Introduction

Cameroon is Africa in miniature. It is a country with a very diverse set of environments from wet tropical lowland rainforest in the south and east to semi-arid savannah in the north that is verging on desert. In between there are upland areas with montane forests and grasslands. As in most tropical countries, people used to depend on the forest for the wide range of products they used to meet their everyday needs; they were hunter-gatherers and subsistence farmers. In the past, farmers practised shifting agriculture on small plots of cleared forest, which were abandoned after 2–3 years and then allowed to revert to forest/shrub fallows that replenished soil fertility. With the advent of colonialism and then globalization, the forest was cleared for what was considered to be progress in many different guises, but especially for agriculture and for crops destined for export to industrialized countries. As populations grew and agriculture expanded, the deforestation spread and together with the disappearance of the trees there was the loss of an important resource of traditionally important nutritious foods, medicines and other useful products, including the loss of wild animals eaten as ‘bush meat’.

Modern agriculture ignored these local species, and instead promoted cash crops from other parts of the world and intensively farmed staple food crops like maize, cassava and yams, and in some areas domesticated livestock. In addition to improved crop seeds, the Green Revolution package promoted artificial fertilizers and a range of pesticides. Typically, however, the farm size in Africa is less than 5ha, often less than 2ha; hence farming was focused on providing for the needs of the household and seldom on providing food
for sale. Consequently, farmers were not generating income and remained very poor. They were thus unable to purchase fertilizers and the other inputs that would maintain good crop yields. Furthermore, as the forest receded, the land became more degraded with increasing loss of soil fertility. In parallel with this degradation, there was a decline in the range of living organisms that are essential for the maintenance of life processes, such as nutrient and carbon cycling, food chains and life cycles important for pest and disease control, pollination and so on. Furthermore, access to potable water declined due to erosion, siltation and pollution. Against this background, modern agriculture has dramatically increased the yield potential of many staple food crops. However, for farmers in the highlands of Cameroon, just like those in many other developing countries, the consumption of a diet increasingly based on starch-based foods like cassava, cocoyams, maize and the reduced consumption of traditional foods led to unbalanced diets, malnutrition and a greater susceptibility to disease.

Improved fallows using leguminous tree and shrub species are a well-known, widely tested and increasingly adopted agroforestry technology for soil fertility improvement (Cooper et al., 1996; Buresh and Cooper, 1999; Kanmegne et al., 2003; Degrande et al., 2007). Results from a wide range of sites in Cameroon have shown that consequently maize yields are increased, on average, by about 70 per cent (Degrande et al., 2007), but in some areas three- or four-fold gains are possible. However, recognizing the traditional importance of indigenous tree products for food and nutritional security (Leakey, 1999), and the declining resource of these species, the World Agroforestry Centre (ICRAF), in 1995, initiated a programme to domesticate the species producing indigenous fruits and nuts. Work to domesticate these species started in Cameroon in 1997 to improve the yield and quality of their products, with a focus on the species identified as the farmers’ priorities (Irvingia gabonensis, Dacryodes edulis, Ricinodendron heudelotii, Garcinia kola, Cola spp., Pausinystalia johimbe and Prunus africana).

The techniques and strategies of vegetative propagation, characterization of genetic variation, tree selection and cultivar development have been extensively reported elsewhere (see the reviews by Leakey et al., 2005, 2007). Uniquely, the approach developed in Cameroon was to work directly with local communities and to promote the use of local knowledge (Leakey et al., 2003; Tchoundjeu et al., 2006, 2010). Through this research, techniques and strategies for participatory tree domestication were developed with the aim of empowering local communities, promoting food self-sufficiency, generating income and employment, and enhancing nutritional benefits. This participatory approach brings together agricultural science and community empowerment. There is now growing evidence that in this way agroforestry can help rural communities to be self-sufficient and to support their families on an area of less than 5ha (Schreckenberg et al., 2006; Degrande et al., 2006). As a result, the domestication of indigenous fruit and nut trees is now becoming recognized as an important component of agroforestry, which is starting to have meaningful impacts in rural development with application in the alleviation of poverty, malnutrition and hunger.

Worldwide the incidence of poverty is still in excess of three billion, with malnutrition around two billion, while 38 per cent of cropland has been degraded. As a consequence, local people without the life-support system of the forest struggle to be self-sufficient and youths go to the towns in search of employment. Early in 2008, the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) indicated that in order to address this complex set of interacting environmental, social and economic problems, agriculture needs to address poverty, malnutrition, hunger and environmental degradation in an integrated way rather than focusing solely on improved food production. IAASTD therefore promoted multifunctional agriculture to resolve social, economic and environmental sustainability, and find a new approach to meeting the needs of the smallholder farmer (McIntyre et al., 2008). In recent years, this philosophy has been implemented in Cameroon by the World Agroforestry Centre through its Agroforestry Tree Domestication projects funded by the International Fund for Agricultural Development (IFAD), the United States Department of Agriculture (USDA) and the Government of the Republic of Cameroon. The aim of these projects has been to empower smallholder farmers to help themselves climb out of poverty, malnutrition and hunger, while at the same time creating more environmentally sustainable farming systems. The current USDA project integrates agriculture, agroforestry, the marketing of agricultural and tree products, microfinance and small post-harvest machinery through a self-help package for poor smallholder farmers based on capacity building, communication and community development.
Through this integrated approach to rural development it has become clear that agroforestry can be the delivery mechanism for multifunctional agriculture (Leakey, 2010). The process involves three steps (Figure 1).

The first step involves the restoration of soil fertility using nitrogen-fixing trees and shrubs in improved fallows to rehabilitate degraded land and so to improve food security from staple food crops.

The second step involves tree domestication, which develops new tree crops to replace the lost resource of forest species that are important in the lives of local people. In this way it also enriches and diversifies the farmland, making it more productive and enhancing the ecological functions of the agroecosystem. It also improves the quality and marketability of the tree products.

The third step is to promote entrepreneurism and develop value-adding and processing technologies for the new tree crop products. This is aimed at increasing the availability of the products throughout the year, expanding trade and creating off-farm employment opportunities: outputs that should empower the community and create a pathway out of poverty.

**Project strategy to promoting multifunctional agriculture**

The underlying research developed propagation methods based on very low-tech appropriate technology that did not require running water or electricity, and so was suitable for use in remote rural communities. It also developed simple techniques for the characterization of tree-to-tree variation. However, the critical strategic development was the decision to implement participatory tree domestication rather than the conventional research station approach. Linked to this was the decision to set up pilot projects.
in key communities and to then create rural resource centres (RRCs) to implement the community capacity-building activities, with support from relay organizations (non-governmental organizations [NGOs]), while ICRAF researchers just played a coordinating and mentoring role.

The project’s philosophy was to provide knowledge, but no money. Farmers were taught simple, low-tech methods for the rooting of stem cuttings, marcotting and grafting. This did not involve the farmers in buying equipment. As the scale increased, researchers trained NGO trainers, who then disseminated knowledge to the communities. Extension to new villages was often by farmer-to-farmer exchange visits. The successful adoption of research outputs can be attributed to the relevance of the research to farmers’ needs and interests and the fact that the programme builds on traditional knowledge, local culture, local species and local markets and overcomes the key constraints of degraded soil fertility, poverty, malnutrition and unemployment.

The World Agroforestry Centre’s tree domestication programme in the highlands of Cameroon is currently funded by the USDA under the ‘Food For Progress Act’ of 1985, but was initiated in 1999 with funds from IFAD. Currently the programme is working with more than 200 farmer groups or associations under the day-to-day supervision of 17 relay organizations in the western highlands of Cameroon. These relay organizations are local NGOs, community-based organizations (CBOs) or some well-established farmer groups whose capacities have been reinforced to reskill and support farmers in ways that open up new opportunities for employment, commerce and rural development. Thus, these relay organizations are training and mentoring organizations working to improve the livelihoods of participating communities, with a central focus on trees that have been traditionally important for food and nutritional security. Based on the research mentioned above, the World Agroforestry Centre developed training packages for the relay organizations to provide training and technical backstopping on plant propagation to farmer groups. Using these packages and the accumulated knowledge of World Agroforestry Centre staff, the participatory tree domestication initiative started with two pilot villages in 1999, and since then it has rapidly grown as interested communities have joined. To encourage this early up-scaling, the IFAD-funded project upgraded the first five pilot villages to RRCs to particularly improve the horticultural and plant nursery skills of the associated communities. As the RRCs grew, it became necessary to develop satellite nurseries in the more distant villages. Today, this network involving over 200 communities is based on seven RRCs (being expanded to 10) and 150 satellite nurseries servicing more than 10,000 farmers in the north and northwest regions of Cameroon (Figure 2).

The relay organizations that manage and facilitate these RRCs serve as diffusion hubs for new technologies, skills and knowledge, in association with national and international research institutes. To fulfil this role effectively, the RRCs have their own tree nurseries to provide training for a diverse set of species based on appropriate horticultural technologies, agroforestry and soil fertility improvement using ‘fertilizer’ trees, as well as the improvement of well-adapted varieties of maize, potatoes, plantain and cassava. As was planned from the outset, the long-term sustainability of these RRCs is being achieved by becoming financially independent as both viable commercial nurseries and organization strengthening enterprises.

Under the IFAD project (1999–2006), villagers came to the RRCs for formal training and work experience in tree domestication, agroforestry and nursery management. In addition, they were specifically taught horticultural skills, such as the identification of elite trees with superior characteristics, and techniques of vegetative propagation (marcotting, grafting or the rooting of cuttings) appropriate for sexually mature trees. With these skills, the villagers can then develop their own selected cultivars producing a wide range of high-quality, marketable tree products with the capacity to flower and fruit without going through an unproductive juvenile period, and that are also ‘true-to-type’ — that is, genetic copies of the original mother tree.

Through their tree nursery activities, the RRCs produce nitrogen-fixing ‘fertilizer tree’ seedlings as well as create selected cultivars of indigenous fruit and nut trees that can be sold to neighbouring communities to generate funds to support and expand the facilities. With the growth of the project, the RRCs helped villagers to develop their own community nurseries. Equipped with these new skills, farmers are soon in a position to plant, further multiply or sell plants from their own nurseries. As this process has progressed, these satellite nurseries have also started to become independent and financially viable. Usually farmers have opted to split their plants between (i) sale to other RRC members and outsiders, (ii) further multiplication to build up numbers for the future and (iii)
cultivation to start to produce their own fruits and nuts for home consumption and sale.

USDA funding started in 2007, and by mid-2009 community empowerment and capacity building was centred on seven RRCs in the west and northwest regions of Cameroon, with 150 satellite tree nurseries (Table 1). Today, the agroforestry network involves over 10,000 farmers from more than 200 communities, supervised by 15 relay organizations (NGOs or CBOs) just for agroforestry. The number of farmers who have received training has varied from one RRC to the next, for example, MIFACIG Resource Centre (MIFACIG) has provided agroforestry training to over 2,500 farmers in 35 satellite nurseries since 2005. Across all RRCs, the average number of farmers trained per satellite nursery is about 16 farmers.

The role of the RRCs has been expanded to include training in a wider variety of skills, from the use of microfinance, decision making by community committees, through to business management and marketing. In addition, the project is actively supporting community development and the value-adding of agricultural produce and agroforestry tree products. In 2009, two relay organizations started to supervise four women’s groups processing products.

Training community in community organization and management is being done in partnership with Centre d’Accompagnement de Nouvelles Alternatives de Développement Local (CANADEL) to develop local infrastructure (roads, water supplies, storage facilities for crops, etc.). The communities are expected to finance 15 per cent (5 per cent cost and 10 per cent in kind) of project costs from their own resources. The processing, value-adding and marketing of agricultural/agroforestry produce is implemented in partnership with WINROCK International through training local engineers in the development of small tools and equipment for

Figure 2 | West and northwest regions of Cameroon showing location of RRCs and satellite nurseries
community-level use. This creates off-farm employment, which is spawning local entrepreneurs who are setting up businesses in the community. The final component of the project is the provision of small short-term loans to villagers, mostly to women, for the purchase of agricultural inputs (seed, fertilizers, casual labour, etc.) through a local microfinance provider, First Investment for Financial Assistance (FIFFA).

As described below in more detail, when integrated with agroforestry, tree domestication and tree nurseries, the overall package is improving rural livelihoods by empowering participating communities to engage in a self-help approach to income generation, better diets, better health, greater access to education and increased self-sufficiency and food security.

### General outcomes and successes from multifunctional agriculture

#### Soil fertility restoration

All the RRCs have promoted ‘fertilizer trees’, such as *Calliandra calothyrsus*, *Acacia angustissima*, *Sesbania sesban*, *Tephrosia vogelli* and *Cajanus cajan*, to fix atmospheric nitrogen and restore soil fertility. In 2008, the seven RRCs produced over 52,500 fertilizer trees. In 2007–2008 at Riba Agroforestry Resource Centre (RIBA), the number of farmers planting fertilizer trees rose from 208 to 360. These improved fallows have become a well-accepted technology in most of the communities engaged in this project, and farmers are reporting that their crop yields have doubled or tripled. This is a significant increase in the productivity of staple food crops and improves food security. Potentially, this increased yield will allow farmers to plant a smaller area of food crops and so increase the space for other types of crops, to meet their other needs. Leguminous trees and shrubs are also popular with bees; hence many communities have become bee-keepers, and in some communities everyone now has access to honey. To illustrate the importance of these trees, the 7ha RIBA site was completely bare and degraded, and had been abandoned by farmers. Now, the soils have been rehabilitated and the yields of wheat, maize, beans and potatoes doubled. In addition, the
plot has a diverse range of tree species for other purposes. For example, in addition to providing fuelwood, boundary trees act as windbreaks, a woodlot on the hilltop provides fodder for livestock and forage for bees, and the fields also contain local indigenous fruit and medicinal plants as well as some exotic fruits.

**Production of superior varieties of indigenous fruit trees**

The western highlands of Cameroon have many indigenous tree species with the potential to be domesticated and produce marketable food, fodder and non-food products. While the project has formally focused on the original set of priority species, we now find that once the farmers see and understand the techniques of vegetative propagation, they start to apply them to a much wider range of species, including some exotic fruits such as cocoa, avocados, mangoes and apples. In 2008, the seven RRCs produced over 122,500 plants of indigenous fruit and nut trees.

In addition to selling plants, community members also deploy their newly acquired nursery management and tree propagation skills to improve their own farms. For example, between 2007 and 2008, the number of trees planted by each household within the RIBA network of farmers rose on average from 10 to 120. Similarly, within the MIFACIG network of farmers, the number of trees planted per household rose from 10 to 200, and the number of groups mentored by MIFACIG increased from 18 in 2007 to 35 by the end of 2009. To enhance the sales and start to build community ownership of the cultivars, they will be given names that identify the farmer and the nursery. In addition, with the recent formation of the African Organization of Intellectual Property, variety trials will be established at the RRCs to ensure that the communities gather the data needed to register their best cultivars for Plant Breeders Rights.

One entrepreneur who has had a long association with the project has been identifying trees which fruit out-of-season and has been propagating these by marcotting. He is selling his selected marcots at about US$10, and on rare occasions when he targets rich people visiting the market he has got US$30 for a single plant of a selected cultivar. For this price he offers a service contract to plant the tree for the customer.

**Income generation from tree nurseries**

One of the very encouraging outcomes of tree nursery developments has been their income-generating capacity through the sales of superior varieties of indigenous fruit trees. Typically, the first priority is to produce trees for domestic use (typically about 200 trees per farm) and so it takes about three years before an income stream starts, but then subsequently there is rapid growth. The volume and value of these sales has been steadily climbing year by year, but the number of trees sold varies between the different RRCs and nurseries (Table 2). At the 10-year-old MIFACIG, plant sales from the RRC were valued at US$21,000 in 2009, while plant sales from its 35 satellite nurseries averaged about 35 per cent of that value – that is, US$7,350. In comparison, the plant-derived income from the five-year-old nursery of Resource Centre (GIC PROAGRO) was around US$1,750 in 2007 from fertilizer trees, but in 2008 they shifted to fruit trees and the income in 2009 was about US$40,000. Already cultivars derived from superior trees are the largest source of income in the satellite nurseries of GIC PROAGRO. This capacity to generate income from nurseries can be developed quite rapidly. For example, the nursery setup under the RRC of the Promotion of Women’s Initiative in Self-Help Development (PROVISDEV) which has been in existence for only 18 months, is already full of plants of 15 species, many at a marketable size. Soon, all these communities will also be able to further increase their income by selling fruits from their named cultivars.

<table>
<thead>
<tr>
<th>Name of relay organization</th>
<th>Duration of collaboration with ICRAF</th>
<th>Income generated (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIFACIG</td>
<td>10 years</td>
<td>21,000</td>
</tr>
<tr>
<td>GIC PROAGRO</td>
<td>5 years</td>
<td>40,000</td>
</tr>
<tr>
<td>RIBA</td>
<td>5 years</td>
<td>1,454</td>
</tr>
<tr>
<td>APADER</td>
<td>5 years</td>
<td>6,550</td>
</tr>
<tr>
<td>PIPAD</td>
<td>2 years</td>
<td>140</td>
</tr>
<tr>
<td>GIC AFABOONG</td>
<td>2 years</td>
<td>140</td>
</tr>
<tr>
<td>AJP CEDES</td>
<td>2 years</td>
<td>100</td>
</tr>
<tr>
<td>PROVISDEV</td>
<td>2 years</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>69,584</strong></td>
</tr>
</tbody>
</table>
Processing and value-addition options for tree products

One of the constraints to better food processing is the local availability of processing equipment. Through the involvement of WINROCK International, seven local metal workers have been trained in the design and fabrication of appropriate equipment for drying and grinding a range of foodstuffs, including spices and some new agroforestry products not previously processed. This development has created employment opportunities. Each of the trainees now employs 3–7 people to assist in manufacturing the equipment. By 2009, a total of 56 discharge mills and 18 gas dryers were manufactured and sold. Users were trained in their use. Income generated by the sales of this equipment totalled US$44,400 in 2009. Profits from this enterprise are about 10–20 per cent.

Local entrepreneurs and producers are benefiting from the use of this equipment to extend the shelf life and quality of their produce. For example, one entrepreneur – ‘One Man Creation’ – has set up a stall in Bamenda Market selling sealed packages of high-quality dried herbs made from indigenous plants, mostly agroforestry trees (Njansang – *R. heudelottii*, Bitter leaf – *Vernonia* spp., Eru – *Gnetum africanum*). He sells 150g bags of Eru for US$1.35. Although this is a considerable ‘mark-up’ on fresh Eru sold in neighbouring stalls, his trade has increased three-fold in four months, and the traditional traders in the market are becoming jealous. This business generated a revenue of US$748 in 2009. Another entrepreneur, VINJI Spice Enterprise, is processing chilli peppers, garlic and ginger and creating new market outlets for these products. This business generated US$1,150 in 2009. These small businesses have also created a few new jobs as each entrepreneur now has now 2–5 employees.

Food crop processing

About 100 women organized into four groups established small commercial companies to process cassava and other crops. These groups employ 5–7 people. The income generated in 2009 is presented in Table 3.

One of these groups, Groupe d’Initiative Commune Femmes dynamiques pour le développement du manioc (GIC FEDDMA), is run by 10 women who employ eight workers and process about 66 bags of dried cassava flour (gari) per day, each bag weighing 180 kg. Gabonese traders are buying these bags at US$40–54 per bag, depending on the season. As profits are said to be US$2.7 per bag, this suggests that each of the 10 women are making an income of around US$3,000–4,000 per year. In three other groups, including Mambu Self-help Group, a cassava grinding mill and facilities for the preparation of gari were donated by a USDA-funded project. Mechanization dramatically increased the processing capacity and a total of 41 tonnes of cassava was processed into gari from November 2008 to November 2009, generating about 1.5 million CFA francs (US$3,000).

Microfinance

Through the involvement of FIFFA, the project is also helping farmers to obtain short and small-scale loans for the purchase of inputs such as seeds, fertilizers and hired labour. These loans are very desirable, but are not essential for the longer-term sustainability of the project. The RRCs are involved in explaining to farmers how to apply and pay back their loans. Farmers who make their repayments on time are rewarded with the opportunity of having a larger loan in subsequent years. In the first phase of loans, US$78,000 was made available to over 900 farmers in 82 communities, 70 per cent of whom were women. By the end of 2009, US$246,000 was made available to 1,239 farmers – 359 men and 642 women. Farmers have benefited greatly from this access to microfinance and are consequently increasing their crop production. Secondary benefits from the use of these loans for casual labour have included the release of children from farm work so that they can attend school.

### Table 3 | Income generated by groups processing cassava products, 2009

<table>
<thead>
<tr>
<th>Name of relay organization</th>
<th>Duration of collaboration with ICRAF (years)</th>
<th>Income generated (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mambu self-help</td>
<td>2</td>
<td>3,000</td>
</tr>
<tr>
<td>Sang women mixed farming group</td>
<td>3</td>
<td>498</td>
</tr>
<tr>
<td>Groupe Equilibre Alimentaire de Modjou</td>
<td>2</td>
<td>3,000</td>
</tr>
<tr>
<td>GIC FEDDMA</td>
<td>2</td>
<td>3,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2</strong></td>
<td><strong>9,498</strong></td>
</tr>
</tbody>
</table>
Community infrastructure
With the assistance of CANADEL, the project is helping community members to develop community development plans, finance, and implement their own small infrastructure projects. For example, three communities have installed water standpipes in their communities. Potable water is now being piped from hillside springs 2–10 km away. This clean water has greatly improved the health of community members as well as eliminated the need for women to carry water from contaminated streams and rivers. The water was also being used for livestock, village nurseries, and small-scale irrigation of off-season vegetable plots. By the end of 2009, the programme had provided support for nine infrastructure projects, including the construction of boarding facilities at the MIFACIG RRC. In every case, the communities were closely involved in their conception, design, and execution. They also contributed towards construction and costs. Before the project began, each community agreed to provide 5 per cent of the cost in cash and 10 per cent in kind. The project’s cost was, on average, around 4 million CFA francs (US$8,000), with the road projects being the most expensive. The communities were fully involved in the selection of the contractors, who bid by tender, and the work was supervised by the community’s own development committees.

Impacts of multifunctional agriculture
The most important and exciting thing about this project has been the wide range of positive livelihood impacts that are transforming peoples’ lives. A recent study identified 31 positive impacts, which are now being verified and quantified. These impacts include a feeling of empowerment from increased knowledge and success; recognition of a pathway out of poverty; retention of youths in the villages due to career opportunities; enhanced livelihoods from improved nutrition, better health and increased income; and access to children’s schooling, home improvements, wells and so on. Additionally, women indicated reduced drudgery in their lives from not having to collect water from rivers and carry farm produce from remote fields, as well as from mechanical processing of food crops. All these meant that they had more time to look after their families and engage in farming or other income-generating activities. These impacts strongly suggest that the domestication of indigenous fruit and nut trees acts as a catalyst to the promotion of self-sufficiency through the empowerment of individuals and community groups through the provision of new skills in agroforestry, food production and processing, community development and microfinance. In this way, it is possible for communities to climb the entrepreneurial ladder out of poverty. By so doing, they set themselves on a path towards improved livelihoods based on the recognition of the social and cultural value of ‘life-support systems’ from indigenous species formerly ignored by agricultural science.

Discussion
This project is an excellent example of how multifunctional agriculture delivers social, economic, and environmental sustainability and raises poor people out of poverty, malnutrition, and environmental degradation. The prime purpose of this is to get people out of poverty in rural Africa. The approach uses “fertilizer” trees to improve soil fertility, and then to generate income from selected cultivars of indigenous fruit and nut trees that have local and regional markets. These tree products then need processing and trading, which creates opportunities for employment and entrepreneurship. In this way, we are trying to generate other jobs in the rural economy, so that some farmers can become processors, value-adders, traders, fabricators of processing equipment and so on. Hopefully therefore, the exposure of this project resulting from this UK Foresight Initiative will help to increase the acceptance of these approaches to resolving the problems of agriculture. The technologies and practices adopted by this are not specific to any agro-ecological zone or country and are already in practice in many countries of Africa, Latin America, Asia, and Oceania: in both humid and semi-arid climates. The next challenge is the wider implementation and scaling-up of the project concepts. The main capacity constraint is in the skills of vegetative propagation of tropical trees. The second constraint is the policy support and appropriate funding to drive the process to the level where adopters see their first trees established in the field and fruiting.

Conclusion
The lessons learnt from the Agricultural and Tree Products Program suggest strongly that it is possible to
take the concepts of multifunctional agriculture forward in ways that break the cycles of land degradation and social deprivation that have kept nearly half the world’s population in poverty and so to steer a path towards social, economic and environmental sustainability. The programme has been complemented by its steering committee as the most innovative and holistic of the four ‘Food For Progress’ projects funded by the US Department of Agriculture in Cameroon over the past decade. What is needed now is to disseminate these skills and experience to millions of other poor people in Africa and other tropical countries. There are many ways of doing this, but one very interesting and outstanding lesson from this project has been the importance of building rural development from the grassroots, using technologies that are simple, practical and easy to implement without spending large amounts of money. The nurseries are a good example; the facilities needed are well within the reach of most farmers once they have had training in the simple technologies developed by the World Agroforestry Centre for soil fertility management and tree domestication. Once established, these activities are self-supporting. Additionally, the philosophy of self-help integrated rural development promulgated by the RRCs has been proven to encourage very strong local participation, and ensured the sustainability of the diverse set of activities.

**References**


