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Appraisal of the Agricultural Extension System of Family Farm Schools in Cameroon

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Authors' contributions

This work was carried out in collaboration between the both authors. Author FAA designed the study, wrote the protocol, and wrote the first draft of the manuscript. Author FMB managed the literature searches. Both authors read and approved the final manuscript.

Case Study

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ABSTRACT

This paper analyzes the extension system used by Family Farm Schools in providing agricultural information to farmers to alleviate rural poverty and hunger in Cameroon. It examines the background of Family Farm Schools and the unemployment problem of school leavers and advances the view that moving away from pure state paternalism to a partnership between the state, private sector, NGOs, donors, civil society, and rural communities in promoting of agricultural training and extension would improve the asset levels and autonomy of rural youths. Data was obtained through field observations, focus discussions and programme documents. The conclusion highlights the unsatisfactory financial position of the Family Farm Schools' extension system and suggests the way forward to develop a newly conceived policy agenda for agricultural training and extension using this system; adopt a diversified and pluralistic strategy for funding the programme; build a platform for dialogue and collaboration with the relevant extension service providers; and evaluate the programme within the economic growth and poverty reduction strategy for government action.

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1. INTRODUCTION

Agriculture is the engine of growth for most developing countries, and agricultural development is one of the most effective ways to alleviate hunger and poverty. In sub-Saharan Africa, 60-80% of the population is employed in agriculture, producing 30-40% of GDP [1,2]. The World Food Summits of 1996 and 2002 respectively, the Millennium Development Goals, all underline the importance of food security [3]. Yet, in many developing societies, both youths and adults generally do not have access to the skills and knowledge necessary for gainful employment and full participation in agricultural development. In attempting to accelerate growth in agriculture to deal with the issues over increasing food insecurity and the largely unpredictable long-term effects of climate change, the contributions from agricultural extension and research cannot be underestimated [4,5]. Agricultural Extension receives high priority in the World Bank's strategy for accelerating agricultural growth in sub-Saharan Africa [6,7]. This strategy is attained not only through propagation of improved practices, but also by helping farmers to become better managers of their farm enterprises through extension services that stimulate agricultural growth.

One of the main features of agricultural development programmes in Cameroon is dependence on the small-scale farmers on the premise that a combination of factors comprising the right technology, effective extension services, and access to physical inputs, adequate markets and other infrastructural facilities are essential to improve productivity and the standard of living of the farmers. However, peasant agriculture in Cameroon has developed little over the years, and it is presently incapable of solving the nation's food problems without widespread adoption of appropriate innovations. Rural households continue to live in abject poverty and to escape this predicament the youths migrate to urban areas contributing to swell the problems of unemployment, deviance and criminality. The attainment of food self-sufficiency in Cameroon remains a dream as the country continues to import some essential food items from Europe and Asia to satisfy domestic food needs. Since poverty prevails more in the rural areas in Cameroon, empowering the rural youth by building their asset levels is critical to an effective poverty reduction programme.

Youth unemployment is a major policy issue in Cameroon because most of the schools tend to prepare the youths only for white-collar jobs and fail to teach them skills that could render them more useful in the rural economy. Incompatibility between what is taught in conventional schools and what is needed in the job market seems to aggravate the unemployment problem; the solution lies in the establishment of better links between training and employment [8,9]. Agricultural modernization presupposes the introduction of technical expertise, which differs from the traditional skills and habits of local farmers. This expertise is inadequate, particularly so, because the farming population is ageing and many young people have developed an aversion for manual work and contempt for rural life. The average age of cocoa and coffee farms in Cameroon is about 35 years and that of farmers is about 60 years [10]. Mobilizing the youth for active participation in agricultural development is one of the ways in which Family Farm Schools promote, through training and advisory services, better agricultural production methods and new technologies at the grassroots level [11,12]. The Family Farm Schools' system is perceived as an alternative-cum-companion to further education and training of primary school leavers to imbue them with a realistic sense of commitment and active involvement in farming and the development of rural areas. It is

closely-related to the Training and Visit system of agricultural extension which aims at closing the gap between the yields attainable using best-practice technologies and the yields farmers actually achieve. The strategic role assigned to agricultural extension in Family Farm Schools and the resources being invested in it makes it imperative to study its peculiarities because extension has an economic impact on agricultural output [13,14].

The state's withdrawal from providing direct support to farmers following the persistent economic crisis which began in the mid 1980s has greatly affected the management of agricultural extension services [15,16,17,18]. Since the early 1990s, many extension agents have gone on retirement and those in active service no longer visit the farmers regularly. With the present wave of globalization and liberalization of economic activities, NGOs are perceived as viable stakeholders in the development process [19]. As Bebbington et al. [20] note, donors, faced with the confidence crises and inefficiencies of their traditional governmental counterparts tilted their policies towards working with NGOs in programmes of poverty alleviation and sustainable development. However, development initiatives propelled solely by NGOs are likely to be risky and unsustainable because NGOs operate projects of short duration and at times funding may be withdrawn when projects are still uncompleted. Since poverty prevails more in the rural areas in Cameroon, empowering the rural poor by building their assets through accumulation of human capital is critical to an effective poverty reduction programme.

2. METHODOLOGY

Given the aforementioned issues, this paper adopted a qualitative method of data collection involving field observations, focus discussions with stakeholders and review of programme documents. A descriptive approach is used to examine this alternative-cum companion to the formal education system that is more rural development oriented; to analyse the training and extension principles guiding the Family Farm Schools; and to assess the challenges faced in propagating this extension system in Cameroon. The researcher was ideologically committed in the implementation of the Family Farm Schools programme from 2000 to 2002, serving as the pedagogic coordinator. He participated in the design and production of pedagogic materials, the training of trainers, and follow-up and evaluation of field activities, interacting with the instructors, students, community leaders, and farmers involved in the programme.

3. LITERATURE REVIEW

Agricultural extension continues to be in transition worldwide as governments and international agencies advance structural reforms to improve agriculture [21]. In the broadest interpretation, agricultural extension provides non-formal agriculturally related continuing adult education for multiple audiences. Organized agricultural extension services were introduced in Cameroon at the beginning of the 20th century by the German colonial administration using coercive methods to make the farmers adopt the recommended crops in their farms which hitherto produced to satisfy local food demands. The public sector for many decades (1960s to 1980s) was the major player in the provision of extension services in the country. These services were very effective in assisting the majority of small-scale farmers in improving their agricultural production. Over the last three decades or so, extension services started experiencing some challenges due to socio-economic changes and agricultural sector reforms in the country. The budgetary allocation to the extension service declined and the traditional methods of service delivery were no longer sustainable

and change was inevitable. To address these issues the Cameroon Government came up with a National Agricultural Extension Policy which facilitates the development of pluralistic and demand-driven extension services involving private sector extension providers, Non-Governmental Organizations (NGOs), Community Based Organizations and development partners. Family Farm Schools are among the NGOs providing agricultural extension services within their training programme.

Rivera et al. [22] argue that no single institutional approach best suits extension development in all circumstances, just as there is no one single arrangement that best suits development. Otherwise the problems of extension and, for that matter, of development, would have been solved long ago. Decentralization, pluralism, cost sharing, cost recovery, stakeholder participation in development initiatives and the decisions and resources that affect them are some of the elements in the current transition process of extension. Public sector extension was severely attacked in the 1980s for insufficient impact and for not being adequately effective, for not being efficient and, sometimes, for not pursuing programmes that foster equity. Scarce financial resources for extension and in some cases the lack of skilled manpower and dearth of organizational capacity led to major changes in ideological, economic and technical perspectives of agricultural extension [23,24]. Also, the forces for worldwide structural adjustment resulting from massive debts by developing nations, the onslaught of conservative ideology emphasizing efficiencies over welfare, the accelerating reaction against subsidies in agriculture, all contributed to the critical assessment of extension.

Family Farm Schools (FFS) are vocational establishments created and run by parent associations offering a three-year vocational training in agriculture using a system that involves the alternation of classroom learning and on-the-job training in school with action-research and supervised extension activities on family farms. In 3 years, using a dual training approach which does not dislodge the students from their socio-cultural background, the youth can learn about the principles of growing field crops and horticultural or market garden crops and livestock breeding with the use of simple farm implements for a start. The schools derive their name from the family farm unit, the ownership and management of which is identified as one of the most important issues in rural development programmes [25]. In Cameroon, Family Farm Schools are adaptations of the "Maison Familiale Rurale" system of France which promotes the training of rural youth to contribute in the transformation of agriculture and the rural environment [26]. Starting with one school in Afia village in Cameroon's East Region in 1963 following a study visit to France by the Catholic Youth Action of the Diocese of Doume, the number of schools has increased to more than 40 in Cameroon [27]. The schools are opened through the initiatives of 'Institut European de Cooperation et Developpement' (IECD) working in collaboration with Parent Associations.

A general experience of the early agricultural leaders in the United States of America was that adult farmers were reluctant to try new practices and it soon became obvious that one of the fastest ways to introduce new technology was through young people [28]. In this way, parents saw the results for themselves of the work of their children and applied the new practices on their farms. Working with the rural youth can have significant impact on the rate of adoption of new technology in agriculture.

3.1 Family Farm Schools are Active in Three Fields

3.1.1 Family perspective

It is the active association of families from respective rural communities, parents, and local officials that give the schools a legal basis. Pedagogical objectives are based on family values and the active participation of the youths and their families. The schools strive to contribute towards the success of every youth who chooses to be trained in the system, avoiding the temptation of extreme selectivity for obtaining better rates of success in examinations even though the quest for efficiency is a normal concern.

3.1.2 Occupational perspective

It is in the world of work that situations are analyzed and adolescents are trained without limiting them to see and do things only the way others do. On the contrary, they are invited to go beyond and do better in building their self-esteem. Training implies making progress through experience rather than accumulating new knowledge on an everyday basis that remains static. It is most important to get the youths to become more conscious about their social situation in order to strive by themselves to change it. In order to do this, it is necessary to promote dialogue with those who simply conform to tradition and routine. In other words, instead of thinking for the youths, they are brought in the course of training to contribute and have their own ideas [29].

3.1.3 Zone of action perspective

Family Farm Schools currently lay emphasis on agriculture (crop and livestock production), but the general concern is for the rural areas as a whole. The schools have to be located in rural areas within easy access to the target population. The schools have respect for the community's values as these constitute a stimulant for development [30].

4. FUNDAMENTAL PRINCIPLES OF FAMILY FARM SCHOOLS

Family Farm Schools operate on four basic principles: i) a responsible development-oriented parents' association; ii) personal development (integral training) of the youth; iii) application of a dual training system; and iv) rural development-oriented training.

4.1 A Responsible Development-Oriented Parents' Association

The first principle of Family Schools is the existence of a responsible Parent Association which is assisted by other local and external elite of the community as well as philanthropic organizations interested in the socio-economic development of the area. A review of the historical path of Family Farm Schools shows that the opening of such schools always start with a meeting of parents who are worried about their children's education and the future of their country. Such awareness often serves as a motivating factor for the parents to organize themselves into a development-oriented association to promote the setting up of the school. General Assembly and Board meetings of all the stakeholders create a busy life of association which contributes to the good functioning of the dual training system. This makes it possible for parents: to play a pro-active role in their children's education; to encourage fruitful dialogue between adults and young people; and to raise questions about social change and the future of the rural environment.

4.2 Personal Development (Integral Training) of the Youth

The training model encourages integral development of the trainees and helps them to become aware of the real problems arising in the environment, to be able to analyze the situation in an effort to find solutions and bring about change in the rural community. The training is personalized and geared to help students to freely and willingly make a right choice. Emphasis is placed on building the trainees' character, discipline and sense of responsibility by inculcating in them the right attitude to work. This is a distinguishing feature of the FFS system and it is pursued by tutoring/counseling, which is done in close collaboration with the parents. Training activities are aimed at cultivating a sense of responsibility in the students so that they can make their own decisions with integrity. The educational activity in the school is conceived as being carried out by delegation of the parents and in close cooperation with them; never substituting them in their educational role, however. The parents are the first educators of their children. The school collaborates with the parents in this basic responsibility. The training in agriculture is integrated as far as possible with teaching of French and English and general subjects such as, Mathematics, Biology, History and Geography. Integration in this context implies that content in the general subjects is used to facilitate understanding of its relation with agriculture. In which case, lessons in language or mathematics use content taken from agriculture instead of examples that are unrelated to agriculture. Crop calendars are used for planning classroom teaching and farm work for selected crops and this has to be checked against the holiday periods. The choice of lessons to be taught at the beginning of the school year takes into consideration, familiarity of the students with the crops in order to make it easier for them to understand the methods, starting with observation of something that is known to arrive at that which is not known.

4.3 Application of a Dual Training System

Family Farm Schools follow the dual training approach that has proven appropriate in many parents-promoted educational institutions in the world [31]. This approach has been employed in higher education in the USA and in the Youth Training Scheme and sandwich course system of the British Polytechnics as well as in Germany and some Developing countries [32]. The rationale for dual training lies in the fact that knowledge is not only acquired at school, especially in agricultural training where certain things can only be learnt in the farm. Dual training in Family Farm Schools is full-time training within a discontinuity of activities. Such pedagogy fosters continuity of learning in the person with the goal of integrating the socio-professional phase on the family or commercial farm, with the theoretical phase at school. This learning process tackles real-life situations, raising the awareness level of the learner to experiment and assimilate new ideas and to master contingency problems. The system requires an appropriate training structure and the means to constantly associate the different training phases so that training activities and content of the two phases are mutually enriching for the individual trainees.

The Dual Training System is developed progressively, through classroom experiences, and action research usually in the school's experimental farm and the family farm, offering concrete farm situations for an agricultural advisory system that caters for the development and professional orientation of each student. Field experiences in Cameroon and Cote-d'Ivoire favour the practice of spending two weeks at school and one week on the farm in turns throughout the training period [33]. This implies spending about 12 weeks of study and practice on the family farm and 24 weeks at school during the academic year. The dual

training principle is a pragmatic way that allows the youth to pursue vocational training while working with their parents on farms without disrupting their socio-cultural roots.

4.4 Rural Development-Oriented Training

Very few organizations have succeeded in developing comprehensive programmes suitable for rural development because many projects simply offer modern sector skills training in a rural setting. Too often the content, equipment and techniques employed are imported with little adaptation to the rural setting. Family Farm Schools are rural development-oriented. To meet their goal of providing not only skills training but of preparing young people to meet the challenges of rural development, programme planners strive to carefully assess the extent to which course contents, equipment and training methods influence the attitudes of the youth. The increasing numbers of educated young people without jobs creates a situation that appears not to be subject to a self-correcting process. Too great migration of young people from the rural areas can jeopardize social cohesion. The towns cannot absorb everyone into meaningful employment. A choice has to be made between either encouraging the development of economic activity and supporting services in rural areas or of accepting the *status quo* and its inevitable consequence; A depopulated, ageing and predominantly female rural sector, agricultural production lagging ever further behind national needs and ever swelling numbers of desperate urban poor. Since most of the poor in Cameroon live in rural areas, key strategies for poverty alleviation on a sustainable basis, should aim at raising rural incomes. This necessarily involves measures to increase agricultural productivity and rural incomes. But we are faced with an economy, which is unable to offer wage employment in 'modern work' to a majority of the population. The school system, originally designed in order to fill clerical, administrative and social service positions, is still largely run or supervised, not by local communities but, essentially, by government. In this process, the older/traditional system by which parents and communities brought up their children to adult membership has been set aside and almost forgotten. The growing difficulty in meeting the cost of this governmental provision of services has aggravated the unemployment situation and rural-urban migration and emigration of those who can afford the means, leading to rural stagnation.

The long-term response to these effects could involve significant physical and human capital investments in the rural economy, which might produce an enabling environment capable of generating greater output, incomes and demand. If this is achieved, sources of employment could be diversified in both the countryside and the urban centers. Other long-term actions required to effectively transform the rural economy involve getting the prices right, appropriate technology and good governance. The Family Farm Schools' system place greater emphasis on parents and the village community, to take greater responsibility for training the youth in agriculture with whatever government can give to encourage them to participate actively in the development of their villages.

5. THE TRAINING AND VISIT EXTENSION OF FAMILY FARM SCHOOLS

The Training and Visit system developed and broadcast by the World Bank in the 1980s attempted to get public sector agricultural agencies to work in an efficient fashion to deliver information to farmers and feedback from them to researchers. This system focused exclusively on information transmission to and from contact farmers who were supposed to be representative of the farming community. It relied on Subject Matter Specialists (SMS) who would interpret research results for field-level extension agents to disseminate to

farmers. The extension agents were linked with the SMSs through regular supervisory visits and training meetings. In the field this system faced a lot of obstacles as extension agents, under pressure to achieve targets of numbers of farmers adopting particular practices, chose contact farmers who would demonstrate the innovations rather than those who were representative of the entire farming community. In many countries the researchers could not come up with an adequate flow of research results to disseminate to farmers and the farming environment was not sufficiently uniform to permit relatively uniform solutions and innovations. The SMSs were inadequate in number and World Bank-supported projects to introduce the T&V system proved financially unsustainable because of the high incremental costs involved [34].

Family Farm Schools provide comprehensive agricultural extension services (for crops and livestock) within its training programme. The extension strategy strives to advance the principle of stakeholder participation in programme decision-making at the grassroots level with a view to underscore Institut Europeen de Coopération et Developpement's (IECD) commitment to the promotion of the dual training system in the development of African agriculture. The extension approach has four key elements: regular visits of the family farms of trainees by instructors, carefully selected to achieve a "spread effect" to farmers who are not in direct contact with extension services; involvement of a cadre of resource persons, selected on the basis of their expertise and who in turn interact with the instructors at field-level; and regular supervision of the activities of trainees on each field visit. The school instructors gradually disseminate technological packages adapted to the needs of students and local farmers. In this way, Family Farm Schools are proving to be a viable alternative or complementary advisory system to centralized provision of extension services. The approach is currently one of the forefronts of extension-related activities sponsored by the European Development Fund in Cameroon. It is viewed not only as a system for disseminating information, but also as an opportunity for capacity building to assist young farmers gain the knowledge, critical skills and self-confidence needed to make farm management decisions so that the family farm can sustainably provide them with livelihood benefits.

The non-academic phase of the programme deals largely with experiential learning. Agricultural advisory work takes place in two broad phases articulated between the school environment and the family farm. Starting with the first phase at school, the planning of work schemes and selection of appropriate teaching and learning styles in the programme are still much the responsibility of the instructors. Lectures, tutorials, case studies, discussion groups, practical classes, study visits and attachments are employed in an effort to guide learning activities into useful channels for the benefit of the trainees and farming community at large. During this phase, the trainees elaborate a study guide for data collection on a specific theme at the village from parents, village extension agents, and other resource persons. This exercise also facilitates observations, fact-finding, interviewing and a write-up of the results. The variety of experiences the students go through while in the village goes to enrich the plenary discussion at school.

Facilitation by the instructor ensures that every one participates in the plenary discussion through suggestions, questions, objections, and narration of lived experiences. This teaching technique tends to emphasise the presentation of evidence and conflicting arguments and helps students to form their own opinions on an informed basis. The course is planned to enable students to make progress through the study of a series of topics to acquire the relevant knowledge and agricultural skills in an atmosphere of respect for others' views and experiences. After the plenary discussion, a synthesis is done, and the students are

encouraged to file their reports for regular consultation. Maps, pictures, tables and drawings can be used for illustration in the reports. Regular report-writing forms part of the training and the keeping of farm records is mandatory. The filed reports constitute the student's farm notebook.

The second phase takes place on family farms in a village setting. A proper understanding of the countryside and the activities of its inhabitants is impossible within the four walls of a classroom. It follows that any system of education and training, which takes instructors and their students outdoor to provide practical opportunities for learning, can only be beneficial for the philosophy and practice of extension education. For the instructor, it provides an opportunity to stimulate interest, to encourage observation, to analyse and to demonstrate. For the student it provides an exciting opportunity to come into contact with new real-life experiences and to practice new skills. The pedagogy of FFS provides time and the occasion for the youth and adults to talk on issues of common concern to the family farm and the village community. Experiences are shared in class and on the school farm between students and their instructors and also on the family farm between students, instructors and parents. Follow-up visits of the students by instructors enrich the experience of sharing among the students, parents and instructors. The interactions between students, instructors and the adult farmers facilitate constructive criticism and mental stimulation for adoption of agricultural innovations.

The instructors work fairly independently with farmers, networking with sources of information and necessary inputs, able to solve problems and refer problems to be solved, and able to live in farming communities without looking down on farmers or rural life. Advisory work in the village gives the students the opportunity to observe and record, to measure and to collect data and to improve their knowledge of plants and animals and to build on their practical skills in agriculture. It also provides them with a tremendous stimulus for language development as they seek to identify more accurate technical terms in relation to the local language. Work in the field enables them to examine the appropriateness of land use practices and how conflicts and problems associated with the exploitation of land arise as well as the relationship between farming and the rest of the economy. The instructors challenge the students with a problem to solve, and provide them with available resources and opportunities to arouse their curiosity for problem solving. In agricultural education there is no effective substitute for participation in farm work to understand how things are done and to get first-hand information from experienced farmers. The system develops in the students, an inquisitive spirit by involving them in formulating questions, organising ideas, carrying out investigations, making inferences, weighing evidence and exchanging ideas in an atmosphere of mutual respect.

Visits and periods of attachment to specialized farms and programmes are among the ways in which students of Family Farm Schools learn. Follow-up visits are organised to coincide with the agricultural calendar of the zone so that the instructors can make recommendations based on the local realities and discussions with the students and their parents. The farm visits provide an opportunity to look closely at working life in a concrete situation. It is a typical learning-by-doing programme, which follows the apprenticeship system. Field exposure brings the students into contact with real-life situations and obstacles giving them the opportunity to look for solutions using local resources. The wealth of information obtained from the different training phases (The village and the school) facilitates dialogue between the students, teachers and parents. Individual and mass methods of extension are used in disseminating information and advice to farmers. In the FFS system, instructors reduce to a minimum, theoretical transmission of knowledge and leave the board from time

to time, to acquaint the students with practical work on farms, transforming the farms into outdoor classrooms.

Adult farmers are encouraged to regularly visit the demonstration plots of the students of Family Farm Schools to learn about innovations and discuss their farm problems and needs with the young men and women in training. Contact farmers are not necessary in this system because the system promotes on-farm research which benefits both the youths undergoing training and their parents who can use the new skills acquired through interaction with instructors and their children to improve agricultural production. On-farm research involves experimentation and comparison of different technologies or components of different technologies on the basis of standard designs, research controls and analysis. It is also concerned with the introduction of new technologies or systems in the village community and the assessment of their relevance, workability and acceptability within a frame of research-development interaction. On-farm demonstrations also enable the school instructors to study how farmers react to agricultural innovations and how they might adapt the system to meet their local needs and resource patterns. Active community involvement is encouraged for the youths to become development leaders in their respective areas and to eventually replace the ageing farmer population.

The family farm serves as a venue for on-farm demonstrations to get the students and other farmers acquainted with a given farming technology. School instructors or field extension staff can coordinate the demonstrations on the plots of selected students. The farmers in the village community learn from these demonstrations and can adopt the new techniques in their own farms. The rate of diffusion of new techniques within the locality depends on how favourable it is as a solution to the farmers' problems. Instructors and extension staff can visit family farms and evaluate the on-going activities of the students. During the visits the conditions of the farms of individual students are critically examined and recommendations made for improvement. The on-farm interactions also facilitate acceptance by the farmers of new ideas and appropriate techniques that are disseminated into rural communities under actual farm conditions. On-farm interactions also promote dialogue and build the confidence of the students, farmers and instructors, thus creating a positive atmosphere for adoption of innovations in traditional farming. From this perspective family farms could be viewed as learning systems or out-door classrooms where knowledge and experiences are shared between school instructors, farmers and resource persons as partners.

One important aspect of extension that has in the past received little attention even within participatory approaches is the personal development of the farmers through institutionalized training. While the extension and research staff have opportunities to upgrade their skills through retraining in formal institutions, the farmer in the less-industrialised country has little opportunity. This upgrading will not be useful if extension work from conception to implementation remains top-down in approach. A properly-run Family Farm School provides a solution to this problem through modular courses. Each Family Farm School Association determines what the priority needs of the locality are, and the training staff designs and implements programmes to meet the objectives. Pedagogical assistance in the Dual Training System is provided by the National Coordination of Family Farm Schools. So far, no direct mechanisms are in place for systematic state subventions and the programme relies solely on contributions from members and support from international agencies and private local corporations and persons of goodwill. The community provides land that is big enough to accommodate buildings and experimental farms.

6. CHALLENGES OF THE FAMILY FARM SCHOOLS' EXTENSION APPROACH

The main challenges facing the extension approach of Family Farm Schools can be classified into external and internal constraints. The external problems include: lack of technically sound, financially feasible and environmentally-friendly and clear extension messages to meet the real needs of target groups. This is due to the lack of an established linkage between research activities as the main source of problem solutions and agricultural extension. A unified organizational structure for coordination between public and non-public extension organizations is lacking. An effective coordination among the organizations responsible for providing important services to agriculture such as finance, marketing and cooperatives is also lacking. Furthermore a representative farmer organization to provide a forum for expressing their needs and problems to protect their legitimate interests in the face of inconsistent government policies is absent.

Among the internal challenges are inadequate funds to cover salaries and investment costs, inadequate means of transportation to facilitate the mobility of instructors for advisory work and lack of educational aids for use in extension. There is a shortage of qualified instructors to undertake field extension, largely due to lack of an objective measure for selecting the instructors, inadequate technical support advice due to absence of subject matter specialists, instability and low morale due to lack of financial incentives for the programme. There is poor overall management of the family Farm School system with respect to planning and programming of extension activities and absence of monitoring and evaluation. There is lack of a felt-needs mechanism for indentifying and ranking farmers' problems to guide research activities and to establish priorities with respect to target groups with varied needs. The use of resource persons with a public extension culture tends to divert the focus with respect to target groups as services are largely oriented to the better-off farmers, while ignoring the small and illiterate farmers and women involved in farming activities that are in great need of extension services. Family Farm Schools and their instructors are based in the rural areas where communication infrastructure is poor. This impedes their accessibility to constant supply of relevant and timely information on various issues relating to their work. They require information and advice on the best cropping methods, specific soils and given crops, different types of livestock, planning demonstrations and field days. They must also keep themselves up-to-date on ICTs tools and services that could have a major impact on the economics of farming. Agricultural information is provided through various formal and informal channels and sources which include the mass media, electronic and printed media, interpersonal communication, libraries, and information centres. These mediums are not widely employed in the Family Farm Schools' extension system due to the location of agricultural libraries and information centres in city centres far away from the rural areas.

7. CONCLUSION AND RECOMMENDATIONS

In conclusion, Family Farm Schools have the potential to enhance farmers' ability to invest in the training of youths and to increase agricultural output through provision of more effective information and advice to improve the overall quality of agriculture in Cameroon. Family Farm Schools provide advisory services to both the young and old farmers because of the strong links between classroom teaching and on-farm demonstrations. It must be in the long-term interest of the country that young people should be better informed about farming and the rural environment and should also take up farming as a livelihood option. The financial position of the FFS extension system as of now is grossly inadequate.

Considering the huge capital out-lay in terms of specialized equipment, tools and materials usually required to establish agricultural training and extension programmes, there is great need for the FFS programme to move away from a single NGO-supported initiative to one supported by more rural development stakeholders. The main recommendations for government and development stakeholders include the need: (1) To develop a newly conceived policy agenda for agricultural training and extension using the FFS model; (2) To adopt a diversified and pluralistic strategy for funding the programme; (3) To build a platform for dialogue and collaboration with the relevant institutions that comprise the diversity of extension service providers; and (4) To evaluate the programme within the Highly Indebted Poor Countries' resources and the Growth and Employment Strategy Paper for Government Action over the period 2010 to 2020. Implementation of these recommendations will greatly contribute to ensure food security, income generation, and improved rural livelihoods.

The agricultural extension techniques propagated by Family Farm Schools are but one part of meeting the challenge of poverty alleviation via education and self-employment. Equally demanding is the task of developing structures and support services that will ensure that eventual graduates have opportunities to invest in agriculture. This requires the setting up of a credible rural development bank for providing financial services to farmers and concessions of agricultural land of reasonable sizes to be acquired by the young farmers for crop and livestock production. Other incentives like favourable prices, access to markets, transport facilities, agricultural inputs and effective linkages with agricultural research should be made available to encourage the young farmers. Global developments require a new vision and the promotion of improved best practices if agricultural extension systems are to be revitalized and made more effective to meet the diverse needs of farmers. In the absence of these efforts, innovative training and extension systems may prepare skilled youth who are committed to agricultural development goals but who have no means for effective implementation of their action plans.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Ajayi AO. An Assessment of Farmers Willingness to Pay for Extension Services using the Contingent Valuation Method (CVM): The Case of Oyo State, Nigeria. *The Journal of Agricultural Education and Extension*. 2006;12(2):97-108.
2. Amin AA, editor. *Developing a Sustainable Economy in Cameroon*. Council for the Development of Social Science Research in Africa. Dakar; 2008.
3. Amungwa FA. *Family farm Schools, Teaching Practice and Agricultural Extension in Cameroon*. Grassroots Publishers Ltd. Yaoundé; 2012.
4. Amungwa FA. Appraisal of Privatisation of Agricultural Extension Services in Cameroon. *Journal of Agricultural Extension and Rural Development*. 2009;1(3):085-092.
5. Axinn GH. *Guide on Alternative Extension Approaches*. Food and Agriculture Organization. Rome; 1988.
6. Baye MF, Fambon S. *The Impact of Macro and Sectoral Policies on the Extent of Poverty in Cameroon*. *Globalization and Poverty: The Role of Rural Institutions in Cameroon*. Tokyo: FASID; 2001.

7. Bebbington A, Thiele G. Non-Governmental Organizations and the State in Latin America. London: Routledge; 1993.
8. Centre National Pédagogique des Maisons Familiales Rurales. Les Maisons Familiales Rurales: Educational Foundations and Principles. Paris: UNMFREO. French; 1989.
9. Chatier D. Paths of Courses by Alternation: History of an associative education in agriculture and the rural world. Paris: Editions Universitaires, UNMFREO; 1986. French.
10. Cleaver K. A Strategy to Develop Agriculture in Sub-Saharan Africa and a Focus for the World Bank. World Bank Technical Paper No. 203, Africa Technical Department Series; 1993.
11. Evenson RE. The Economics of Extension. In: Investing in Rural Extension Strategy and Goals, Jones GE, editor. New York: Elsevier; 1986.
12. Dewbre J, Borot De Battisti A. Agricultural Progress in Cameroon, Ghana and Mali: Why it Happened and How to Sustain It, OECD Food, Agriculture and Fisheries Working Papers, No. 9, OECD Publishing; 2008.
13. Duffaure A. Education, Environment and mix. Paris: Editions Universitaires, UNMFREO; 1985. French.
14. Food and Agriculture Organization. Food and Agriculture Indicators: Cameroon, November; 2006.
15. Garcia C, Amungwa AF, Sanguinini P. Account Render First Meeting of African coordinations of Family Farm Schools (March). Abidjan. French; 2001.
16. Haddad WD. Education and Development: Evidence for New Priorities. Washington D.C: World Bank Discussion Paper No. 1990;95.
17. Hinzen H. Education for All: The Dakar Framework for Action - Meeting our Collective Commitments. Adult Education and Development No. 55, German Adult Education Association: Institute for International Cooperation; 2000.
18. International Fund for Agricultural Development - IFAD. The Republic of Cameroon: Country Strategic Opportunities Programme. Rome: Executive Board; 2007.
19. Lioutas ED, Charatsari C. Who is the Customer of Public Agricultural Extension /Education Services? International Journal of Rural Management. 2011;7(1-2):83-102.
20. Matanmi BM, Adesiji GB, Omokore DF. Need for Privatization of Agricultural Extension Services in Nigeria. Global Approaches to Extension Practice (GAEP). 2008;4(2):6.
21. Nové-Josser F. The Surprising History of Family Holiday Cottages: Evidence and Perspectives. Paris: Editions France-Empire. French; 1987.
22. Psacharopoulos G. Why Educational Policies Can Fail. Discussion Paper No. 82, Washington DC: World Bank; 1990.
23. Rivera WM, Qamar MK. Agricultural Extension, Rural development and the Food Security Challenge. Rome: FAO; 2003.
24. Rivera WM, Qamar MK, Crowder LV. Agricultural and Rural Extension Worldwide: Options for Institutional Reform in the Developing Countries. Rome: FAO; 2001.
25. Roberts HA. Recommended Competencies needed for Teaching in International Agricultural Extension Settings. Journal of International Agricultural Extension Education. 2011;18(3):71-82.
26. Shepherd A. Sustainable Rural Development. London: Macmillan Press Ltd; 1998.
27. Staats J, Dembele N. Agriculture for Development in Sub-Saharan Africa. Michigan State University: Background Paper for World Development Report; 2008.
28. Tafah EE, Asondoh RT. Partnership mix in Assisting Local Communities to Reach Sustainable Development in Cameroon. International Journal of Public-Private Partnerships. 2000;2(3):463-475.

29. Vespoor A. Pathways to Change. Improving the quality of Education in Developing Countries. Washington DC: World Bank Discussion paper N° 53; 1989.
30. World Bank. Cultivating Knowledge and Skills to Grow African Agriculture. Washington DC: World Bank; 2007a.
31. World Bank. Enhancing Agricultural Innovation: How to go beyond the strengthening of Research Systems. Washington DC: World Bank; 2006.
32. Zarraga JC, Green GD. Skills Training Programme with Particular Reference to Rural Youth. In: FAO. Training for Agriculture and Rural Development. Rome: FAO; 1985.
33. Wessel T, Marilyn A. 4 H: An American Idea, 1900-1980: A History of 4 H. Chevy Chase: National 4 H Council; 1982.
34. Weitz R. Integrated Rural Development: The Rehovot Approach. Publications on Problems of Regional Development N° 28. Rehovot: Settlement Study Centre; 1979.

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