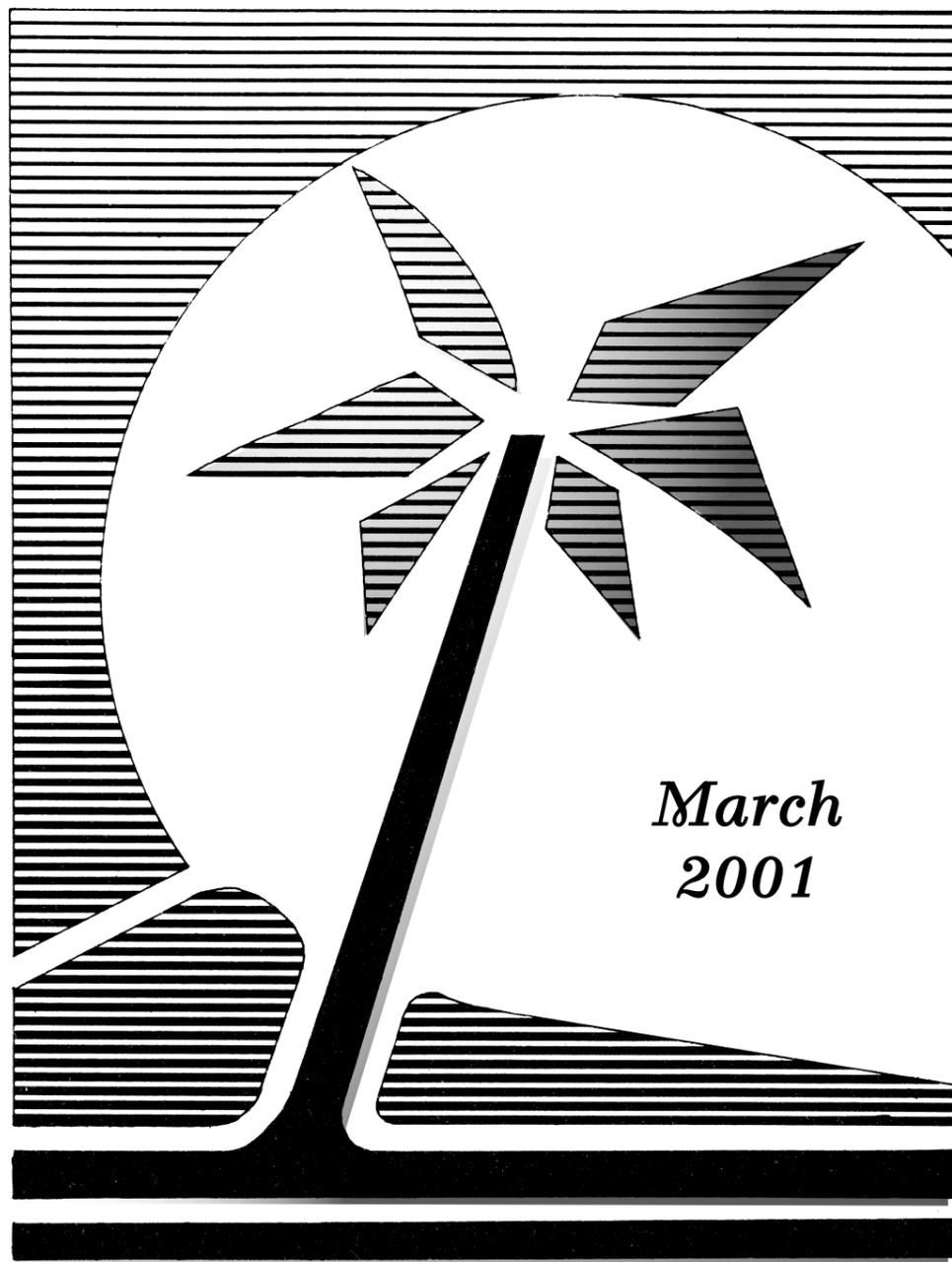


*N*ewsletter

- AGM Reports
- DFID Renewable Natural Resources Research Strategy
- Scottish & Border Region Seminar: Livestock Programme & Food Security in South Sudan
- SW Region: AGM Report; Ethical Trade & Organic Culture
- UK Forum on Agricultural Research for Development



*March
2001*

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GIFT AID—Second Reminder

Members can now substantially increase the Association's income at no expense and minimal effort to themselves.

URGENT ACTION NEEDED—see Yellow page III in December 2000 Issue

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Tropical Agriculture Association Annual General Meeting 13th December 2000

Chairman's and General Secretary's Report

We report on what we believe has been a successful year for the TAA. The year 2000 has seen several changes, both on the administrative side and in the activities of the Association.

The Administration of the Association by the Executive Committee has been considerably eased because the activities in London and the South East have been efficiently managed by the LSE Group under the leadership of Dick Jenkin. This has meant that the Executive Committee has been able to reduce the number of its meetings from 6 to 4 per year. The meetings are now held in March and September, in the DFID office in Victoria street, where we have the facility of a video-link with the Treasurer and the Membership Secretary who attend at the DFID office in East Kilbride. We wish to thank DFID for making their facilities and services available to us. The other meetings are held in July, to coincide with the Royal Agricultural Show at Stoneleigh, and in December on the day of the AGM in London. No video links are required on these occasions, as the members from Scotland are expected to be present in person. This year the July meeting was arranged by Ted Wilmot, and was held in the village hall at Barford. Many thanks to Ted; and the December London meeting was held at DFID.

As we will hear later, the TAAF Committee has met regularly at the offices of CDC. Many thanks to CDC for providing their facilities. We will hear more of the activities of TAAF later, from Keith Armstrong who chairs the TAAF Committee, and a presentation from one of our TAAF awardees.

There has been a full programme of events in all three of our regions, thanks to the hard work of our regional convenors and their helpers. Papers from almost all of the seminars and meetings have been placed on the TAA Web-site, which is now getting an increasing number of visitors, averaging more than 10 per day. We will hear more about the web site from Tony Smith, our Membership Secretary, who also manages the site.

We are a little concerned about a reversal in the trend of membership. The number of members increased steadily through many years, then levelled out for a few years, and this year, for the first time is showing a

decline. We have therefore decided to have a membership drive. You will see from next March's *Newsletter*, that we will be asking each member to recruit (at least) one other member. An application form will be included in the newsletter for this purpose. The Executive Committee is convinced that there are many persons out there in the cold, who could and should join the Association.

Turning to the *Newsletter*, you will have noticed the changes in style and presentation which are happening, largely through the initiatives of Tina Bone, (our 'Typesetter'). You will also have seen that we have lost our Editor (Mrs. Wong), who has had to resign due to her increasing domestic commitments. Thank you Liz for your good work in the past. The Executive Committee has been discussing possible new arrangements for the editing and production of future newsletters. However, in the interim, EXCO collectively has assumed control of the editorial arrangements. As you will have seen from your December *Newsletter* any member fit and able to take on the role of Editor should contact the General Secretary. We are fortunate that most copy for the *Newsletter* now comes either on diskette or by E-mail. This greatly simplifies the production of the *Newsletter*.

The TAA has been an active member of the UK Forum on Agricultural Research for Development, and has also been involved in meetings of the European and the Global fora. Our participation in these fora does give us an opportunity to intervene in policy issues related to global agricultural research for development. The UK Forum successfully intervened to ensure that non-CGIAR crops be retained on the agenda of the Global Forum (GFAR) and these, including the minor and under-utilised crops, are now incorporated as a priority known as the commodity chain area. The most recent intervention has been to lobby the Office of Science and Technology, and DFID, to encourage the European Union to retain an instrument such as the earlier STD and current INCO-DEV in the new framework programme 6 which is being developed in Brussels. These activities are posted on our website.

Next year, 2001, is the time for our biennial conference. Following the success of our last conference in Scotland, we hope to hold the next one

in Wales, with a possible visit across the Irish Sea to Dublin. If all goes according to plan the conference will be hosted by the University of Wales, Bangor, and the theme will be related to agro-forestry. We hope that as many members as possible will be able to participate and attend the conference. Further details will appear in the March newsletter.

We intend mounting the TAA stand again at the Royal Show in 2001. The Association is much indebted to Ted Wilmot who has played a pivotal role in organising our input but he will not be in a position to continue after next year's event. We (and Henry Gunston in particular, who is in charge of manning the stand) really need help and support from one or more members who live near to Stoneleigh if we are to continue in the future. An appeal for help has been issued in the newsletter.

It is very pleasing that our president, Sir Charles Pereira, is with us today. He has undergone some medical treatment to improve his walking ability, and we note with pleasure that this has been successful.

We would like to close by thanking all the members of the Executive Committee, the organisers of the regional groups, those responsible for the production and distribution of the *Newsletter* and other members and helpers for their support during the year.

We also thank Richard Manning for agreeing to deliver the 18th Ralph Melville Memorial Lecture which we will have the privilege of listening to shortly.

Roger Smith (Chairman)
Paul Tuley (General Secretary)

Membership Secretary's Report

There has been a gradual erosion of Membership numbers over the year, some sixty Members being in line for removal from the List. These are primarily those who persist in paying by cheque in the past and who have failed to deliver for the current year. They will not receive their March Newsletter. Given the low cost of Membership compared with similar professional Societies and Associations, this response from a small minority is tedious, costly and disappointing. ExCo may have to look carefully at the need for an increase in the subscription but this will be avoided if at all possible. The way forward is to increase membership numbers. There are a substantial number of potential new members within the profession at large who could well be persuaded to join. Hence, in the coming year the 'Recruit-a-Member' campaign will be mounted. Members will receive details with their

March Newsletter but essentially each existing Member will be urged to recruit at least one suitably qualified colleague (see page 20 of this Newsletter).

There are still some sixty Members who have not upgraded their Banker's Orders or cheque payments from £14. In effect, they now owe the Association £35! Reminders continue to issue. A plus side is that we have seen an increase in Corporate Members during the year and we will continue to pursue this avenue.

Members and an increasing number of 'outsiders' are making use of the Web Site. Among other advantages, it has greatly raised the profile of the Association in many quarters. We have had over a thousand 'hits' in the past period. Comments and suggestions for further development of the Site will be welcome.

Count of Members by Membership Category

31 January 2001

Membership Category	No. of members (not suspended)	No. of Members (suspended)	No. of Members (total)
A	23	0	23
C	14	1	15
F	1066	57	1123
H	8	0	8
S	13	4	17
T	1	1	2
Totals:	1138	65	1203

Corporate Membership

If your organisation becomes a corporate member of TAA it will be accorded the following benefits:

- Your web site will be linked to the TAA web pages.
- You will receive, without additional charge each year, a copy of the CVs of TAA members available as consultants.
- You will be able to advertise in the TAA Quarterly *Newsletter* at the rate accorded to members, currently 10p a word, which is considerably cheaper than the normal commercial rate.
- You will have your company name listed in a special section of the annual list of members produced by the TAA.

The following are the current corporate members of TAA:

- Adas International, Whittington Road, Worcester, WR52JU
- Agrisystems, Agrisystems Ltd, Agrisystems House, Oxford Road, Stonebucks HP17 8PL

- Danagro A/S, Granskoven 8, Glostrup 2600, Denmark
- Fundacion Hondurena Investigacion Agricola, Fhia Apartado Postal 2067, San Pedro Sula, Honduras
- Halcrow Rm Ltd, Halcrow Rural Management, Burderop Park, Swindon SN4 0QD
- Hunting Technical Services, Thamesfield House, Boundary Way Hemel Hempstead HP2 7SR
- IACR-Rothamstead, IACR-Rothamsted International, Harpenden, Herts. AL5 2JQ
- LTS International, Pentlands Science Park, Bush Loan, Penicuik, Edinburgh EH26
- Natural Resources Inst, Chatham Maritime, Chatham, Kent ME4 4TB
- PMTC International, Riverside House, The Green, Harrold, Beds. MK43 7DB
- Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AE
- RWA International Ltd, Becketts House, 34 Market Place, Pripion, N Yorks HG4 1BZ
- Wellesbourne Horticultural Research Institute, Wellesbourne, Warwick CV35 9EF
- WS Atkins, WS Atkins Rural Development, Westbrook Court, Girton, Cambridge CB3 0NA

MemSec.

Honorary Treasurer's Report

The report is presented in the format as required under the 1993 Charities Act and prepared and professionally audited in accordance with the Charities (Accounts and Reports) Regulations 1995. Spreadsheets are prepared for expenditure and income in cheque and date order and submitted to the auditors along with all supporting documents for preparation of the final accounts. Copies have been distributed in normal format.

1999/2000 income/expenditure followed the same pattern as in previous years. The main source of income, membership subscription, has remained relatively stable. The other, though much less than last year, is donation to the Award Fund. The main grant was received from the Department for International Development, £3,400. Other major income was received from participants attending the September 1999 Biennial Conference but which was almost equally balanced by outgoings. Less bank interest and decreased donation to the award fund was the main reason for decreased income

Charitable expenditure remained at the same level as the previous year. Increased expenditure on the

Newsletter and the Conference was offset by decreased expenditure by the award fund. No capital expenditure was incurred. Increased management and administration costs for Exco meetings reflect the wide geographical spread of its members and the write down of surplus publications, as advised by the auditors. After discussion with the auditors it was decided to close our small Euro account. The bank originally indicated that there were no deposit charges but quarterly charges for no service forced closure before the account was in debit!

The arrangement to use a casual contractor to check the August bank statement has again been successful. Some 1100 Bank Standing Orders indicating amounts transferred of 5, 14 and £20 have to be reconciled. The outcome creates considerable work for the Memsec in his follow-up of the underpaid and those who pay annually by cheque but forget! Many hours are put in by members of the Executive Committee in following up venues, meetings, assessing candidates for awards, membership and accounts, all on a voluntary basis, keeping costs down. The examination also identified eight members paying double subscriptions! I would again urge members to check bank statements for double and under payments, particularly in the month of August.

Net assets, mainly surplus funds, have shown a decrease at £31,620. Of this total about £10,000 is dedicated to the Award Fund. Management of the Association, including the write off, utilised 13% of resources expended (notes 2 & 3 of the financial statement). All services by members were volunteered free.

As of April this year a new approach to 'Gift Aid' was introduced by which members can declare their subscriptions as gift aid donations. The method of declaration has been set out in the last two issues of the Newsletter. To-date I have received only 50 (fifty) signed declarations out of approximately one thousand possible returns! Please return the declarations, which return 22% of subscription/donation as increased income to Association funds.

A similar pattern of expenditure is forecast for the current year. Complementary financing is still being actively sought for the Award Fund to increase the present level of assistance to young agriculturists seeking tropical experience.

Again I would like to propose that the Chartered Accountants who carried out the audit, E.A. Bell and Co, act as auditors for the 2000/2001 accounts.

Audited Accounts 1999-2000

Extract of the audited accounts for the financial year 1999-2000.
Audited Balance Sheet As at 30 June, 2000

	£	£	£	£
Fixed Assets	1,006			
Less Depreciation	250	756		
Current Assets				
Cash at Bankers: Current	617			
Deposit	30,537			
Cash in hand	20	31,174		
Deduct Current Liabilities		(310)		
Net Current Assets	31,620			
Accum. Fd. Balance b/f 1/07/99	34,566			
Net Surplus (Deficit) on the year	(2,946)			
INCOME AND EXPENDITURE ACCOUNT				
Income				
Subscription	23,311			
Award Fund Donation	3,535			
C.V. Directories	2,773			
Functions	6,377			
Sales Misc	8			
Adverts	296			
Bank Interest	978	37,278		
Expenditure				
Membership List			2,728	
Newsletter			13,680	
C.V Directories			3,153	
Show, Function, Conference			8,567	
Regional Subvention			1,100	
Insurance			289	
Auditors Fees			310	
Depreciation			250	
Exco Meetings			915	
Administration			2,383	
Euro Account Bank Charges			14	
Publications Written Off			523	33,912
Excess (Deficit)				3,366
Less Award Fund Expenditure				6,312
Deficit on the Year's Operations				(2,946)

Gift Aid Declaration in favour of TAA(UK)

Note from the Honorary Treasurer

We still look for a greater response from the membership with regard to the forwarding of completed Gift Aid certificates. To-date some 95 have been received. This represents extra annual income to the Association of (20 x 95 x 22/78) £535.90. Each declaration, which can be by telephone, fax, email, orally or face-to-face, represents a further (20x22/78) £5.64 addition to resources. Oral and telephoned declarations will be followed up by a written acknowledgement from the Honorary Treasurer. It should be noted that those who already claim relief on the subscription for other reasons may not declare it for gift aid in favour of TAA(UK). For those who require further explanation, I refer them to the internet at www.inlandrevenue.gov.uk/charities

HonTreas.

The Executive Committee

Only four posts on ExCo fall vacant as of now. The General Secretary, The Treasurer and the Membership Secretary have all completed their current 3-year term of office. All three existing incumbents have agreed to stand for re-election. No other nominations have been received. The Editor has found it necessary to resign during the course of the year and we are fortunate in having a willing volunteer in the person of Mr D.G. Robertson to take over this role

The Constitution

This has remained unaltered since the inception of the Association. Changes in the classes of Membership, the lowering of the age of adulthood, etc., call for a few necessary amendments to the current text. These have been listed for scrutiny by the Membership in the December 2000 Newsletter. A formal motion of acceptance will be put to the floor at the AGM.

Motions to the Floor

1. That the account of the AGM of December 1999 as recorded in the March 2000 Newsletter be accepted as a true and accurate record of the proceedings.
Proposed: Mr E Wilmot; Seconded: Dr J Watson. Approved Unanimously.
2. That the audited accounts for the financial year 1999-2000, as presented, be accepted.
Proposed: Mr K Virgo; Seconded; Mr H Franks. Approved Unanimously.
3. That Messrs E.H. Bell & Co. be appointed our auditors for the financial year 2000-2001.
Proposed: Prof. T Preston; Seconded; Mr E Wyerly-Birch. Approved Unanimously.
4. That the proposed amendments to the Association's Constitution as given in the December 2000 Newsletter be implemented.
Proposed: Mr M Taylor; Seconded: Mr A Smyth. Approved Unanimously.
5. That Mr P. Tuley, Mr L.N. Robertson and Dr A.J. Smith be re-elected as General Secretary, Treasurer and Membership Secretary respectively. Also, that Mr DG Robertson be elected as Editor of the Newsletter.
Proposed: Ms. C Cairns; Seconded: Dr R Yates. Approved Unanimously.

Members are asked to note that the 18th Annual Melville Memorial Lecture will issue in the June 2001 Newsletter

LONDON & SOUTHEAST REGION

DFID Renewable Natural Resources Research Strategy

Michael Wilson

**Head of Research Section, Rural Livelihoods Department,
Department for International Development**

Introduction

The International Development Targets include a reduction by one half in the proportion of poor people living in extreme poverty by 2015. Currently, two billion people are malnourished and 1.3 billion live in absolute poverty with less than \$1 per day. In total, 840 million people go hungry every day with 70% of these living in Asia.

The nature of the poor is changing down on the farm. The consequences of increased numbers are not just reduced holding sizes but more people are exploiting common property with the number of inland capture fishers in Asia thought to have doubled over the last ten years. There are more diverse livelihoods with a smallholders livelihood often derived from crops (25%); livestock (15%); farm wages (10%); remittances (15%); non farm wage (12%); non farm enterprise (15%) and other (8%).

A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. Livelihood strategies focus not only on increasing income or food flows, but also on long term improvement in social and economic relations within the family life cycle as well as addressing aspects of vulnerability.

Long running constraints to agricultural productivity still persist, for example:

- Trypanosomiasis: still no control;
- Late Potato Blight: a new strain makes control more uncertain and more expensive for what has become the world's 4th major food crop, of which 30% is grown in developing countries, much of it rain-fed.

- Black Pod and Witches' Broom diseases have moved Brazil over ten years from being the World's No 2 producer of cocoa at 400,000 tons to only 80,000 tons.

The National Research Institutions remain a mixed resource. The ratio of their research investment to output is only 25% of that in the developed world and there are questions about its effectiveness. There are differences, at least to a degree, between Asia and Africa, but overall there are pockets of excellence co-existing with mediocrity, lack of originality and scientific rigour, and lack of social and financial accountability.

Structure of Strategy

The DFID Natural Resources Research Strategy has bilateral and multilateral components which are equally focused on the primary purpose of generating benefits for poor people by applying new knowledge in natural resources systems. Funding of the strategy amounts to £30 million each year. A ten year horizon to 2005 aims to help achieve the international poverty-elimination goals subscribed to by DFID's White Paper and to influence National Agricultural Research Systems (NARS), the Consultative Group on International Agricultural Research (CGIAR), the World Bank and the European Union.

Bilateral Research Programmes

The bilateral component addresses the needs of people dependent on agriculture, forestry, livestock and/or fisheries for their livelihoods. It is organised as eleven research programmes: crop protection, natural resource systems, forestry, crop post-harvest, plant

sciences, animal health, livestock production, aquaculture, fisheries management science, fish genetics, and post-harvest fisheries.

Research contributes to improvement in the livelihoods of poor people who depend on any of six natural resources production systems: semi-arid; high potential; hillside; forest-agriculture interface; land-water interface; and peri-urban interface.

To strengthen the relevance of research, the strategy adopts a structured approach using logical framework methodology. Each of the eleven programmes typically addresses two or three production systems and has one or two purposes formulated for priority constraints within them. Over time, additional constraints amenable to researchable solutions will be identified.

Each programme is managed by academic or private sector institutions contracted by DFID through competition. Programme Managers are advised by Programme Advisory Committees (PAC) with technical, social, economic and environmental specialists representing some 57 UK institutions. Lead advisers represent DFID on each PAC.

Examples of Impact from the Fisheries Research Programmes

Basic/Strategic Research

The Fisheries Management Science Programme (FMSP), managed by the Marine Resources Assessment Group, has devised an elegant statistical model which provides a new, more accurate approach to fish population estimates and has been adopted by the Food and Agriculture Organisation (FAO).

Research, also by the FMSP, has successfully modelled the behaviour of fishermen and fishing enterprises under variable conditions of catch, legislation and control, accommodating national and international economic and legislative issues. Better management and conservation of national fish stocks has been demonstrated at three UK Overseas Territories (UKOT). License revenues in excess of £2 million per year have accrued to one of the participating UKOT, most of which is directly attributable to the introduction of the new model into the management system. Fisheries management authorities in the Seychelles, Namibia and UKOT in the Indian Ocean and South Atlantic have adopted aspects of the methodology.

Applied/Adaptive Research

The Aquaculture programme, managed by the Institute of Aquaculture, Stirling, has shifted its balance of research from disease to production and paid particular attention to the link between research and development along an adaptive continuum. The spectrum of work covers rice/fish systems, cage culture, and perennial ponds in the Mekong Delta, Red River Delta and Bangladesh; pond culture in N. East Thailand and Laos; seasonal ponds in Eastern India; and tanks and fish in engineered irrigation systems in Karnataka.

The jigsaw puzzle of the major systems involving poor fish producers in Asia is nearly complete. Fish researchers now see the need for a Farming Systems approach. Given the variety of production systems no one size fits all, but what are the generic issues? For example:

- Fish seed. How does poor quality fish seed impact on the poor? How can they make money out of producing better quality seed? What opportunities are presented for the: hatchery, nursery, trader and fish farm manager and by issues of genetic quality, and institutional support?
- Viral and bacterial disease management. Shrimp white spot in Mekong affects 0.5 million farm families plus processors and is moving from China through Vietnam and likely to progress to Bangladesh and the Gangetic Delta. EUS disease (*Aphanomyces invaderans*) has been identified as one causal organism and disease management systems are being investigated and promoted.
- Benefits of adaptive research in a village. Institutions, women and men's groups are now working together and used to dealing with researchers. They are willing to take more risk, consider new ideas and work with neighbouring villages.
- Need for evolution in adaptive research to match the changes taking place with development: increased confidence, savings, conserved land; more willingness to take risk and use inputs; changes to the farming system from e.g. wet land behind the bund used for higher value crops; and short duration varieties changing the permutations and combinations of the farming system.

Multilateral Support to the CGIAR

The multilateral component of the strategy entails working with the international natural resources research community, in particular the Consultative

Group on International Agricultural Research (CGIAR) an association of developed and developing countries, foundations and multilateral organisations which sponsors sixteen international research centres. The CGIAR is an important part of the global research system. The total CGIAR budget (\$340 million) represents about four per cent of the global spend on agricultural research. Apart from research, the CGIAR germplasm collections are a public good of fundamental importance.

Influence

Through its active membership, DFID seeks to influence thinking within the CGIAR, for example in areas such as poverty reduction and the better use of performance assessment systems. DFID representatives attend the half yearly meetings and the Annual 'Centres Week'. The DFID Chief Natural Resources Adviser is chair of the oversight committee. DFID is also involved in advising the International Food Policy Research Institute (IFPRI) with its current review of CG impact on poverty; and influencing the European Union's new strategy to the CGIAR. Individuals from Universities and other UK organisations are invited as members of the different Centres' Boards.

Funding

Funding from DFID is attributed to specific research programmes and projects within the CGIAR research agenda, those which directly support DFID's objectives. Other DFID support is delivered through a fund for which the centres may compete. It supports demand-led research projects commissioned by developing country research systems or commissioned by centres from scientific institutions in the UK. The concept of 'working together' is emphasised.

Collaboration

The eleven bilateral research programmes also collaborate with the CGIAR centres. There are currently some forty such ventures which include facilitating uptake of research outputs.

An Example: The International Rice Research Institute

IRRI's interdisciplinary research programmes concentrate on the three major rice ecosystems: irrigated, rain-fed lowland, and upland. A fourth, the cross-ecosystems research programme, focuses on research that will generate knowledge applicable to all, or several programmes. IRRI's partnerships programme has eight projects that aim to deliver and conserve rice genetic resources and accelerate the impact of research. Research areas include:

- ❑ **Irrigated rice:** increasing yield by developing a rice plant with a new architecture for radiation use efficiency and better suited to direct seeding; hybrid rice; increasing the efficiency of inputs; and minimising the effects of climate change.
- ❑ **Rain-fed lowland rice:** better understanding of socio-economic and abiotic/biotic components; technology to manage soil, water and crop; and high yielding germplasm adapted to overcome poor soils, drought and submergence.
- ❑ **Upland rice:** germplasm improvement for abiotic and biotic constraints; perennial rice to help control erosion; and allelopathy to assist weed management.
- ❑ **Flood prone rice:** germplasm improvement and crop resource management across ecosystems; accelerated breeding using bio-technology; bio-diversity for pest management; N fixation; and yellow rice.

Improvements to the Strategy

During the last two years, the strategy has been reviewed and changes made for more effective adoption of existing knowledge and technologies from previous research. There is more synergy from partnerships among research programmes and with DFID geographical desks and NARS. Partnerships are also established with other multilateral donors (CGIAR, and EC) to create a critical mass for improved geographical focus; uptake; dissemination and extension; and information and impact assessment.

The strategy seeks to work with the following sectoral DFID Departments:

- ❑ **Health and Population Department:** zoonotic diseases: e.g. over 10% of tuberculosis is now caused by extra-pulmonary *Micobacterium bovis*; tapeworm cysts (cystercercosis - *Taenia*) are common in the poor in Latin America; as are liverflukes in Bolivia and Nepal.
- ❑ **Engineering Department:** looking at energy; geo-science; transport urbanisation; water supply and sanitation; and information and communications technologies.

New Areas of Research

The strategy is looking at the following new initiatives within the existing programmes of research:

- ❑ **Forage.** A traded commodity which falls between programmes and for which there is a universal need in most mixed farm systems.

- ❑ **Fish.** In mixed systems. Enhancement of rivers and flood plains where 10 to 30 fold return on introduced stock i.e. 50,000 to 100,000 million tonne increases are theoretically possible from the Gangetic and Mekong systems. In reservoirs in Asia with a 3 to 4 million tonne increase possible. Peri-urban fish culture in Africa.

Next Strategy

Changes in Store

For the next strategy beyond 2005, the following changes predicted by the year 2020 will have implications on natural resources management and productivity:

- ❑ **Human population:** total 7.5 billion of which urban comprise 3.4 billion;
- ❑ **Water shortage:** diversions to urban areas;
- ❑ **Climatic change:** water surplus on SE coasts will cause ocean upwelling; areas of drought and increased rainfall now becoming clear and experience coinciding with mapped projections; forecasting of wet and dry el nino events now feasible and six months advance warning to farmers permits adjustments to farming practice.
- ❑ **Rice:** output needs to increase by 70%;
- ❑ **Bio-diversity loss:** of world's animal genetic resources of 40 species and 3,800 breeds, 30% are at risk of extinction;
- ❑ **New concerns:** on GMOs, intellectual property rights, animal welfare, bio-safety and wildlife.
- ❑ **HIV/AIDS:** eliminating a generation in some countries resulting in labour shortages and knowledge loss.
- ❑ **Women-headed households:** more than 50% of rural households in some areas of Africa.

The fast pace of change in the science of biotechnology means that there are many genetic techniques available, which can offer the following:

In animal health and livestock production:

- ❑ more productive livestock;
- ❑ better adaptation to environment;
- ❑ identity of candidate antigens to develop vaccines;
- ❑ locate sites for drugs on the genome;
- ❑ identify the genetic causes of virulence in disease;
- ❑ diagnostic tools for epidemiology and control;
- ❑ identity of genetic markers for feed quality traits

desirable in forages and crop residues for use in plant breeding;

- ❑ manipulation of rumen micro-flora to improve the use of locally available feeds.

In crops

- ❑ genetic-cytoplasmic male sterility systems that facilitate hybrid seed production;
- ❑ molecular genetic maps for major cereals and legumes;
- ❑ identification and cloning of several genes that control individual genetic traits associated with agronomic fitness;
- ❑ effective manipulation of the genomes of cereals and legumes through genetic transformation.

Developments in information and communication technologies will enable the use of satellite imagery for accurate predictions of disease, drought and yields; exchange of research information on national and international computer links; and geographic information systems to assimilate and analyse environmental and agricultural records.

Structure of Research

Future research may be oriented and managed around a region or a development outcome: e.g. a vaccine produced and delivered against a particular livestock disease; or integrated control of a major pest drawing together research and development strands.

Possible merging of the CGIAR and bilateral streams of research funding.

Better integration of development and research along the continuum.

Conclusion

To justify the investment of DFID funding, research must deliver developmental benefits and demonstrate value for money. Better understanding of clients and uptake pathways are delivering the knowledge needed by the poor whose livelihoods depend on natural resources. Impressive results of impact are emerging, examples of which are regularly publicised in DFID media.

The almost unbelievably rapid advance in technology now render it likely that hitherto recalcitrant problems may be amenable to solution. Yet major social and environmental changes already well underway will require RNR research to be organised, managed and focused rather differently than is currently the case.

Routine Maintenance of Rural Roads in Zimbabwe

K. Gongera

Chief Engineer (Roads), District Development Fund

This lecture was presented at our joint meeting in November 2000 with the Institutions of Agricultural and Civil Engineers.

Publication in the *Newsletter* has been delayed and, in the interim, the paper has issued in the *I.Agr.E. Journal – Landwards*, 55, 3, Autumn 2000.

The paper describes in detail the employment of standard tractors and machinery in a labour intensive routine of regular maintenance to keep open all year the extensive network of rural roads in the country. It

is of particular interest to those concerned with those aspects of rural development; provision of farm inputs; market access and such, dependent on reasonable road conditions and good communications.

Members who attended the meeting will have received a copy of the paper with their Delegates Pack. Other Members who do not have access to *Landwards* and require a copy of the full paper, should contact me.

GenSec.



VACANCIES

World Vision UK

➔ Agriculture Mechanisation Specialist, KOSOVO

Supervise and manage up to eight national agriculture technicians in the implementation of a tractor repair programme in four municipalities (Gjilan, Podujeve, Fuche, Kosovo and Prizern). Requires knowledgeable in tractor repair and a good track record in supervising previous tractor or agriculture machinery repair programme. A team player who is able to work well with national and expatriate staff on an equal basis. Good interpersonal and communication skills. Good English verbal and written skills. Good computer skills.

➔ Food Security Coordinator, SUDAN

To help the Country Director in the overall coordination of the agricultural recovery and development activities in areas of operation in Sudan. The Coordinator will initiate the proposal/concept paper preparation, prepare reports, supervise in-country agricultural projects and maintain good contacts with donors, NGOs, Support Offices and the Africa Technical Services Food Security Programme (ATS/FSP) involved with agriculture. Requires MSc or PhD, preferably in agroforestry, agriculture, horticulture or in the biological sciences. A minimum of ten years' experience in agricultural research with at least five years' experience in Africa in either research or development including hands-on contact with farmers. Proficiency in the use of requisite computer software. Good written and oral communication in English. Ability to communicate in Swahili or Arabic will be desirable.

Contact: Clare Scott, Overseas Recruitment Administrator, World Vision UK, 599 Avebury Boulevard, Central Milton Keynes, Buckinghamshire, MK9 3PG.

Tel: 01908 841045; Fax: 01908 841014; email: clare.scott@worldvision.org.uk

Note: World Vision also have a number of administrative/management posts overseas, involved with overall aid programmes, food aid, and the like. Some of these could be of interest to Members.

GenSec.

SCOTTISH & BORDER REGION GROUP SEMINAR

Assessing Crop and Food Supplies

Michael Daw

Department of Agriculture & Forestry, University of Aberdeen

Introduction

The main focus of this presentation is on forecasting food situations at national (macro) or regional level, as practised by FAO and other international organisations. The assessment of local (micro) situations involves many different approaches—used by WFP, NGOs and relief agencies. These involve 'Risk Mapping', 'Vulnerability Analysis and Mapping', 'Household Food Economy Analysis' and a whole jargon of methods from 'Proportional Piling' to 'Pair-wise Ranking Matrices'. Although these have useful applications at the local level, I am not going to concern us with them—my experience has been much more with the forecasting of national and regional food situations, usually with FAO, and in this area there are fewer objective techniques available. In most situations, it is a matter of combining and interpreting a mix of information in a logical way.

Since the 1984/5 drought and food deficits in the Horn of Africa, considerable growth has occurred in 'food supply forecasting' and 'early warning systems' because: donors recognised that lead times are long for procuring, mobilising and distributing food aid assistance, and governments are much more aware the need for good information on impending food situations (especially in LIFD countries)—for planning state procurement, pricing, storage and prudent levels of exports/imports, and for providing services and incentives to farmers in the following season.

Institutional Background

Individual governments normally have their own Agriculture Departments or Statistical Authorities—which have collected historical data on crop production, and produced long-standing time series and, more recently, made pre-harvest forecasts. Some countries have invested in specialist National Early Warning (NEW) units often with external assistance (for staff, training, hardware, image receiving facilities etc.) located in an appropriate department (sometimes Agriculture).

NEWUs may also link up regionally eg. SADC, CILS, IGADD—covering 24 African countries—mostly LIFD. They produce regular reports (national and regional) on the developing crop situation, run-down of stocks and price movements. They may use primary data and other information, for example, from USAID's FEWS, FAO's various remote sensing products or food/crop/nutritional data from NGOs. These are important inputs to Government tactical planning, to the private sector and to the international community. The emphasis is on cereals and pulses, and the systems are most developed in grain-eating countries (N, E, S. Africa and Asia).

In most cases, NEWUs maintain close liaison with UN (mostly with FAO) which collates national information; as well as providing training, international staff, hardware and various satellite-based products to NEWUs.

Also available data is received at Rome and incorporated into 3 separate regular planning publications: Food Outlook (monthly); Food Crops and Shortages (6 per year), the 'Africa Report' (6 per year). All are available on-line or by regular mail. They include commentary on the world grain situation plus identification of problems, import needs, price movements etc. The work is carried out by GIEWS within ESC, Rome which monitors 30 African countries, 12 Asian countries, some Latin American countries and 9 FSU countries (more recently). Desk officers in GIEWS are responsible for monitoring a number of countries.

GIEWS also produces 'Cereal Balance Sheets'—historical time series and early estimates for the current season—continually revised with new information so as to identify deficits and import requirements in good time. Many countries now have 10 years' Balance Sheets, by cereal and for all cereals. They are tied back to countries' official crop statistics after finalisation, so historical figures are official, whereas the forecast is based on GIEWS' best estimate. All are held on a large spreadsheet managed in Rome.

Crop and Food Supply Assessment Missions (CFSAMs)

In addition to monitoring and contributing to the above reports and balance sheets, GIEWS also engages in primary data collection by mounting CFSAMs in-country where a crisis is expected, or quantitative forecasts are needed, and countries request assistance, and when there is finance available (regular programme/external sources).

CFSAMs are pre-harvest. They collect unique information but also act as catalyst for local staff to engage in fieldwork and pull together all relevant data. They also bear costs of the travel which might otherwise be difficult. They are expensive, because of logistics, and are usually conducted jointly by FAO and WFP HQ staff, with local officials and local consultants.

FAO mounts about 40 CFSAMs annually, usually following a critical situation e.g. 1997 Indonesian economic crisis, 1998 Bangladesh flood damage, 1998-99 North Korea, 2000 Tajikistan. Some LIFD countries have regular CFSAMs e.g. Sudan, Eritrea, Ethiopia. Mostly there is one mission per year but there may be two where the situation changes (e.g. rainfall) or where there are two distinct crop seasons (e.g. Somalia, Sudan, Kenya).

Objectives:

- finalise Production and BS for previous year
- forecast food crop production and availability for current year
- estimate B.S. for following year (imports as residual)
- present draft findings to Gov., donors, NGOs
- write 'Special Report' for distribution to donor community

Staffing

Typically 2 FAO staff + 8 local staff (agronomists and economists). 1 week in capital, 2-4 weeks in field, 1 week in Rome. From start of mission to distribution of final report, 6 weeks.

Sources of Information

Forecasts are made using information in the following 5 categories:

- historical time series (crop stats)

- rainfall monitoring (records, agromet models, water satisfaction indices, yield estimations)
- remote sensing products (CCD, NDVI)
- market price analysis (seasonal and spatial time series)
- field work (farmers, traders, crop inspection).

Information needed at **start of mission** (HQ or capital):

- historical time series of crop areas and production (by crop, region, sector)
- previous national balance sheets
- information on growing season (weather, insect damage, disease etc)
- price data for season
- official stocks
- trade in food crops
- Macro-econ information
- Remote sensing images
- Outputs from NEW units, donors (FEWS), NGOs etc.
- Preliminary crop planting data (if available)

During Mission:

Field visits with small interdisciplinary teams to surplus and deficit areas. Attempt to cover whole country. Common checklist. Aim to get areas planted/harvestable plus factors affecting areas and yields:

- pre-planting prices
- stock levels at start of season
- seed, improved seed, fertiliser availability and prices
- availability of other inputs (fuel, labour etc.)
- relevant weather data
- pests, diseases, weed problems and crop protection measures
- prices (grain, livestock, wages)
- farmers'/traders' expectations.

Visit MOA local offices, farmers, traders, NGOs and inspect crops first hand.

The main steps in such missions are:

- Develop areas, yields and production forecasts in the field against a background of satellite images and agricultural statistics. Neither images nor time series are predictive (quantitatively) but satellite data are very useful inputs to estimating rainfall, crop conditions and yields. Statistical series may give 'the bounds' of area and yield estimates.
- Develop forecasts at localised level and aggregate to region and national level (initially very disaggregated, then build up).
- Teams return from field with draft forecasts and explanations/justifications for each 'district' or zone. Presented, discussed and criticised in the larger forum of the whole mission (8-10 people). Continually checked against time series, satellite data and rainfall records. Forecasts agreed at disaggregated level.
 - Finalised—single point estimates
 - Aggregated to regional & national level Produce tables of areas, production etc by crop/sector/season
 - Build up next year's national BS
 - Estimate import requirement (commercial and food aid).
 - Calculate regional production, surplus/deficits
 - Present preliminary findings (national and regional to Government, donors, UN, NGOs in-country)

- Write 'Special Report' and debriefing FAO and WFP Rome.
- Special report approved and distributed, possibly with a formal Appeal to donors.

Observations

- Despite large volume of information, in the end, the forecasts are judgmental; no fully objective method. Depends on skills and experience of C.A. teams—consistent teams desirable. Objectivity of Agromet models limited by good rainfall data (beginning to use CCD in some situations) but, even then, must still obtain good data on areas planted and on insects, disease, weeds etc.
- Satellite images and statistical time series very useful but do not lead to point forecasts—need careful interpretation. But very useful information against which to check local opinion and observations.
- Views of farmers and traders and local MOA staff, and field inspections are still a vital input to whole exercise.
- Care needed with overly optimistic opinions of agronomists and extension staff, and pessimistic views of traders. Farmers more reliable. Checks and balances provided by historical time series, satellite images and price trends.
- Still partly an art rather than a mathematical science but accuracy is still improving.

Food security and food economy

Tim Fison

Livestock programme and Food Security, South Sudan

Introduction

What do the terms food security and food economy actually mean? Are they used interchangeably or just overlap a good deal? I have a fair idea of what they are about but difficult to define. Huge amount of information generated about them and probably many academic courses available. Save the Children Fund (SCF) has been a leader in this field and has produced much literature. SCF seconded food security people to World Food Programme (WFP) to try to influence their approach to dropping food into South Sudan.

Food security: does this term refer to the state of mind of the people concerned or to a perception of those trying to help? It is a very subjective, rather vague concept. Does it imply prospects of food for next meal, whole day, next day, week, month or year? At what nutritional level? Is it a general feeling of confidence about the future?

Food economy: more objective, can be studied and figures produced. The term seems to deal with more physical things, which can be measured or assessed. Can be considered at various levels e.g. region, country, district or household level. It involves a study

of the kinds of food available, either locally produced or imported at an area level by traders or national level by governments. What proportion of the diet is contributed by each type of food: pie charts showing this are much used by food economists. Loss of body weight seems never to be taken into account in the yearly balance sheet of survival. What factors are impinging on the supply of each type and how do these vary according to seasons or other cycles of events? How do the proportions vary between years and seasonally. Whole range of considerations, whole livelihood and way of life needs to be understood.

Background of South Sudan

Huge flat area of the central Nile flood plain and rivers draining into the Nile system. Mountainous areas surrounding this to east and south and south west. The flood plain is used extensively for livestock rearing, which has to be geared into the ecology. Other areas cultivated extensively: fruit, sorghum, maize, tea potential, groundnuts, cowpeas. A rich variety of people (for example the Taposa, Didinga, Bari, Zande, Jur) inhabit this ironstone shield around the borders of the country.

In contrast, the flood plain is a land of open and wooded grassland, mud, fire, insects, fish and remarkable flatness and occupied mainly by the Nuer, Dinka and Shilluk people. Extensive flooding in the wet season makes movement difficult. The water progressively shrinks down to the main rivers during the dry season and much old grass is burnt. Most cattle make transhumant movements following the receding floods, kinship groups combine their cattle into camps of up to several thousand and move together progressively from the villages during the dry season. Traditional sites are used as they migrate. At the homesteads the cattle are kept in large thatched, domed structures called luaks or in small groups nearby. There is a continual juggling of animals between homesteads and cattle camps to keep old people and young children supplied with milk or fulfil marriages or other social obligations. Sheep tend to move with the cattle while goats tend to stay around villages on the higher ground where there are trees. There are infinite variations on this general pattern.

Wildlife also follow a similar movement: there are two species which migrate on a large scale (to the extent, at least up till a few years ago, of rivalling the migrations in the Serengeti): these are the tiang (*Damaliscus lunatus tiang*) and white eared kob (*Kobus kob leucotis*).

Historically, the south has been exploited for slaves and ivory from the north and hence there is a general feeling of distrust towards northerners. Sudan was ruled under the Ottoman empire and then under the Anglo-Egyptian condominium. The latter exercised the so-called southern policy to protect the south from Islam and Arabisation. Independence came in 1956 with insufficient provision being made for southern interests. Almost immediately a civil war began, which only ended in 1972 with the Addis Ababa agreement between president Nimeiri and the southerners. Regional autonomy granted to the south and vice president of all Sudan was a Dinka. In 1982, the South was split disastrously into 3 regions. Then came the imposition of Sharia law and the beginning of the oil field development and the construction of the Jonglei canal. A second period of civil war began in 1983 and continues to the present time. A fatal split between the Nuer and Dinka occurred in 1991 and led to the loss of many towns to northern control. A punitive Nuer raid on Bor county left the Dinka there destitute and without livestock and caused much lasting resentment. There are now many factions in the South and the Khartoum Government exploits these. Some of the factors which fuel the war are: religion (there is a great revival of Christianity amongst southerners), history, culture, resources (oil, water, minerals, grazing and livestock and agricultural potential). Slavery still goes on.

Some southern Sudanese still refer back to the Old Testament in which there is a reference to south Sudan and it is still quoted as an explanation for their never ending problems. There are also more recent prophets of the Nuer whose words are still taken as truth.

Food Economy in south Sudan

Why should there be food insecurity? It is, after all, a huge country and relatively few people.

The main internal food resources are: sorghum, maize and millet as staple carbohydrates, the main pulses are cow peas and some beans, with groundnuts also being important in some areas. Only few vegetables are grown: tomatoes, pumpkins and onions. Oil seeds: sesame and shea butter. Wild plant foods are very important and varied with examples such as *Balanites* sp., *Amaranthus*, *Portulaca* sp., *Borassus* palm, various grasses and water lily seeds and tubers. Wild food plants in south Sudan have been the subject of a major study. The principal wild mammals used for food are the tiang and kob but the widespread use of automatic weapons has led to their decline. Wild

birds are not often used but there is a huge potential e.g. the spurwing goose. Fish comprise a very large resource: catfish, Nile perch, tilapia, *Heterotis* and many others. Domestic animal products: milk, mainly of cattle but also goats and sometimes sheep, meat of cattle, sheep and goats. Some eggs and poultry meat are also consumed. Blood is harvested mainly from cattle.

Extensive surveys have been done in south Sudan in an effort to quantify (in the form of pie charts) the various components of the food economy at different seasons, in different years and for different social groups.

Factors contributing to food insecurity

- War (not only between north and south but between southern factions too)
- Weather
- Human disease
- Animal disease
- Lack of infrastructure
- Terrain
- Insects and parasites

How do the above affect food security?

- War:
 - takes men for fighting so fewer available for cultivation and leaving female headed households
 - causes displacement so interruptions to cultivation and harvest
 - people lose the will or confidence to cultivate
 - crops get burnt in the field or stolen from storage
 - markets disrupted
 - livestock are looted
 - general breakdown of society and loss of property
 - interruptions of grazing and cattle movements
 - insecurity, or fear of it, interferes with development programmes
- Weather:
 - inconsistent rainfall, total amount and distribution
 - recurring floods and drought, with much local variation, cropping always uncertain.
- Terrain:
 - the flatness makes drainage difficult and many places become a sea of mud in the wet season,

restricting movement and making roads difficult to maintain.

- much clay soil, which is liable to set hard or become water logged, limiting the period of easy cultivation either by hand, by oxen or by tractors.
- Lack of infrastructure:
 - roads are non-existent or beyond repair, hardly any trucking system, limited river navigation
 - no grain storage system
 - no stock routes or slaughter slabs
 - lack of basic amenities
 - no government services
 - no market structures.
- Human disease:
 - affect on labour for cultivation e.g. guinea worm, kala azar, TB, brucellosis, malaria, gut worms, relapsing fever, schistosomiasis and malnutrition.
- Animal disease:
 - lowering productivity e.g. CBPP, internal parasites, trypanosomiasis, brucellosis, TB, HS, anthrax, blackquarter, malnutrition.
- Insects and parasites:
 - the ecology promotes huge parasite transmission e.g. liver fluke, amphistomes, schistosomiasis, guinea worm, and gut nematodes.
 - Nuisance effect and disease transmission potential of flies on people and animals: house flies, *Stomoxys*, mosquitoes, *Tabanidae* and *Hippoboscidae*.

Operation Lifeline Sudan

Began in 1989, with UNICEF and WFP mainly supplying grain and relief supplies, based out of Lokichoggio in northern Kenya. Tripartite agreement between GOS, OLS and SRRA and RASS. Now it comprises a consortium of some 30 NGOs with UNICEF and WFP at the head. All squashed into a camp of several hectares with razor wire all around. Social consequences for the local Turkana: large influx of foreign Kenyans as well as expatriates. WFP doing mostly supplies of maize, sorghum, oil and other feeds by lorry and planes (*Hercules*, *Buffaloes* and *Antonovs*). UNICEF play a coordinating role in human health, animal health, education, water, fisheries etc. OLS is split into different sectors, of which household food security was one: animal health came fairly and squarely in there along with fisheries, seeds and tools, ox ploughing and seed swapping! Huge emphasis on household food security: recurrent theme of many meetings and numerous surveys and

assessments: WFP food monitors doing endless bean piling on crop yields, wealth ranking, and sources of food from year to year in different localities. Large database compiled. Particular emphasis on wild plant foods.

Livestock Programme

Initially, only UNICEF was involved and the focus was on rinderpest eradication. A very successful programme of vaccination was carried out with the number of confirmed outbreaks reducing from 11 in 1993 to one in 1995 and one in 1998. In 1992–3, UNICEF encouraged NGOs to come in to broaden the livestock work. Now there are about 10 NGOs doing livestock work and the area is parcelled out to avoid duplication and squabbling!

A common approach, rather dictated by UNICEF, has been adopted: a decentralised, privatised, community based and sustainable (catch jargon words) animal health programme has been attempted. Cost recovery has been an essential feature. Basic strategy comprises an initial assessment of needs and problems followed by community meetings to explain programme. Chiefs and other community leaders are asked to organise the selection of people for training as community animal health workers. A short crash training course of 10–14 days is carried out, following which equipment and medicines are issued. The CAHWs are then sent off to begin their work.

Periodically, the CAHWs report back bringing treatment records, remaining drugs and cost recovery. They are given 20% of the cost recovery and the rest is kept, pending a decision to use it on some communal project. More drugs supplied on basis of treatment records and the amount of cost recovery brought.

Initially, UNICEF organised the rinderpest vaccination campaign as a separate exercise. Later, rinderpest vaccination was included (at the insistence of UNICEF) in the work of the CAHWs.

Main diseases addressed:

CATTLE	Vaccinations HS Anthrax BQ CBPP	rinderpest
Treatments	trypanosomosis Liver fluke Gut nematodes (especially <i>Haemonchus contortus</i>) CBPP HS, BQ, anthrax Eye infections Lice Ticks	
GOATS and SHEEP	Vaccinations RP for PPR	anthrax
Treatments	Gut nematodes Mange Pneumonia (including CCPP) Pox Lice and fleas Ticks	
CHICKENS	External parasites	

- ❑ **Drugs used:** heat stable RP vaccine, albendazole (Vermidan, Tramazole), oxytetracycline 20% LA, ivermectin (Cevamec), oxytetracycline eye powder, louse powder, tick grease.
- ❑ **Recording system:** each CAHW carries separate sheets for the main diseases and there are circles to cross off for various age categories treated. These are submitted to district supervisor who compiles a summary on another sheet for each CAHW. The latter are then sent to the relevant NGO.
- ❑ **Disease investigation:** a small diagnostic lab was established in Lokichoggio and the main investigations were into brucellosis, trypanosomosis, internal parasites, skin diseases and tuberculosis.

How successful has the livestock programme been?

It was considered to be one of the better sectors within OLS. There has been strong coordination and direction from UNICEF, with considerable influence from Tuft's University. It has been perhaps too top down.

- ❑ **Privatisation:** the ultimate aim is to have private traders bringing in drugs and selling them to CAHWs. It was not clear where the professional veterinary input would come in? This may be possible near Uganda or Kenya but is very difficult in many areas remote from borders and dependent on plane supplies. Linked with cattle trade.
- ❑ **Decentralised:** this was achieved to some extent. The CAHWs were out and about but there is still tendency to hover around airstrips and CAHWs often see themselves as NGO people. Are they an improvement on the old style veterinary scouts and stockmen? Difficult to get away completely from some kind of structure, in the sense of both physical centres or clinics and a personnel hierarchy.
- ❑ **Community based:** difficult to define community, especially in these times of displacement and upheaval and with transhumant lifestyles. Community is standard development jargon now. What does it mean? More of a lineage question if equal representation desired. Endeavoured to get selection of CAHWs by broad consensus on the basis of one CAHW for every two subchiefs. It was difficult to base CAHWs in geographical areas because there is so much movement of people and livestock. The actual selection was very problematical. It was difficult to get the idea across that CAHWs are answerable to their own people and to give complete control over to chiefs and community leaders. Attempts were made to set up

Veterinary Coordination Committees which were supposed to control cost recovery, settle disputes and generally help organise the programme. These met with varied success.

- ❑ **Sustainable:** it was difficult to get away from the dependence on aircraft for drugs supplies and logistics. The near impossibility of exchanging Sudanese currency and the lack of an agreed exchange rate were severe obstacles to sustainability.

Did the programme have an impact on food security?

It was often hailed as a great programme but it was hard to demonstrate the impact let alone measure it. One obvious success has been the virtual end of rinderpest: it still often heads disease ranking lists but this reflects fear of it rather than its current effects. Stephen Blakeway attempted to quantify the result of controlling rinderpest in south Sudan. He worked out that it was 15 times as cost-effective in terms of increased milk production as flying in grain. There is little doubt about the benefits of control of rinderpest. What about other inputs: can one claim an impact from numbers of treatments achieved? Main causes of loss of condition and productivity are: trypanosomosis, fasciolosis, haemonchosis, energy and protein deficiency, age and repeated pregnancies, chronic CBPP, TB, schistosomosis, mineral deficiencies, distance to water and grazing, biting fly stress and ticks. Not all of these were addressed by the programme.

Vaccinations for HS, BQ and anthrax

These were not done consistently or on a large scale and it is difficult to quantify changes in prevalence of sporadic diseases.

- ❑ **Vaccination for CBPP:** this was unlikely to have had a large impact because firstly, there was doubt about the efficacy of the vaccine and, secondly, only a low coverage was achieved.
- ❑ **Trypanosomosis treatment:** there was no strategic herd dosing and no vector control, so individual treatments were unlikely to affect prevalence. Once an animal has reached the chronic stage it is more difficult to cure. There is probably a fair amount of tolerance to trypanosomes in south Sudan and perhaps even finding a few in the blood might not mean they are causing disease.
- ❑ **Dosing for liver fluke:** this is assumed to be beneficial but without strategic dosing or any possibility of grazing control, there must be some doubt about the effect of a one-off dose of anthelmintic. In the case of chronic infections acquired over time, one

wonders whether removing the existing parasite load merely opens the way for reinfection. Sewell showed individual variation in response to infection but always 'insidious wasting and progressive anaemia'. He found that one fluke reduced annual liveweight gain by 200g so an average infestation of perhaps 200 flukes, this means a potential loss of 40kg. But what would it mean in an adult animal with a chronic, stable infection and seasonally, fluctuating body weight?

- ❑ **Dosing for intestinal worms:** the evidence for benefit of deworming is well documented and accepted wisdom in many situations. However, GTZ in Somalia found it difficult to show any effect on weight gain in goats in Somalia and an earlier study in south Sudan found no demonstrable effect of anthelmintic dosing in young, growing cattle. Many animals probably have low, non-pathogenic burdens which may be uneconomic to treat. Perhaps giving individual treatments to affected animals is a reasonable approach in low producing livestock. The author came across one cattle camp where the calves in general were thin and diarrhoeic and faecal samples showed high egg counts. In this instance, a herd treatment, certainly of the young stock would probably have been beneficial but the policy of insisting on payment precluded it. On the other hand, perhaps the animals would have self-cured and then shown compensatory growth.
- ❑ **Treatment for CBPP:** some experts say it is immoral or at least counter productive to treat cases of CBPP on the grounds that it promotes the carrier state. But firm evidence for this is lacking and, in any case, refusing to treat affected cattle in south Sudan is not an option. But who has checked on the effect of a single injection of oxytetracycline on a chronic case of CBPP? CAHWs claimed great success but this was hard to believe and the author never managed to follow up a case.
- ❑ **Treatment of HS, anthrax and BQ:** the sudden onset of these diseases make successful treatment difficult but again great success was claimed by the CAHWs. Perhaps the diagnosis was uncertain in early stages! There was no quantification of treatment successes.
- ❑ **Treatment of external parasites:** infestations of lice in calves and fleas in kids and lambs were common and sometimes heavy. Treatments must have produced benefits in terms of animal welfare and perhaps in productivity too. Feather lice never seemed a big problem and the louse powder was probably not very effective against mites and ticks. The programme therefore had little impact on poultry production.

Measurement of impact

There was a great deal of discussion about this, both within the whole OLS livestock programme and amongst programme staff in SCF.

1. Participatory assessment

This is perhaps the only possible way under current conditions in South Sudan. Veterinaires sans Frontieres (Switzerland) did it and found a perception of large benefit from their programme. The author tried it in one area for the SCF programme and found quite the reverse: the participants felt there was more disease and less milk after several years of the programme!

For donors, a positive participatory assessment may be sufficient but what is reality? Do people tell you what they think you want to hear or what they think will produce a suitable response? Is what they think correct anyway? Is it enough to know that people think the programme is all right? It is not easy to carry it out in a controlled way with different people in different situations to enable meaningful comparisons to be made.

2. Measure effect on milk offtake

This should be the most obvious and relevant indicator as far as food security goes. But in practice it is quite difficult! For example, there is a seasonal effect on milk yield: several studies have shown a near doubling of milk offtake in the wet season compared with the dry. So the difficulty is to keep other factors such as nutrition constant while measuring the effect of treatment. There are also practical difficulties in carrying out the measurement. Gourds are often used with a tiny hole at top so just getting the milk into a suitable container for weighing (froth makes problems for volume measurement) and back again poses a difficulty, especially if the milk has begun to clot! Women and girls are in control at milking and they tend to be a bit secretive about the handling of the milk. The milkers have to be persuaded to bring the milk straight from the cow to a central spot for weighing and recording the name of the cow and her calf. It is often dark when the evening milking is done and there may be mud, rain and mosquitoes to contend with. Ideally, offtake from the same cows would have to be done for several days running because the amount taken varies according to the whim of the milker. To show the effect of treatment with, say, Ethidium, this would have to be done before and after treatment and the owners would have to be persuaded not to move the animals during that time.

Another approach might be to estimate the milk consumed by children, for example by finding out how many have to share the milk from a group of cows, whose offtake has been measured.

It may be that, given the other constraints such as genetic potential and nutrition, the increase in production following disease treatment in individual animals may be limited. Consultants from Farm Africa, who came to evaluate the SCF programme thought that the potential for increasing food security through improvements in cultivation was much greater than increasing livestock production!

3. Measure effect on growth rates

There are problems with measuring this parameter also. It is difficult to ensure regular access to the animals and seasonal fluctuations in weight are likely to occur with varying pasture quality and quantity. An earlier study in south Sudan showed that the growth of young stock stopped completely for several months in the dry season and the weight of adult animals varied by about 4% during the year. Measuring growth rates in controlled and regularly treated animals would introduce different circumstances from those herded normally.

4. Measure effect on mortality

This is difficult to do without written records and identification of animals. Progeny history taking might be a way around this problem. Individual cows are 'interviewed' with the owner: the fate of each of her calves is noted in turn and a picture of mortality and disease prevalence is built up. With careful questioning, it might be possible to compare the calf mortality during the period for which the programme has been running, with earlier years.

A livestock census (either by objective counting by observers or by participative techniques) might show and increase in herd size. This might, however, reflect circumstances other than changes in mortality.

5. Measure amount of blood consumed

The taking of blood for human consumption is done covertly by the Nuer and Dinka and there might be difficulties in arranging access.

6. Measure amount of meat eaten

On the whole cattle are not slaughtered for meat. An increase in consumption might indicate a state of desperation rather than a greater number of animals available for slaughter.

7. Measure disease reduction

Good baseline information at the start of the programme and detailed surveillance thereafter. Figures or opinions obtained by participatory techniques might be acceptable.

8. Measure fertility

This might be done by analysis of herd structures or by careful progeny history taking to work out such parameters as the average number of calves per cow and calving intervals.

9. Measure some indirect effects of the programme

Examples of these might be the value of animals in markets and the number being sold and the average size of bridewealth.

10. Document programme outputs instead of impact

Examples of these might be the following:

- Number of CAHWs trained No. still working after certain period
- Number of refresher courses given
- Knowledge retained by CAHWs
- Standard of work of CAHWs
- Number of vaccinations and treatments given
- Amount of drugs supplied
- Amount of cost recovery received and community projects resulting from its use.

We should question whether there is a need to measure the impact or cost benefit of a programme. Are the donors really insisting on this or is it the perception of the NGOs? It might be sufficient to make a considered judgement of the likelihood of there being benefits and just get on with it! It must be remembered that livestock are not only used for food. There are other justifications for working with animals: the whole social fabric depends on them, they are the basis for a welfare system and children relate to them almost like pets.

Other spin-offs from the programme are as follows:

- Gaining ethnoveterinary knowledge
- Training remains
- Knowledge generally about livestock in south Sudan
- Livestock and education
- Livestock and human health, e.g. TB and brucellosis
- Facilitating other programme sectors.

Conclusion

The author is not discrediting the community animal health approach, indeed he is a firm believer in bringing local people in and using their knowledge. But sometimes exaggerated claims seem to be made about them: there are problems and one has to ask whether there are examples where CAHWs are operating without external input? What about the standards of treatment? Where do professional vets fit in?

In terms of food security, there probably would there have been a greater impact had we abolished or modified the cost recovery system. We could then have been more proactive in giving treatments. Payment of the CAHWs might have produced a greater output. There were also questions about the competence of the CAHWs, given that they received crash courses in which they had to learn doses, prices, vaccination, recording, giving injections and drenches, signs of different diseases and the cost recovery system. They needed frequent and regular follow up and refresher courses but this was difficult to achieve in practice.

On balance were we just making people happy or did the programme really help their nutrition status? It was certainly a popular programme and generally seen to be helpful. A very successful programme from an organisational point of view might not necessarily have a commensurate impact on food security.

One feels it must be a morale boost for pastoral people in the difficult circumstances prevailing in south Sudan to receive help for their most important asset. Children with access to cattle certainly were noticeably better physically and more cheerful than children without.

The programme concentrated entirely on drugs and vaccines. This is the easy and popular and visible way of helping pastoralists but perhaps of limited value when genetic potential or nutrition impose further ceilings on productivity. Need to know how much Nilotic animals would produce without disease and with optimal nutrition.

Perhaps animal production people should have been used more! Was it sustainable? Elaborate claims made about this but hardly relevant in south Sudan.

The programme was fully justified on grounds quite apart from those of immediate household food security enhancement. Veterinary work is always said to be the art of the possible: in South Sudan this is particularly the case.

RECRUIT-A-MEMBER

Following a standing ovation for the Chairman when he announced the opening of the **RECRUIT-A-MEMBER CAMPAIGN**, the initiative is now underway with the issue of this Newsletter. We are all aware of individuals associated with our disciplinary coverage who are not Members, largely from inertia. Given the modesty of our subscriptions and the advantages of Membership, financial constraint is unlikely.

Hence, every existing Member is asked to recruit at least one new Member in any category, including Corporate. Keep to the Banker's Order mode of payment if at all possible.

The vital part of the Application Form is reproduced on the facing Yellow Page. It can be removed or photocopied. Further copies can be lifted from the Web Site or obtained from the Membership Secretary

We are particularly keen to increase the youthful part of the Membership and also try to improve the balance between the sexes. So rally round, this is not a particularly arduous task and one that can bring great benefit to the Association and its future direction.

GenSec.

The Biennial Residential Seminar

Advances in Agriculture and Forestry for Arid Lands

The University of Wales, Bangor, 15–16 September 2001

Members should take note of the date and location for this seminar. Full details will appear in the June issue of the Newsletter but suggestions and offers for papers, exhibits and the like will be welcome from now on and those interested in making a contribution should contact me as and when. I am hopeful that an expedition to Dublin or thereabouts can be organised to follow on the weekend of the seminar.

GenSec.

Display Material for the TAA Royal Show Stand. 2nd–5th July 2001

□ As well as being a flagship site for TAA activity at the Royal Show, our stand gives a chance for members to communicate directly with the show-going public.

□ Firstly, to help fill stand wall space, large format photographs depicting rural development in tropical countries would be very welcome. Posters can be useful as well.

□ Secondly, we usually dedicate one table to displays of members' books and to free handout material such as booklets and single sheet fliers. These can be from organisations with whom you are involved (including your employer) as well as representing your personal activities.

□ If you are keen to contribute material for display or distribution at the TAA Royal Show stand please contact: Henry Gunston, CEH Wallingford, Crowmarsh Gifford, Wallingford, Oxon OX10 8BB. Tel: (direct line) 01491 692452; e-mail hmgu@ceh.ac.uk.

Henry Gunston

SOUTH WEST REGION

Annual General Meeting 3 January 2001

Exeter Golf and Country Club, 3rd. January 2001

(Combined with the presentation of a number of short papers and luncheon, graced with the oratory of a guest speaker.)

Apologies for absence were received from:

Messrs Tom Preston, David Wendover and Francis Shaxson.

The Chairman and Branch co-convenor John Russell reviewed the past year which included seminars on bee-keeping, organic production and marketing and NGOs in development. He drew attention to the creation of the Overseas Resource Centre at Bicton College which is being set up by BOAT—the Bicton Overseas Agricultural Trust, which has particular connections with the SW Branch of TAA.

The financial position was presented by Mrs. Jackie Foan and approved by the meeting.

Consequent upon the appointment of David Wendover to a two year engagement in Tanzania, he has been obliged to relinquish his position as one of the Regional Convenors. His long term and efficient commitment to this task was described by the Chairman and received well deserved approval.

The Committee for the coming year was elected as follows: **J.F.A. Russell**: Regional Convenor and Chairman (Exeter); **G.L. Taylor-Hunt**: Joint Regional Convenor and Secretary, (Newton Abbot); **H.G. Evans**: Treasurer (Exeter); **C. Riches**: Member (Bristol); **T.K. Roberts**: Member (Bath); **J.W. Reed**: Member (Sturminster Newton); **D. Gibbon**: Member (Sidmouth).

The programme for 2001/2002 was discussed and members are looking forward to visiting the Commonwealth and Empire Museum in Bristol in April, the Eden project in Cornwall in June and a seminar on participatory research and development at the RAC, Cirencester in the autumn. Precise details will appear in the 'Yellow pages'. The next AGM will be on Thursday, 3 January 2002.

Looking ahead to 2002, a number of ideas will be considered by the Committee. These include permaculture, agro-forestry, urbanisation and poverty, transgenic crops, the control and regulation of large animal crop predators, range management, game farming and pig husbandry.

Five papers were presented before lunch

□ **Mr. David Gibbon** described his work in Nepal with the improvement of farmer income. British funded and developed institutions had been handed over to Government. Thereupon many well trained scientists left and entered or started NGOs. Relay cropping producing maize, potatoes and vegetables (a recent introduction) is connected with the market in Calcutta by telephone. It is very difficult for researchers to develop solutions to problems when production has moved away in the meantime. The research system has gone back to the old rigid system so farmers go ahead on their own. This all highlights the inequalities of access to resources, advice and research and justifies the DFID emphasis on livelihood research and development.

□ **Mr. John Terry** spoke on the DFID vertisols project in Ghana which ended in August 2000. The 180,000 ha vertisol areas are plagued with *Cyprus rotunda* which is very difficult to control except with glyphosate. The vertisols are sticky and glutinous when wet and set like concrete when dry. The soils can be used with the formation of raised beds from baulks to wide beds combined with minimal tillage. However this leads to problems with the *Cyprus rotunda*. The project has been to combine the two technologies together for small scale farmer use. 5-6 years of glyphosate use get 95% control and on camber beds with 90 to 180% increase in yields. On farms with wider 40 cm. high beds which are better in the dry season, yield increases are 60% for maize and 30% for cowpea. With no control of *Cyprus rotunda* gross margin is limited to £75.00 compared to £300.00 when control is achieved. The technique will continue when farmers use tractors etc. and have harrows for secondary cultivation and have been given the necessary but moderate amount of training on bed formation. The glyphosate replaces the past hand weeding.

□ **Mr. Charles Howie** presented rice growing on the Mekong Delta in Vietnam. There are toxicity

problems with iron plus sulphur (FeSO₄) and salt. The final 200 km, long section of the Mekong falls only 2 metres and annual rainfall ranges from 1,000 mm at the sea end to 2,000 mm at the Thai border. As much as 7 crops in 2 years amounting to 12+ t/ha can be grown up-stream but only 2 crops a year near the sea amounting 2.5 t/ha. There is a 2.4% population growth. Farmers have turned to shrimp production and a system of dams for water control. Danish and Canadian aid is becoming involved and it is forecast that GM rice will be introduced in due course.

□ **John Russell** spoke on the participatory village development programme in Ghana with which he has been involved. Two villages were involved in the preparatory stage just east of Kumasi. It is a Government—private sector development initiative with district funding of research, support to extension etc. Over a 3 day period in each village, the people were divided into 4 groups: older men, older women, younger men and younger women and the plan developed. The sequence of participatory planning is; preparation of village maps, transects and crop calendars—problem

identification—potential solution of problems and development plan. In a final regional seminar in Kumasi, each village presented their problems. Then the Government departments, NGOs, private training institutes and banks stated how they might be able to assist including funding and identifying markets and potential outlets through the private sector.

□ In the final presentation, **Mr. Bill Vellacott**, Principal of Bicton College and Chairman of BOAT, described the new Resource Development Centre which is expected to go into place in 2001. Aimed at overseas students in particular, it is a section of the new library and will include computer access to information, books and a video facility. The Centre will also be available to all local NGOs, schools and community groups associated with overseas projects.

After an excellent luncheon, everyone settled down to hear Mr. Phil Parker present an amusing but at the same time thought provoking talk on his time in the banking industry.

G.L. Taylor-Hunt

SOUTH WEST REGION SEMINAR (with the Association of Better Land Husbandry) on Organic Production, Marketing and Ethical Trading in Developing Countries, Tuesday, 7 November 2000, Long Ashton Research Station, Bristol

Ethical Trade and Organic Agriculture

Mick Blowfield

**Natural Resources and Ethical Trade Programme,
NRI, Central Avenue, Chatham Maritime, Kent**

At first glance, ethical trade and organic agriculture would seem natural allies. Organic agriculture is widely perceived as being more ethical than industrialised, external input-based farming; ethical trade is promoted as being more morally acceptable than what has existed previously. Both have succeeded in capturing the public imagination, and caused people from producers to consumers to question the conventional way of doing things.

Moreover, there are both moral and business imperatives for emphasising the synergies between ethical trade and organic agriculture. Although the largest group of ethically conscious consumers are concerned primarily with food safety issues (Nicholson-Lord, 1999), there is a significant group of consumers who make purchasing decisions on a combination of ethical issues that merge healthy

eating (with an emphasis on organic produce), worker welfare, community development (supporting local suppliers), fairtrade (a better deal for Third World suppliers), animal welfare, and environmental sustainability (Tallontire & Rentsendorj, 2000). These people rarely distinguish between these issues, but want products that can guarantee a positive holistic impact.

The multiple retailers that dominate food sales in Europe are also increasingly unwilling to give shelf space to differentiated ethical products. For instance, in continental Europe, multiples are reluctant to stock separately labelled fair-trade and organic bananas, and are looking for suppliers that can meet fair-trade and organic standards with the same product (NRET, 2000).

Therefore, for the uninitiated outsider, the fact that there is not greater synergy between ethical trade and organic agriculture is surprising and problematic. The IFOAM Trading Group has produced guidelines on social issues for organic producers, and there has been work on joint certifications using organic production and fair-trade standards (Courville, 1999). Furthermore, there is evidence from a number of sources that organic agriculture has a positive social dimension in tropical countries (Crucefix, 1998; NRET, 2000b). However, in general it is fair to say that there is a long way to go before there is the degree of coherence that consumers and customers might expect.

What is Ethical Trade?

One difficulty in optimising the linkages with organic agriculture is that there are different definitions of ethical trade. The term itself was probably chosen in order to grab attention and not because encapsulates a coherent concept or set of values. An early user of the term was Richard Welford who used it to refer to a 'more holistic and ethical approach to doing business' that values social and environmental impact, and restructures North-South relations (1995). This is a very broad definition that embraces social, environmental and economic dimensions of trade, and which I have argued elsewhere sets the scope for a broad church where organic agriculture standards can sit side-by-side with an array of social and environmental initiatives (Blowfield et al., 1999).

Ethical Supply Chain Management

Since then ethical trade has become more narrowly associated with the monitoring of and compliance with the core labour and human rights standards set out in the ILO core labour conventions, the UN convention on the rights of the child and the Universal Declaration of Human Rights. There is a wide array of labour codes of practice which include criteria on forced, indentured and bonded labour freedom of association, rights to collective bargaining, equal remuneration for male and female workers, forced and bonded labour, discrimination, and the minimum age of workers. The most well-known of these codes in the UK are SA8000 and the Base Code of the Ethical Trading Initiative.

These initiatives are probably most accurately described as ethical sourcing. The codes are intended to guarantee minimum acceptable standards for workers, and are a response to growing recognition of

exploitative practices in developing country industries exporting to the West. They have been heavily promoted by brand-owners and retailers, and used as part of their socially responsible supply chain management strategies. Because of retailer support and adverse publicity about commercial farms and plantations in Africa and Latin America, they have been widely adopted in commercial agriculture.

In some ways reminiscent of organic production and processing standards, the number of worker welfare codes of practice has grown rapidly, and there are international, regional, national and company-specific schemes. These look very similar on paper, but are often quite different in approach. For instance, the Ethical Trading Initiative is a membership-based alliance of retailers, primary marketing organisations, NGOs and trade unions as interested in partnership and common-learning as in auditing particular producers. SA8000 in contrast a third party verified code, compliance with which is increasingly a requirement for suppliers to engage with Western customers. Custodianship of codes and the nature of the audit process remain contentious topics, with developing country producers increasingly active in developing and implementing their own schemes.

Unlike organic agriculture standards, there has been little attempt to make these codes a legal requirement, not least because to do so could lead to challenges at the World Trade Organisation. Of course, many of the criteria accepted by ILO member States and are already enshrined in national law. Some critics argue that compliance with codes is seen as an achievement when in fact it may only be a statement that a company is not behaving illegally. Nonetheless, even achieving these criteria is protested in various quarters. Some developing country governments have argued that the codes of practice are non-tariff barriers to trade aimed at protecting Western companies from global competition. Developing country growers and manufacturers criticised Western companies of failing to consult about the criteria and the options for meeting them.

Equally, there are those that argue the existing criteria are insufficient to address the ethical values or priorities of developing country stakeholders. For companies that wish to manage social risks in their supply chains and international development agencies that want to see business have a positive impact on poor people, the emphasis of worker welfare codes may be too narrow. They focus only on issues in the workplace, and even then often do so in a simplistic fashion, ignoring for instance the specific needs of women, migrant groups, seasonal labour,

the disabled, and children who for a variety of humane reasons may have to work. Avoiding such issues may actually have a negative impact on certain workers, and will leave companies open to the type of negative publicity they wish to avoid.

To establish a reputation as a responsible company, it is not enough only to concentrate on the workplace: the relationship with neighbouring communities and respect for land rights, for example, are also critical issues. Similarly, how a company manages retrenchment or its policies for developing human capital are issues that a socially responsible business needs to address. In other words, existing codes of practice are too spatially and temporally specific to be considered a comprehensive indicator of corporate social responsibility.

Mentioning the limitations of this approach to ethical trade is not to ignore the positive outcomes that have already been achieved in the space of a few years. To take the examples of horticulture in Kenya and Zimbabwe, the use of codes of practice has led to significant benefits to workers in the areas of housing, sexual harassment, working hours and worker-management relations. It has also served as a catalyst for bringing together different companies and organisations, many of whom would have been mutually suspicious if not antagonistic in the past. In other papers, I have argued that in the absence of sufficient data on the actual impact in the workplace of using codes of practice, this catalytic role both in the West and developing countries is one of the major achievements (Blowfield, 1999).

Fair-Trade

There are similarities between the management of social issues in the supply chain and organic standards. Both have been developed to meet commercial requirements, and are performance-based standards used to reassure customers that certain conditions of production are being met. Unlike process-based standards such as ISO14000 or AA1000, external parties define what is good performance and certify producers based on compliance with fixed principles or criteria. Although with great significance to developing countries, both have their origins in the West and are mostly used for trading with Western customers.

What neither addresses is the nature of the trading relationship itself. This is often problematic because even the most willing of producers can face constraints to improving their social or environmental performance as a result of what other

stakeholders do or do not do. For instance, the potential for organic agriculture to benefit small producers in developing countries is often constrained by lack of credit or infrastructure. Similarly, factors such as interest rates, foreign exchange policies and terms of trading have a significant impact on how far and how quickly growers can improve workers' conditions. In private and to a lesser extent in public growers and exporters criticise their customers for making ever more demands for better performance while refusing to recognise the need for better prices or stable contracts.

Of all the initiatives to manage the social and environmental dimensions in supply chains, fair-trade is unique in that it promotes an alternative approach to conventional trading relationships. There are a number of types of fair-trade, but a recent common definition agreed upon by key organisations in the fair-trade movement defines fair-trade as:

'an alternative approach to conventional international trade. It is a trading partnership which aims at sustainable development for excluded and disadvantaged producers. It seeks to do this by providing better trading conditions, by awareness raising and by campaigning.' (Humphrey, 2000.)

Some of fair-trade's own advertising emphasises how producers obtain better prices and the investment in social development by producer groups made possible by a consumer price premium. Better farm-gate prices is a simple message to communicate both to consumers and producers, but for a variety of reasons it has often been difficult to achieve (Collinson & Galvez, 2000; Blowfield & Gallet, 1998; Nelson & Malins, 1998). Moreover, it may not be the most important benefit for producers. According to Traidcraft's director, Philip Angier, what distinguishes fair-trade is the sharing of risk along the supply chain (*pers. comm.*). Fair-trade buyers typically exhibit a strong commitment to their producers, and alternative trade organisations such as Traidcraft and Oxfam invest heavily in building up the capacity of local organisations. Many mainstream companies would say they do the same, and that stable relations with suppliers and investment in capacity building is simply business best practice. However, the sharing of risk between producers, producer organisations, buyers and retailers is unique to fair-trade.

Two key challenges for fair-trade are how to retain that commitment while trading in volatile commodities and when supply outstrips demands from fair-trade buyers. The examples of Kuapa Kokoo in Ghana and MCCH in Ecuador show that the fair-trade market is easily saturated, and the true test

of producer/trading organisations is their ability to adhere to fair-trade principles once they begin to supply for conventional markets (Collinson & Galvez, 2000). In both of these cases, it seems that the organisations concerned have made a successful transition, but evidence from Uganda and elsewhere shows that this is not always the case (Nelson & Malins, 1998).

There has been more dialogue between the organic agriculture movement and fair-trade than there has with advocates of ethical sourcing. In part, this is because both see themselves as bringing benefits to small producers, and have a shared interest in

reducing the costs of monitoring and verifying performance. Occasionally, this identification of common interest has led to an impression (not least amongst producers) that both offer financial benefits beyond those offered by conventional markets. This is misleading and potentially damaging. The premium for organic produce is largely a factor of demand outstripping supply, and of the increased costs of production; as supply increases and large-scale producers convert to organic the farm-gate premium is likely to fall. In contrast, the premium for fair-trade is intrinsic to the fair-trade philosophy, and is justified by investment in the social and human capital of producers.

Table 1. Comparison of characteristics of ethical sourcing and fair-trade

Ethical Sourcing	Fair-trade
<input type="checkbox"/> Primary focus is conditions of production	<input type="checkbox"/> Primary focus is terms of trading
<input type="checkbox"/> Applies to producers world-wide	<input type="checkbox"/> Developing country focus
<input type="checkbox"/> Works within existing trading chains	<input type="checkbox"/> Offers an alternative trading chain, especially producer organisation (cooperatives), worker shareholdings (on plantations), and alternative buying relationships
<input type="checkbox"/> Current standards mostly applicable to commercial producers (although guidelines for smallholders may be introduced soon)	<input type="checkbox"/> Usually targeted at small producers (although fair-trade bananas are also sourced from plantations)
<input type="checkbox"/> Does not directly support institution or capacity building	<input type="checkbox"/> Actively facilitates capacity building and promotes active partnership between producers and buyers
<input type="checkbox"/> Guarantees living wage for workers	<input type="checkbox"/> Except on plantations, does not address workers' wages
<input type="checkbox"/> Does not guarantee prices to producers	<input type="checkbox"/> Guarantees a minimum farm-gate price equal to the cost of production
<input type="checkbox"/> Guarantees core labour standards	<input type="checkbox"/> Assumes smallholders depend on family labour, and therefore does not always insist on core labour standards
<input type="checkbox"/> Does not address spatial and temporal impact (e.g. on family livelihoods, land tenure)	<input type="checkbox"/> Does not address spatial and temporal impact
<input type="checkbox"/> Does not require producers to adopt social development programmes (although some developing country producers have such programmes—e.g. education, health, civic amenities)	<input type="checkbox"/> Provides funding for social development by producer groups

Significance of Ethical Trade for Organic Agriculture

At the start of this paper I highlighted some of the reasons for greater links to be drawn between ethical trade and organic agriculture. These were essentially commercial reasons. However, there are also issues specific to tropical agriculture that need to be considered. Some would argue that the ideological and technical differences between the organic and ethical trade (fair-trade in particular). Even the fair-trade movement has differences of opinion about

the value of certification, and fair-trade standards only exist for a small range of products.

Some in fair-trade say that certification is an unjustified added cost, although there is growing experience, particularly in organic agriculture, on how to make this more efficient (e.g. the use of internal control systems). In relation to tropical countries, the questions raised earlier about the relevance of ethical sourcing to cultural values and priorities is more pertinent, but it would be unwise to ignore what is a rising area of commercial activity.

There are those that argue that ethical trade in whatever form does not address the more deeply rooted problems of trade itself (e.g. the trade in food across continents), and that the best way to improve people's standards of living is to add value near to the farm (e.g. through processing).

However, international trade in organic agricultural produce is a reality, and production for that market has a human dimension that is hard to ignore. Organic farming usually requires more labour than high external input-based agriculture. Whether in the context of small-scale or largescale producers, this brings worker rights and welfare to the fore on organic farms. Farm-owners may argue that they cannot afford to provide better conditions where labour costs increase and opportunities for than mechanisation decline, but additional costs may be more than offset by savings in other external inputs and higher prices. In general, conversion to organic production shifts costs from external, often imported inputs, to local labour, and the rise in interest in ethical trade makes it in farm-owners' moral and commercial interests to ensure that workers benefit from this change.

For all types of producer, the net cost of socially responsible organic agriculture should not be more than that for conventional agriculture. To some extent, any increased costs arising from organic farming are more than compensated for by the premium prices still paid for organic products (around 15 to 20% for most export crops). Income is often also increased because of more direct marketing lines (something that would be further strengthened by fair-trade), and because organic conversion may be combined with investments in quality improvement (e.g. better fermentation of cocoa beans), again leading to better prices for farmers.

There is growing recognition in conventional agriculture that social performance is a legitimate part of quality management, and it would be short-sighted to assume that the credentials of organic agriculture will go unchallenged. There are many examples of good socially responsible business practice to learn from, and opportunities to influence future developments. For most development agencies, environmental impact by itself is not a strong enough argument for investment. For many developing country people, the benefits of organic agriculture are limited by working conditions and trading relations. For industry, ignoring the social dimensions of business practice is to put its reputation at risk. For all of these reasons, it is in the interests of all who see

organic agriculture as playing an important role in tropical countries to think seriously about the role of ethical trade and how they wish to engage with it.

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Members are asked to note that the following papers from South West Region Seminars will issue in the June 2001 Newsletter:

- **R.J. Cheatle**, ABLH, Kenya. 'Organic and Near-Organic Marketing Issues in Kenya'.
- **Jesus Concepcion Cabrera**, Tropical Sustainable Agriculture Consultant. 'Restructuring Cuban Agriculture on more organic lines after withdrawal of Soviet support'.
- **T.F. Shaxson**, ABLH, Dorset. 'Organic and Inorganic Components for Sustainable Soil Productivity'.
- South West Region Papers presented at the Cirencester Meeting.



UK Forum on Agricultural Research for Development

Stephen James, Chair UK Forum,

This National Forum was created during the preparation for the 'European Forum' (EFARD) meeting in April 1999 and in the light of the need for country representation at that event as well as related multi-stakeholder occasions. This in turn was a response to the creation of the Global Forum (GFAR) in 1996. The genesis of GFAR is closely linked to a so-called 'renovation process' for the CGIAR system and the need to widen and deepen the involvement of the various stakeholder groupings. Therefore, GFAR and its regional relatives include to varying extents IARCs, NGOs, ARIs and Universities, Farmers, the Private sector and donors.

The GFAR-2000 Dresden was the first meeting to include the formal representation from EFARD and other regional fora. It was held in high regard by many of the representatives of stakeholders who had little voice in the CG system and had never come together to exchange views in a formal setting. However, some of those more closely attached to the CG seem to hold a contrary view and were largely unimpressed by the GFAR, perhaps feeling that it did not add any value to the CG itself.

There can be little doubt that many of the regional fora of the developing world are playing a major part in the development agenda. In the north, the operation of the different national fora is very different and is at least partially dependent upon the nature of the support from their own governments. It certainly offers the opportunity to engage in a dialogue with other regional fora, especially those in the South. The UK Forum, in order to keep in touch with as many stakeholders as possible, is run on an unfunded basis though we recognise that this must be revisited as we develop.

As embodied in our Mission Statement (absolutely essential!), we wish to develop and sustain a network of UK organisations capable of responding to needs in developing and transitional countries for Research and Development, education and skills in support of equitable and sustainable agriculture and natural resource management. Our aims can be summarised in four elements:

1. To be a forum for open discussion, debate and exchange of information and ideas among all stakeholders across all areas of its mission.
2. To contribute to the development of national and international policies and programmes by initiating

its own proposals and responding to the draft initiatives of others.

3. To provide UK representation to the European and Global Forum on agricultural research for development and contribute to the objectives of the Global Forum.

4. To foster, strengthen and optimise UK R&D services for agricultural research for development.

This overview fits with the European Forum whose objective is to improve the coordination of activities of the European scientific community in order to reinforce the solutions that Europe can bring to the major problems of agricultural development. These approaches are directly related to the eradication of poverty, provision of food security in all the areas of the world and the conservation and sustainable utilisation of the natural resources, including biodiversity. The Forum more particularly aims to participate in and promote the co-operation between partners, building on their comparative advantages and encouraging a full participation of stakeholders in agronomic research for development.

We are essentially an email community through which we distribute policy documents of interest to ARD and seek to influence the agenda of official bodies in the area. I have little doubt that we have been very influential already. During the preparation for the European Forum in 1999 strong representations were made for the non-CG crops to be represented and some attention to be paid to the importance of the 'food chain'. This resulted in the subject appearing as one of only four global topics on the GFAR agenda. More recently, we have lobbied with relevant UK government departments to have a version of INCO-DEV reinstated in the proposals for FPVI. I am pleased to report that a recent draft of the outline for the future of the European Research Area has indeed included this element. I am sure that this is not the end of that particular road.

Our current attention is focussed on how we can interact with other relevant Fora that are already active in the UK. We are especially enthusiastic to ensure we have the widest possible range of stakeholders being part of the UK Forum. To be part of the UK Forum network or to provide ideas on how we can improve our reach, just email me at: stephen.james@bbsrc.ac.uk—it is as easy as that.



Pasture Research Project—Kenya 1971–76

R.D. Sheldrick, IGER, North Wyke, Devon

How often have we all seen difficulties encountered in agricultural production in a particular country, surface again a decade or two later in another? With the rush to overcome and solve the problems of the present, the experience gained earlier is often overlooked—assuming that it has been written and published.

The Kenya Pasture Research Project was sponsored by the Overseas Development Administration (ODA) and the Government of Kenya (GoK) in order to:

- **Phase 1** enable accumulated knowledge about pasture and fodder species to be evaluated through the grazing animal and built into farming systems, and
- **Phase 2** extend pasture and forage research from the high potential districts (e.g. Kitale) into other ecological zones important to livestock production.

During the period of inevitable delay between the initial negotiation of the remit and the arrival in Kenya of the staff, the GoK had experienced a major problem with the viability of the Kenya Co-operative Creamery (KCC). Milk deliveries to the factories had become so seasonal that cheese and butter production had to cease for months in the dry season, while overheads continued, and staff had to be laid off. From the outset, GoK urged Project staff to place priority on investigations into small-holder dairying, such as provision of dry season fodder, hay or silage making, nutritional and disease concerns. To determine the extent of the problems experienced in the small-holder dairy system, ODA appointed an agricultural economist to join the Project on a short-term contract.

After a survey of small-holder dairy farms in 24 high potential districts in six Provinces, assisted by Extension Staff, a series of inter-locking factors were identified as contributing to the problems experienced by the KCC. While the low quality and quantity (even absence) of specialised dry season feed was an underlying factor—compounded by a lack of knowledge on the part of the farmers about pasture management and fertiliser use—the main problem was attributed to the generally poor nutritional state of the cows due to over-stocking, leading to low intake, insufficient dietary protein, and silent heats. With no records and a lack of husbandry expertise,

oestrus (even when not silent) was often missed. When the situation was coupled with infra-structure problems such as an unreliable rural telephone service, and problems with the AI service sometimes lacking semen, or transport, or fuel, it was not surprising that many animals were in a permanent state of highly advanced lactation. Pregnancy testing was not generally available, and farmers had an unfounded optimism in the outcome of AI.

As already mentioned, over-stocking and poor grazing control often resulted in deteriorating pastures, with coarse less nutritious grasses and weeds, and very importantly a drastically shortened growing season (defined as pasture production above 10 kg DM/ha/day). No finance was available for replanting over-grazed pastures, although the economist identified this as having a good internal rate of return. Extension advice was often poor, with expectations of pasture or forage yields based on small-plot cutting data rather than farm-scale grazing. Farmers' knowledge about balanced rationing was also poor, most supplementary feeds being offered providing additional carbohydrate, when the greatest need was for protein. Water was rarely available *ad lib.* in the field, and often water shortage was likely to limit milk yields at some time of the year.

Most farmers also confined their cows at night in a 'boma' or 'kraal' close to their dwelling. Thus there were often fewer than 12 hours per day available for grazing. When coupled with the over-grazed state of many pastures, this gave insufficient time for the animal to gather its nutritional requirements. Further, in hot weather conditions, day-time heat stress would normally be overcome by grazing during the cooler, night periods. Confinement in a night boma stopped this option, unless the boma were particularly large and grassy, or cut forage was provided in adequate quantity. There was also a problem with under-strength communal dips leading to many deaths from tick-borne disease. Due to poor hygiene with milking equipment and sheds, mastitis was prevalent, with average morbidity in infected herds reaching 51%.

When a cow did calve, farmers' knowledge about its management and nutrition was inadequate. The report stated that, 'Few home-bred heifers reached milking age', and when they did they were unthrifty

and poorly grown at first service. This situation had resulted in a typical policy of 'Buy-Milk-Sell', with no replacements reared and most animals sold off at the start of the dry season. At the time of the report (1974) it was already apparent that there was a decline in the quality of animals available for buying in. Further, in situations where prestige was conferred by the numbers of stock, rather than their quality or output, over-grazing—and the problems flowing from it—was even worse.

The priorities identified in the report allowed a new Phase II (1974–76) for the Project to be negotiated, concentrating on the problems of small-holder dairying. It high-lighted the inter-acting nature of the factors involved. Officials could not expect that research into isolated problems such as dry season feeds or the control of mastitis could alone cure the difficulties with the supply of milk to the KCC factories. Cows not having calved for 3 to 5 years due to problems with heat detection, compounded by

infra-structure problems as simple (or complex) as rural telephones being unreliable, and social attitudes to ownership of livestock were likely to cancel out any advances due to findings from conventional research into any of the agricultural components in this interlocking pattern of problems.

Similar problems to these were encountered in the Reading University study of small-holder dairying in Nicaragua, as reported in the SW Region Seminar held at Seale Hayne College in June 1998 (TAA Newsletter March 1999, p.22). A letter in the Newsletter (June 2000, p.38) mentioned that plans were being drawn up to re-open the dairy at Tabora, Tanzania which had previously gone bankrupt. This article has been prompted by correspondence with Oxfam, Ireland, giving them information about some of the logistical problems that may have affected the Tabora dairy, upstream of the factory gate.

I am indebted to Dr. John Goldson of Naivasha for some of the information in this article.

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Agricultural Small Business Adviser – Mozambique
Farm Manager – Uganda

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Website: www.vso.org.uk

Want to find out what it's really like? Chat to someone who's done it on 0845 603 0027 (local rates), weekdays between 6pm – 9pm.

OBITUARIES

John Roderick Dunsmore, ISO 1927-2000

John Dunsmore died on 17 November 2000, at the age of seventy-three. He was quiet and unassuming but determined and will be greatly missed by his many friends in the TAA.

Educated at Merchant Taylors' School, Crosby, John did his National Service in the Gordon Highlanders and was Second Lieutenant attached to the Officers Training School in Bangalore. He spent a year working on a farm in Mull before going in 1949 to Downing College, Cambridge, to read agriculture. He graduated B.A. and took the Diploma in Agriculture in 1953. At Downing, John was a keen oarsman and was a well-liked and respected Captain of Boats.

After Cambridge, in 1954, John gained the Diploma in Tropical Agriculture in Trinidad and began his overseas service as an agronomist in Malaya. Initially he worked mainly on the problems of agricultural uses of deep peat soils, particularly with pineapples and coffee, and from 1957 as agronomist in-charge of the Federal Experimental Station, Serdang, where experimental work on annual crops, fruit trees, cocoa, oil palms, pastures, fodders, cattle, pigs and goats was carried out. In 1958 he moved to Sarawak where he first worked as rice agronomist establishing a rice research division for wet and hill rice for the State and then, as Assistant Director of Agriculture (Research), he was made responsible for opening up and developing the State's Agricultural Research Centre. It was here that he met his future wife, Susi Heinze, who taught Art at the Teacher's Training College in Kuching. They were a devoted couple, dedicated to the task of working with local people to alleviate poverty.

In Sarawak John developed his interest in the inter-disciplinary assessment of resources for agricultural and rural development planning. After eleven fruitful and happy years in Malaya and Sarawak he returned to U.K. to take an appointment with the Overseas Development Administration's Land

Resources Development Centre, where he remained as Senior Principal Scientific Officer until retirement in 1987. During this time with the ODA he travelled widely, preparing and implementing projects in Belize, The Gambia, Yemen, Indonesia and Bangladesh, and publishing many scientific papers. Perhaps most close to his heart was his work in Nepal with the Koshi Hill Area Rural Development Programme (KHARDEP). During this time he was awarded the Imperial Service Order and was invested with it by Her Majesty The Queen in Kathmandu during her State Visit to Nepal in 1986.

Though officially retired from 1937, John remained very active in his pursuit of fighting poverty and environmental degradation, undertaking numerous consultancies in Belize, The Gambia and China, and especially in Nepal, with which he and his wife retained close links. They had been due to visit Nepal in November/December 2000 where John, invited by the Hill Agricultural Research Project (HARP), was to have presented a draft report for discussion at a workshop on the identification of opportunities for income generation from the Himalayan nettle (Allo). Although terminally ill John completed his report and sent it to Nepal, where it was much appreciated by the staff of HARP, who stressed in a message received on 18th December that they will endeavour to ensure that the project is successfully completed and that the outcome is a tribute to John.

R. Jenkin

Sir Roger Swynnerton

We have been informed of the sad death of our former President, in late December last. A full obituary will appear in the June issue of the Newsletter.

GenSec.



LETTERS

Technical Library CD—A Resource For Development

Any individual or organisation trying to do income-generating activities often faces the problem that they do not really have enough technical knowledge or technical information available to work out whether a certain activity is feasible and the best way to produce or construct something. Lack of good and practical information means that one can waste a lot of time and money rediscovering what is already well known and well documented. It can easily mean the difference between success and failure of a project.

If one is based in the Capital City, then one has a better chance—there are organisations like ITDG, EU, FARMESA etc which have libraries which often have books on the subject you need, and which allow you to photocopy parts which you require.

If they do not have what you need, then the best course is probably to browse the internet using a cyber cafe.

But both these techniques are time consuming and/or expensive, and outside Harare the cost and difficulty of accessing the Internet are big obstacles.

Even to build up these paper libraries is a costly process—for example the complete ITDG Booklist has about 700 books, which cost USD 10,000, and which weigh about 500 kg.

If we try to duplicate this information in Regions and Districts, Technical Colleges, other colleges and schools throughout Zimbabwe then one is talking a whole bunch of money.

About 1998 some smart guys in Belgium realised that putting this kind of information on computer CD ROM made a lot of sense.

They worked with GTZ (German), SKAT (Swiss), Peace Corps, UN University, MSF, and a lot of others to create a set of 4 CD's.

The Main CD—HDL 2.0—has 800 books and reports plus 430 magazines completely reproduced on its single CD—such is the power of modern technology.

Since a CD costs only about Z\$ 100 to manufacture and copy, these HDL guys (Humanity Development Library) give away the CD's free to any individual or organisation in the 3rd World (they charge something like US\$ 20 per CD to individuals and organisations in

developed countries, and use that revenue to cross-fund the distribution to the 3rd world).

I have personally checked out these 4 CDs in some detail—I was cynical after I heard about this project and before I got my hands on them—but I am very impressed with their quality and completeness of coverage.

There are a few sectors which they do not cover, and the quality of the best paper sources is sometimes better or more complete than the CD contents for some sectors (but not always).

But the HDL Project is one of continuous improvement, HDL willingly accepts feedback, positive and negative, and THE CD's ARE FREE.

The 4 CDs are :

- HDL (agriculture, aquaculture, building, economy, education, energy, environment, forestry, gender, health, industry, nutrition, sanitation, society, water)
- Food and nutrition
- Medical and health
- Environment

Every relevant Government Ministry, NGO, RDD, University, college, secondary school, Cyber Cafe, entrepreneur, SME, Fundi and budding Fundi in Zimbabwe and the Region should get their hands on these CDs. Even if you do not have a computer yourself you can run it on someone else's computer. Note that you do NOT need any internet connection, modem, or any special software on the computer to run the CDs—only Windows 3.x, Windows 95/98, WinNT or Windows 2000.

Contact HDL at: HDL, Oosterveldlaan 196, B-2610 Antwerp, Belgium. Fax : 00 32 3 449 75 74.

Email: humanity@globalprojects.org

internet web: <http://www.globalprojects.org>

or <http://www.humaninfo.org>

or <http://www.oneworld.org/globalprojects>

Alex Weir, Harare

Email: alexweir@africaonline.co.zw

Forwarded by Hugh Harries, TAA Member:

Introduction to the Pakistan Coconut Plantation Society

We take the opportunity to inform you that we have formed the 'Pakistan Coconut Plantation Society as a 'non-Government organization' to promote the planting of coconut palm trees in Pakistan. This will not only improve the natural environment in Pakistan but will also help to minimize sea pollution which has been on the increase in recent years and is adversely affecting the sea food resources.

A few aims and objects of the society are reproduced below for your kind information.

- 1) To motivate private sector investors to establish coconut farms in Pakistan.
- 2) To utilize the undeveloped coastal areas of Pakistan for coconut plantation.
- 3) To liaise between coconut producing countries and potential farmers for the exchange of information.
- 4) To work in close association with global organizations to fight the menace of pollution.
- 5) To exchange information and development activities at the international level and acquire assistance as and when required, for the implementation of plans in respect to environmental protection in Pakistan.

Sir, we would like to link the activities of our society with global efforts for fighting environmental pollution and would request you to please introduce our society in your country and provide us communication link with organisation and forums working in the same field .

Thanking you and looking forward to have your co-operation to eradicate this world wide problem.

Thanking you.

Yours faithfully

Kaukab Iqbal Chairman (PCPS)

Suite #709, Land Mark Plaza, Opp. Jang Press, M.B.Q. Road, Karachi 74200, Pakistan

Tel: 263 9729, 263 9730; Fax: 263 9740

Email:
pakistancoconutplantationsociety@egroups.com

Experimental Agriculture

The letter from Richard Smith, published in the December 2000 Newsletter, prompts me to write to confirm that, yes indeed, Cambridge University Press still offers TAA members special discounted subscription rates for *Experimental Agriculture*.

Richard Smith rightly states that this international journal focuses on reporting the results of research on crop science and systems of agricultural production conducted (mainly) in the warmer regions of the earth. It has a long history having been first published in 1933. There are four issues a year with a total annual page number in excess of 500. Thus, for example, volume 36 (2000) contained reports on 27 individual crops, with papers submitted from nearly 30 countries, from Australia to Zimbabwe. There is also an excellent book review section. The Association is well represented on the Editorial Board. Members include our Chairman, Roger Smith, whilst the Chairman of the Board is Professor Rod Summerfield and the book review editor is Dr Lindsay Innes. Many TAA members contribute papers to the Journal, and act as referees.

I have recently taken over as editor from Dr John G. W. Jones, who held this post with distinction for six years from 1995. We are in the process of reviewing the relationship between *Experimental Agriculture* and the Association. Because of the close links described above, it would seem sensible to consider whether the TAA should adopt *Experimental Agriculture* as its own professional journal. Members' views would be welcome.

In the meantime, the annual subscription for TAA members is £59. **But, for new subscribers in 2001, there is a special 20% reduction making a net price of only £47, less than a pound per week, or 10p per page!** (It is probably also allowable against tax). By comparison, the price to institutions is £160. Please look elsewhere in this issue for details of how to subscribe.

Good original research papers, including in-depth review articles, are always welcome. The contents pages, and abstracts of papers, can be viewed on-line, either direct (<http://journals.cambridge.org>) or through a link from the TAA web site: <http://www.taa.org.uk/>

Experimental Agriculture continues to be an important means of promoting the contribution of agricultural research to development.

Mike Carr, Bedford
email: mikecarr.rtcs@freeUK.com

An Ancient Mariner

I feel rather like the Ancient Mariner who was rash enough to shoot an albatross and then had the corpse hanging round his neck for years (stinking probably). I had a substantial hand in inventing INIBAP (though not the name) in the early 1980s and the body has been kind enough to keep me on the mailing list despite my nasty remarks about what it is doing. Anyway, elderly gents who have shot albatrosses are notorious for yacking on and on about them.

INIBAP is an acronym for 'International Network for the Improvement of Bananas and Plantains'. The body was originally independent but then came under the direction of IPGRI in Rome; this body was the IBPGR and everyone knows what that means. INIBAP may have Roman bosses but it is centred on CIRAD in Montpellier, with networking tentacles spreading round the tropics. Networks are very trendy these days but the CG did not invent them.

Feeding poor people by developing one of the half-dozen great crops of the world (but an almost totally neglected one) was INIBAP's primary objective. Alas, it got enmeshed in Science, especially Pathology and *in vitro* tricks and it largely forgot the feeding-of-poor-people bit of the story. Recent publications bear this out all too clearly. The core activity of INIBAP ought to have been banana breeding, a subject it has hardly touched, apart from faintly promoting the excellent efforts of FHIA in Honduras, as related in these pages a while ago (Rowe 1999; Simmonds 1999). Banana breeding is, of course, much harder than plant pathology and lends itself less well to the quick multi-author paper. So biotechery, hordes of new viruses, informatics and networks will have to do, even if poor folk remain under-fed; FHIA varieties should reach them someday.

There have been some peculiar bureaucratic goings-on, too. INIBAP has spawned a body called PROMUSA (I am not clear why), which was, with GILB, the original GLOBAL PROGRAMME; since GILB is/was a CIP invention to breed resistance to potato late blight the logic was not wholly clear, unless INIBAP was making a play for CIP. A special programme for blight was as little needed as special programmes for banana diseases. And, much to CIP's credit, they regarded blight resistance empirically as an exercise in handling polygenes, not as a Holy Grail. Whatever the history, GILB has disappeared from the INIBAP reckoning, along with late blight. Incidentally, potato and sugarcane breeders have much in common—they tend to treat nasty diseases empirically.

Recent publications include the Annual Report (1999), a very attractive document with nice coloured pictures, the latest issue of the banana mag, INFOMUSA, with a four-page insert on PROMUSA, and a memorial document on Paul H Allen. This last is published by INIBAP though apparently the work of FHIA; Allen was a very successful banana collector around 1960 when he assembled the large UFCO collection in Honduras, of which the survivors are now retained and well used by FHIA. This is a proper collection, meant for practical use; not one of *in situ* mushes which are currently so fashionable. Alas, the tribute to Allen does the great man little credit; the photos are bad, descriptions are incomplete and unexplained and the systematics uncertain. It looks as though ploidies were established by inspection without any proper chromosome counting—it can be done fairly well by the experienced but is better not attempted by amateurs unless tested against good metaphase plates.

INIBAP is undoubtedly trendy. Its Report hardly mentions that vulgar old-fashioned plant breeding but is loaded with the delights of plant pathology (any disease will do for a paper or two); it promotes biotechery and *in vitro* stuff like crazy: it strongly favours informatics and computing, approves of *in vitro* conservation (while happily printing photos of planting new clones alongside the promotion): it muddles its taxonomy and there is never a chromosome count in sight. But there are some signs of grace: collections are being filled in, root systems are analysed and nutritional value is treated. (Bananas are pretty good nutritionally but not nearly so good as potatoes).

Poor folk in the moister tropics desperately need an INIBAP; it is a pity the one we have got is not a bit better adapted to the demands placed upon it. Above all, decent breeding and let any essential plant pathology follow. No-one ever improved a crop by researching its diseases as a starting point, no matter what the bureaucrats and plant pathologists think.

N.W. Simmonds

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A Threat to the Tax Free Status of FAO work

Thank you for publishing my previous letter dated May 1st 2000 that same month.

I would also like to thank the members of the TAA who wrote with support and advice on how to refute the tax authority's claim that tax should be paid on FAO consultancy fees. With this information plus a statement by the legal office of the FAO, and in particular that

'FAO has always determined that consultants are officials of their organisation (and therefore exempt from taxation on the salaries and emoluments paid to them by the UN), and not independent contractors.'

The Inland Revenue has backed down and accepted that this work is tax free provided a correctly worded certificate is provided by FAO.

Much relief all round!

Grahame Dixie

Why Haiti?

Haiti doesn't have many trees. Yet a major part of its six million people rely on wood or charcoal for the daily preparation of its food which cannot be eaten raw. Some of the commercial operations such as bakeries do use imported gas or fuel oil, but these are few and far between. Port au Prince the capital has an insatiable demand for charcoal for its burgeoning population now spilling out over the plains, into neighbouring Dominican Republic and into the United States. Charcoal lorries grind and bounce their way over rough roads and mountain tracks from the very heart of Haiti around Hinche where the local people are now cutting down their mango trees to turn them into ready black cash. Many passengers hitch a slightly cheaper ride atop the charcoal loads at great risk. The journey, if all goes well, takes eight hours excluding toilet and lunch stops. Even on the bus, three people are squashed on to seats designed for two, and another sits on an improvised seat in the aisle. This amid the baggage, fighting cocks and regurgitated food.

Haiti usually hits the Western press when boatloads of migrants are shipwrecked on remote reefs in the Bahamas. We remember Papa Doc Duvalier and his son Baby Doc now living in France. We know that former Catholic priest Aristide had four years as President, was constitutionally barred from a second

consecutive term for four years, and is now set for resuming his office by popular choice. He has a big task ahead. What we may not know about is the poverty and the riches, the lack of basic institutions like government departments, white lines on the roads! It is said that there are only 180,000 salaried staff in Haiti.

So why Haiti?

Haiti became independent from the French 200 years ago and great fortifications were erected to ensure there would be no return. Much of the culture and traditions are traceable back to West Africa and Benin, modified by missionaries and the USA.

Flying by MAF (Mission Aviation Fellowship) six seater planes to Hinche takes twenty minutes to cover the eight hour bus journey. Hardly time to take in the large tracts of bare land without people, trees or agriculture. It is land well suited to trees, and almost certainly was covered at one time by native pines, Haitian oaks and many other species removed for shifting cultivation by subsistence farmers. As the tree roots died and natural regeneration ceased, destructive hurricane rainstorms dealt a fatal blow to the soils which disappeared out to sea with disastrous results on the coral reefs and fisheries. It is easy to see this process continuing like a helter skelter down the steep mountainsides to the south of Petionville and Kenscoffe where quick return crops of carrots, leeks, beans, tomatoes, culinary herbs etc are favoured.

There are now only very small remnants of the natural vegetation and flora still found in Haiti, and these are under serious threat along with the indigenous species of birds, insects and other wildlife.

Haiti ranks among the most environmentally degraded countries on this planet, and continues to sink beneath a sea of erosion, despite its proximity to the biggest democracy on the planet.

And why TAA?

TAA began life in Trinidad and spread under the UWI to Jamaica just next door to Haiti. Its influence has spread far and wide. Perhaps its members have overlooked Haiti. My involvement during my retirement came about through the TAAF award to a Tear Fund appointee from Northern Ireland who went to work in the tree nursery attached to a mission. Obviously sustainable agriculture, erosion control and damage limitation during cropping, and

regeneration of damaged environments are all part of the package required.

Unfortunately, Haiti does not have the benefit of the support and exchange of views that can arise from membership of CARICOM (Caribbean Community) or the Commonwealth of Nations. Haiti stands alone, a unique Creole speaking nation attached to a Spanish speaking neighbour to the East. To the West off the Southern arm is Jamaica, and off the Northern arm is Cuba. Beyond is the USA. Haiti really needs real friends.

Within the membership of TAA are to be found the people with the necessary skills, knowledge and contacts to help Haiti. Could now be the time to draw together and offer the hand of friendship? It might be accepted.

Lewis Wallis
Haywards Heath

BOOK REVIEWS

Nature's Government: Science, Imperial Britain and the Improvement of the World

Richard Drayton

ISBN 0-300-05976-0. £25. Yale University Press, New Haven & London, 2000.

The volume takes as its starting point the proposition that 'through the story of a garden we may explore the history of the world'. Its main focus is the growth and development of the Royal Botanical Gardens at Kew, which is used to trace the interactions of science and imperial expansion between the 1780s and the end of the Victorian era.

The introductory chapters connect the histories of science of plants, of gardens, Britain and the British Empire. The history of botany as a field of knowledge is traced from Athens, through Alexandria, the Arab World, Renaissance Europe and from the Scientific Revolution to the Enlightenment—leading to the way in which imperial expansion shaped ideas of classification and the keeping of botanical gardens. The political uses of knowledge and plants is described, particularly in the British Isles, from the sixteenth to the eighteenth Century, and attention is drawn to the patronage of botany and gardens exercised by the monarchy and nobility, including the Hanoverian origins of the Royal Garden at Kew.

The development of the idea that efficient use of resources justified their command led to the natural sciences being included in the ideology of

'Improvement', which supported enclosure at home and expansion overseas. The example of European monarchies providing patronage of science was in time emulated by the British Crown.

The major part of the volume shows how Kew emerged as an imperial and scientific institution contributing to the development of the agrarian origins of the British Empire. The author argues that Kew's growth and influence were supported by the recognition of the men of science that their private and public ends could best be secured in imperial work and by the appreciation of entrepreneurs and administrators that applied science could give them practical help and ideological credibility.

The development of Kew as an imperial institution was informed and stimulated by the earlier and impressive progress made by England's European competitors such as France. Eventually, Kew came to be admired and regarded as a model worthy of emulation by other countries in Western Europe.

Even before Kew became a Public rather than a Royal responsibility in 1840 the motive of improvement of the agriculture of the colonies was an important objective. Other objectives followed to:

- assist with the fiscal support of a colony;
- support industrial development at home;
- earn personal fortunes by English nationals;
- contribute to the security of the Empire;
- and to national prestige.

An extensive system of collecting and transporting plants to Kew from overseas came into existence. Individuals working abroad sent plant material back to England and especially to Kew Gardens. Collectors were commissioned by wealthy patrons to find and bring back plants. The East India Company was a valuable source of plant material. The Navy provided transport and assistance for small teams to reach distant colonies, and in some cases, provided funds to organise the flora and to publish the results. By such means Kew became the central entrepot for botanical collections coming to the heart of Empire and provided encouragement to a network of colonial botanic gardens supporting them by: sending plant material, information, and trained individuals to undertake the scientific work associated with the gardens. Although not claiming to present a comprehensive list of overseas botanical gardens Drayton refers to at least twenty-one gardens principally in Asia, the West Indies and towards the end of the 19th Century, in West Africa, as well as Australia, Mauritius and Fiji. [The reader may be tempted to compare this system with CIGAR which emerged in the later 20th Century.]

Examples are provided of contributions made by Kew and other botanical gardens in the Empire's development, through its work in locating, multiplying and providing plant material. These include examples as diverse as breadfruit plants sent from the Pacific to St. Vincent's garden in the West Indies, and barrels of mahogany seeds from the West Indies to Calcutta to assist in providing timber for the British Navy. One of the most interesting examples of the contribution made by exotic plant material is that of gutta-percha which rapidly came to play important roles both in Britain's industrial development, communication, and in national security (and was later used in golf balls and chewing gum). This latex was tapped from various trees of the family Sapotaceae in SE Asia. It was regarded as a miracle material being strong, light and resistant to acid and electricity. It was used on floors and printing rollers in the textile industry, by gold refiners and soap makers to channel acid and alkali agents, and to insulate telegraph wire within the UK and in submarine cables. Kew came to be seen as an agent in helping to conserve and increase the supply of such natural resources.

Many examples are given of the roles played by colonial botanical gardens in helping to establish

major agro-industries. Ceylon and Singapore assisted in transferring rubber from South America to Malaysia. Kew itself was the entrepot for the transfer of New World cocoa plants from Trinidad. The author makes an interesting observation on the distribution of credit between Kew and other parties for contributions to botany and agricultural development.

'...Kew, by virtue of its metropolitan stature, was able to lay claim to any successes achieved in colonies by entrepreneurs or local botanists. Locals were, however allowed to keep their failure as their own.' (p. 249).

Sir Joseph Hooker was able to claim in the late 19th Century that Kew was the botanical headquarters of the British Empire and that it had become the botanical centre of the world, and literally carried out all the economic and scientific work of the Empire under the direction of various departments of state. By 1902 Joseph Chamberlin confirmed that during the Edwardian Empire Kew was in effect the Colonial Office's economic development bureau.

The story closes as Kew reaches its central position in the colonial system, with only brief reference to the subsequent developments of British colonial institutions.

We are fortunate that Drayton, who walked in the botanical garden in British Guiana as a boy without knowing its role, has, through this volume, shared his discoveries from the long journey which he subsequently made.

D.T. Edwards

(Repeated with permission from BCPC News)

Pesticide Residues, Natural Toxin and GMOs: Real and Perceived Risks

The latest publication from the British Crop Protection Council examines the real and perceived risks associated with pesticide residues, natural toxins and Genetically Modified Organisms (GMOs). Entitled *Human Exposure to Pesticide Residues, Natural Toxins and GMOs: Real and Perceived Risks*, this 81-page book is a full record of the proceedings from the one-day symposium of the same name which was held in Brighton on Monday, 13 November, 2000.

The day began with an outline of the current regulatory requirements for pesticides and showed how the requirements have become increasingly more complex and expensive. The role of dietary exposure and worst-case risk assessments was then examined.

The debate subsequently moved on to look at the role that pesticides play in reducing our total exposure to food-borne toxicants and contrasted the low level of public interest in these natural toxins with the heightened concerns raised by the mere presence of any pesticide residue in food. The fact that few people want to hear about natural toxicants, however, is no reason for regulatory authorities to ignore them. The risks posed by mycotoxins and the need for control and regulation on an international level was the next topic under discussion. It became apparent that the methodologies for monitoring these natural toxicants are critical if we are to replace prejudice with facts.

Finally, the symposium turned to GMOs with, firstly, a clear and helpful account of what is being done to test their safety through the concept of substantial equivalence. This was followed by a critical and revealing review of how the current public crisis of confidence in GM crops came about and some suggestions as to how the current impasse might be resolved.

Summarising the day's discussions, Professor Sir Colin Berry suggested that the symposium title was back to front:

We have decades of well-controlled observations on the effects of pesticides and can make data-based risk assessments from which it is clear that risks are low. We know next to nothing about the long-term effects or the level of natural toxicants we ingest or the hazards relating to 'organic food' consumption, other than the generalisation that pesticide and toxin ingestion is likely to be higher than with the conventionally produced food. This is truly an area needing a risk versus hazard evaluation. Finally, with GMOs, it is almost all speculation; we are still in the stage of hazard identification.

The book costs £15 plus delivery.

Orders can either be sent to:
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Members are invited to note that this year's BCPC Brighton Conference (12-15 November 2001) will embrace two topics: 'Weeds' and 'Pesticide Behaviour in Soil and Water'.

GenSec

The President's Progress

'Simama'

Many Members will have more than an inkling that our President has had the opportunity, firmly grasped, to embark on a widely varied and eminently successful career, spanning the pre-war years to the present. It is, therefore, most apposite that he has found time to put pen to paper and attempt an autobiographical record. This is not quite true, as one suspects that a full work would occupy several volumes and thus, he has chosen a more anecdotal route, picking out those events that he considers significant to himself and family, to his fellow man and in some cases simply that they amused. I will not give away the reason for the title of the book. Given the potential wealth of material that could have been included, this transforms what could well have been a rather indigestible catalogue of events into a most readable account. Nevertheless, in the relevant chapters, this lighter touch does not preclude the casting of an unbiased and critical assessment of the historical events with which his numerous posts and appointments involved him. The work is to be recommended both to those of us who have hovered around the periphery of these events but also to latter day Members who would wish to gain a balanced view of the ambience of times that tend to be sorely misrepresented in today's world.

The work is privately published and available to Members for a modest £15 by contacting Sir Charles. (He actually admits to his first name being Herbert!)

GenSec.



TAAF Awardee Update

Simon Milligan—Nigeria

I am a third year DPhil student in the Graduate Research Centre for the Comparative Study of Culture, Development and the Environment (GRC-CDE) at the University of Sussex and am supervised by Dr Tony Binns (University of Sussex) and Dr. Ian Scoones (Institute of Development Studies). During the summer months of 1999 I was granted an award by the TAAF Committee towards my doctoral research on the dynamics of herder-farmer relations in the Hadejia-Nguru wetlands and their surrounding drylands of north-east Nigeria, where it is often posited that there is increasing pressure on resources and frequent violent and non-violent clashes between pastoralists and cultivators. As a Research Associate of the Geography Department at Bayero University, Kano (BUK) and a guest of the Hadejia-Nguru Wetlands Conservation Project (HNWCP), I spent just over eleven months in north-east Nigeria, returning to the UK in August 2000. Although my studies involved no formal collaboration with non-academic bodies, I anticipate that my work will contribute to a marriage of practical and academic gain by way of informal collaboration with the HNWCP.

The HNWCP was established in 1987 as a partnership between the Nigerian Conservation Foundation, the Royal Society for the Protection of Birds (RSPB), and the former Borno (now Borno and Yobe), Bauchi (now Bauchi and Gombe), and Kano (now Kano and Jigawa) State Governments. Between 1990 and 1998 the Project was managed by The World Conservation Union (IUCN) and its focus shifted from the protection of palaeartic and afrotropical migratory water birds to a broader mandate that emphasised the maintenance of the multiple economic and ecological functions of the Komadugu-Yobe Basin. Since March 1998, bridging funds have been provided by the UK Department for International Development (DFID), the RSPB, and the Yobe State Government.

Occupying an area of approximately 5,100km, the flood plain wetlands are an area of local, regional,

national and international ecological importance and are said to have played a central role in the regional economy for centuries. The area has a human population of 1.25–1.5 million, with much seasonal in- and out-migration and a high annual growth rate of approximately 3.3% per annum (compared to the current 2.9% p.a. nation-wide). Water resources provide an estimated fish harvest of between 4–6,000 tonnes per annum, and a plethora of crops are cultivated under rain-fed, flood recession, irrigated and flooded rice cropping systems. Indeed, there are indications that over 1000 tonnes of vegetable products per day have departed five vegetable markets in the wetlands.

Pastoral populations have developed specialised range management strategies to utilise the resources that the wetlands provide, with numbers of cattle alone fluctuating between approximately 250,000 and 500,000 per annum in accordance with seasonality and shocks. The large livestock population represents a sector that generates in excess of =N=400m (c. £2.5m) per annum in and around the wetlands. In response to uncertainty and ecological variability, it is claimed that the herders have developed complex symbiotic relationships with the settled farming communities. Over the past 15 years however, numerous claims have been made regarding the nature and causes of an apparent breakdown of the symbiosis. Indeed, indications suggest that over the past 13 years at least 90 people lost their lives as a consequence of herder-farmer clashes in the Hadejia-Nguru wetlands and in Jigawa, Bauchi and Yobe States as a whole, at least 210 deaths have been recorded. Inevitably many more people sustained injuries, damaged or lost property, and suffered damage to their emotional and mental well-being by way of feelings of anguish, bereavement, vulnerability and so on.

Building on field investigations conducted during July 1997, January–February 1998 and January 1999, I

attempted to analyse the importance and dynamics of herder-farmer relations in space and time by focusing on three sites within and to the north of the Hadejia-Nguru wetlands. The sites were located along a west-east gradient of declining rainfall and increasing distance from the large urban markets and a south-north gradient of declining biological productivity and natural resource endowment, and increasing distance from tar macadam roads.

I am currently trying to grapple with the very large volume of data I collected and in turn, develop a strong and defensible thesis. Nevertheless, it is apparent that a number of key, inter-linked trends have marked the last three decades, including: pervasive and rising levels of poverty; low levels of rainfall and subsequent environmental change; a widespread introduction and up-take of productivity enhancing technologies; an increasing importance of the market economy, providing a dynamic 'basket' of opportunities, constraints, and aspirations; the rapid penetration of physical infrastructure (e.g. access roads) is submerging increasing numbers of individuals into the market economy; there is a growing realisation that with new technologies, favourable market conditions, and an enabling institutional environment, commercial value can be attributed to capital stock bundles that are or were formerly common pool resources, and; since 1976, but particularly since the mid-1980s, the decentralisation of modern forms of governance has contributed to a growing number of functions and responsibilities being placed in the domain of Local (and State) Governments and the security forces. Simultaneously, the power, authority, and dominance of (many) customary leaders has declined or evolved to function in different manners. At a macro-level, a policy and institutional environment across the three tiers of modern government has supported and promoted particular livelihood strategies (settled, market-oriented farmers) and geographical spaces (zones of potentially high productivity) to the neglect of others (migratory livestock rearers and agro-pastoralists; marginal/dryland environments).

Communities are highly differentiated and consequently the nature and dynamics of herder-farmer relations are individual-specific. Nevertheless, it is apparent that conventional understandings of

conflicts being driven by environmental and material considerations should be disputed. Resources and herder-farmer interactions and arrangements have material and non-material dimensions, are multifaceted, and the dynamics of relations are infused with issues of power, control, authority and dominance. Relations are highly political, sensitive, and emotive, and facets thereof, continually drift in and out of states of non-violent conflict.

Incidences of violent conflict have risen since the late 1980s and resource tenure regimes are becoming more contested in both wetland and dryland environments. Stemming from the 'local legal universe' are struggles for individuals to legitimise and realise their claims. Actions of 'forum shopping' in cases of non-consensual action or behaviour may ensue, but whose (motivations for) pursuit and subsequent selection may be contested. Accordingly, legal pluralism necessitates conflict management; not because of the coexistence of different legal forms but rather as a consequence of the multiplicity of contradictory claims and arbitration authorities, which in part contribute to states and feelings of uncertainty.

In November I was commissioned by the DFID Rural Livelihoods and Environment Coordination Office in Kaduna, Nigeria to write a Desk Review on herder-farmer conflicts in the wetlands. The Review advocated a multi-level processual approach to conflict management, drawing upon the sustainable livelihoods framework and a rights-based approach, in which an accent is placed on a culture of subsidiarity, good governance, and 'positive peace-making' and 'positive peace-building'.

How did I benefit from the TAAF award? On the ground, it proved invaluable in me being able to keep the BUK Departmental Land Rover on the road. (The Land Rover being somewhat old and a little temperamental, I became a very good friend of the local mechanic!) Furthermore, the financial assistance made it possible to employ between one and three research assistants at a time, enabling me to gain a more nuanced appreciation of the local ecology and the dynamics of environmental change, and the gender implications of herder-farmer relations. The time in Nigeria has enabled me to develop my skills and capabilities, including being able to effectively

facilitate participatory approaches to learning and action and one-to-one discussions of matters of great sensitivity. The time spent overseas was enjoyable, stimulating, challenging, and very successful, and has been very influential in my desire to seek employment in international development work later this year.

In sum, the award contributed to the personal and professional successes of the fieldwork and by writing the Desk Review, a wider audience, including the Department for International Development, should

benefit from the research. I would therefore, like to take this opportunity to express my gratitude to the TAAF Committee for their generous support and encouragement.

If anyone would care to contact me regarding my research, I may be reached at:

SimonMilligan@compuserve.com



Letting the Genome out of the Bottle

Amid all the fuss surrounding the completion of the human genetic code projects, perhaps those of us of more botanical bent have due cause for some sense of grievance. Not only did the plant wallahs beat the animal lot to the punch but there are also those who would argue that successful mapping in the Plant Kingdom is a more likely route with which to bring untold benefit to humanity.

Publicity has been sadly lacking although there was some coverage in a December Telegraph lauding the first completed code. In this case the well-known temperate weed, *Thale Cress*, *Arabidopsis* sp. Publication in Nature is one thing but the sight in the popular press of Professor Mike Bevan holding aloft the prize specimen is another. However, the news that the

structure of the genetic code of rice had been cracked by two biotech companies, only rated a two inch paragraph in The Times of 27 January 2001.

I also understand that the vitamin enhanced 'Golden Rice' has been reluctantly deemed acceptable from sections of the anti-GMO lobby on 'moral grounds'. Having got their sights on the wicked ways of the multinationals, quite what do they think the objective of most of this type of research is?

It could be that I am not sufficiently well read on these topics and I am sure that our new editor would welcome further comment from more knowledgeable Members.

GenSec.

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 her area of expertise, the copy is referred by the Editor 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 will be printed in a very small sized point in future) 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. Similarly, drawings, diagrams, maps, etc., should be of good quality and the original artwork made available to the Editor. The possible inclusion in the *Newsletter* of black and white photography is currently under investigation.
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 text generally 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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