of marker bunds (or larger untilled ridges) at set distances down the slope. These in turn were to be constructed on the grade, and designed to discharge into dedicated and pre-constructed waterways.

As well as the physical protection of the soil, attention was given to the development of a tropical version of the longer Norfolk Four Course rotation to maintain or enhance soil fertility. The inclusion of a ley in the rotation was not feasible

for most farmers, as few had livestock or facilities for fencing. Groundnuts as a legume were acceptable in most areas. In the tobacco areas this crop received some manure and maize did well after tobacco. In order to stimulate rotational farming, Government introduced subsidies for model farmers or Master Farmers. Generally they did very well, but were not popular often being accused of witchcraft, and were the butt of nationalistic political intrigue.

During the 1950s, the use of oxen for ploughing and carting, and the use of manure and artificial fertilizer were encouraged. The soil in cattle bomas was known to be enriched, and when the cattle were moved on, these soils were used for the most valuable crop, often tobacco or vegetables. Moving it onto the fields only began after a number of farmers had acquired carts. For those that had a little money, subsidised fertiliser was preferable.

Work on maize improvement had also begun with variety trials and a breeding programme. Any new variety offered to the local farmers should maintain its pre-eminence for at least three re-sowings, and store well under local conditions. In the 1970s, when the village mills were driven out by competition of the large commercial mills, storage became less important and the larger farmers switched to the softer and higher yielding hybrid maize. Later in the 1990s, as economies collapsed across the continent, and factories failed, there has been a move back to hard grain, and village mills are being re-introduced.

Community themes

Co-operative marketing was encouraged and worked reasonably well at the local level, but when elected representatives from different regions had to decide the allocation of scarce and lumpy resources, the system ran into difficulty. Political Cooperatives were a failure because of poor administration. Marketing boards in the Government sector provided some better centralised support, but with declining economies, much marketing has reverted to the private sector where it had been largely in the thirties.

Village Land Improvement Schemes (VLIS) were developed in which a number of farmers banded together so that their corresponding strips could be cultivated at the same time, and the conservation methods could be applied continuously over a wider area (a system harking back to the mediaeval concept of communal fields).

Community Development was established as an alternative form of extension, in which the people were asked for their priorities for the enhancement of their way of life. This was



a natural sequence to the provision of Jeanes' Workers, and was mirrored much later in Farmer Participatory Research (FPR). One of the main requests was for enhanced water supplies; this could usually be provided from boreholes. It was envisaged that the community would undertake the responsibility for maintenance of these facilities, but the community did not often see it like that. In some cases water tables were too low.

During the late 1950s, chemical pest control became possible in peasant farming, especially on cotton. DDT, now reviled, was instrumental in taking one area I knew out of famine. The application of minute amounts of the dust in the crown of maize plants, controlled stem-borer, and led to a tenfold increase in harvest. Fertilizer and pesticides supply were linked to marketing, and credit was soon added. This in turn led to a proliferation of Farmers Associations, which were encouraged for the preferential distribution of supplies.

During the Colonial period the problems of land use were well recognized. This was essentially a period of Indirect Rule, and ideas had to be introduced through the native authorities. Major areas of conservation (i.e., major watersheds) had been declared Forest Reserves, and every village was supposed to have a village forest reserve for its own woodland purposes. Education was also proceeding apace. For the most part extension policy was centrally driven, and although chiefs and farmers were consulted over means, there was recourse to the big stick where necessary. Most of the practices introduced eventually became accepted as part of the culture, and regulatory action became unnecessary. Colonial extension policy aimed at early planting, rotation, clean weeding, and physical conservation. The original indigenous pattern favoured slash and burn (very wide rotation) and mixed cropping.

The use of force caused reaction during the period leading up to Independence, and was one of the main planks of the anti-Colonials. After Independence, the National Government gradually came back to propounding much the same programmes as had been in vogue in the previous decade. Only some time after independence did expatriate researchers seriously investigate mixed cropping and successional planting.

Larger schemes of the 1970s

The formation of politically inspired cooperatives was not a success, and they were dispensed with. Independence also brought a rush of donors willing to finance any reasonable kind of development especially if it was on a big enough scale. Thus VLIS comprising a dozen or so farmers, and village conservation drives were out, and Land Reorganisation Schemes involving dozens of villages were in. Such schemes were also holistic in that complete road, marketing and conservation constructions were included, and at the insistence of the national government, health and adult education were added. Such wide-ranging schemes covering numerous different disciplines (Integrated

Development Projects) raised the problem of what organisation should be the successor to project management. The responsibility for the maintenance of the conservation structures was a particular worry.

By the early 1970s, the schemes now widespread in Africa were absorbing a large proportion of developmental finance, and the economic outcomes were less than had been promised. While the national governments were pressing to complete the national coverage of development, the World Bank toned down the facilities on offer in subsequent schemes. At the same time the extremely "top-down" system, T&V (Training and Visit), was developed where centrally agreed messages were disseminated as far and wide as possible.

The fuel crisis of the mid-1970s raised the cost of all oil-based products and placed agricultural chemicals beyond the economic reach of the majority of small farmers, without subsidy, which international opinion was against. Cropping patterns were re-examined and the concepts of crop succession and of crop complementation were resurrected. USAID played a prominent part in this, in what became known as Farming Systems Research (FSR). Traditional practices of intercropping and successor cropping, particularly where there was no question of mechanical cultivation, were also examined. Mixed cropping was back in favour. Biological control of pests had been started two decades earlier but it came into its own when the costs of pesticides rose.

Reversion to smaller schemes

Many of the expensive schemes of the previous decade were no longer sustainable, either due to administrative failure or because in some places hostilities had broken out, and agencies were unwilling to carry on with large area schemes. Instead they favoured small initiatives, which might later be expanded. One of the most successful was that of farmer-to-farmer extension and one of the most successful farming systems to have evolved, largely in Latin America, is that of Zero Till. Compost making is back in favour in some areas, especially where it is linked to the production of high-value vegetables with a ready market.

The donor agencies took stock of where there could be economic justification for intervention, and found that it could not be justified in a large part of the Third World. For these disproportionately disfavoured areas, it was concluded that perhaps the farmers themselves had the ingenuity to get themselves out of their distress – at least it would be more economical. Teams of researchers are now funded to watch the farmers trying to get themselves out of their dilemmas. This is called Farmer Participatory Research (FPR), and the researchers are no longer experts but facilitators. There have been some successes from this approach, but whether these local innovations can be transferred to a much wider scene remains to be proven.



AGM AND ANNUAL MEMORIAL LECTURE

**ROYAL OVER-SEAS LEAGUE, PARK PLACE,
ST JAMES'S STREET, LONDON SW1A 1LR**

(see map on page ii for directions)

WEDNESDAY, 28th NOVEMBER 2007, 5.00 P.M.

AGENDA

1. Apologies
2. Minutes of AGM of 13 December 2006 *vide* March 2007 Newsletter
3. Matters Arising
4. Reports from Officers
5. Adoption of Audited Accounts
6. Approval of Accounts
7. ExCo Elections
8. AOB

THE 25th ANNUAL RALPH MELVILLE MEMORIAL LECTURE

At 6.30 p.m.

DR GEOFFREY HAWTIN

Former Director General, International Plant Genetic Resources Institute, Rome, Italy

“SECURING CROP DIVERSITY—ASSURING THE FUTURE”

(see page iii for abstract)



THE ANNUAL REUNION

will be held from 7.30 p.m.

A hot fork-buffet will cost £18 per person

To: Elizabeth Warham, General Secretary TAA, PO Box 3, Penicuik, Midlothian EH26 0RX

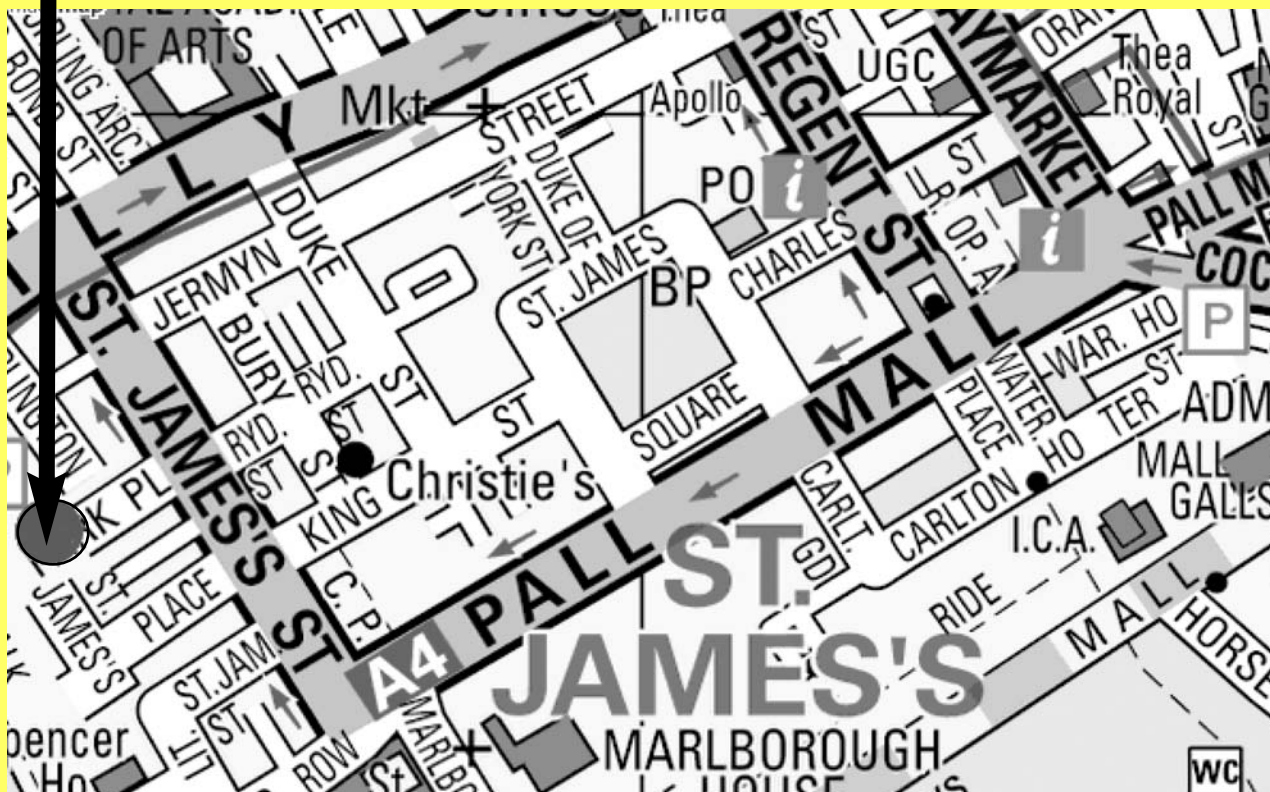
I/We*..... will/will not attend the 2007 AGM, Memorial Lecture and Reunion. A cheque to the value of £....., made payable to the Tropical Agriculture Association is enclosed.

* Please print clearly!



AGM VENUE

**ROYAL OVER-SEAS LEAGUE, PARK PLACE,
ST JAMES'S STREET, LONDON SW1A 1LR**



How to get to the London Clubhouse

Tube to Green Park (Piccadilly, Jubilee or Victoria lines), take exit marked Buckingham Palace, walk past the Ritz Hotel turning right into Arlington Street. At the end of Arlington Street there are some steps, down the steps to the front entrance (approx. 5 minutes).

Buses stop outside the Green Park tube station on Piccadilly, numbers 8, 9, 14, 19, 22 and 38, running west to Hyde Park Corner, Victoria and Knightsbridge, and east to Piccadilly Circus and Holborn.



Ralph Melville Memorial Lecture

(Abstract)

While the loss of biodiversity receives a lot of publicity, one of its most important components is disappearing almost unheralded: the genetic diversity of the crops on which our current and future food security depends. Such diversity will become ever more important as climates change and new pests and diseases threaten production.

Diversity is disappearing from fields throughout the world as changing lifestyles and the globalization of trade have resulted in the abandonment of many traditional crops, and agricultural intensification has resulted in fewer varieties being grown over ever larger areas. Furthermore, many populations of crop wild relatives are under threat from the loss of habitats, and all this is occurring at a time when advances in molecular genetics are making such gene sources more valuable than ever before.

Efforts to redress the situation have included the development of the CGIAR collections as a global public good, endorsement by more than 150 countries of a Global Plan of Action, and the coming into force in 2004 of the International Treaty on Plant Genetic Resources for Food and Agriculture. Large collecting efforts, especially in the 1970s and 1980s, and initiatives to conserve agriculturally important habitats have helped stem the loss, but many germplasm collections are themselves under threat, largely from a lack of reliable funding.

Recognizing this situation, the Global Crop Diversity Trust was recently established to provide a stable, long-term source of funding for the world's most important genetic resources and a back-up seed repository, the Svalbard Global Seed Vault, is being built in the permafrost, deep within the Arctic Circle.

Scotland/Borders

Wednesday 31st October

The University of Durham is organizing a one-day conference on 'Sustainable Development with Conflict' to be held in the Anthropology Department, commencing at 9:30 am.

Speakers will include Paul Richards (Wageningen University), Mike Rowlands (University College London), and from Durham Ben Campbell, Gina Porter, Alex Standish and Paul Sillitoe.

All are welcome. Further information from Paul Sillitoe on 0191 334 6100 or email paul.sillitoe@durham.ac.uk



South-West

Thursday 25th October 2007

Seminar on Seed Systems in Africa to be held at the Shipham Village Hall, 25th October, 2007.

Good seed is the foundation of a vigorous competitive crop and is the major vehicle for dissemination of pest/disease management technologies, through host-plant resistance, and a range of other traits from drought tolerance through early maturity to improved nutritional quality. In many communities, particularly among the poor and vulnerable, seed is the main and sometimes only input – either re-cycled or purchased. What are the most effective seed system options for widespread dissemination of new cultivars and for securing seed supplies at community level? Speakers will describe lessons for the study of seed systems in Nigeria and Tanzania including best practice in farmer saved seed, community-based seed groups and the private sector.

Short presentations (15 minutes) will also be welcomed from members who wish to share their experiences of improving seed systems, be this for post-conflict/disaster relief or sustained development.

Coffee will be available at 10:00am. The meeting will begin at 10:30am and close at 4:00pm.

Please register intention to attend to Charlie Riches (by 10th October) and offers of short talks by 1st October. Email: charlie@riches27.freemove.co.uk (phone: 01934-842453).

Directions: Shipham lies approx. 15 miles from Bristol off the A38. From Bristol take A38 past Bristol airport and proceed through the traffic lights in Churchill. Go straight over the traffic lights. As you go up the hill out of Churchill the road bends to the right. Rowberrow Garage is on the left and here turn immediately left, at the end of the forecourt, up hill to Shipham and find the village hall on the right at the top of the hill just past the village name stone marking the village boundary.

From Junction 21 of M5 take A370 in direction of Bristol as far as traffic lights in Congresbury. Keep in the right-hand lane and turn right to Churchill and Langford on the B3133. Pass the University of Bristol Vet School on the left, behind high walls. At the mini roundabout go right. Budgens and a petrol station will be on your left. At the T-junction with the A38, turn right to Churchill, Taunton. Proceed to Churchill traffic lights and follow direction above into Shipham.

Tuesday 8th January 2008.

SW Branch AGM and Luncheon to be held at the Exeter Golf and Country Club.

This will include the formal AGM, three or four short presentations on topical subjects and work, the annual luncheon with a speaker of note. Suggestions and volunteers for the short presentations will be welcome by the organiser. Full details in the December Newsletter.

To be convened and organised by George Taylor-Hunt. Tel: 01626 362782 and e-mail: gtaylorhunt@talktalk.net

Spring 2008—Seminar on Water for Crop and Animal Production. Convenor Tim Roberts

Summer 2008—Seminar on Biofuels and the Associated Cropping. To be held at the Green Spirit Plant, Henstridge. Convenors George Taylor-Hunt and Bill Reed

Also see pp 40–41 in main *Newsletter* for more 'Newsletter Extra':

□ The Nyika-Vwaza (UK) Trust

□ TAA Seminar: ARSENIC CONTAMINATION OF WATER AND FOOD IN DEVELOPING COUNTRIES



Because of the intractable problem of producing adequate food in some of these areas, the donors have shied off the subject, and are concentrating on Poverty Alleviation. By doing this they can concentrate on trying to protect hungry babies, maintaining the population level and driving more rural people into the outskirts of cities where they can be more advantageously serviced. The latest donor pitch seems to want to dispossess thousands of peasant farmers in favour of passing their lands over to large corporations to manage. It seems that this is what the Russians attempted in Europe and Asia with very mixed results and almost entire failure when transferred to Africa. The donors again are back to wanting big schemes, so as to limit their administrative costs. Relatively high administrative costs (they would tacitly agree) are all right for NGOs, who operate, largely spurred on and funded by idealists, as long as the big donors do not have to pay them.

The present dilemma

While half the world condemns the growing of economic crops in the Third World, insisting that efforts should go into food production for their home market, the others maintain that Global Trade should be governed by market forces, especially those of the Developed World. At the same time the Developed World has become more and more conscious of food safety, and has insisted on such hygienic standards of production that very few in the Developing World can afford to install them. The effect is to distort the market forces in favour of the Developed World's production. As has been recognised from the early part of the 20th century,

peasant farmers in the developing world need to produce for sale as well as for subsistence. The logical outcome of this is that production will increase in those areas where there is comparative benefit and the most lucrative market, and a sophisticated market chain leading back to the primary producer. Two crops to-day fit that category: cocoa for the higher rainfall and more fertile soils and poppies for the most arid and poorest soils. These do not need extension. This is globalisation taken to the extreme.

The gap between the small farmer inspired innovation, and the introduction of it to a broader region has never been wider. The small farmer, who by and large has not got access to the internet, is now probably as much on his own as he was when Livingstone sailed up the Shire 150 years ago, with far less land, with far less prospects, and with few friends in the wide world outside.

Postscript

Monterrey has made an attempt to get more help to the poorest, but the brave statements have hardly yet been implemented. An innovative idea from the British Government, the F.F. Initiative, has the possibility of cranking up the availability of aid in the short term. But this is at the expense of committing future generations to pay for it, after all the funds have been used up, and hopefully when the benefits of the scheme will have been adequately demonstrated.

Ted Wilmot OBE began his career as an Agriculture Officer in Malawi in 1950 and was subsequently a senior natural resources adviser in ODA.

Period	Food	Crops		Marketing	Services	Conservation	Community
		Economic peasant	Estate				
1900-1930	Local	Rice Cotton	Tea/Coffee Tobacco	Govt usage Private buyers	Missions	Forest reserves	Indirect rule
1931-1950	Local	Cotton, Rice Tobacco	Tea Tobacco	Auctions Co-op. boards	Limited extn and research	Village forest reserves	Village surveys Jeanes' Workers
1951-1960	Local Impr. Maize Groundnuts Village milling	Cotton Tobacco Groundnuts	Tea Tobacco	Auctions Co-op. boards	Increased extn and research Fertilizer credit Oxen Pesticides	Contour ridges Contour bunds Graded bunds Rotations	Master farmers Community dev. Village land improvement schemes Coord. with Admin.
1961-1970	Impr. flint Maize Hybrid Maize Groundnuts	Self sufficiency Value added Global markets	Tea (incl. smallholder) Tobacco (incl. smallholder) Sugar	Boards Auctions	Project schemes Farmer training Irrigation Settlement	Graded bunds Grassed waterways Planned roads	Land reorganisation Donor investment Smallholder Tea and Tobacco
1971-1980	Hybrid dent Maize Central milling Groundnuts	Increased global competition	Tea (incl. smallholder) Tobacco (incl. smallholder) Sugar	Boards Auctions Treaties	Area management Farmer training T&V	Grassed contour strips	Area development Donor investment Rural development Food for Work
1981-1990	Dent Maize Central milling	Competition increases Commodity extension	Competition increases	Boards Auctions Private buyers	Farming Systems Research Crop packages	Succession planting Peoples' forest Zero till	Donor revised ideas Communal forestry NGOs Reduced extension
1991-2000	Flint Maize Village milling Famine relief	Market share reduced	Market share reduced	Auctions Private buyers	Farmer Participatory Research	Zero till Composting	Process projects NGOs preponderate Farmer to farmer extension



The Nyika/Vwaza Trust and International Conservation Developments

Harry Foot

The Nyika-Vwaza Trust

The Nyika-Vwaza Trust [NVT] was founded and registered in Malawi at the instigation of David Foot, who has lived on the Nyika for the past 14 years, to assist the Malawi Government's Department of National Parks and Wildlife [DNPW] with the conservation of the Nyika National Park and the Vwaza Marsh Wildlife Reserve. All work done by NVT is in consultation with DNPW. In 2004 I instigated the registration in the UK of The Nyika-Vwaza (UK) Trust [NV(UK)T] to assist with promotion and fund raising, especially in tax efficient ways. The two Trusts are legally independent of each other but work together through a Memorandum of Understanding.

Nyika National Park

Resources available to NVT

- ❑ Manager is currently a temporary part-time expatriate volunteer (Mike Budgen, UK trustee) pending a more permanent appointment.
- ❑ A labour force of 60 workmen recruited from villages around the boundaries of the Park, plus 2 driver-mechanics and storekeeper. It has been said that in Malawi the employment of one person results in the feeding of eight people so NVT is arguably helping to feed about 500 people
- ❑ Vehicle fleet of 4 vehicles (all second-hand) for the movement of workmen and materials around the Park. Serviced by Trust mechanics with periodic inspection (voluntary and free) by Hugh Kayes, retired tea estate factory engineer. DNPW has offered the use of a tractor, presently at Vwaza, provided NVT can make it operational.
- ❑ Equipment. Tools and clothing as necessary.

Core Work

- ❑ Control of wild fires, essentially by a programme of early burning.
- ❑ Control of the spread of *Pinus patula* from self-seeding both internally within planted area and outside those areas. Approx. 500 hectares were planted between 1952-57 by CDC and subsequently neglected over the following 50 years.

Some areas are clear-felled using axes (not chainsaws) and timber sawn by pit sawyers (not sawmill which is out of commission). NVT is happy to use these simple methods as part of an eco-friendly policy and to provide employment to as many people as practical.

Other Projects

- ❑ Communications within the Park.
- ❑ Bridge restoration programme, funded by grant from the British High Commission. Over the years timber bridges have been destroyed by fire (wild fires or poacher-lit fires) and neglect. A programme of restoration or construction of new bridges (total 12) is well under way with the professional and voluntary assistance of Brian Parsons, retired construction surveyor. On advice of Major Ian Gordon [Nyika Park Warden 1971-77 and now trustee of NV(UK)T], the main timber structural beams are abandoned in favour of steel. However, instead of using imported steel, at great cost to Malawi's foreign exchange reserves, we are using old lorry chassis, of which there are plenty lying around in Malawi.
- ❑ Signposts. Decayed wooded uprights are replaced with stands built from Nyika rocks onto the face of which wooden finger posts are attached. These can be easily replaced when necessary, but the stands will be permanent.
- ❑ A tourist map of the park is in production.
- ❑ Workmen's Hostel. Sleeping accommodation on an existing brick/cement base, new ablution block, and kitchen/dining areas on old premises are being constructed with eco-friendly Nyika earth-plus-cement blocks.
- ❑ Manager's Log Cabin. Funded by the Beit Trust, made from Nyika pines and designed free by David and Robyn Foot. Up until now the Trust has been dependent upon the generosity of The Nyika Safari Company (NSC) for free accommodation.
- ❑ Bracken Control Research Project. A 3-5 year experimental programme has recently been initiated because bracken is spreading across the high plateau to the detriment of the grazing areas of herbivores and the habitats of other creatures and plant species. Advice from readers would be most welcome.



- ❑ Bibliography. A start on compiling this has been made voluntarily by Louisa Verney of Cazenove Loyd whilst on sabbatical at Chelinda. Much work still to be done.
- ❑ Mechanic's Workshop and Diesel Storage Tank. NVT is at present dependent upon the shared use of the NSC facilities. Construction, to be funded by the Tusk Trust, will be commenced shortly and will further reduce NVT's dependence upon NSC.

Vwaza Marsh Wildlife Reserve

- ❑ Borehole funded by Beit Trust at Chigwere Cultural Centre.
- ❑ Some road clearing and repairs of culverts.
- ❑ Construction of a bund annually across South Rukuru River to hold back water to provide a pool for hippos when Lake Kazuni dries up in the dry season. The bund is washed away in the rains when Lake Kazuni fills.
- ❑ Restoration of Hewe River to marshes. In 1999 local people diverted the Hewe River to provide water for agriculture and fishing. This caused marshland to dry up and, at the request of local people and DNPW, in January 2007 NVT financed the restoration of the Hewe into the marsh land.

International Conservation Developments

Peace Parks Foundation [PPF], South Africa is also involved with Conservation:

- ❑ PPF is the leading international organization promoting Trans Frontier Conservation Areas (TFCA).
- ❑ In November 2006 the CEO of PPF, Prof. Willem van Riet, travelled from South Africa for a night in London at no cost to the Trust in order to speak about TFCA's at a promotional and fund-raising event organized by NV(UK)T. He described the most successful TFCA as being that between North and South Korea where both countries had declared no-go areas either side of the border and this produced a marvellous natural conservation area in which there was no interference by humans. The planned Nyika TFCA between Malawi and Zambia will be created not in a war situation but in peace.
- ❑ Nyika TFCA will embrace NNP and VMWR, both in Malawi together with the Zambia part of Nyika and 3 contiguous Forest Reserves, Mtenge, Makutu and Lundazi, all in Zambia.

- ❑ Both Governments signed a Memorandum of Understanding at Chelinda in August 2004. Now a formal Treaty is to be signed in South Luangwa, Zambia in mid-October 2007 that will bring the TFCA formally into existence.
- ❑ The signing of the Treaty will be celebrated with the launch of a new Wildlife Sanctuary being constructed by PPF on the international border at Bambanda, Zambia, and Zaro, Vwaza Marsh. This will be one of several sanctuaries to be built within Nyika TFCA to assist with the re-introduction of animal species that are no longer found in the area.
- ❑ PPF has been assisting DNPW since 2005 with law enforcement. To date 40 poachers have been convicted. Punishments either fines up to Kwacha 100,000 or goal sentences ranging between 6 months and 5 years.
- ❑ PPF is also assisting both Governments with training of scouts. Seven Zambia scouts and 12 Malawi scouts have been trained to date.
- ❑ The old Zambia scout base at Nyika Rest House has now moved to Kaperekeze entrance.
- ❑ For more information on PPF see www.peaceparks.org

Harry Foot, son of a tobacco farmer and a Federal MP for Nyasaland, was in the administrative service in Nyasaland for some years before becoming Bursar of Charterhouse until his retirement. Harry Foot, Stowford Farm, Harford, Ivybridge PL21 0JD.

Harry Foot's

Date for your Diary

**The evening of Thursday
8th November 2007
when NV(UK)T will be
holding its next promotional
and fund-raising evening at
the Royal Geographical
Society, London.**



An introduction to The MicroLoan Foundation

Tom Hall

MicroLoan Foundation

The MicroLoan Foundation (MLF) is a UK-based charity that provides small loans, basic business training and on-going mentoring support to poor people in sub-Saharan Africa to enable them to develop self-sustainable livelihoods, to feed, clothe and educate their families, and work their own way out of the poverty trap. The mission of MLF is to significantly reduce the depth and breadth of poverty in the communities within which it operates.

Before accessing our services, many of our clients have little or no access to credit in any form. Because two-thirds of our clients are illiterate, they often lack the knowledge to start their own businesses. MLF counters this by never lending to individuals without providing them with the expertise and training to build a business plan likely to succeed.

MLF only lends to groups of about 10 to 18 women so that individuals can support and encourage one another and provide assistance to each other if things do go wrong. Currently these groups are made up only of women, many of whom have little or no schooling. Research shows that women – the primary carers in African culture – are more likely than men to use a loan to invest in their family's future.

Malawi

Malawi is officially the 9th poorest country in the world (UN Capital Development Fund, 2000), with a population of over 12 million, 90% of which are subsistence farmers who live on an average of 45 pence per day (World Bank, 2006. <http://web.worldbank.org>). The population is very susceptible to famine. Failure of the staple crops due to drought or lack of fertilizer, or disease that affects the population's ability to farm such as HIV/AIDS or malaria, seriously threatens their lives. In the recent famine of 2005, the Food and Agriculture Organization Report (2005) estimated that one quarter of the population would not have enough food to survive the year. This coupled with an estimated HIV/AIDS

infection rate of 30% and a child mortality rate of 10% puts average life expectancy in Malawi at just 36 years of age.

With plans aimed at expanding throughout sub-Saharan Africa, MLF opened its first office in Malawi in 2002. The MLF has made over 10,000 loans with a repayment rate of over 96%. Since on average each client has received two loans, we have directly assisted over 5,000 women. For most, it is the first time that they have had access to any real earnings and they use the profits from their businesses to buy food for the family and pay for their children's schooling. As a Malawi family typically comprises five dependents, including at least one AIDS orphan, this means that our loan programme has assisted directly some 30,000 people.

Graduation

After receiving several loans from us, some of our clients are ready for significant business expansion. One of our key goals is to "graduate" our clients to accessing larger-scale, longer-term commercial credit from the country's established banks. We are proud to have an agreement with a major commercial bank in Malawi to introduce our clients as new customers. By helping more women like Bertha access financial services we hope to make a significant impact on poverty reduction in the communities we serve. Each sustainable business increases the number of jobs available in the local community, drives up the standard of living and ensures that people are no longer dependent upon foreign aid.

Microventures

Although MLF has grown rapidly and maintains a high repayment rate, the women's groups carry out a limited range of businesses. As a result they are vulnerable to poor rains or shifts in the local market. In response to this, we have set up a business support arm called Microventures. The purpose of Microventures is to provide our clients with the training and skills necessary to build higher margins and more resilient businesses. We are currently piloting training in several areas suggested by the women, such as knitting, sewing, mushroom farming and paper-making.



Monitoring and Evaluation

'We always monitor performance by using a number of key performance indicators. Specifically we monitor

- ❑ loan repayment rates,
- ❑ the number of people impacted,
- ❑ individual business performance set against initial business plan agreed with groups, and
- ❑ individual client case studies, like that of Bertha above, illustrating the project's progress and telling the stories of those involved.

tom.hall.microloanfoundation@googlemail.com

Bertha's Story

Bertha Gama, (pictured below, left) used her first loan from MLF of around £30 to buy some rice which she sold door to door. She is now on her third loan and has won tenders to provide rice to three schools in the Kasungu region. Bertha and her family used to sleep on reed mats in a small mud hut. She had only one set of worn-out clothes and could not afford to send her children to school. With the profits from her business she has bought a plot of land and is building a multi-room brick house. She is now able to feed and clothe her family, and can pay for her three children to go to school.

More case studies of our work will soon be featured in the *Daily Telegraph* Christmas Appeal. We would be glad to send you details of these if you are interested.



Sunflower in the Sun © Tina Bone



*Paper delivered at a South-West Region Seminar on
Organic and Sustainable Agriculture held at the
Rookery Manor Conference Centre, Edingworth, 29th March 2007*

Collaboration in organic livestock marketing

Bob Kennard

Introduction

“It is not so much that farmers think that the system of individual marketing brings greater collective profit than a collective system would. It is that almost every farmer nourishes a secret belief that in this competition he manages to do just a little better than his neighbour.”

From *The Farmer and his Market* 1927.

My years in Africa taught me a lot. One particular experience at Vuvulane Irrigated Farms (VIF) in Swaziland, taught me that farmers will only collaborate if they really see a need to do so – it cannot be introduced “from above”. In farmers’ meetings at Vuvulane, the constant cry was for marketing opportunities for their vegetable and other crops (which were an addition to the main crop – sugar cane). So we looked at the local market, both within Swaziland and in neighbouring South Africa, and the huge potential soon became obvious. We reported back to the farmers, received an enthusiastic response and subsequently started with a pilot project – production of onion sets for a large farm. At the next farmers’ meeting a mass of volunteer hands were raised, but as the various stages went by, the enthusiasm waned, until they actually produced around half a dozen bags of onion sets. Genuine motivation is all.

Graig Farm Organics

On return to the UK in 1985, my wife and I looked at potential opportunities for our own farming business. We started with the idea of producing chickens

that tasted of chicken, reared in traditional extensive conditions. However, the farming establishment was so blinkered to any alternative to intensive poultry, that we soon coined the phrase - the “Ooh, you can’t do that” syndrome. However, of course, you can do that, as a handful of farmers were doing at the time, and as developments have subsequently proved. Indeed, man spent many millennia doing just that before intensive poultry systems were developed.

We began rearing and slaughtering poultry at Graig Farm in 1988, and soon saw demand increase, not only for chicken reared in this way, but also beef, lamb and pork. We needed a name for this extensive system of production, and decided that organic, being a very high standard, and moreover, legally defined, was the way to go. The 22 acres of Graig Farm became organic around 1990.

We now offer a wide range of organic produce through independent retailers, by mail order and via the internet. The development of the organic market has been dramatic since our beginnings in the late 1980s. We have always aimed at the very top of the quality spectrum, and have been fortunate to have won Organic Food Awards (the “Organic Oscars”) every year since 1993. An indication of the stunning rise in perceptions of organic is seen when comparing our first award in 1993, when we were presented with a certificate in a marquee near Coventry, to the situation in 1998, when the same awards were held in the Ritz in London at a dinner with the Prince of Wales and three government Ministers.

By the mid-1990s, it became apparent that the supermarkets were becoming interested in organic meat. Until that point, our supplier base was a fairly loose arrangement of 20-30 organic livestock farmers. Together with Nigel Elgar, a farmer from Montgomeryshire, we felt that there was here a great opportunity for British livestock farming, as there was demand for a new product, which could be managed, to the advantage to all stages in the food chain, particularly the producers. We therefore became pro-active, created Graig Producers as a separate entity, recruited a part-time manager, and tried to encourage as many organic livestock farmers as possible in Wales and the Borders to join us.



The Organic Meat Market

The Organic market has recently been growing by around 30% annually, in 2005 worth some £1.6 billion in UK. It is dominated by the supermarket sector, which have around 76% of organic food sales (90% of organic meat sales). Organic meat is the latest fresh market to develop, after greengrocery and dairy.

Farm-gate values of organic livestock 2005:

Beef £19.7m (up 44% on 2004)

Lamb £12.3m (up 29% on 2004)

Pork £8.3m (up 20% on 2004)

Poultry £89m (up 55% on 2004)

Current growth levels lower in beef & lamb

Supermarket sales of meat & fish up 25% from 2004-2005



The Supermarket Meat Route

All supermarkets have a few designated processors for meat, normally only one or two. This means there are very few buyers currently in the market. It can also result in long journeys to slaughter. The processors' preferred delivery route for livestock is by farmers direct to processors. Traditionally there has been virtually no contact between producers and supermarkets. In both these issues, Graig Producers is offering an alternative sourcing route in providing the contact point between farmers and processors, but also communicating regularly with supermarkets – joining up the food chain in line with the 'Curry Report'.

Graig Producers

Graig Producers (GP) now numbers some 250 members across Wales and the Borders, with more in our second region in South West England, as well as Caledonian Organics in Scotland (a farmers' co-operative which GP manages) – some 500 organic livestock farmers in all.

Most farmers will say that of course collaborative marketing gives them a voice in a tough marketplace, but when the chips are down, some are still tempted by the extra 'two pence' down the road (in our case, by supplying the supermarket processors directly). That is why we developed "hooks" – ways of making self-interest a stronger force than the proverbial 'two pence'. We supply a range of extra benefits that encourage continued membership of the Group, and a sense of belonging. The social aspects are often overlooked as an important factor in farming – particularly in the minority activity of organic farming. The numerous other advantages to

membership, other than selling livestock – the "hooks" – include local meetings and cheap inputs.

Legally, the Group is not a Co-operative. It is a membership-based organisation, with all the aims and objectives of a Co-op, but formed as a limited company. My experiences with some of Africa's Ministries of Co-operatives had some influence over that decision, but so did the members at the time. We had to be lean and efficient, and decision-making had to be quick, and able to react to changing circumstances.

As we grew, there was a danger of losing our original "local" feeling, with everyone knowing each other. We attempted to counter this by having local co-ordinators - 8 within Wales and the Borders.

There are three categories of membership - Full, Dairy and "In Organic Conversion".

The purposes of the Group go well beyond simple procurement of organic livestock:

- ☐ To help members to be financially viable, which feeds into rural community as a whole;
- ☐ Bring stability and structure into the organic livestock market;
- ☐ Bring efficiencies into the organic meat chain;
- ☐ Take a strategic view of the organic livestock sector.

We believe that whilst representing their members in the marketplace is a necessary and noble endeavour, Producer Groups have to justify their place in the food chain by adding value. Simply procuring livestock is no longer enough. There has to be benefit along the food chain. We believe this is achieved through:

- ☐ Improving the farming businesses of members
- ☐ Improving the quality of livestock supplied to retailers
- ☐ Improving the quantity and continuity of livestock
- ☐ Improving communication along and beyond the supply chain
- ☐ Gathering and analysing information
- ☐ Overcoming technical problems at the production end of the chain.



Improving Farm Businesses

GP aims to improve farm businesses through maintaining sustainable prices, reducing costs and improving management resources. With strength of numbers, and a consistent, reasonable approach, GP regularly improves prices to farmers on a week-by-week basis. In addition, GP has successfully lobbied supermarkets and processors for forward minimum prices, and an overall pricing structure.

Organic farmers must remain financially viable, or they will revert to conventional farming. To ensure financial viability, costs of production must be known and independently monitored. Graig Producers has been carrying out this work with its members for some years. This exercise also enables participants to have feedback on their own farming operation. This benchmarking is both physical and financial.

Cost reduction is achieved through bulk buying of inputs, and new management tools – for example GP helped develop 'FarmIT' farm management software, which offers organic farmers increased information about their business. A recent survey of GP members showed that 92% of members now have computers in the home, and 74% use e-mail – a significant increase over the last survey only 2 years ago.

Stock quality & selection

In the early days of organics, quality was a major issue. Through feedback and training (on hoof and hook), the quality of Group members' stock has improved significantly over recent years, with members sweeping the board in organic carcass competitions. Stock selection is now done by members themselves, by and large, without routine external help (or cost).

Continuity of supply is essential in a food industry where everything must be available year-round. Facilitating movement of organic store stock between different regions of the UK together with introducing seasonal price incentives are two ways in which GP have helped achieve an improvement of monthly supply of livestock.

Information dissemination in a developing system such as organic livestock production is an essential part of GPs activities. This is achieved by local meetings, as well as by newsletters and a website.

Communication & Information

We need to communicate with members (through day-to-day contact, newsletters, website, e-mailing,

meetings, etc.), processors through daily contact and supermarkets through regular meetings. In such a relatively young sector, organic meat has limited information sources. GP has a role in gathering information through membership surveys – e.g. forage survey (2006), and networking with Organic sector and outside bodies (e.g. Scab initiative 2007), etc. The information then requires analysis, collation and dissemination. Monitoring of production and demand levels of organic meat, including in-conversion production, is a large and important gap in current knowledge, which GP is currently working with organic certifying bodies and the marketplace to fill. As well as being useful to all in the food chain, information can be used in lobbying and research to overcome technical problems, such as organic treatment for sheep scab.

British livestock farmers appear to have made little progress since the opening quote of 1927. We have tried in our modest way to look for a new collaborative approach in the new and vibrant organic livestock sector. We hope that in another 80-years' time the sector will have moved on to a more collaborative and trusting method of marketing – or to use a good organic word – a 'sustainable' marketing system.

Bob Kennard, Managing Director, Graig Producers, Dolau, Llandrindod Wells, Powys LD1 5TL. Tel: 01597 851655; Email: bob@graiqfarm.co.uk

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Cows (French Marshes 2006) © Tina Bone



AgriNet Virtual Information Centre in Bangalore, India

founded by John Cherriman

A campaign called “Shining India” by the Hindu Nationalist Party at the last general elections brought to the fore a reality check of what the citizens think and what the political parties believe their citizen thinks. The post mortem revealed a huge dissatisfaction of the rural populace, who make up more than 80% of total population, with the government of the day and their failed policies towards development of agriculture economy. The current government has not made much of an impact in addressing the bleak future that agriculture faces in India and has not taken remedial steps in this direction. Even suicides by farmers have not triggered the collective conscience of the people nor of the government to step in and stop this blight on the zestful spirit that makes up new India.

Paradoxical but true, one of the major contributors to India's success stories of self-reliant economy have been NGOs that have brought in skills and support to the marginalised people all over the country. Yet, the effort of the NGOs has reached a level of saturation, wherein further enhancement and value can only be adapted and appreciated with an infusion of new ideas, promoting a balance between charity and ability to live life with self-respect, dignity and right to livelihood. This bridge of balance, between charity and ability to live life by choice, is the issue many NGOs seem to have difficulty in delivering to the communities they work for.

John Cherriman, while interning with Challenges WorldWide in Bangalore, India, realised the potential of the farmers' capabilities and the need to bridge the gap between perception and reality that both, the NGOs and farmers seem to have about each other goals. Armed with a knowledgebank gained from international experts, John Cherriman launched AgriNet, a virtual information centre for encouraging a healthy exchange of vital information on agricultural practices from planning to delivery of produce to market place, including micro-credit and finance. The goal to bring sustainable all weather agriculture production, with an

adequate safety net, for the farmer and a realistic long-term planned growth for the farmer, is an effort that AgriNet seems to have impacted, with success, on an increasing number of people and agencies.

John Cherriman, with a master's degree from the Royal Agricultural College, Cirencester, has brought in a corporate style accountability in the process and procedural cycle in providing guidance to organisations and farmers independently, with training manuals, online access to information, access to market place sales, and more, with unique hand-holding methodology, resulting in tangible benefits to all the participants.

Knowledge is empowerment, and AgriNet enables this philosophy by having its own project near Bangalore for people to see and also get trained in optimising agriculture practices by adopting new methods with a healthy dose of traditional commonsense.

A single window source for integrated management of agriculture, Cherriman's Agrinet has embarked on a purposeful task of bringing natural elements of agricultural practices to the fore, by making the farmer realise that his bounty of wealth lies beneath his feet and he need not depend on the promised miracles of imported and genetically modified seeds, for his livelihood. AgriNet uses a mix of technologies and indigenous methods in bringing about a change in the agricultural space that seems be unique to this region, the tropics, with commendable success. AgriNet has earmarked a route map of sustainable growth for the farmer and has established a knowledge business services unit for NGOs to access and provide guidance to their communities of farmers and entrepreneurs. A brimful of ideas and enthusiasm for the country, AgriNet is in the throes of creating farmer millionaires over a period of time by bringing the perks of urban living to the rural face of India.

Website: www.agrinet.org.in

Email: john.cherriman@agrinet.org.in



Cyril Charles Webster

28 December, 1909
to
8 August, 2007

Cyril Charles (Tom) Webster who died on 8th August 2007 was professor of tropical agriculture and deputy principal at the Imperial College of Tropical Agriculture (ICTA) between 1957–60. Although short, this tenure covered that interesting period with Trinidad becoming independent and the college merging with the University of the West Indies. He was an honorary member of the Tropical Agriculture Association and in recent years he held the distinction of being the oldest member of TAA, and as this article will show he was a man of considerable intellectual stamina.

CCW set out on his career by taking a degree in agriculture at the then South East Agricultural College at Wye in Kent. This was the beginning of a long and happy association with Wye. After excelling as a student he continued contact with the college through the Agricola club (former student association) and in his retirement had the honour of being elected a fellow of the college. After graduating from Wye he won a colonial office scholarship to do a 2-year postgraduate study as a prelude to a career in tropical agriculture. The first was at Cambridge (where he acquired the name Tom) and then a year at the Imperial College of Tropical Agriculture (ICTA).

On his return home in 1933 the Colonial Office had no jobs to offer but he obtained employment with the Burma Tung Oil Company as an agronomist. Oil extracted from the seeds of this tree crop was an ideal base for high performance varnishes and paints, including marine anti-rust paints. A pioneering attitude prevailed at the estate in central Burma. He had to quickly learn to ride a horse and had an eventful two years. Importantly he was introduced to commercial tropical tree plantations, which were to dominate his career.

In 1936 he obtained a posting within the colonial service with which he worked for the next twenty years. Initially he went to Nigeria, working on oil



palm but in 1939 he moved to Nyasaland (now Malawi) to continue with work on tung. He was responsible for setting up a small research station. After the war he critically evaluated this research by writing it up as a PhD thesis, obtaining his doctorate from London University in 1949. Up to this time Webster was doing basic hands on research using simple and inexpensive equipment, analyses, etc. Nevertheless the work has survived the test of time as it was still being quoted in books and reviews in the 1990s.

On moving to Kenya (1950) his career evolved to research management and in this role he excelled both here and later. After 5 years he moved to Malaya to take the deputy director job but remained less than a year as with independence looming he decided to leave the colonial service.

In 1957 he was appointed professor of tropical agriculture and deputy principal at the Imperial College of Tropical Agriculture (ICTA), the college he had attended as a student. Here he and Peter Wilson began to write the book *Agriculture in the Tropics*, which eventually went into 3 editions. He was also part of a World Bank mission to Tanzania that had major implication on agri-development in that part of the world.



The apex of his career in tropical agriculture came in 1961 when he returned to Malaysia to be director of the Rubber Research Institute. This was a significant scientific centre in the country, having about a thousand ethnically diverse employees. Webster's impartial management and focused pursuance of the institute's role to promote the rubber industry won him lasting respect. After leaving the institute in 1965 he was invited to be an assessor of their research, returning regularly to Malaysia over the next decade.

Back in the UK he joined the Agricultural Research Council (ARC) as a scientific advisor. At that time UK agriculture was a modest success story. The then Labour Government was trying to enact a "white-hot technological revolution" and research budgets were increasing. It was a good time to be in research management and in 1971 he was promoted to chief scientist, the No. 2 of the organisation. Readers may marvel that someone with a simple degree in agriculture reached such heights and all

without attending a single management-training course. After his official retirement (1975) he kept active, doing a number of consultancy jobs, wrote the second addition of his book, edited another on rubber and then returned east (1978-80) to be the first director general of the Palm Oil Research Institute of Malaysia. His colleagues will remember Tom for his integrity, his detailed and searching questions on every research project, and his copious note taking in an extremely tidy script. CCW remained alert well into his nineties but was blighted with deteriorating eyesight, which gradually precluded his scientific interests.

His was appointed a JMN (Johan Mangko Negara, a Malaysia award) in 1965 and a CMG in 1966. He married Mary Langtree in 1937 (whom he divorced) and Mary Wilmhurst in 1947 who died in 2002. One daughter and one son from the second marriage survive him.

Colin Webster and John Coulter



Book Review

Developing Countries: Evaluation of Land Potential

The work of LRD, 1956-2001. Edited by John Makin, John Bennett, Martin Brunt and Chris Griffin. LRD Publishers, Rookery Cottage, Weston Road, Bucknell, Shropshire. 167 pp + maps and photographs. Price £15.

The book describes the work of the Land Resources Division (LRD) of the British Ministry of Overseas Development through a fascinating account of both the technical work and the personal experiences of the scientists and their families over a period of nearly half a century. There are contributions from no less than 40 scientists and a chapter by the wives of several of those involved. Life in the early days was particularly hard for the wives as they did not qualify for passages unless the overseas posting was for two or more years and they often ended up in pretty isolated conditions.

The Division was originally based at Tolworth Tower and its work was initially based on the potential that aerial photography offered for land use surveys. Pre-World War II there were a few resource surveys based on aerial photography but the techniques developed during the war offered much improved quality. In the later years satellite imagery and its refinements provided many new opportunities. The main task was to survey land for its agricultural potential, and the photographs were used as a basis for mapping 'land systems', recurring sequences of

topography, soils and vegetation. Hundreds of thousands of square miles in more than thirty countries in Africa, Asia, Central America and the South Pacific were investigated, supplemented by thousands of field examinations and supported by a range of soil analyses. Initially teams were mostly scientists with experience in agriculture, soils and forestry but were increasingly complemented by engineers, economists and other social scientists when they became involved in development projects. These were legion; the control of mosquitoes in the Caymans, transmigration in Indonesia, tsetse control in Nigeria, water development in Cyprus and sugar projects in Malawi, to name but a few.

The accounts underline the fact that the age of adventure – and hardships – was still extant during this period, and on many occasions the scientists must have re-echoed the words of David Livingstone when lost in the Bangweulu swamps of Zambia: "it is not all pleasure, this exploration". There were many uncomfortable experiences, some not without danger; using catapults to move elephants, and being locked up in a forbidden Somali military camp only to be released by the Sandhurst-trained commanding officer. The problems, as one would expect, were as much administrative, political and logistical as physical. One team found the British High



Commission Staff varied from the saintly to the subversive. Logistics in countries like Nepal, though described with humour, were a major challenge and the sometimes interminable waiting for accommodation was a trial.

The final story is the amalgamation of the various units of the Overseas Development Ministry at the naval barracks at Chatham Maritime, a political rather than a scientific decision that resulted in their location in a magnificent pile infested with dry rot. Thereafter the staff and the activities of the Division were wound down and eventually ceased.

The authors are to be complimented on their retrospective analyses of the usefulness and the weaknesses in this enormous exercise to collect land

resource data on such a vast scale. It contributed greatly to knowledge of the natural resources of the countries and in some places this is now a major source of information for university teaching. It was felt that local institutions were sometimes not sufficiently involved and the impact on agricultural development planning in several instances may have been marginal. The lack of economic analyses in some projects also left a major gap. However, it may be years before we know the real contributions of these projects. I found that the publication describes a fascinating but bygone era of overseas work and is an excellent record for all of us interested in that era.

John K.Coulter



LETTERS

LETTERS:

I take this opportunity...

to inform you that the publications from the research institute ICIMOD in Nepal have become available on internet from 5 June on <http://books.icimod.org/>. Although to some extent in a 'grey' category academically, there are many interesting titles which might interest your readership. In particular, I hope that the TAA Newsletter might be interested in a publication on micronutrient issues which I was involved in myself: <http://books.icimod.org/index.php/search/publication/62>, although I acknowledge that the book was published in 2005. My interest is solely that I hope the researchers contributing to the book (and the other publications) deserve more exposure of their efforts.

Dr Peter Andersen
Associate Professor
Department of Geography
University of Bergen
Fosswinckelsgate 6
N-5007 Bergen, Norway

I noted with interest...

the series of articles about Fairtrade issues in the June edition of the Newsletter. These prompt me to pose two questions that I hope can be answered by one or other of the authors or your readers, and may stimulate further discussion on the topic. By what percentage does the farm-gate price for commodities sold under Fairtrade differ from the

open market farm-gate price? and Why is the 'social premium' not paid to farmers as an additional price at the farm gate for their products?

James Biscoe
Tremana
Foundry Hill
Stithians
Truro TR3 7BS

I would like to express my grateful thanks...

to all members of the South-West Region, who so kindly and generously presented me with a very handsome inscribed Dartington Glass Bowl, in recognition of my fifteen years as Coordinator of the Region, much of which I should add was in concert with David Wendover. I have always enjoyed doing this, especially with the help of such dedicated committee members and an appreciative Membership. As you all know the Region continues to flourish under the guidance of George and Bill. I am also stepping down from membership of the TAAF committee, and nothing has given me greater pleasure than helping young people getting started in, or gaining first hand knowledge of, the Development field. I remain convinced it is the single most important activity of our Association and the key source of younger members. I shall of course continue to be an active member of TAA.

John Russell





The Royal Show: Muddy, but Unbowed

On the TAA stand we performed well, despite the heavy rain which caused the Showground to be closed on the last day, Wednesday, 4th July. The problem for the organisers was to provide public parking where cars would not become bogged down in mud. Our own marquee stood on tarmac, so we suffered no worse than having areas of soggy carpet. Despite the rain, Tim Hutton, the Chief International Steward, concluded that the International area (which included our TAA stand) had “a good Show”. National (or state) stands this year represented Argentina, Canada (Manitoba), the Falkland Islands, Ghana, Kenya, Nigeria and Texas (USA). This year – for the first time – our own name also featured on the International Village “Street Signs”.

We had around 50 entries (from many countries) in our visitors’ book, and amongst the Show VIPs we were pleased to welcome Sophie, Countess of Wessex, and Sir Menzies (“Ming”) Campbell, the Lib-Dem Leader. They both had cogent points to make, and were interested in the aims and activities of TAA. The sight of “Sir Ming” and his entourage sweeping onwards through the Show, each with a TAA calico bag, was worth seeing. The Countess of Wessex, on receipt of her bag, said that she must work harder to eliminate plastic bags at home! Our neighbours from the Ghana and Nigeria stands, both held days enlivened with dancing, drumming – and national food.

Our stand featured a TAA zone where aspects of the Association itself and our Award Fund (TAAF) were displayed. There was also an area for presentation of

material from corporate members and other “overseas related” organisations. This year we featured the International Group at the Henry Doubleday Research Centre, whose leader, Julia Wright, joined us for a very productive day on Monday. We also offered fliers on “Himalayan Village Ways”, a village-based cooperative Indian rural tourism project, with which ExCo member Keith Virgo is involved. Through Ted Wilmot’s connections, books and leaflets from the Overseas Development Institute and from “Practical Action” (formerly the Intermediate Technology Development Group) were displayed. All this material attracted interest from visitors. Amongst around 10 technical enquires were matters of taxation on cocoa imports, the possibility of TAAF support for bee projects, and (from the Countess of Wessex) the need for tropical producers to be guided towards using packaging which would be acceptable in British food outlets. Our thanks to Ted, and to all members who took turns to “meet the public”, for their help and support.

As with the TAA itself, the role of the stand at the Royal is changing. Although some 25 members checked their entries in the Membership List, the days of large gatherings of members for evening social events are probably gone – especially as ExCo no longer meets at the Show. However, the TAA role in making contact with real farmers and rural development activists either from, or working in, tropical countries was as strong as ever.

Henry Gunston



Henry Gunston welcoming the Countess of Wessex to the TAA stand



TAA Online Directory of Consultants

Has your TAA Directory subscription expired?

We are now accepting subscription renewals for the TAA Online Directory and hope that those with lapsed membership will renew. For your convenience, a registration renewal is available on the website. The registration form and fee should be posted to the address below. Please download your reformatted CV from the Directory website – mark any changes/updates in red – and email to myself and Mike Barnard. In view of the disruption caused by the failure of the website, we are extending the validity of all registered members by six months. Thereafter members will need to re-register annually.

Protecting personal email addresses on the web

To help protect your personal email addresses from spammers, it is recommended that you obtain an email 'icon' to insert in your online CV. Nexodyne provides a free service which allows you to create a custom email badge.

Example: **directory_editor@taa.org.uk**
(my email badge for use on the web)

For a badge similar to the example above: Go to **http://services.nexodyne.com/email/index_custom.php**. Insert your email address:

Select foreground colour "0000bf" (blue)

Select background colour "FFFFFF" (white)

Select border "FFFFFF" (white border)

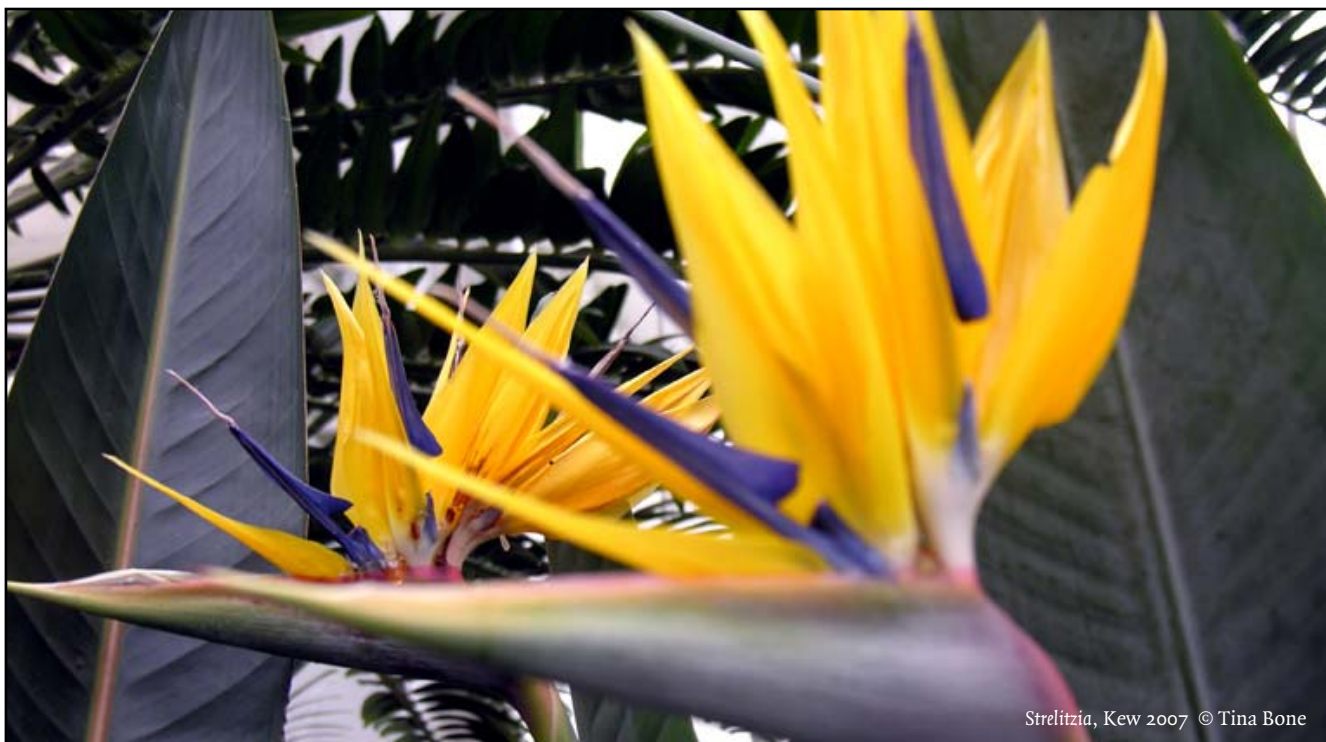
Select font "Tahoma"

Click 'generate'.

Follow the 'click here' link

Select 'save' and input a file name

Keith Virgo, Directory Editor



Strelitzia, Kew 2007 © Tina Bone



TECHTALK

This interesting new development should be of interest to all TAA members. The organisers of TechTalk, AA International Ltd, have been in discussion with TAA to access the skills of our members, especially those registered in the TAA Directory. By linking to the Tropical Agriculture Association, AA International Ltd will be able to draw on experts in natural resources, farming, forestry and rural development, with experience from around the globe. The principle was approved by the TAA Executive Committee on 10th July and these details have been, circulated to Directory Members.

Detailed discussions are to be held with AA International on 29th August to chalk out a system for collaboration. We will keep you advised as things develop.

TechTalk: Outline of the product

TechTalk is a new concept in advice giving. It is a personalised, web based, advisory service designed to give project managers, farmers, conservationists,

land managers, field based staff and consultants and others involved in the management of natural resources, rapid access to an expert practitioner who will answer their individual technical questions. TechTalk advisors will have long practical experience together with access to the latest research, allowing the very best information to be made easily available to users.

Structure and Delivery of the Product

TechTalk is a web and e-mail based service designed for users in developing countries. Users shall present their queries using a simple, standardised format, the question will be matched to an advisor who is an expert in that field and the advice sent back, in plain English, within 48 hours. Each subscriber will have a personalised access web page where a library of answers can be built up. The site will also be able to present expertly written FAQs to all users and will offer subscribers the opportunity to share problems and experiences.

The Consultants

AA International Ltd was formed as a spin-out business from the University of Wales, Bangor and as such, our tropical work shall also be underpinned by consultants from the CAZS – Natural Resources, Welsh Institute of Natural Resources (WINR)¹ UW Bangor as well as Dulas Ltd in Machynlleth. AA International Ltd also has in house, many years of agricultural and natural resource management expertise in more than 60 countries.

The high quality of the product shall be underpinned by the calibre of our consultants, outstanding both in terms of their research output and practical experience in their field.

Operation of the Proposed Business and its Relationship with the TAA

TechTalk is envisaged as a subscription product, with clients paying an annual fee of £600 which may be paid at a subscription rate of £50 each month. For this fee, each client would be allowed 2 questions per month, with an additional fee payable for any extra questions. For the typical questions that we expect to receive, it is envisaged that answers need not exceed 200 words.



We would like to propose an initial fee rate of £10 per question to the specialist, which would be paid monthly in arrears according to the numbers of questions answered.

TechTalk is aiming to provide a service that gives written answers to queries within 48 hours. If the specialist feels, due to the nature of the question that more time is required, this information will be relayed back to the subscriber. If questions require "longer" answers, fees shall be negotiated with the specialist providers on a case by case basis.

We expect that the TechTalk service will, on occasion, lead to more detailed consultancies in the form of technical reports and on-site consultancy contracts. Where consultancy services are provided by TAA specialists to TechTalk clients (and arise directly from queries initially directed through this service), fee rates shall again be determined on a case-by-case basis.

It is difficult to assess numbers that may subscribe to this service. Our surveys suggest that initial take-up by international organisations may be in the order of 15 - 20 clients in the first year, but that this will grow with time (word of mouth works nowhere more effectively than in the world of international development).

Operation of the Website

We are currently in discussion with Internet System Designers as to the best way of setting up this website system. Thus, full details of how it will be operated can not be given at present.

Extract from AA International draft paper, 7th July 2007

Keith Virgo

WINR is the third mission arm of UW, Bangor and groups CAZS-NR and Bio-composites. WINR is a part of the all-Wales Welsh Institute of Sustainable Environments (WISE) which includes Bangor, Aberystwyth and Swansea



**G B PANT UNIVERSITY of AGRICULTURE and TECHNOLOGY,
PANTNAGAR - 263 145,
UTTARAKHAND
(INDIA)
XXIII CONVOCATION
April 21, 2007
CITATION by**

***Prof P. L. Gautam, Vice-Chancellor,
for the conferment of the degree of Doctor of Science (Honoris causa) on***

***MR MICHAEL JOHN WILSON,
Ex-Senior Rural Development Advisor to India County Office, UK***

Mr. Chancellor,

I have the honour to present to you Mr. Michael John Wilson, former Head of Renewable Natural Resources Research, UK Department for International Development (DFID) – formerly Overseas Development Administration (ODA), London, who has been recommended by the Academic Council and the Board of Management of this University as an eminently qualified person for the conferment of the degree of Doctor of Science (*Honoris Causa*) in recognition of his contributions in successful implementation of the rural development programme in India.

Mr Wilson was born on Nov. 8, 1942 at Yorkshire in England. He obtained his B.Sc. (Hons.) Agriculture in 1966 from Leeds University and Diploma in Tropical Agriculture in 1967 from University of the West Indies. He has got a vast experience of working in many countries with



major work done in India, South East Asia, South Korea, West Indies and Zambia. His arduous efforts influenced lives of millions of poor. He advanced the cause of rural poverty alleviation by advocacy to secure substantial United Kingdom Aid Programmes to finance poverty focused projects across a spectrum of India's rainfed areas, and by his policy and strategy to work to improve the impact and developmental relevance of research to India's rural poor. His starting point was in Eastern India, where the long running Indo-British Fertilizer Education Project (IBFEP) had achieved much by direct transfer of Green Revolution technology.

He built up a major rural development programme in India, which culminated in many projects including Western India and Eastern India Rainfed Farming Projects, Karnataka Watershed Project, Himachal Pradesh Forestry Project, Orissa and Andhra Pradesh Rural Livelihoods Projects, DFID joint-funding of IFAD Eastern India Project, Oilseeds Research, support to the Indian Grassland and Fodder Research Institute, support to National Bureau of Plant Genetic Resources (NBPGR).

Mr Wilson gave support for Indian Research Institutions and encouraged research directly related to the development programme. He arranged initial collaborations between UK Research Institutes and the Indian Grassland and Fodder Research Institute, the Central Soil Salinity Research Institute, National Research Centre on Rapeseed-Mustard, G.B. Pant University of Agriculture and Technology, the Energy and Resources Institute and the National Bureau of Plant Genetic Resources.

Mr. Wilson represented UK at various International Conferences and meetings, such as World Bank and FAO, etc. He served as Senior Rural Development Adviser to DFID India Country Office, UK and New Delhi, as Senior Agricultural Adviser to Asia and Oceans Division UK, DFID London, as Senior Natural Resources Adviser to South East Asia Regional Office of the ODA in Bangkok, and in many other important and prestigious positions.

Thus, Mr. Chancellor, Mr. M.J. Wilson is a person whose service to agriculture and India's rural sector has been outstanding. By honouring him, the G.B. Pant University of Agriculture and Technology is acknowledging the debt of gratitude which the farmers and the people of India and other developing countries owe to him.

I pray, Mr Chancellor, that Mr M.J Wilson be honoured by conferring the degree of Doctor of Science (*Honoris causa*) of this University.



Mike Wilson receiving his Hon. DSc scroll from the Vice-Chancellor.



The Nyika-Vwaza (UK) Trust

Charity No. 1105105 supporting conservation of Malawi's northern parks

**An Evening at the
Royal Geographical Society, Exhibition Road entrance,
London SW7 2AR on Thursday 8 November 2007**

The Trustees invite all Friends, members of the TAA, and those who are associated with Malawi to an interesting and convivial evening at The Royal Geographical Society. The principal events will be:

- (i) A lecture by Professor Colin Baker MBE entitled
By Water to 'the Warm Heart of Africa': Lake Malawi and the Shire River in the history of Malawi**

This Waterway, pioneered by Dr. Livingstone into Central Africa, was subsequently replaced by rail and road routes but the Malawi, Mozambique and Zambia Governments are now investigating the practicality of re-opening it. Professor Baker explores the full circle turn of history that makes this subject topical.
- (ii) An exhibition and sale of paintings by several Malawian artists.
Purchase of paintings by cash or cheque only.**
- (iii) There will be a cash bar both before and after the lecture with time to view the paintings and to socialise.**

**Tickets are £15 per person. For full details please see
www.nyika-vwaza-trust.org**

Alternatively, if you do not have access to the web, tickets may be obtained by writing to Harry Foot, Stowford Farm, Harford, Ivybridge PL21 0JD. When applying, please provide names and addresses of those who will use the tickets – it helps us to know our guests.

Doors open at 6 pm. The Chairman's Welcome and the Lecture at 6.45 pm.

**Harry Foot, Hon Secretary
Tel: 01752-892632**



TAA Seminar

ARSENIC CONTAMINATION OF WATER AND FOOD IN DEVELOPING COUNTRIES

Wednesday 24th October 1:30pm – 5:00pm

British Expertise, One Westminster Palace Gardens, London, SW1P 1RJ

Programme

- 1. Global dimensions of the problem of arsenic in groundwater - Peter Ravenscroft*
- 2. Arsenic in drinking water and health issues - Guy Howard*
- 3. Arsenic in soils and agriculture - Hugh Brammer*
- 4. Arsenic in food crops - Andrew Meharg*

*Peter Ravenscroft is presently Research Associate,
Geography Department, Cambridge University*

Guy Howard is Policy Adviser, DFID, Glasgow

Hugh Brammer is a former FAO Agriculture Adviser, Bangladesh

*Andrew Meharg is Professor of Biogeochemistry, University of
Aberdeen*

Registration inclusive of tea/coffee and biscuits

TAA members £5.00; Non-TAA members £10.00

*How to get there? One Westminster Palace Gardens, which is off
Victoria Street, is only 5 min. walk from Victoria Station. See
www.britishexpertise.org*

Contacts: TAA London/SE Group:

h.brammer@btinternet.com & thorpe.w@gmail.com

TAA East Anglia Group: keith@virgos.freemove.co.uk



TAAF NEWS

To date, 128 longer-term awards have been given to young people who have completed projects of at least six months in more than 40 countries. More recently 14 short-term awards have been taken up by MSc students as part of the overseas element of their degree. Two of the latter are now undertaking longer-term projects.

The following are some examples of the career development of TAAF recipients from the commencement of the Award Scheme in 1990.

MSc Awards (Short-Term)

Claire Langley has just returned from Indonesia where she conducted a 2-month study aimed at determining the level of vulnerability of Jakarta's poor to the effects of climate change. The study will result in recommendations, aimed at Government bodies and development organisations, for including adaptation to climate change in poverty reduction strategies. Claire is currently writing up the results of her research for an MSc dissertation at Edinburgh University. She hopes that the proposals will be used as a model for linking environment and development in poor urban areas vulnerable to the effects of climate change.

Mentor: Antony Ellman

Rachel Lenane is in Madagascar mapping local resource use and biodiversity on Cap d'Ambre, the northernmost point of the island. Her project is

investigating threats to endemic species in a coastal forested area and it will make an important contribution to design of conservation management programmes in such environments. Rachel expects to stay in Madagascar until October to write her dissertation for an MSc at Oxford University. She hopes to find a career in the field of conservation and development.

Mentor: Antony Ellman

Awardees in the field (6-month awards)

Graham Clarkson

Graham is due to complete the second phase of his project in Malawi. He is organising various focus groups to look more closely at some of the main issues arising from the Trees on Farm programme.

Mentor: Margaret Pasquini

John Ferguson

John has completed the baseline survey in Kenya and has been progressing with the plan to introduce Kenya Toggenburg goats. Goat house construction is well underway and vegetable production continues. He has been working closely with vets from ILRI and the Ministry of Agriculture in developing a strategy to avoid zoonotic diseases.

Mentor: Richard Ewbank

Sarah Cooper

Having been a successful MSc awardee in Ethiopia Sarah has taken up a long-term award and commenced her project with the Grassroots India Trust in the Western Himalayas – the Kullu district of Himachal Pradesh. The main concern of the programme is the promotion of agro-biodiversity. A baseline survey is being implemented covering some 60 mountain villages in order to assess the crops being grown and to establish the need for further diversification. Wheat, maize, garlic and potatoes are some of the main crops.

Quotes from Sarah: "I am benefiting from being able to use the experience that I gained from my time in Ethiopia (with TAAF) last year. I will not only return to the UK with plenty of valuable skills that I can apply in my future employment but also rock-hard leg muscles to boot. So a huge 'Thank You' for helping me to undertake this wonderful opportunity.



"The team is extremely grateful to TAAF for providing the grant that has enabled this project to go ahead and a full report on its findings will be provided in September when the MSc thesis is complete."

Mentor: Laurence Sewell

Joana Couthino

Joana was a successful MSc awardee and she has now been given a longer-term award. She leaves for Madagascar in August to take up her new assignment.

Mentors: Antony Ellman/Mikael Grut

Ex-Awardees

Cecily Hindley (The Philippines 2006)

Cecily has recently returned from the Philippines where she was working with the ICRAF programme RUPES (Rewarding Upland Poor for Environmental Services) in the Kalahan and Bakun areas of Luzon. She was able to gain a better understanding of the range of research work undertaken by ICRAF and various NGOs. Cecily also participated in farmer training, workshops and seminars in agroforestry practices. Some time was also spent in developing a proposal concerned with research into carbon sequestration in endemic fruit tree species. A further activity was the planning of exchange visits for farmers from both areas. She intends to take up an MSc course at Bangor later this year.

Peter How (Afghanistan 2003-06)

Peter has had three years on the Afghanistan Direct Seeding Project based in Kabul but working also in outlying districts and particularly Kunduz. In the last years he acted as Project Manager. The programme was looking at the feasibility of using a direct seeder for mechanised small grain production in rainfed areas of the country. He networked with other NGOs and worked with local artisans and also held a number of workshops. More than 700 farmers were met during some 36 meetings.

From Peter's final report: "There can be no greater challenge or important area of work than that of farmer participation, understanding farmer views and problems and working with them to develop appropriate solutions.

"From a community point of view breaking down barriers such as the massive armour-plated 4x4 to Chinese bike is massive; it's like actually stepping into the community.

"I really appreciated being looked up by travelling TAA consultants. The TAAF flexibility is indicative of an organisation with a great deal of relevant experience. I have very much appreciated the support and the grant."

Peter has taken up a contract with the Organic Research Centre (ORC) near Newbury. He is about to get married and then hopes to embark on an MSc course.

David Carr (India 2006/07)

David undertook his TAAF award in India under the supervision of Dr Claire Heffernan of the Livestock Development Group at Reading University. The activities were centred in Orissa and Andhra Pradesh in collaboration with the Arupa Research Foundation. The main objective was to gain an understanding of changing livestock practices amongst farmers and the genetic makeup of various breeds. It emerged that there has been a dramatic reduction in the number of local breeds and an increase in cross-breed bovine types. The work involved the use of a detailed questionnaire and some five hundred farmers were interviewed in the two States.

From David's final report: "The experience as a whole has given me many valuable lessons and many thanks must go out to TAA for their help and guidance before and during my stay there. The award has been a huge learning curve for me."

Matthew Lake (India 1992)

After his TAAF award in Tamil Nadu Matthew took up a job with Comic Relief liaising with a wide range of grant-recipient NGOs to review projects across Africa. He later joined Concern Universal to work in Sierra Leone firstly in agricultural development and latterly in emergency response providing nutrition and health support to more than 150,000 people. He led the Concern team in Bangladesh providing health and livelihood services in particularly poor communities. After a period in the USA he became International Director of Concern Universal based in the UK and working with various partner organisations across Africa, Asia and Latin America. One of the projects established by Concern is a marketing company in The Gambia providing genuine livelihood opportunities to small-scale horticulturalists. Matthew says, "Many thanks to TAA for their support."

Naysan Adlparvar (India 2005)

Naysan is currently the Team Leader of the Afghanistan Pilot Participatory Poverty Assessment programme funded by ADB, UNDP and USAID. This project aims to collect, document, disseminate and advocate the 'voices of the poor' for inclusion in the forthcoming National Development Strategy. He plans to start his DPhil at the Institute of Development Studies at the University of Sussex in early 2008.

**Daniella Hawkins (Zambia 2005)**

Daniella is a coordinator with a charity foundation overseeing grants to projects focussed, in the main, on children and families in developing countries. The main areas funded are water/sanitation, natural resource management, food, health and education.

Kate Green (Kenya 1992)

Kate is a consultant, primarily in the area of skills and training (both work-based learning and further education). This involves coordination of a regional network of training providers, managing a project of facilitated business groups, and work with a number of training providers aiming at becoming more demand-led and responsive to employers.

Steven Usher (Costa Rica 2002)

Steven is in Thailand as a Senior Programme Assistant with UNESCO in the Education for Sustainable Development Unit. He is involved with an international disaster reduction and a post-tsunami environment and development project with indigenous people in the south of the country. He is planning to present a paper in Japan on climate change mitigation.

Rob Paterson (Costa Rica 1995)

Much of Rob's career has been with NGOs in African countries with Angola being his first posting. For the last years he has been in Mozambique with CARE.

Jake Paul (Solomon Islands 1999)

Jake is with the NGO Reforesting Scotland. The activities are mainly concerned with non-timber forest products such as a birch syrup, wine production, various fungi, etc. The control of bracken that is overtaking large areas is also a concern and its use for fuel and fertiliser is being investigated.

Richard Cook (The Philippines 2006)

Rich has been in Thailand doing a diligence assessment of a company producing shrimp in Trat Province. He is also assessing the viability of tilapia production. The tasks involve economic, social and environmental surveys of both the company and the surrounding area. He has also been working with a tilapia contract farming project near to the Cambodian border. Rich is currently in Singapore and will undertake similar work in Malaysia. The long-term objective of his employer is to incorporate a contract farming concept into future expansion plans. This will also benefit the participant communities by providing some market stability for their products.

Judith Powell (Guatemala 2004)

Judith is in Sudan as a funding coordinator for Oxfam. Sustainable resource management issues are the main concern, particularly in Darfur, and these are now being integrated into the programme.

Nick Harvey (Nepal 1992)

Nick is currently based in Khartoum, Sudan, with the Foreign and Commonwealth Office.

Ed Hamer (Mexico 2005)

Ed has graduated from a Postgraduate Diploma at the London School of Journalism and is now working for the The Ecologist magazine. He is specialising in writing on issues of agricultural development for a number of national magazines. He is about to undertake a research visit to Eastern Europe where the impact of the Common Agricultural Policy on subsistence farming systems in Romania, Montenegro and Hungary will be investigated. He intends to do an MSc at Bath University at a later stage. Ed is a member of the TAA Publications Committee.

Margaret Pasqini (Nigeria 2000)

Dr Pasquini has been working as a research officer at the University of Wales Bangor for four years. Her current research focuses on the promotion of indigenous vegetables in sub-Saharan Africa.

She is leading a project on the conservation of biodiversity of these species in Benin and Mali and is in charge of a network which brings together 14 partners from Europe and Africa. She plans to continue developing her career in full-time research in the tropical vegetable production sector.

Margaret is a member of the TAAF committee and is TAA's Honorary Treasurer.

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Protea at Kew © Tina Bone

Editorial Guidelines

1. The Newsletter issues quarterly in early March (green), June (yellow), September (brown) and December (blue).
2. The Editor is primarily responsible for the production aspects of the Newsletter.
3. Regarding the professional content, unless falling within the Editor's area of expertise, the copy is referred to an appropriate Member of ExCo, who de facto act as an Editorial Board.
4. All copy should be with the Editor by the first week of the month preceding the month of the next issue—at the latest—the earlier, the better.
5. Whenever possible, reports and papers from meetings and seminars should be presented in summary or as concisely as the material permits. References should be kept to the minimum (these are printed in a very small sized point) and the author should be prepared to accept enquiries from Members seeking further detail. In general, submissions to the Newsletter should not exceed 1,200 to 1,500 words in length.
6. Submissions by email and/or disc are encouraged. Such material should always be supported by a confirming hard copy posted separately to the Editor.
7. All email submissions to the Editor should be repeated to the General Secretary.
8. To ensure accurate scanning, hard copy submissions should be of good quality, double spaced and with wide margins.
9. Drawings, diagrams, maps, etc., should be good quality line art, and the original artwork (on disk or printed at least 600 dpi black and white) made available to the Editor. Photographs: good quality black and white or colour photographs to be sent to the Editor (s.a.e. for return). Digital format: Max quality JPEG. 300 dpi EPS, TIFF.
10. Exceptionally, short notes in clear and legible handwriting may be accepted.
11. The following House Style has been adopted for production of the TAA Newsletter, and contributors are asked to present contributions, as far as possible, in this format:
 - ☐ References to the Newsletter and other journals and books/publications to appear in italics
 - ☐ Titles of papers to appear in italics rather than parentheses
 - ☐ Caps to be used in titles for all words, apart from words like 'a' 'the' etc. Caps in general to be kept to a minimum.
 - ☐ Companies always to be referred to in the singular, i.e. 'its' and 'has' rather than 'their' and 'have'
 - ☐ Organisations to be identified by full name the first time they are mentioned with acronym (if it exists) in brackets. Thereafter use acronym
 - ☐ Latin phrases and names in italics
 - ☐ Authors of papers to be referred to by full name, and affiliation included
 - ☐ Papers might include short biography of author, so please include this, if possible
 - ☐ Contributors of letters to have names in full, plus place of origin, to permit cross referencing with the Membership List.

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Subscriptions are due annually on 1st August and, with the exception of members having no bank account in the UK, are payable by banker's order. Members joining after 30 April in any year will not be charged a subscription for the balance of that year.

Current subscription rates are:

- ☐ Individual membership (printed Newsletter) £30 p.a.
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- ☐ 'Journal' membership (with J. Exptl Agric.) £50 p.a.
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- ☐ Corporate Membership £80 p.a.

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- ☐ Full page £200
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- ☐ members—10p per word.
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Disclaimer: While we make every effort to protect the interests of our members, we are unable to check the accuracy or integrity of any advertisements in the Newsletter. We cannot accept responsibility for any misfortune resulting from an advertisement in the TAA Newsletter.

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