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# Innovative Agricultural Extension for Women

## A Case Study in Cameroon

S. Tjip Walker

In Cameroon's poor Northwest Province, agricultural extension was extended to women for practical, not ideological, reasons — in a sustainable, replicable experiment that increased production and women's income.

This paper — a product of the Women in Development Division, Population and Human Resources Department — is part of a larger effort in PRE to document cost-effective ways of raising the productivity of women farmers in Africa. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Mila Villar, room S9-133, extension 33752 (53 pages with tables).

Women are responsible for 70 percent of staple food production in Africa, but agricultural extension is still geared to men. The North-West Development Project in Cameroon demonstrates that this scenario of neglect is avoidable.

The project design team that set out to improve agriculture in Cameroon's poor North-west Province did not extend extension and credit to women for ideological reasons. Food crops were a primary concern, and women were growing them.

Despite stiff academic requirements, the ratio of female extension workers increased to 18 percent for workers and 14 percent for supervisors. Before the project, the few female workers had been restricted to home economics and kitchen gardens. After three months of intensive training, female agents did as well as men.

The project worked more through contact groups than contact farmers. The advantages: cost-effectiveness, the benefits of group dynamics, and the shared use of expensive equipment.

And groups allow socially acceptable contacts with male agents, a supportive environment, a chance to develop leadership and management skills, and the use of more effective communication methods.

Maize credit was given to producer groups whose membership is 90 percent female. The members have collective liability for the loans and achieved virtually 100 percent repayment each year.

The short-term strategy of "gender targeting" was often used. Groups were initially contacted by same-gender extension agents. Once trust and credibility were established and farmers knew the system, the same-gender agent could turn an area over to an agent of the other gender.

These and other techniques used in Cameroon are widely replicable, providing three principals are observed: focusing on small farmers, redressing male biases, and recognizing women's roles.

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## FOREWORD

This paper is the author's second examination of the extension service in Cameroon's North West Province and its unusual success in reaching the province's women farmers. The first study, Making Extension Work With Women: The Efforts of MIDENO in Cameroon, was commissioned by the Equity Policy Center and was based on data collected in September 1986. That report described the initiatives of the "Mission de Developpement de la Province du Nord-Ouest" (MIDENO) to improve the extension service and the success these initiatives were having in reaching women.

The report came to the attention of the staff of the World Bank's Women in Development Division early in 1988. The division felt that while MIDENO's efforts clearly exemplified innovative programming for women in agricultural extension, a broader and more up-to-date case study would be of greater value. As a result, the author was contracted, through the International Development Management Center (IDMC) of the University of Maryland, to prepare an expanded and more current description of MIDENO's interventions and its ability to deliver services to women farmers. The UNDP - Regional Program for Africa financed this work, which forms an integral part of ongoing research: Raising the Productivity of Women Farmers in Africa being managed by PHRWD and funded by the UNDP Regional Program. This report is the result.

The field work for this report was conducted in August 1988 and included interviews with staff of: the Ministry of Agriculture at the national, provincial and local levels; MIDENO and its executing agencies; donors; and others involved in agricultural development in Cameroon. Discussions were also held with three women's farming groups and numerous other individual farmers. Raw data were also collected from MIDENO, the Provincial Delegation of Agriculture, and the FONADER agency in Bamenda. These data serve as the basis for the tables and analysis in Chapter II. It should be noted that all of the information and data presented in this paper was current as of August 1988. However, given the fluid environment that presently prevails in Cameroon, the situation is certain to have changed.

The author would like to thank Katrine Saito of the Women in Development Division for her able management of the entire consultancy and the staff of IDMC for their tireless support. In Cameroon, the fieldwork was made so much easier because of the assistance of the staff of MIDENO and the North West Provincial Delegation of Agriculture, particularly Samuel Mbonchom, Chief of Service for Extension and Training and Jonathan Tame, Technical Coordinator of MIDENO's Planning, Evaluation, and Monitoring Division.

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## EXECUTIVE SUMMARY

Agricultural extension has not been particularly kind to Africa's women farmers. Despite the critically important role of women in African agriculture - they are responsible for at least 70 percent of food staple production, and are also significantly involved in other agricultural activities - agricultural extension services have been geared towards male farmers. Women are under-represented within extension services and, compared to male farmers or farming couples, women farmers receive far less attention from extension services and consequently benefit much less from improved farming techniques. After five years of innovative programming to reach women farmers, the North West Development Project in Cameroon demonstrates that this scenario of neglect is avoidable.

The North West Province, with an average precipitation of 2250 millimeters and a 2500 meter altitude range, has many cropping systems. In the mid 1970's, an integrated, large scale agricultural development project was conceived for the province which, despite its agricultural potential, was one of the poorest areas in the country. The design was changed several times before it was finalized in 1983, the first year of activity. MIDENO (Mission de Developpement de la Province du Nord-Quest) was established as the coordinating agency responsible for general management, financial control, and planning, monitoring and evaluation. Existing organizations were given responsibility for implementing the six components: adaptive research; agricultural extension and training; agricultural credit; agricultural input supply; village water supply; and roads. An animal traction program was incorporated later.

The original design retained the pre-project bifurcated extension service with separate organizations responsible for coffee and food crops. A result of the collapse of the coffee extension organization at the beginning of the project was the creation of a single integrated extension service.

The project design team had access to various studies on rural women in Cameroon and, although women farmers were not specifically mentioned in the goals, they figured predominantly in the extension and credit aspects of the project design. In particular, the use of female extension agents was emphasized and innovative modifications were introduced to the extension strategy of the T and V model. The approach used was not ideological but technical and based on efficiency criteria: food crops were a major concern of the project and women were the major growers of food crops. In contrast, the strategies used by the animal traction component to target women were not identified initially but evolved gradually.

### Recruitment and training of female field staff

The project called for a more than doubling of field staff and an informal target was set of hiring equal numbers of males and females. With female recruitment of 25 percent, the gender target was not achieved, but by 1988, females accounted for 18 percent of Village Extension Workers (VEWs) and 14 percent of Extension Supervisors (the two grades under MIDENO control). The results are remarkable given the pre-project ratios and fairly stiff academic requirements, and compare favorably with the situation in other African extension services.

Before the project, the few female agents employed by the Ministry of Agriculture had been restricted to home economics and kitchen gardens. Under the project, all recruits and existing VEWs, male and female, were given the same three-month intensive training program covering basic agriculture, cash and food crop production, extension methods, and also rural sociology and farming systems. To ensure effective communication and an understanding of local customs and institutions, VEWs were posted to their own tribal areas.

A 1987 review of VEW performance showed no significant differences between the men and women agents for the five characteristics assessed: conscientiousness, timeliness, technical knowledge, relationship with farmers, and creativity.

#### The use of contact groups instead of contact farmers

In North West Province, nearly everyone participates in formal or informal groups, and the involvement of women is especially prominent. Continuing the pattern of previous development efforts, the project used these groups as the basis for both extension and maize credit activities. Advantages for extension are cost-effectiveness, the benefits of group dynamics, and the shared use of expensive equipment. Additionally for women, groups provide socially acceptable contacts with male agents, a supportive environment, an opportunity to develop leadership and management skills, and the use of more effective and persuasive communication methods. Recognition of the need for individuals to benefit from membership contributed greatly to the success of MIDENO's groups. Agricultural credibility was enhanced by the selection of agriculturally able "contact farmers", of whom half were women, to act as good examples and to provide demonstration fields, and by identifying "leader farmers" from the traditional or administrative elite to organize meetings and campaigns.

While coffee loans are made to individual farmers, credit for maize is given to groups whose members have collective liability. Small maize farmers are targeted by a maximum 2 hectare farm eligibility and by providing packages in 1/2 hectare units. In practice, women being the main maize producers and comprising over 90 percent of group membership, are the major beneficiaries. Maize credit has proved popular and successful: the number of credit groups rose from 23 in 1985 to 363 in 1988, and the maize packages issued increased from 728 to over 5000 in the same period. Repayment was virtually 100 percent every year. Initially the credit was single season and in-kind, but in 1987 the scheme was expanded to include a little cash for hiring labor, and multi-year credit lines for group potato storage and group managed maize mills were introduced.

#### Gender targeting

A short-term strategy, "gender targeting", was introduced both to redress some of the problems encountered when VEWs work with farmers of the opposite gender and also to increase the effectiveness of the limited numbers of female agents. The T and V system of VEWs in distinct geographic work areas was modified so that groups were contacted initially by extension agents of the same gender. Once farmers' trust had been earned, the credibility of the advice established, and farmers were familiar with the system, then geographic areas

were demarcated and groups introduced by their same gender agent to the agent taking over the area. After this temporary measure, both male and female agents are able to work with any group.

Experience showed that gender targeting was unnecessary where group cohesion was already strong and where groups, particularly women's groups, had been the focus of previous community or cooperative development efforts. With new or poorly cohesive groups, a preliminary "pre-extension" phase concentrating on group rationale, dynamics and process was a required first step.

#### The use of monitoring and evaluation in modifying approaches

The PAFSAT (Promotion of an Adapted Farming System based on Animal Traction) component illustrates the effect of monitoring and evaluation on the evolution of an intervention. Initially, the program selected and trained only male farmers. After evaluation, training was redirected to farming couples and a separate women's program that focused exclusively on uniquely women's activities (kitchen gardens and cooking) was created. A subsequent evaluation encouraged the program to retain the special program targeting women but to integrate women more fully into core activities. As a result, groups are being used as a means of introducing women to the unfamiliar technology of animal traction; farming couples are defined as any two members of the same household regardless of gender; the length of the residential training has been shortened; and the women's program has been expanded to include trouble shooting and monitoring and evaluation, and to provide specialized training and encouragement to women's groups.

Thus the program has evolved from neglecting women, through segregated activities to a hybrid which is largely integrated but retains a specialized women's focus.

#### The success in reaching women farmers

MIDENO's innovative strategies have benefited women farmers. A 1987 survey of 402 men and 148 women farmers revealed that all could correctly identify the name of their VEW. For every food crop-related indicator, a higher percentage of women than men had received advice. For maize, advice had been received by 92 percent of women farmers, of whom 99 percent had adopted and 92 percent of adopters had increased yields. Recent estimates show that full-adopters attain a marginal increase of 1.5 tons/hectare, or an increased income of about F CFA 70,000 (US\$ 233) per hectare, throughout the province. Coinciding with this increased efficiency in reaching women farmers have been improved road access to markets and a decline in coffee and cocoa prices. The increased production and expanding commercialization of food crops, which now provide more cash income than traditional cash crops, has increased women's income.

Literature on women farmers consistently recommends that extension focus simultaneously on small farmers, on redressing male orientation and on recognizing the roles that women play in society that may affect their response to particularly strategies or packages. Adherence to these principals explains the success of MIDENO's strategies. MIDENO's task was simplified by a good knowledge of the agricultural and social environment and an explicit targeting



of women farmers.

### Sustainability and replicability

The sustainability of these benefits to women farmers depends on several factors. The innovations in extension strategy--working with groups and gender targeting--and the trouble-shooting practiced by PAFSAT have minimal cost implications, but do require a certain number of female agents. If, as presently seems likely, the project-employed extension staff including most of the female agents are made redundant, the long-term implications are not clear. The traditional divisions by gender of crops, labor, responsibilities and control of income still largely pertain in north west Cameroon, and consequently women are entitled to keep the income from sales of surplus food crops. The effect on women of any future changes in these roles is unknown.

Important for both male and female farmers is the utility of the extension message and the means to implement the recommendations. There is growing farmer discontent that the maize recommendations have changed little since the start of the project. If the in-kind credit program finishes, an input supply will be needed. While farm incomes have been raised in the short-term, the long-term negative implications for soil fertility and erosion, and hence agricultural output, are significant.

The conditions under which the project was conducted (wide agricultural and tribal diversity, agricultural and sociological constraints, divisions of labor, etc.) are similar to those found elsewhere in Africa. While the specific innovations to target women farmers are likely, with local modifications, to be widely replicable, more important is adherence to the three principals of focusing on small farmers, redressing male bias and recognizing women's roles.

Introduction: THE NEED FOR INNOVATIVE PROGRAMMING TO REACH WOMEN FARMERS THROUGH EXTENSION

1. Agricultural extension has not been particularly kind to Africa's women farmers. On a continent where women produce 90 percent of the food (FAO, 1983a) and 60 percent of total agricultural output (US Department of Commerce/USAID, 1984), insensitivity and neglect by extension services is the norm. As one indicator, women are negligibly represented within extension services.<sup>1</sup> A survey of extension services worldwide revealed that in 10 African countries where data were available, only 2.6 percent of the extension staff overall were women, and in no African country did women represent more than 9 percent of the staff (Swanson and Rassi, 1981).

2. More importantly, numerous case studies have pointed out "the gender gap" that exists in the provision of extension services to women farmers. Compared to male farmers or farming couples, women farmers receive far less attention from extension services and consequently benefit much less from improved farming techniques. This is true even when it is widely recognized that women contribute significantly to agricultural production in the area.<sup>2</sup>

3. A study of extension activities in western Kenya is representative (Staudt, 1982). It showed that farms managed jointly by a farming couple received at least one visit in 75 percent of the cases, yet women-managed farms were visited in only 50 percent of the cases. This discrepancy remains even when controlling such factors as farm size, wealth, or willingness to adopt new practices. A study of the Tanga region of Tanzania produced similar results (Due, Mollel, and Malone, 1987). Jointly-managed farms were four times more likely than female-managed farms to receive at least one extension visit with the consequence that jointly-managed farms were more likely to adopt improved practices that resulted in almost doubling their yields of maize.

4. Finally, in Cameroon itself, a study in the South West Province (Almy and others, 1988) revealed that extension workers were better known to male-headed farming households. When asked for the name and post of the local extension agent, every male heading a household could accurately give the name compared to 42 percent of the women farmers heading households. The likely reason is again frequency of visits. Half the male- and jointly-managed farms had received an extension visit; only 18 percent of the women-managed farms had seen an extension agent.

5. Compare these rather bleak results with those from Cameroon's North West province where, for the last five years, the Mission de Developpement de

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<sup>1</sup> There is an ongoing debate about the relationship between women's representation in the extension service and success in reaching farmers. A few (Knudson and Yates, 1981) seem to argue that women in the extension service is both a necessary and sufficient condition for reaching women farmers. The majority view (Ashby, 1981; FAO, 1983b; Berger, Delancey and Mellencamp, 1984; Weideman, 1987) is that women in the extension service is necessary but not sufficient to ensure extension service reach women. Other, more recent studies (Spring, 1986), argue that women in the extension may not even be necessary to reach women farmers. Thus, with the exception of the third perspective, women's representation in the extension service is an indicator of attention to and concern for women farmers.

<sup>2</sup> This is the conclusion of Berger, Delancey and Mellencamp (1984) who base their opinion on the basis of 12 case studies of extension programs in 7 Sub-Saharan African countries.

la Province du Nord-Ouest (MIDENO) has been implementing a project to improve agricultural production in the province.<sup>3</sup> In terms of agricultural extension, the project has hired almost 200 new extension agents, one-fourth of whom are women. The overall representation of women in the extension service is now 18.3 percent, among the highest among developing countries.<sup>4</sup>

6. A recent survey of the effectiveness of the extension service found that all farmer respondents, both male and female, were able to correctly name the local extension agent and his or her post. All respondents had received visits from the extension agent, with a higher percentage of women than men receiving advice on food crop farming techniques, adopting improved techniques and benefiting from increased yields. An earlier survey showed that women were twice as likely as men to be full-adopters of recommended practices for maize and that full-adopters received a 90 percent increase in maize yields.

7. The stark contrast in results is reason enough why MIDENO's activities deserve attention as an example of innovative programming for women in the extension domain. However, there are two other reasons as well. First, MIDENO may be unusual, but it need not be unique. This is because the setting in which MIDENO's efforts took place was similar to those found elsewhere, not only in Cameroon, but in much of Sub-Saharan Africa. The agricultural setting of the North West Province may be more diverse and have greater agricultural potential than that found elsewhere, but at the same time farming systems, constraints, and division of labor is similar to the predominant pattern in Africa. Similarly the policy setting in the agricultural sector in which MIDENO operated created problems and potentials found frequently in Africa. As a result, even though the MIDENO experience is a single case, it would appear to have wide applicability within the continent.

8. The second additional reason MIDENO deserves attention is that by virtue of being an integrated development effort, it coordinated several development activities in agriculture. These activities differed in their approach to women and in their success in reaching women farmers. By looking at the various experiences comparatively, it is possible to develop insights into the reasons MIDENO is innovative and successful in reaching women with greater precision and confidence.

9. The paper is organized into three chapters. Chapter I deals with both the agricultural and the policy setting in which MIDENO was designed and implemented. The major aim of the chapter is to make the case that the factors impinging on MIDENO's development efforts are not significantly different than those that might confront agricultural development initiatives elsewhere in Africa.

10. Chapter II is devoted to the MIDENO case. The emphasis is on describing the steps that MIDENO took to upgrade the extension service and the

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<sup>3</sup> The following results are presented fully and documented completely in Section IV.

<sup>4</sup> In Swanson and Rasse's (1981) survey, only two developing countries, Thailand and the Philippines, had a higher percentage of women in agricultural extension programs.

results that were obtained, particularly with respect to delivering extension services to women farmers. However, to provide additional context, the chapter also summarizes the project's implementation history and briefly notes the other development activities sponsored by MIDENO in the agriculture sector.

11. Having examined MIDENO's initiatives in the agricultural sector in detail in Chapter II, Chapter III attempts to generalize from the MIDENO case. This is done in two steps. First, the lessons for reaching women farmers are distilled. Then these lessons are re-examined to determine the extent to which the MIDENO's experience and success can be sustained and replicated.

## CHAPTER I: THE SETTING

### (1) THE AGRICULTURAL SETTING

#### The National Context

1.01 Cameroon is often referred to as "Africa in Miniature" because almost all of the ecological zones found on the continent are also found within the country. These range from the forest zones in the east and southern part of the country to the cool, damp highlands of the west to the savannah and semi-arid sahelian region in the north.

1.02 This ecological diversity supports most of the foodcrop farming systems found in Africa: a cassava, yam and plantain based system in the forested zones, a maize, beans, and cocoyam based system in the western highlands, and a millet sorghum, and groundnut system in the northern zones. The diverse climate and topology also permits the production of a wide range of cash crops. Cocoa and robusta coffee in the low-lying forest zones, arabica coffee in the highlands, and cotton in the north are grown primarily by small holders. Rice is grown in various parts of the country both by small holders and in commercial schemes. Palm oil, rubber, and sugar are grown in commercial estates.

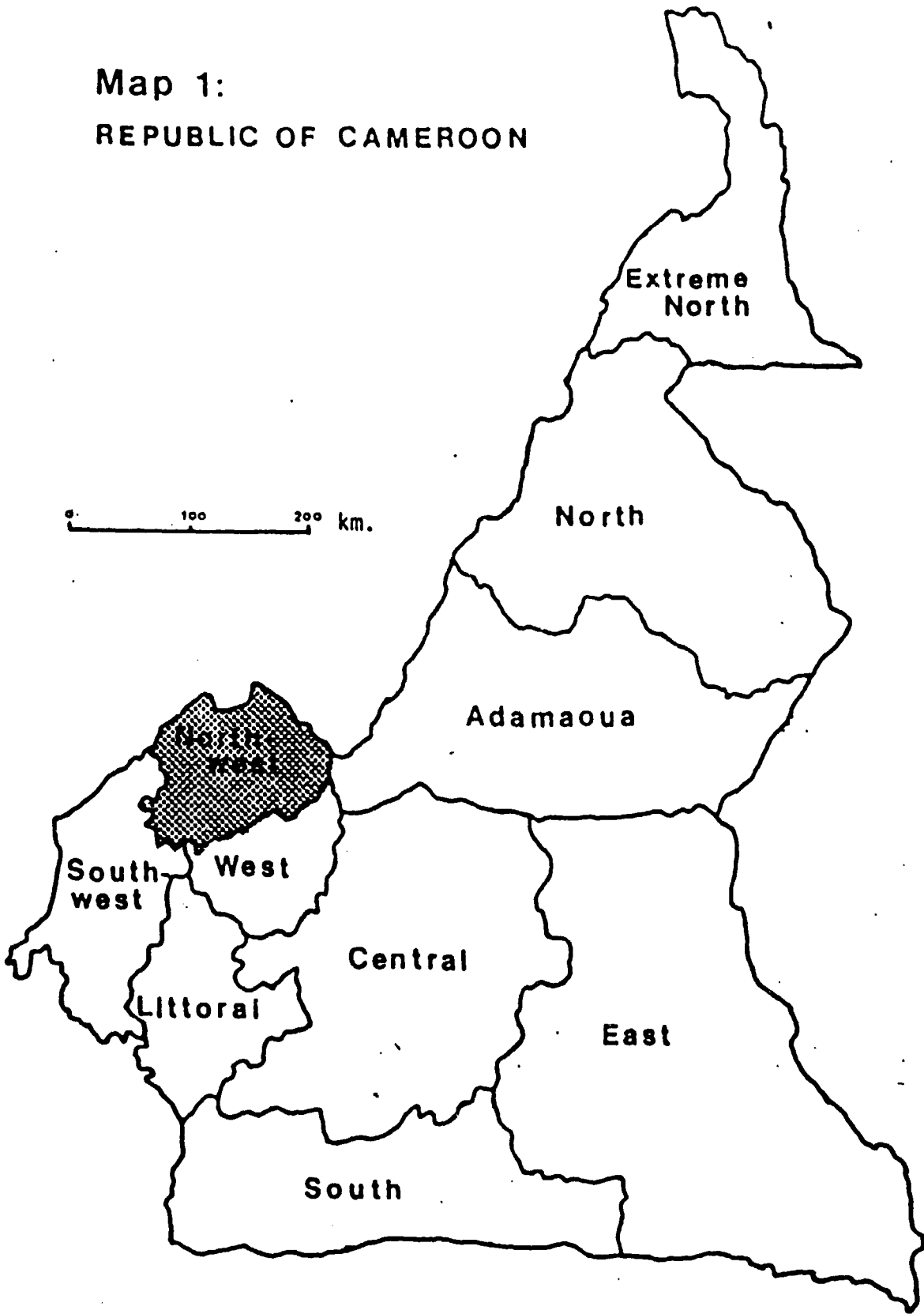
1.03 Although Cameroon has benefitted from commercial oil production over the last decade, the underlying economy remains, like that of the majority in Africa, agricultural. The agricultural sector supplies essentially all of domestic food needs, provides employment for approximately 75 percent of the population, and generates about one-fifth of state revenues.

1.04 Production trends in Cameroon have mirrored those elsewhere on the continent. Until the early 1980s agricultural sector growth had exceeded both the population growth rate and the growth of the entire Cameroonian economy. Since then, production has stagnated, falling behind population growth rates. This stagnation is principally the result of deteriorating world prices for Cameroon's major agricultural exports: coffee and cocoa. Nevertheless, it is estimated that per capita food production has declined from a peak in the mid-1970s.

#### The Provincial Context

1.05 If Cameroon can be called "Africa in Miniature", then the North West Province deserves the label "Cameroon in Miniature" because the ecological and agricultural diversity found within Cameroon can almost all be found within the province. This is all the more remarkable given that the North West Province is the second smallest of the country's ten provinces, comprising only 4 percent of the national territory (see Map 1). The province is made up of five divisions -- Bui, Donga-Mantung, Menchum, Mezam, and Momo -- and its provincial capital is the rapidly growing city of Bamenda. The North West Province, along with the South West Province, make up the anglophone portion of Cameroon.

Map 1:  
REPUBLIC OF CAMEROON



### Cropping Patterns

1.06 The province's agricultural diversity is the product of sufficient rainfall and a varied topography. An average of 2250 millimeters of rain falls on the province during the seven month rainy season from mid-March to mid-October. Combined with topography that varies over 2500 meters in elevation, ranging from tropically forested valleys, through transitional plateaus, to highland savannah over a mile high, the province contains climates suitable for supporting most of the cropping systems found elsewhere in the country (IRA, 1982).

1.07 Typical forest zone crops are grown in the low-lying area. Roots and tubers -- including cassava, cocoyam (*xanthosoma* and *colocasia*), and yams -- are the dominant food crops, although these are often intercropped with maize. Robusta coffee, and to a lesser extent, cocoa and oil palm, are the cash crops.

1.08 In the middle elevations maize-based agriculture is practiced. It is almost always intercropped with some combination of beans, groundnuts, roots, tubers, or gourds. At this altitude it is warm enough to permit two cycles of maize production per year.

1.09 In the higher elevations only one cycle of maize is possible, again intercropped with some combination of beans, groundnuts, roots, tubers, or gourds. However, the cool climate permits the inclusion of Irish (*solanum*) potatoes in the cropping mix. In all but the highest elevations bananas, plantains, citrus fruit, and avocado pears are grown to supplement the diet.

1.10 Arabica coffee is the dominant cash crop at the middle and higher altitudes. Introduced into the province in the 1950s, it is now estimated that every farming household grows at least some coffee (MIDENO, 1984b). The province also supports small-holder rice production (both irrigated and rainfed) on several mid-altitude plateaus.

1.11 One indication of the agro-ecological diversity of the province is to compare the province's production of major crops with national production. As Table 1 shows, the North West Province is the nation's leading producer of highland foodcrops (maize, beans, and Irish potatoes); indeed three of the top five maize producing divisions are located in the North West Province. More importantly, the province is also a major producer of such forest zone crops as sugar cane, plantains, and oil palm.

1.12 The diversity of cropping systems and the favorable growing conditions provides the province with a strong agricultural economy and makes it a logical target of development activities (see Table 2 for summary statistics). However, at the same time the province's diversity also complicates any effort to improve agricultural production. Given the range of crops grown and the local variations in cropping mixes, it is impossible to offer a single recommended agricultural package or to present a uniform extension message. Moreover, given the variety of tribal groupings found within the province, any extension message must be conveyed in a language and through institutions

appropriate to each tribe.<sup>1</sup>

Table 1: Comparison of North West Provincial Production with National Production of Selected Crops

Crop	Total	Total Provincial/Divisional		
	National (tons)	(tons)	(percent)	(rank)
<b>EXPORT CROP PRODUCTION</b>				
Arabica Coffee	35,400	16,160	45.6	2
Robusta Coffee	118,830	4,870	4.1	7
<b>FOOD CROP PRODUCTION</b>				
Maize	408,740	168,990	41.3	1
Bui Division		50,100	12.3	2
Donga-Mantung Division		27,370	6.7	5
Menchum Division		15,530	3.8	10
Mezam Division		73,090	17.9	1
Momo Division		2,900	0.7	NA
Cassava	1,385,300	109,500	7.9	5
Cocoyams/Taro	191,800	39,860	20.8	3
Yams	109,420	19,780	18.1	2
Irish Potatoes	41,980	25,760	61.4	1
Beans	54,460	21,980	40.4	1
Groundnuts	99,180	11,730	11.8	4
Sugar Cane	122,810	33,000	26.9	2
Plantains	1,001,600	158,900	15.9	3
Bananas	701,900	128,300	18.3	3

Source: 1984 Agricultural Census

### Labor Patterns

1.13 If the province exhibits many of the farming systems found in the rest of Cameroon and in the rest of Africa, it also exhibits the dominant agricultural labor patterns, including a fairly rigid division of agricultural labor between men and women. Women in the North West Province are solely responsible for the planting, weeding, and harvesting of the food crops. Men concern themselves with the cash crops. One agricultural survey (IRA, 1982)

<sup>1</sup> Although the majority of the tribes in the province share a common ancestry and are collectively known as the Tikar people, these tribes no longer speak the same language, observe the same customs, or organize themselves in exactly the same manner. Also inhabiting the province are three other major groups that are not Tikar. Two of these--the Bali and Widikum tribes--are semi-Bantu people like the Tikar. The third group is the Nilotic Fulani whose pastoral, migratory culture is markedly different from the agricultural, sedentary life of the other tribes. The major ethnography of the Tikar is Kaberry (1952); see also McCulloch, Littlewood, and Dugast (1954). Bryson (1979) provides a useful summary.



reports that women perform 72 percent of the land preparation, 48 percent of the planting, 70 percent of the weeding, and 63 percent of the harvesting. A more recent detailed study in the Ndop Plain region produced similar results.<sup>2</sup> In coffee growing areas this means that men have a traditional responsibility for whatever pruning or weeding is done annually and for picking and fermenting the ripe coffee berries.

Table 2: Agricultural Sector in the North West Province. Summary Statistics

	National Total	NW Province						
		Total	Pct.	Bui	Donga-Mantung	Menchum	Mesam	Momo
<b>HOUSEHOLDS</b>								
Farm	1,153,500	131,800	11.4	28,700	25,000	20,300	40,500	17,300
Non-farm	530,200	21,900	4.1					
<b>Total</b>	<b>1,685,700</b>	<b>153,700</b>	<b>9.1</b>					
<b>POPULATION</b>								
Farm	6,622,000	953,000	14.4					
Non-farm	2,376,000	86,000	3.6					
<b>Total</b>	<b>8,998,000</b>	<b>1,039,000</b>	<b>11.5</b>					
<b>AVERAGE HOUSEHOLD SIZE</b>								
Farm	5.7	7.2						
Non-farm	4.5	3.9						
<b>Total</b>	<b>5.3</b>	<b>6.8</b>						
<b>CROP FARMS</b>								
Total Number	1,130,200	131,200	11.6	28,700	25,000	20,100	40,100	17,300
-Growing Coffee		95,700		24,100	16,500	13,800	31,200	11,100
-percent of Total Farms		72.9		84.0	66.0	68.7	77.8	64.
-Growing Foodcrops		130,600		28,200	25,000	20,000	40,100	17,300
-percent of Total Farms		99.5		98.3	100.0	99.5	100.0	100.
Area (hectares)		1.75		1.90	1.29	1.50	2.30	1.1
-Devoted to Coffee		0.39		0.37	0.27	0.36	0.52	0.31
-Devoted to Foodcrops		1.36		1.53	1.02	1.14	1.78	0.85
Percentage Selling Produce*		95.0		96.5	95.2	95.1	94.3	93.
Gross Income from Sales (F CFA)		192,867		139,709	191,055	142,960	291,956	114,23

Source: 1984 Agricultural Census

Note: \* Includes both cash and food crops.

1.14 Traditionally men also cleared new farm land, whether for food or cash crops. However, with increased land pressure, there is very little land left to be cleared so women are increasingly left to do any land preparation for food crop plots by themselves. At the same time, women, and indeed the entire household, are called upon to assist with the coffee harvest. Men have also encouraged women to grow food crops -- such as cocoyams, groundnuts, and even maize -- within stands of coffee so that any weeding the women do on the food crops will benefit the coffee as well.

1.15 Despite women's considerable contribution to cash crop production, men retain complete control over any income realized from the sale of coffee or

<sup>2</sup> Other descriptions of the division of labor can be found in Bryson (1979; 1980), Eyben (1982), and MIDEMO (1984a).

cocoa. Women are, however, entitled to keep any income derived from the sale of surplus food production (Eyben, 1982).

### A Dynamic Environment

1.16 However, these traditional distinctions between cash crops and foodcrops and between men's work and women's work are beginning to unravel due, principally, to the growing commercialization of foodcrops. With improved access to urban markets both within and outside the province, potatoes, maize, and other crops, have ceased to be solely subsistence crops and have become "near cash crops".<sup>3</sup> As Table 3 shows, the majority of sugar cane, cassava and potatoes is grown for sale rather than consumption and maize is a significant income generator for those with sales. Indeed, the census data indicates that foodcrops now provide more cash income than do the traditional cash crops.

1.17 Women have responded to this opportunity for increased incomes by increasing production of foodcrops. For the most part this increased production has been achieved through increasing the land under cultivation either by establishing new farms on more marginal lands or shortening the fallow periods on existing plots.

Table 3: Commercialization of Crops in the North West Province

Crop	Percentage of Farms with Sales	Percentage of Total Production Sold	Average Value of Sales per Farm with Sales (F CFA)
<b>EXPORT CROP PRODUCTION</b>			
Arabica Coffee	100.0	100.0	57,000
Robusta Coffee	100.0	100.0	68,000
Total Export Crops	100.0		63,000
<b>FOOD CROP PRODUCTION</b>			
Maize	43.6	21.4	60,100
Bui Division	37.5	27.0	121,400
Donga-Mantung Division	50.0	29.6	60,900
Menchum Division	41.0	9.8	17,400
Mesam Division	46.7	17.0	62,200
Momo Division	40.0	18.6	7,200
Cassava	50.8	55.8	73,000
Cocoyams/Taro	34.9	25.0	11,900
Yams	46.6	34.9	9,300
Irish Potatoes	51.2	54.9	28,600
Beans	58.6	48.3	17,500
Groundnuts	49.9	41.9	16,500
Sugar Cane	53.3	72.6	36,000
Plantains	61.3	48.9	57,000
Bananas	57.6	41.2	31,000
Total Foodcrops	88.5		159,000

Source: 1984 Agricultural Census

<sup>3</sup> The term "near cash crop" has been coined by the extension service to describe those crops that are in a transitional state between production solely for consumption and production primarily for the market. That maize belongs to this category is evident from the fact that number of households marketing at least some of their maize production has increased from 44 percent in 1972 to 66 percent in 1984 (MIDENO, 1984a). However, the fact that individual households on average only market 15 percent of their maize crop indicates that commercialization is still in its early stages (Wertime, 1987).

1.18 This increased commercialization and the increased population have combined to exert extreme pressure on land. Thus while farm incomes may be raised in the short-term, the long-term negative implications for soil fertility and erosion, and hence agricultural output, are significant.

1.19 At the same time that foodcrop profitability and production has increased, traditional cash crops, particularly arabica coffee have been headed in the other direction. Coffee prices have declined steadily in real terms over the past decade. Despite the desires of the government to stabilize coffee production, farmers now have other options and are consequently neglecting or abandoning coffee farms. As a result production has decline in the North West Province from an average of over 10,000 tons in the late 1970s to less than 5,000 tons.

1.20 For the most part, male farmers have observed this trend toward increased commercialization of foodcrops, but have not deviated from their traditional roles. However, it is an important and open question as to how men might respond if this commercialization continues. Will they continue to do nothing as they watch their wives' incomes rise ever as their income from coffee falls? Will men simply demand a share of this new revenue from the land that tradition says belongs to them?<sup>4</sup> Or will men begin to displace women as producers of the near cash crops? If so, what will be the impact on women?

1.21 The agricultural setting provides opportunities for agricultural development in the province, but the diversity of the province's cropping patterns, the range of tribal groups, and the complexity of the underlying dynamics make realization of that potential a daunting challenge. But, by the same token, a program that succeeds in this setting would seem to be able to cope with the numerous challenges facing agricultural development elsewhere in Africa.

## (2) THE POLICY SETTING

1.22 The policy setting in Cameroon before and during the implementation of MIDENO's activities is similarly representative of the policy environments found in other African countries. Cameroon's agricultural policies begin with the realization that continued economic growth and continued food self-sufficiency are dependent on continued growth in the productivity of the agricultural sector. Despite this overarching truth being repeated in all the six Five-Year national development plans, there has been considerable fluctuation in the sectoral policies adopted to achieve this goal.

1.23 Indeed, since independence two distinct approaches have been adopted with high hopes of both donors and Cameroonian policy makers only to be discarded a few years later when gains in agricultural productivity failed to live up to expectations. Since 1980, Cameroon has adopted a third approach, but with the advent of the current economic crisis, the country appears to be on the verge of adopting yet a fourth approach.

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<sup>4</sup> Within all of the sedentary tribal groups in the province, all land is owned by the traditional chief. He grants use rights to lineages and families. These rights are inherited patrilineally with the male head of the household determining the cropping mix on the family's land (Bryson 1979; Eyben 1992).

1.24 The merits of the various approaches notwithstanding, a key point is that each successive approach builds on the remnants of its predecessors. Therefore to understand the policy environment surrounding MIDENO necessitates a brief history of Cameroon's agricultural policy since independence, with an emphasis on extension.

### Agricultural Policy Since Independence

#### Phase 1: Continuation of Colonial Patterns

1.25 From independence in 1960 until the merging of the two federal states of East and West Cameroon into a unified state in 1972, each state continued to follow the patterns of policy established by their respective colonial power. East Cameroon continued the French system of Secteurs de Modernisation (SEM). One SEM was located in each province and provided a range services, including extension, seed multiplication, and pest control to small-holders engaged in export crop production. The SEM extension network was quite extensive, with 1500 agents in the field, and was considered quite dynamic in the early- and mid-1960s (Falloux, 1983).

1.26 Historically in West Cameroon, the British had relied on either plantations and estates or crop-specific cooperatives for the production of export crops. Extension was principally provided through the cooperatives to its members. West Cameroon also continued the British emphasis on community development. With both cooperative and community development, the stress was on groups and on working together for the collective good. As a result, a major activity of cooperative and community development agents was to strengthen existing traditional groups or to create new ones.

1.27 Although the structure and orientation of agricultural extension activities differed in the two states, there was, nonetheless, an underlying similarity in philosophy. Small-holder agriculture was stressed and government intervention was modest and extension, research and the like were provided directly by civil servants. This changed dramatically in the second phase.

#### Phase 2: Proliferation of Parastatals

1.28 The dominant characteristic of the second phase was the reduction of the direct government role in agricultural activities and a transfer of these functions to an increasing number of parastatal entities. This process began in 1968, with the promulgation of a decree defining the scope of the new parastatal organizations. However it really moved into dominance in 1972. With the abolition of the SEMs and the organization of the national Ministry of Agriculture whose scope was narrower than either of the state secretariats that had preceded it. Responsibility for agricultural research and community development were transferred to other ministries, leaving the Ministry of Agriculture limited to the "definition, coordination, and evaluation of agriculture policy". Implementation or intervention was the now domain of the parastatals.

1.29 The rest of the decade saw a proliferation of agriculturally-related parastatals that differed in size, comprehensiveness, geographic scope, crop and economic orientation, and even as to the ministry to which they were responsible. Some parastatals were region-specific integrated development efforts that covered infrastructure, rural health, and other sectors, as well as agriculture; others were commercially oriented concerns which focused attention on a single export crop; and still others were organizations with a national mandate to improve specific agricultural services like credit, food crop marketing, agricultural machinery. However, whatever their implementation orientation, each parastatal established whatever research, extension, or field level services they deemed necessary.

### Phase 3: Push for Government-Led Integration

1.30 In preparation for the Fifth Five-Year Plan, MINAGRI commissioned a thorough internal review of its activities and Cameroonian agricultural policy more generally. The resulting Bilan Diagnostic provided a frank, but gloomy, assessment of the situation. In the extension area, the study concluded that:

- . The staff joining the extension service, particularly at the lowest levels, were receiving inadequate pre-service training;
- . The training that was being offered was too theoretic and did not apply to the issues and problems faced in the field;
- . In-service training was insufficient at all levels and often inappropriate;
- . There were few incentives for field work, even for extension agents, who lacked transportation and supervision. Consequently, there was almost no contact between the extension service and the farmers;
- . There was little contact with agricultural research or coordination with other rural development services;
- . There were regional imbalances in the ratios of extension agents to farmers.

Overall, the study noted overlapping jurisdiction between the government and parastatals often resulting in a duplication of services and concluded that MINAGRI was losing its ability to coordinate agricultural policy, much less intervene directly.

1.31 Since the release of the Bilan, there has been a resurgence of the government's role in agricultural affairs that continues to this day. The move to greater direct government supervision of extension activities has received the support of donors, particularly the World Bank, and more recently, FAO and USAID. In the early 1980s the World Bank funded several studies (Falloux, 1983; Bolinger and Nanko, 1985) intended to provide the foundation for a national extension project. These studies were supplemented by a national extension seminar held in December 1985 to gain input from the full range of those

concerned with extension. Shortly thereafter, the World Bank, joined by FAO and USAID, began design of the national extension project.

1.32 A preliminary design (FAO, 1987), completed in 1987, called for a five-year US\$ 19.1 million project concentrated at the national level and in four of the ten provinces. At the national level the emphasis was on improving the technical and managerial capacity of the central service, strengthening links with research institutes, and establishing coordination mechanisms with the parastatals in hopes of minimizing duplication of efforts. At the provincial level the main thrust was reorganizing the existing MINAGRI services according to the Training and Visit model. Funds were also to be provided to upgrade pre- and in-service training at all levels.

1.33 The design process for a comprehensive, national extension project has not progressed further to date. The main stumbling block has been the insistence, particularly by USAID, that the Government of the Republic of Cameroon (GRC) agree to some concrete measures to strengthen the position of MINAGRI so as to ensure the cooperation of the parastatals in implementing a coordinated national extension service. As a result, the World Bank has gone ahead on its own to fund a small, 18-month pilot project which is designed to introduce the Training and Visit (T & V) model in two departments in three provinces as test cases.

1.34 All of the various studies and reviews of Cameroon's extension service throughout the 1980s have been consistent in their diagnosis of the main problems confronting, in all cases offering a variation on the problems listed in the Bilan. There has also been consistency in the proposed steps to ameliorate the problems. Solutions have focused on reforms in the structure of the extension service: introducing the T and V model, providing greater funding for non-personnel operating costs, developing better links with research centers and parastatals, and so forth.

1.35 At the same time, there is consistently little mention of the strategy that the extension system should adopt to better assure that farmers in the traditional sector are reached. The silence about how the extension service will reach women farmers is particularly apparent given the important contribution of women to agricultural production noted in the previous section. An example is the two volume joint-FAO/World Bank/USAID national extension project design which devotes only a single paragraph to women (FAO, 1987: Annex 3: 12). Similarly, only two women farmers were invited to the National Extension Seminar out of total of 20 farmer representatives and not one recommendation emerging from the seminar dealt with women.

#### The Policy Setting and MIDENO

1.36 From 1980, when MIDENO was first designed, to the present, the prevailing policy setting has both supported and retarded MIDENO's efforts to improve extension in general and to reach women farmers in particular. On the positive side, MIDENO came about at the right time. It had been first conceived in the mid-1970s as a parastatal that provided services itself. By the time MIDENO was designed in the early 1980s, policy had moved into the third phase

and away from parastatal proliferation. By being designed and implemented when it was, MIDENO had more flexibility in the way it tackled the problems of extension in the North West Province. These will be discussed in Chapter II. Another positive aspect of the policy setting were the vestiges of the British colonial and West Cameroonian emphasis on groups which were to provide the foundation on which the extension service was rebuilt.

1.37           Less positively, MIDENO had to confront the powerful, and conflicting interests of major parastatals including the national produce marketing board. More significantly, there was nothing in the policy environment to support concerted efforts to reach women farmers. Given this less than supportive environment, it is all the more surprising that MIDENO was as successful as it was.

## CHAPTER II: MIDENO AND ITS INNOVATIONS IN AGRICULTURAL PROGRAMMING

2.01 This chapter presents a description of MIDENO and the development activities it has supported in three sections of increasing detail. The third, and longest, section in this chapter is devoted to an examination of MIDENO's efforts to revitalize the extension service of the North West province and the impact of those efforts on women. However, this discussion can only be fully appreciated in the context of the other activities that were part of MIDENO's integrated intervention into the province's agricultural system. Thus this chapter begins with a section that provides a general overview of MIDENO, from its inception to August 1988. The second section then provides brief descriptions of the four project components, other than extension, that focused on the agricultural sector. The experience of the activities in input supply, animal traction, credit, and adaptive research provide a basis for a richer and more complete understanding of MIDENO's innovations in extension.

### AN OVERVIEW OF MIDENO

#### Rationale and Design

2.02 The rationale for an agricultural development project in the North West Province is obvious when the significant agricultural potential of the region described in Chapter I is compared with investments in the province and the incomes of its inhabitants. As can be seen from Table 4, in 1980, when the MIDENO project was designed, the North West Province was contributing about one-seventh of Cameroon's production, but was receiving only one percent of government investment. As a result, the province, despite its potential, remained one of the poorest areas in the country.

Table 4: Comparison of Agricultural Production and Investment, 1980

Province*	Contribution to Total Agricultural Production (percent)	Governmental Investment (percent)	Per Capita Income (F CFA)	
			1961	1971
Center-South	19.6	40.0	40000	61000
East	5.6	11.0	20000	33700
Littoral	6.0	22.0	70000	92250
North	28.0	11.0	15000	18200
North West**	14.2	1.0	25000	25700
South West**	9.1	14.0	25000	25700
West	17.5	1.0	40000	45400
Total	100.0	100.0		

Source: GRC (1980) cited in Ntangsi (1987): table 3.2

Notes: \* There were only seven provinces in 1980.

\*\* Disaggregated income figures for North West and South West provinces are unavailable.



2.03 The Third Five-Year Plan (1976-1980) called for integrated agricultural development projects first in the West Province and then in the North West. The High Plateau Development Project was initiated in 1976 in the West Province with financing from the World Bank. That project, conforming to the prevailing patterns of the parastatal phase in Cameroon's agricultural policy, utilized the quasi-public coffee cooperative as the implementing agency.<sup>1</sup> Union Centrale des Cooperatives Agricoles de l'Ouest (UCCAO) was thus responsible for executing a wide range of rural development initiatives including agricultural extension, credit, input supply, and infrastructure development.

2.04 A similar design was initially envisioned in the North West Province built, in this case, around the North West Cooperative Association (NWCA), the apex organization of agricultural marketing cooperatives in the province and funded by a consortium of donors including the International Fund for Agricultural Development (IFAD), the European Development Fund (EDF), and the West German government. However, by the time the project was designed in early 1980, changes in prevailing policy and problems implementing the High Plateau Project in West Province had lowered enthusiasm for the parastatal approach. As a result, the project design/appraisal team was encouraged to identify a different organizational model and approach to project implementation.

2.05 The design team proposed a subtle, but significant, modification of the parastatal model. As with similar development activities a new government structure was created to oversee implementation: the Mission de Developpement de la Province du Nord-Ouest (MIDENO or, in English, the North West Development Authority). However, MIDENO was different. Where other project management units were charged with implementing project activities directly, MIDENO was restricted to coordination with existing organizations being given responsibility for implementation. Thus MIDENO itself was comprised of a general project management office headed by a project manager, a financial control unit, and a planning, evaluation and monitoring unit (PEM). The project management office was responsible for overall guidance, channelling of external funds, and ongoing monitoring and evaluation of project activities. Day-to-day implementation was left to "executing agencies".

2.06 Enthusiasm had not dimmed for other elements of the High Plateau Project, however. Thus the North West Development Project was designed by the donor team as a large-scale integrated intervention in rural development with particular emphasis on raising agricultural productivity.<sup>2</sup> The Project Appraisal Report (PAR) established five overall goals consistent with this mandate (IFAD, 1980):

- To raise farm family incomes;

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<sup>1</sup> Although UCCAO has been by far the most autonomous cooperative in Cameroon since independence, the degree of control reserved by the government over the cooperative makes it impossible to call any cooperative in Cameroon a truly private organization.

<sup>2</sup> The distinction between the project coordinating unit (MIDENO) and the major project it is implementing (the North West Development Project) is often overlooked. As a result, the project is often incorrectly described as "the MIDENO project". This paper attempts to maintain the proper distinctions.

- To improve income distribution;
- To increase food crop production;
- To improve communications and access to and from markets; and,
- To increase foreign exchange reserves by raising the level of coffee production.

2.07 Although the PAR contained no specific goals for reaching women, women figure prominently in the project design, particularly in the discussion of extension and credit activities. In developing the extension program, the design team had access to studies showing the prominent role women play in agriculture (Kayberry, 1952; Bryson, 1979). These data were supplemented by the results of a small socioeconomic survey conducted in conjunction with the project design. This survey revealed that 71 percent of the women farmers lived in polygamous marriages and when combined with labor data, the designers concluded that "women function as independent farming units" (IFAD, 1980, Annex 1: 13). The survey also found that a majority of young males (ages 17 to 34) were migrating from the rural areas.

2.08 Taking all of the available information together, the PAR concluded that "special attention should be given to the ways and means of providing extension to women farmers who currently play a major role in food crop production" (IFAD, 1980, Annex 3: 4) and "ways should also be found to include women as extension workers to ensure good contacts with women farmers" (IFAD, 1980, Annex 3: 5). Besides recognizing the importance of women as individual farmers, the PAR also took note of the role of informal women's groups, and specifically targeted these groups as recipients of food crop loans and incorporation into the extension program.

2.09 To accomplish these goals, the PAR called for interventions in agricultural extension, adaptive research, agricultural credit, input supply, infrastructure development including construction of storage facilities, rehabilitation of secondary roads, and support to self-help village water projects. The PAR also contained numerical targets in the key sectors, and using these projections as a base, the internal rate of return was estimated to be 11 percent after 30 years, principally from increased food production through the first ten years and from increased production and marketing of coffee thereafter. (IFAD, 1980: Annex 12, tables 2 and 6).

2.10 The project was to last five years and was estimated to cost US\$ 39.7 million, exclusive of US\$ 4.0 million of taxes and duties. Financing was to come from four sources: a loan from the International Fund for Agricultural Development (US\$ 12.0 million or 30.2 percent), a grant from the European Development Fund (US\$ 10.2 million or 25.7 percent), a grant from the German aid organization Kreditanstalt fur Wiederaufbau (US\$ 9.7 million or 24.4 percent), and a contribution from the Cameroonian Government (US\$ 7.8 million or 19.5 percent).

Delay and Redesign: Continuity and Change, 1980-1982

2.11 The IFAD loan was approved in September 1980 but project activities did not begin until November 1982. Several events occurring during this delay had a significant impact on the design and implementation of the project<sup>3</sup>. The principal event was the financial collapse of NWCA in 1981. The GRC through the Ministry of Agriculture responded by restructuring the cooperative. A team of consultants called in to assess the situation recommended that NWCA be limited to a much more modest role in project implementation, including removal from agricultural extension and credit activities.

2.12 NWCA's reduced role in the agricultural extension and credit components created spillover effects in other project components. In addition, other, less drastic events occurred that altered the initial design. As a result, once field activities began in earnest in mid-1983, there was not a single component of the PAR design that did not need to be re-examined and redesigned. Thus, a redesign exercise became the first order of business for the newly installed project management and technical assistance team.

2.13 Although the redesign (referred to as Plan MIDENO to distinguish it from Plan PAR), was wide-ranging and included organizational as well as strategic elements, it is important to point out there was little deviation from Plan PAR on the overarching aims or approach of the project. The five goals were retained as was the integrated approach, the large scale, and the general strategy that focussed on small farmers and on food as well as cash crops. Also retained was the innovative organizational design and the stress on reaching women farmers with agricultural services, particularly extension and credit.

2.14 Thus grounded in the goals and strategy of the earlier design, but taking into consideration the changed environment, Plan MIDENO included six components:

- . An Adaptive Research Component to identify improved strains of both cash and food crops and to recommend improved farm management methods that are consistent with the varied agricultural zones and farming practices found throughout the province. The executing agency for this component was a newly created Adaptive Research Service under the Provincial Delegation of Agriculture.
- . An Agricultural Extension and Training Component to train and equip an expanded agricultural extension service dealing with both cash and food crops and to implement a modified version of the Training and Visitation (T & V) system throughout the province. The executing agency is the Extension and Training Service under the Provincial Delegation of Agriculture.

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<sup>3</sup> Part of the delay was due to the need of each of the four funding sources to review and approve the design. Most of the delay, however, resulted from the GRC's slow compliance with the initial conditions precedent (MIDENO, 1987: 14).

- . An Agricultural Credit Component to provide specific loan packages to farmers, primarily to upgrade or expand coffee farms, but also for food crops. Execution of this component is shared between NWCA and FONADER (Fonds Nationaux de Developpement Rural, the rural credit agency). NWCA disburses and collects coffee loans through its member cooperatives, while FONADER approves all loans and manages the food crop loan portfolio.
- . An Agricultural Input Supply Component to expand the volume and range of agricultural inputs available in rural areas. This component consists of both significant infrastructure construction, to increase storage areas for inputs, as well as training and technical assistance to improve management. NWCA is the executing agency of the input supply component.
- . A Village Water Supply Component to provide technical and material support to village-based self-help water schemes. The Department of Community Development, under the Provincial Delegation of Agriculture, is the executing agency.
- . A Roads Component to rehabilitate 145 kilometers of roads in the province. The Department of Highways, under the Provincial Delegation of Equipment and Public Works, is the executing agency.

In addition, technical assistance was to be provided to NWCA to improve various aspects of its internal management. A listing of proposed and actual expenditures for each of the project components from the 1982/83 fiscal year through the 1986/87 fiscal year is presented in Table 5.

#### Implementation, 1983-1988

2.15 After the redesigns were approved by the GRC, implementation began in mid-1983 with the project scheduled to conclude in December 1987. The core agricultural components -- extension, adaptive research, and credit -- proceeded in a phased manner. That is, rather than attempt to launch all three inter-related activities simultaneously throughout the province, the various executing agencies focused on introducing their activities in a subdivision or two at a time.

2.16 A mid-term evaluation mission in November 1985 found overall progress quite satisfactory, and due to favorable exchange rates, determined that project activities could be extended for another year without incurring additional costs. Thus the project's completion date was moved to December 1988.

2.17 The next significant event in the project's history occurred in July 1986 when a new component was added to MIDENO's portfolio. Since the early 1980s, the German government (through GTZ) had been supporting a project to introduce animal traction in one subdivision of the province. In July 1986 the PAFSAT (Promotion of an Adapted Farming System based on Animal Traction) project was placed under MIDENO and its focus enlarged to cover the whole province.

2.18 Later in the year, a joint supervisory mission surprised the project management by deciding to phase-out five of the seven long-term expatriate

positions, well in advance of planned departures. Within four months, three advisors had left and within the year all were gone. This decision was extremely disrupting to the project. In some cases, unintended gaps in supervision occurred as expatriates left the project before senior Cameroonian staff away at advanced courses returned. In other cases, handing over of responsibility was rushed. And in the case of the PEM unit, two vacancies were created when the expatriate director left and his Cameroonian deputy was promoted. Almost two years later these posts still remain unfilled.

Table 3: MIDENO Planned and Actual Expenditures by Component, 1987

Component		1982/83	1983/84	1984/85	1985/86	1986/87	Total
		(----- million F CFA* -----)					1982-86
Extension and Adaptive Research	Planned	190.1	145.2	142.4	123.9	134.5	601.6
	Actual	37.7	369.4	419.1	693.1	NA	1513.3
Input Supply	Planned	242.5	155.0	252.8	330.8	160.2	1021.1
	Actual	2.6	88.2	183.3	152.6	NA	426.7
Agricultural Credit	Planned	2.4	28.0	81.8	169.0	299.8	281.2
	Actual	0.0	0.0	0.0	60.2	NA	60.2
Roads	Planned	204.4	212.3	271.5	421.7	415.0	1109.9
	Actual	0.0	0.0	0.0	0.0	NA	0.0
Village Water Supply	Planned	0.0	75.0	75.0	75.0	75.0	225.0
	Actual	0.0	60.8	27.3	48.5	NA	136.6
Cooperative Support	Planned	107.9	152.7	133.7	84.7	40.4	479.0
	Actual	88.0	152.7	152.5	60.6	NA	453.8
Training**	Planned	113.1	21.3	26.2	17.1	16.5	177.7
	Actual	1.9	50.7	44.0	56.1	NA	152.7
Project Management Office	Planned	73.5	65.0	65.0	73.5	65.0	277.0
	Actual	182.0	269.9	233.4	288.4	NA	973.7
Planning, Evaluation, and Monitoring	Planned	133.1	120.6	109.6	105.1	87.6	466.4
	Actual	23.9	112.6	100.2	128.4	NA	365.1
TOTAL	Planned	1067.0	1015.1	1158.0	1400.8	1294.0	4640.9
	Actual	336.1	1098.3	1159.8	1487.9	NA	4082.1

Source: MIDENO (1987b): Table 2

Notes: \* Given extreme exchange rate fluctuations, conversion into US dollars is not attempted.

\*\* The training component includes expenses for the extension, credit, and cooperative support components.

2.19 The last factor to influence the course of the project's implementation has been the deteriorating economic situation in the country since 1986. Because of lingering benefits of favorable exchange rates, MIDENO was relatively well insulated from the decline through 1987. In the last year, as reserves have been exhausted and government contributions drastically reduced, MIDENO has had to begin the hard task of deciding whether certain project activities should be scaled back. Coming as it does at the end of the project's life, the range of economizing measures open to the project management are limited. Nevertheless, this process of introspection has prompted some useful insights about the replicability and sustainability of projects of this kind. These issues will be discussed in some detail in Chapter III.

## MIDENO'S ALLIED AGRICULTURAL COMPONENTS

2.20 Although this paper is principally concerned with agricultural extension, it is impossible to discuss extension without also briefly describing the activities of the allied agricultural activities: adaptive research, credit, animal traction, and to a lesser extent, input supply. To keep the descriptions brief, only those aspects that affect the extension program or specifically deal with women will be included.

### Input Supply

2.21 Use of governmental-subsidized fertilizer was fairly widespread in the North West Province prior to the start of project activities. Although the fertilizer was primarily intended for use on coffee, much of it was finding its way to the increasingly remunerative food crops. In addition, it was recognized that the planned increases in yields, particularly for food crops, would not be possible without the adoption of improved varieties that were dependent on fertilizer to achieve their high yields.

2.22 At the same time the fertilizer distribution system was sluggish and unresponsive. Fertilizer was often not available when the farmers needed it, and if it was, it was often of the wrong type. Many of the problems with the distribution system were the result of the heavy involvement of the government in all phases of fertilizer marketing from determining annual quotas, to providing the financing, selecting the importers, and subsidizing the distribution. However, changing this policy was beyond the scope of the project; instead activities focused on increasing the capacity of NWCA and its member unions and primary societies to store and manage the fertilizer within the province. Nevertheless, the problems with the government-managed input supply system continued, with serious repercussions on MIDENO's entire agricultural program, particularly extension. This will be discussed in more detail in Chapter III.

### Animal Traction

2.23 Although the PAFSAT (Promotion of an Adapted Farming System based on Animal Traction) component only came under MIDENO supervision in 1986, efforts to introduce farming systems based on animal traction had been ongoing in Wum subdivision since 1980. The two main thrusts of the project have been to select and train farmers in the use of oxen and to provide credit to the trained farmers to acquire the animals and equipment for themselves.

2.24 A particularly interesting aspect of this component has been the evolution of its approach to women over the last eight years. Initially the project selected and trained only male farmers. Evaluations of this approach pointed out that women farmers were being omitted from project activities, and more importantly, that the project was likely to be more successful if women were given better access to the project's services.

2.25 The project's response was to redirect training to farming couples and to create a separate women's program that focussed exclusively on uniquely women's activities, such as kitchen gardens, cooking, and the like. Although

there was some improvement, subsequent evaluations encouraged the project to more fully integrate women into the core activities, while still retaining the special program targeted on women. For the last two years the project has been attempting to implement this approach in a number of ways. For example, women have been added to PAFSAT demonstration (extension) service. In 1986, they made up 24 percent of the demonstrators (5 out of 21). In addition, women's groups have been identified to receive training in animal traction as a unit as a means of introducing women to an unfamiliar technology. PAFSAT is presently working with 47 such groups.

2.26 Other measures taken by PAFSAT to more fully incorporate women into its animal traction activities include: defining a "farming couple" as any two members of the same household, permitting women to be the lead farmer in the couple, and allowing the other member of the pair to be either male or female; and shortening the length of the residential training program to make it easier for women to attend.

2.27 At the same time, the role of the women's program has expanded rather than contracted. A staff of 6 are now responsible, not just for home economics, but for working closely with the demonstrators to increase women's participation in the technical core activities. They do this by providing specialized training and encouragement to women's groups, troubleshooting when problems of communication or morale arise, and collecting data to track the impact of the entire program on women farmers.

2.28 Thus, through a process of trial-and-error, the PAFSAT component has altered its approach to women from neglect to segregated services to a hybrid approach that is largely integrated, but retains a specialized women's focus. Notably, MIDENO's agricultural extension program has taken yet a different approach. Taken together, the range of experience provides additional insight into the elements that determine whether agricultural activities will reach women as well as men farmers. These lessons are discussed in the next chapter.

### Agricultural Credit

2.29 The aim of the agricultural credit program has been to enable small farmers to acquire the farm implements and input packages that were recommended by the extension service. The packages made available thus far have been for coffee and maize. Whether for coffee or maize, the program has been geared to the small farmer: individuals owning more than 2 hectares are ineligible to participate. In addition, the credit packages have been available in small enough units (one-tenth hectare for coffee, one-half hectare for maize) to appeal to all but the most marginal farmers. Moreover, the loans have been, for the most part, in-kind rather than cash. For example, the maize package loan included seeds, fertilizer, and a pesticide used during storage; only since 1987 has the package include a small cash element to cover labor for planting. This has made the loan attractive only to those who planned to use the loan as it was intended.

2.30 Although both the maize and coffee loans shared these characteristics, there were several significant differences. Coffee loans were given to

individual farmers with the farmer's cooperative serving as guarantor. Loans were multi-year and repayment could be either in cash or in produce. As there was no institutional equivalent to the coffee marketing cooperatives for food crops, a different system of guaranteeing maize loans needed to be devised. Both Plan PAR and Plan MIDENO proposed providing credit to informal and formal groups. In this case it was the group, rather than the individuals, who received the loan and all members were jointly liable. As the program was experimental, only single-season loans were made at first.

2.31 The experiment has been successful, and very popular. Since its inception in the 1985 crop year, the number of groups participating has grown steadily from 23 to 60 in 1986, to 207 in 1987, and to 363 in 1988. The number of maize packages distributed through group loans has risen from 728 in 1985 to over 5000 in 1988. But perhaps most importantly, the repayment rate has been remarkably good: "almost 100 percent" in 1985 (MIDENO, 1986: 12), over 98 percent in 1986 (MIDENO, 1987b: 9) and it is estimated that similar rates will prevail in 1987 (MIDENO, 1988b: 7; personal interview). As a result of these encouraging results, the group loan program was expanded in 1987 to include multi-year credit lines for group potato storage and group-managed mechanized corn mills.

2.32 It should be noted that although there was no specific targeting of food crop loans to women's groups, this is, in fact, what happened. Table 6 - which shows loans disbursed in 1986 - illustrates the importance of women in the groups receiving loans. About half the groups that received loans throughout the province were comprised solely of women or had a single male (defined as "women-dominated groups" in the table) and women outnumbered men as members of mixed-gender groups. Overall, more than 90 percent of all group members were women and there were no male-only groups.

Table 6: Group Food Crop Loans by Gender, 1987

Division	Distribution Center	Groups			Members in All Groups		
		Total Number	No. of Women Dominated*	Percentage	Total Number	Number of Women	Percentage of Women
Bui	Kumbo	63	32 (6)	50.8	2877	2651	92.1
Donga-Mantung	Mbiyeh	45	36 (8)	80.0	2491	2374	95.3
Menchum	Njinikom	21	14 (3)	66.7	1143	1102	96.4
Mezam	Nkwen	40	7 (2)	17.5	1639	1349	82.3
	Santa	37	11 (3)	29.7	1283	1061	82.7
	Mezam Subtotal	77	18 (5)	23.4	2922	2410	82.5
Momo	Nyen	1	0 (0)	0.0	45	42	93.3
TOTALS		207	100	48.3	9478	8579	90.5

Source: FONADER, Bamenda

Note: \* Women dominated groups are those with 0 or 1 male members. Numbers in parentheses indicate the number of groups with 1 male member.

### Adaptive Research

2.33 In a region with as much agro-ecological diversity as the North West Province, the ability to take recommendations developed by research stations and



adapt them to particular local situations is very important. The adaptive research component serves this purpose in three ways.

2.34 First, the adaptive research component has conducted trials of improved and local crop strains under actual field conditions as a way of identifying recommended packages that are agronomically and socially appropriate. Following a farming systems approach, recommendations have been developed for maize that encompass planting and weeding times, row spacing, fertilization rates and times, and storage methods as well as improved varieties. Similar packages of recommendations have been prepared for arabica coffee, yams, rice soya beans, cassava, sweet potatoes, and oil palm (MIDENO, 1987b: D6) as well as on general agricultural topics like composting, land preparation, and food storage (MIDENO, 1985c: 21). Second, the adaptive research component provides a resource to respond to problems incurred by farmers or extension workers in the field. Third, this component performs demonstrations of, and training in, the recommended practices.

2.35 The locus of these activities are Trials and Demonstration Centers (TDCs) located in each of the nine major agronomic regimes found within the province. The number and location of the TDCs increases the likelihood that the extension recommendations that emerge from experiment station trials will be well-suited to local farming conditions. Each TDC has about 10 hectares of land for trials and field demonstrations; demonstration models of new technology, such as drying sheds and foodcrop storage boxes; a classroom and office building; and housing for the TDC manager and assistant.

2.36 There is little argument that the TDCs are well-endowed and well-equipped. There is, however, some dispute over the cost effectiveness of the investment in such an elaborate center. It has been argued (Falloux, 1983; FAO, 1987, Annex 3) that either a smaller, simpler trials' center or a system that relying on trials directly in farmers fields would be less costly and just as useful agronomically. MIDENO has maintained otherwise, but, now faced with increased financial difficulty, it is doing so less vehemently. This issue will be raised again in the discussion of replicability in the concluding section of the paper.

## MIDENO'S INNOVATIONS IN AGRICULTURAL EXTENSION

### Background

2.37 Prior to the start-up of MIDENO-sponsored activities, the extension service in the North West Province was plagued with the many of the problems, noted in para 1.30 *et seq*, that affect agricultural extension elsewhere in Cameroon and in Africa. Among them: lack of adequately trained staff, lack of transport and equipment for field staff, lack of supervision and support for field activities, and a loose and uncoordinated relationship between agricultural research and extension (MIDENO, 1985b). In addition, the extension service in the province was bifurcated. "Coffee demonstrators" hired by the coffee marketing cooperatives only provided advice to coffee farmers about coffee production and harvesting, and the extension service of the Ministry of Agriculture was limited to providing advice on food crops.

2.38 Given the gender-based division of labor described in para. 1.83 et seq., it is not surprising that all of the coffee demonstrators were male -- after all, most coffee farmers were male. No more surprising, though less understandable, is that very few of MINAGRI's extension agents were women. In 1982, for example, less than 10 percent of the extension agents were women and in two of the province's 5 divisions there was only one female agent (see Table 7 and Eyben, 1982). Furthermore, these women extension agents were assigned different tasks than their male counterparts. As frequently happens in Africa, the women extension agents were restricted to providing advice on home economics and kitchen gardens.<sup>4</sup>

2.39 The bifurcated structure of extension services was to have been maintained under the Plan PAR. However, the collapsed NWCA could no longer support the coffee demonstration service, and by 1983 all the coffee demonstrators had been laid off. Thus by the time MIDENO-sponsored activities began, one extension service left in the province had to take responsibility for both cash and food crops. This change had obvious implications for the design of MIDENO's assistance to extension, and explains many of the differences between the initial and redesigned component under Plan MIDENO.<sup>5</sup>

2.40 Both designs used the T & V system as the guiding model. This meant that the MINAGRI extension service was to be significantly strengthened by retraining existing staff, hiring and training new staff, equipping all extension staff with transport and tools, increasing supervision of field activities, and developing much closer ties with pure and applied agricultural research (MIDENO, 1985b).

2.41 In terms of extension strategy, however, the redesign in Plan MIDENO deviated subtly from both the standard T & V approach and Plan PAR. Though subtle, it was in terms of extension strategy that MIDENO's programming was most innovative. That strategy relied almost exclusively on groups rather than on individual contact farmers, introduced "gender-targeting" where necessary, and adopted a technical approach to gender issues. MIDENO's interventions in the structure and the strategy of the extension service are described below.

#### Alterations to the Structure of the Extension Service

2.42 As the organizational aspects of the T & V model were to be followed very closely, the priorities of MIDENO's support to the extension component were to: (1) hire and train additional field staff to achieve a more favorable ratio

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<sup>4</sup> Personal interview with Rose Sikod, one of the few women extension agents in the province prior to MIDENO. June 27, 1985.

<sup>5</sup> In retrospect, the dissolution of the separate coffee extension program was probably a good thing. Given the intense national-level interest in increasing the production of cash crops, like coffee, it would have been all too easy for resources to have been poured into the cooperative-run coffee extension service at the expense of MINAGRI's general extension service. It would have been all too easy for MIDENO staff to go along. After all, out of the project's internal rate of return of 13 percent, over 11 percent came from increased marketing of coffee. This scenario is exactly what has happened in the West Province under the World Bank-sponsored Western Plateau Development Project.

of agents to farmers; (2) reorganize and expand the supervisory staff to provide the requisite oversight and control; and (3) implement the system of regular visits and in-service training.

### Field Staff

2.43 The initial PAR design provided for increasing the existing number of field staff (both MINAGRI and cooperative agents) from 82 to 204 (MIDENO, 1985b: 3). Plan MIDENO was much more aggressive, calling for an increase in the number of extension agents (called Village Extension Workers or VEWs) from the existing 170 to 375. This was expected to result in an average of 1 VEW for every 400 farm households throughout the province (MIDENO, 1985b).<sup>6</sup> The ratio of 1 to 400 has become an unofficial target within MINAGRI. Maintaining it in the face of increased population growth, has meant that the number of VEWs has also had to increase. By August 1988 there were 405 VEWs in service.

2.44 In the initial recruitment of VEWs, MIDENO established minimum standards, including a secondary school education, though primary education combined with vocational training in agriculture was an acceptable substitute. These high standards were established in part because sufficient numbers of qualified applicants existed, but also because it was hoped that project-hired and -trained VEWs would be given civil service appointments when project financing ends. However since 1987, GRC has insisted that all new staff be graduates of two-year government agricultural training schools. This change now makes it highly unlikely that VEWs with MIDENO contracts will be retained by the civil service.<sup>7</sup>

2.45 There were two other recruitment criteria. The first, tribal origin, was because VEWs are posted to their own tribal areas to ensure effective communication in the local language and an understanding of local customs and institutions. The second, significantly, was gender. In line with the proposals set forth in the PAR, the extension service set an informal target of hiring an equal number of women and men.<sup>8</sup>

2.46 As can be seen from Table 7, this target was not reached, but the results are remarkable given the fairly stiff academic requirements and the ratios that existed when MIDENO started. It is all the more remarkable, given the situation found in the extension services of other African countries. As noted in the Introduction, women generally account for less than 10% of agricultural extension workers in African countries, and only in Thailand and

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<sup>6</sup> The ratio of 1 to 400 is considerably lower than the recommendations.

<sup>7</sup> The VEWs who are government civil servants are in Category C. This means that they have completed a two-year program in a post-secondary agricultural school. MIDENO had hoped to persuade the GRC that the combination of pre-service and in-service training the project-hired VEWs receive is equivalent to a two-year academic program. However, with ever more Cycle C graduates needing jobs, it is unlikely that project-hired staff will be permitted to join the civil service.

<sup>8</sup> Although hiring VEWs at a ratio of one male to one female was not a target contained in the MIDENO planning documents, it was adopted as an informal goal. When it became clear that this ratio was unattainable, it was revised downward to three to two. Interview with John Parkinson, Extension and Training Advisor, Provincial Delegation of Agriculture, August 18, 1986.

the Philippines, among developing countries, are women more fully represented (Swanson and Rassi, 1981).

2.47 Newly recruited and existing VEWs, men and women alike, underwent a three-month intensive training program in groups of about 45 at a time. This pattern of sequential training fits into the phased approach MIDENO followed in implementing its activities. The training program included basic agriculture, cash and food crop production, and extension methods, and also modules on rural sociology and farming systems. Thus the VEWs were given an appreciation of the complexity of traditional agriculture and a fuller understanding of the relationship between agriculture and tribal customs and institutions. VEWs who successfully completed the course were equipped with basic agricultural tools and a small off-road motorcycle (125 cc), and posted to one of the agricultural posts in their tribal area.

Table 7: Composition of VEWs by Gender, August 1988

Division	Non-MIDENO VEWs*			MIDENO Recruited/Trained VEWs			Total VEWs		
	Men	Women	Percentage of Women	Men	Women	Percentage of Women	Men	Women	Percentage of Women
Bui	28	4	12.5	31	6	16.2	59	10	14.5
Donga-Mantung	28	2	6.7	24	10	29.4	52	12	18.8
Menchum	47	1	2.1	32	9	22.0	79	10	11.2
Mezam	45	13	22.4	39	17	30.4	84	30	26.3
Momo	40	5	11.1	21	8	27.6	61	13	17.6
TOTAL	188	25	11.7	147	50	25.4	335	75	18.3

Source: Provincial Service of Extension and Training

Note: \* Non-MIDENO VEWs include those extension workers employed at the start of the project and those extension agents put at the disposal of the Provincial Service of Extension during the project.

### Supervisory Staff

2.48 The extension component also aimed to strengthen the supervisory personnel. Prior to the start of MIDENO activities, MINAGRI's extension agents had reported to one of the 59 Chiefs of Agricultural Post (CAPs) located throughout the province. With the planned increase of VEWs to 375, the number of VEWs each CAP would supervise would jump from three to six, a ratio considered unacceptably high by the PDA,<sup>9</sup> Plan MIDENO called for supplementing the 59 CAPs with 22 Extension Supervisors, which lowered the ratio of first line supervisor to VEW to 1 to 4. To maintain this ratio as the number of VEWs expanded to 405, the number of CAPs and ESs increased to 65 and 28 respectively.

<sup>9</sup> Cernea (1981) reports that the average ratio of supervisors to VEWs for six World Bank-funded projects in India was one to eight.

2.49 Thus a VEW reports directly to a CAP, or to an extension supervisor if the agricultural post's area of operation is densely populated. In this latter case, the CAP will supervise up to five VEWs directly with the extension supervisor supervising the remaining four or five VEWs.

2.50 Above the first supervisory tier, the extension hierarchy was unaffected by MIDENO's activities. Chiefs of Agricultural Post report to Sub-Divisional Delegates of Agriculture (SDDAs). The SDDAs report on technical matters to their Divisional Chief of Service for Agriculture and report administratively to the Divisional Delegate of Agriculture. This dual reporting structure is maintained at the provincial level where divisional staff report on extension matters to the Provincial Chief of Service for Extension and Training and on administrative matters to the Provincial Delegate of Agriculture (PDA). The PDA reports directly to the Minister of Agriculture and is the ranking agricultural official in the province.<sup>10</sup>

2.51 MIDENO's success in advancing women through the extension hierarchy is more modest than its success in recruiting VEWs, and Extension Supervisors, classifications over which it had more direct control (Table 8). The reduced number of women at higher levels is principally the result of lower numbers of women passing through the agricultural training programs that are prerequisites for more senior positions.

Table 8: Representation of Women in the Extension Hierarchy, August 1988

Post	Number of Posts	Number Held by Women	Percentage Held by Women
Provincial Chief of Service for Extension and Training	1	0	0.0
Divisional Chief of Service for Agriculture	5	0	0.0
Sub-divisional Delegate for Agriculture	15	1	6.7
Chief of Agricultural Post	65	2	3.1
Extension Supervisor	28	4	14.3
Village Extension Worker	405	75	18.5

Source: Provincial Service of Extension and Training

<sup>10</sup> This dual reporting structure continues at the national level as well with national directors of technical services responsible for technical matters and ministers responsible for administrative issues and coordination. This system, a legacy of both the French and British colonial experience, is widely criticized by Cameroonian civil servants for blurring reporting channels and slowing decision making. At the same time the system receives support because it assures more public sector employment and allows generalist civil servants to retain control over technicians. As a result, the dual reporting structure remains firmly entrenched and beyond the scope of a single project to alter.

In-Service Training and Supervised Visits

2.52 The VEWs in the North West Province follow the standard T & V two-week work plan. Of the 12 working days in a fortnight, the VEW spends 8 days making visits to groups, 1 or 2 days in training sessions at the TDC, and 1 day writing reports or doing other office work. That leaves one or two days for making up missed group visits due to public holidays or illness (MIDENO, nd-1).

2.53 The fortnightly in-service training takes place at the TDC. The training sessions are led by staff of the TDC or the provincial subject matter specialists. The aim of these sessions, as in other T & V programs, is to fully brief the VEWs on the agricultural tasks their farmers ought to be doing for the coming two-week period. Classroom sessions are reinforced with demonstrations on the TDC farm. The VEWs are then expected to pass on this message to each of their groups over the following fortnight.

2.54 In a review of VEW performance (Table 9), there were no significant differences between male and female VEW for any of the characteristics assessed by the supervisors.

Table 9: Ratings of VEWs by Gender\*

Dimension	Province		Bui		Donga-Mantung		Menchum		Mesam		Momo	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Duty consciousness	2.0	1.9	2.1	1.1	1.9	1.8	2.0	2.3	2.0	2.1	1.9	2.1
Time consciousness	1.9	1.7	2.0	1.3	1.9	1.8	1.8	1.7	1.8	1.7	1.9	2.0
Technical knowledge	2.0	1.8	2.1	1.6	1.9	1.7	2.1	2.3	2.1	1.7	1.8	1.7
Relationship with farmers	1.9	2.1	2.2	1.9	1.9	2.1	2.1	2.0	1.8	2.3	1.7	1.8
Creativity	1.7	1.6	1.8	1.4	1.7	1.5	1.5	1.4	1.9	1.9	1.6	1.5
AVERAGE	1.9	1.8	2.0	1.5	1.9	1.8	1.9	1.9	1.9	1.9	1.8	1.8
Number in sample	223	55	54	7	40	9	35	6	65	23	29	10

source: PEM Division, MIDENO

note: \* Ratings are based on a four-point scale with 0 being "bad" and 3 being "very good".

Innovations in Extension Strategy

2.55 The T & V model is much less explicit on the strategy of extension than it is on the organization and structure of an extension service. It emphasizes that extension should rely on contact farmers rather than groups serving as models to neighboring farmers (Benor and Harrison, 1977: 13-14). Moreover, the T & V model is silent on issues of gender.

2.56 These aspects have led some critics to argue that by selecting contact farmers that are politically or financially advantaged, by focussing on individuals rather than groups, and by remaining oblivious to gender concerns has meant that the T & V system has proven incapable of reaching poor or women farmers (Moore, 1984; Due, Mollel, and Malone, 1987). Some have even argued a form of organizational determinism; that the T & V system is inherently incapable of reaching women farmers (Berger, Delancey, and Mellencamp, 1984). However, the experience of MIDENO suggests otherwise. It suggests that structurally an extension service can follow the T & V model closely while at the same time creatively tailoring extension strategy so that poor and women farmers are reached. MIDENO's strategy has had three main elements: reliance on groups, application of "gender-targeting" where necessary, and adopting a technical orientation toward issues of gender.

#### Reliance on Groups

2.57 VEWs in the North West Province work principally with groups of farmers -with 10 groups consisting of between 20 and 40 farmers. MIDENO adopted this group approach for several reasons: working with a group compared to working with individuals is more cost-effective, group dynamics increase the diffusion effect that more eager farmers have on the more cautious,<sup>11</sup> and the shared use of expensive equipment like sprayers or coffee pulpers is facilitated (MIDENO, 1985b).

2.58 In addition, the group approach is particularly well-suited to the North West Province where almost all men and women participate in some form of informal or formal group. Among men, groups include njangis (rotating savings societies) or sections of the coffee cooperatives. Among women, where group activity may indeed be stronger, there are njangis, palm oil consumer cooperative groups, farming groups, church-sponsored groups, community development groups and others.<sup>12</sup> VEWs are expected to work with such groups where they exist. In those few areas where there are no pre-existing groups, the VEWs attempt to organize one around extension activities.

2.59 The group, not the individual, thus becomes the basic unit of extension training. The VEW meets with the whole group on each regular visit and relays the extension message to all members. Even so, the MIDENO model does not

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<sup>11</sup> Underlying the extension approach that relies on both contact farmers and farmer groups is a model about the diffusion of innovations (Rohling, Ascroft and Chege, 1981). This model holds that receptivity to innovations is not uniform; that some people are more receptive than others. Indeed, the curve is said to be bell-shaped, with rapid innovators and late innovators in the two tails, and the bulk of the population in the middle. This diffusion theory also holds that the factors that convince early-, middle-, and late-adopters vary (Parkinson, 1986). Early adopters respond to technical information. Middle adopters often need examples or demonstrations to be convinced. Late adopters may never change or will do so in response to social or political pressures to conform and not to the benefits of the innovation itself. Thus contact farmers are supposed to be the early adopters who will quickly adopt the technical information provided by the extension agents. The bulk of the farmers in the farmer group will be middle-adopters. For them the results produced on demonstration plots will be the most persuasive.

<sup>12</sup> For a general discussion of women's groups, see Delancey (nd) and Bryson (1979). A more detailed description of women's cooperative groups is contained in Matt (1979). One indication of the number of women's groups is that the two women's cooperative societies in Bui Division have over 150 affiliated groups between them.

dispense entirely with contact farmers, though their role is different. From each group, five to eight contact farmers are selected, not just one. Their function is not so much to play an active role in extension but rather to convince by example and to provide demonstration fields that become the "classroom" for group meetings. To ensure the agricultural credibility of these contact farmers, of whom about half are women, "leader farmers" are identified from the traditional or administrative elite to organize meetings and campaigns.<sup>13</sup>

### Application of Gender Targeting

2.60 Under the T & V system, VEWs are assigned to distinct geographic work areas and work with all of the groups in that work area. This is not always the case in the North West Province - at least not during the initial stage when the T & V system was being introduced. During this initial stage, when the emphasis of both the extension service and the individual extension agent was on developing credibility and earning the trust of the farmers, a strategy which might be called a "gender-targeting" was applied where it is deemed necessary.

2.61 The mechanics of gender-targeting are straightforward. During the crucial introductory stage, women VEWs are assigned to work with women's groups and male VEWs are assigned to work with men's groups. In other words, gender is specifically targeted by the extension service. Once the extension system is entrenched in an area, and the VEW has established the credibility of the advice and familiarity with the T & V system, the gender targeting is phased out. Geographically distinct work areas are drawn up and a transition period begins as groups are handed over to the VEW taking over that area. As necessary, female VEWs are introduced by male VEWs to the male groups he has been working with and vice versa. By the end of transition period, because of the accumulated trust, credibility, and familiarity with the T & V system, both male and female VEWs are able to work with groups composed of farmers of the opposite sex.<sup>14</sup>

2.62 The reason behind gender-targeting is to try to redress some of the problems that arise in many African cultures from extension agents and farmers being of opposite sexes (Fortmann, 1982; Muzaale and Leonard, 1985). It has been found in some instances, before trust and credibility have been fully established, that a male VEW's request to work with a women's group would be met with suspicion by the husbands of group members (Parkinson, 1986). And even if

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<sup>13</sup> That is, from among those who have "status and a high degree of credibility in an agricultural sense" and who will "assist with influencing the majority of farmers to adopt technical packages of recommendations" (MIDENO, 1985b:4). Another modification made by MIDENO is to identify "leader farmers" as well as contact farmers. These leader farmers have high traditional or political status and are used to help organize meetings and extension campaigns and lend legitimacy to extension activities, but they have a limited role in the day-to-day extension activities. This means that contact farmers can truly be selected for their agricultural abilities.

<sup>14</sup> It should be noted that the model described here is the ideal. Because of institutional constraints such as the existing gender composition of the extension service and the inability of the extension service to identify sufficient numbers of qualified women trainees in certain parts of the province and because of the rapidity with which the restructured extension service was to be put in place, the ideal has not always been attained. When sacrifices have to be made, the length of both the gender-targeting and the transition to geographic-based areas is shortened. However, in all cases, some degree of gender-targeting occurs because of the important role it plays in legitimizing the extension service and opening communication channels to women farmers.



permission were granted, unfortunate dynamics may result. Women in many tribes have been socialized to be deferential to men, particularly to those in positions of traditional or civil authority, by not speaking, not asking questions, and certainly not challenging or demanding solutions to their problems.<sup>15</sup> This submissive behavior does not lead to the type of trust or give-and-take that is the foundation of a successful extension program.

2.63 The reverse case has also been known to create problems. Wives are likely to be suspicious of female VEWs, and the men find it difficult to take her recommendations seriously. This would be especially true if the advice dealt with cash or other crops that are considered a male preserve.

2.64 Given these dynamics, the objectives of gender-targeting is to establish trust and credibility, and to build the foundation of two-way communication between the agent and farmer in a supportive and genial environment. This approach is not a retreat to a separate -- potentially unequal and easily marginalized -- women's extension service. As has already been noted, women VEWs have the same qualifications and receive the same training as their male counterparts so the advice they give is as technically rich, in an agricultural sense, as that offered by male VEWs. But above all, gender-targeting is only temporary.

2.65 Gender-targeting has not proven necessary throughout the North West Province. In areas where group cohesion is already strong and where groups, particularly women's groups, have been the focus of community- or cooperative-development efforts, gender-targeting has not been needed. Extension efforts start further along since groups have already experienced and developed confidence in opposite-sex animators and have established two-way information flows. In other areas, where groups are not extensive, where group cohesion is low, or where past experience with group-based development has been negative, gender-targeting has been necessary and successful.<sup>16</sup>

...A Technical Approach to Gender...

2.66 From the initial Plan PAR to the redesign in Plan MIDENO to various training documents, a major stated aim of the extension service has been to reach women farmers. This aim stems directly from a recognition that women are the major growers of food crops in the province. And as food crops are a major concern of the MIDENO project, the extension service has done what it can to reach them. In this it has adopted a technical, pragmatic strategy based on efficiency criteria rather than ideology. The extension service is not trying to reach women farmers out of a desire to guarantee women's agriculture-based income or because it wants to empower women. Rather, the extension service is trying to reach women because they are clearly an important segment of the

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<sup>15</sup> In a study of extension in Tanzania, Louise Fortmann (1982) found that in meetings run by a male agent, a male farmer was seven times more likely to speak than a woman.

<sup>16</sup> These conditions prevail in Ndop subdivision, an area that has been recently populated by expanding populations from a number of surrounding tribes. Thus Ndop has no history of group-based efforts, it is culturally diverse, and has limited group cohesion. VEWs have only recently been posted to Ndop and in response to the anticipated problems with cross-gender communication, expect to adopt gender-targeting. If so, it will be the largest single application of the approach in the province to date.

farmers they are trying to serve.

2.67 This technical strategy can be an effective, pragmatic approach. The rational, even-handed image that the extension service projects engenders support by local people and national decision-makers alike. A more vociferous orientation toward "women-first" would receive far less support from the village to the national level. It would probably lower the morale within the male contingent of the extension service itself. And, in all likelihood, it would lead to classifying the service as "women's extension" with all of the marginalizing tendencies associated with that notion.

2.68 Nevertheless, this technical orientation has its drawbacks, particularly in the data that MIDENO collects for monitoring and evaluating extension. For those targets dealing with women that are specifically mentioned in the planning documents, like recruitment of women VEWs, data is collected and reported regularly. But for those areas where women are simply a part of an overall target dealing with farmers generally, gender is not seen as a relevant characteristic, and consequently disaggregated data is usually unavailable.<sup>17</sup>

...Reaches Women Farmers...

2.69 Because of the long-standing vacancies in MIDENO's Planning, Evaluation, and Monitoring unit, and the effects of budget reductions, data on the impact of the extension service on farmers in general, and women farmers in particular is not as comprehensive as one would like. Even so, a careful reading of the available evidence is convincing that women, as well as men, are benefiting from MIDENO's approach to extension.

2.70 First of all, women, as well as men, are receiving extension information. An early survey of extension performance (MIDENO, 1985a), showed little difference between males and females in the scores they gave in response to questions about their contact with the VEW. This meant that men and women were just as likely to know the name of the VEW, to have been visited by an extension agent, to have attended an extension group meeting, or to have received training in some improved farming technique.

2.71 A similar, but more comprehensive, survey of extension performance in 1987 produced similar results (MIDENO, 1987b). The survey of 650 farmers (402 men and 148 women) revealed that all the men and women surveyed were able to correctly identify the name of their VEW. Other data are presented in Table 10. It can be seen that on every food crop-related indicator, a higher percentage of women than men had received advice. Particularly impressive are the results that almost 92 percent of the women farmers had received advice on maize, that 99 percent of them adopted the extension package, and 92 percent of those received increased maize yields.

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<sup>17</sup> It is ironic that given MIDENO's remarkable success reaching women, not only in extension, but in other agricultural activities as well, its gender-specific data is so limited. It is all the more ironic because disaggregating data by gender would not be particularly difficult. For example, all the gender-disaggregated data presented in Tables 6-10 came from retabulating existing data. It was only a matter of asking the question.

2.72 Second, there is evidence from both surveys that women farmers are much more diligent in following the recommended practices. The 1984 survey showed that women were twice as likely (52 percent versus 24 percent) to follow the recommended planting densities and were just as likely as men to purchase and apply fertilizer and hire labor for additional weeding. The data in Table 10 also shows that women were more likely than men to use fertilizer as a result of extension advice.

2.73 Finally, full-adopters of the maize package are benefiting considerably. A study of 1984 yields (MIDENO, 1985a) concluded that full adopters achieved an average increase in yields of 1.6 tons/hectare, an increase of over 80 percent. Partial adopters realized yields of over 70 percent. More recent estimates indicate that full-adopters attain a marginal increase of 1.5 tons/hectare throughout the province. At this rate, full-adopters are enjoying increased income of approximately F CFA 70,000 (US\$ 233) per hectare. For the province as a whole incremental production was estimated as approximately 4000 tons in 1986, a marginal increase in value of about F CFA 370 million (US\$ 1.2 million) (MIDENO, 1987b: A-11).

Table 10: Analysis of Farmer Responses by Gender

Indicator	Percentage of Farmer Response			
	Yes		No	
	Male	Female	Male	Female
Received advice on maize	74.4	91.8	25.6	8.2
Received advice on coffee	89.3	43.2	10.7	56.8
Received advice on other crops	74.1	81.1	25.9	18.9
Received advice on food crop farming methods (summary)	66.5	88.7	33.5	11.3
Replanted coffee because of advice	93.8	63.3	6.2	36.7
Adopted maize package because of advice	68.7	90.7	31.3	9.3
Yields increased because of advice	75.4	83.5	24.6	16.5
Used fertilizer because of advice	74.6	86.6	25.4	13.4
Developed other farming skills because of advice	75.3	83.8	24.7	16.2
Received advice on vegetable production	72.6	82.1	27.4	17.9
Received advice on soya bean production	72.8	85.0	27.2	15.0
Received advice on soya bean preparation	71.4	82.0	28.6	18.0
Received advice on storage of yams	75.2	78.0	24.8	22.0
Received advice on storage of potatoes	76.0	77.5	24.0	22.5

Source: PEM Division, MIDENO

## CHAPTER III: LESSONS OF MIDENO

3.01 The previous chapter focused exclusively on MIDENO itself: its organization; its history; its interventions in the agriculture sector, particularly extension; and its record of success in reaching women farmers. The purpose of this chapter is to distill from the particular experience of MIDENO a set of more general lessons. These lessons are presented in two sections. The first section provides lessons on delivering agricultural services to women farmers arising from the way MIDENO implemented its activities in the agricultural sector. The second, and concluding, section reflects the extent to which MIDENO's innovative programming can be sustained and replicated in areas outside the North West Province, either elsewhere in Cameroon or elsewhere in Africa.

### LESSONS FROM IMPLEMENTING INNOVATIVE PROGRAMS FOR WOMEN IN AGRICULTURE

3.02 A review of the growing number of studies and monographs examining ways to improve the capacity of agricultural extension services to reach women farmers, particularly in Africa, reveals remarkable consistency in recommended actions.<sup>1</sup> The recommendations fall into three categories or themes:

1. Focus agricultural extension on the small farmer rather than the progressive or more advantaged farmer.
2. Redress the male orientation or bias in extension, particularly in terms of which gender is perceived as the target of extension efforts.
3. Recognize the roles women play in rural society that may have an effect on the way women respond to particular extension strategies or to packages of recommendations.

3.03 The additional research conducted for this case study not only strongly confirms previous findings (Walker, 1987) that much of MIDENO's success with extension could be attributed to adherence to these three themes, but also explains MIDENO's success in its other agricultural interventions. Thus MIDENO's experience from these three themes deserve to be made explicit guidelines for designing and implementing agricultural development activities.

### Three Themes: A Strategy for Reaching Women Farmers

3.04 Each of the three themes is discussed below and summarized in Table 11. It should be noted that while these themes are discussed separately, they are really closely interrelated.

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<sup>1</sup> These studies and monographs include those of Ashby (1981); the FAO (1983b); Berger, Delancey and Mellencamp (1984); Weidemann (1987); and Due, Mollie and Malone (1987).

Table 11: Reasons for the Success of MIDEMO-Supported Agricultural Programs in Reaching Women Farmers

	<b>Theme 1: Focus on Small Farmers</b>	<b>Theme 2: Redress the Male Orientation</b>	<b>Theme 3: Recognise Women's Roles</b>
<b>Rationale</b>	A disproportionate share of small farmers are women	Development activities need to take active steps to incorporate women, both as beneficiaries and participants, to overcome the ingrained male bias	In implementing Theme 2, the unique roles women play in rural society need to be recognized
<b>Extension Program</b>	Modified standard T&V methodology to focus on groups rather than individual contact farmers  Utilized an integrated extension approach that dealt with both subsistence and cash crops	Hired a significant number of women VEWs (25%)  Provided male and female VEWs with equivalent training and work responsibilities	Relied on pre-existing women's groups, thus strengthening them  Used gender-targeting where necessary, thus recognizing male and female social roles in rural society  Included discussion of gender roles in pre-service training to sensitise VEWs to the issue Provided recommendations on food crop storage and other activities predominantly performed by women
<b>Adaptive Research Program</b>	Followed a strategy that emphasised low- or no-cost changes in existing farming system  Tested all recommendations for economic as well as agronomic suitability to small farmers	Undertook an adaptive research program that included food as well as cash crops	Recommended changes to the farming system that did not require additional inputs of women's scarce labor
<b>Credit Program</b>	Provided credit both for food and cash crops  Designed food crop credit packages in units small enough to be accessible to almost all farmers	Identified a mechanism (informal groups) that ensured women as well as men were able to receive credit	Targeted women's groups for group storage (potato stores) and group venture (mechanized maize mills) credit lines
<b>PAFSAT Program</b>		Hired a significant number of women demonstrators (24%)  Provided male and female demonstrators with equivalent training and work responsibilities  Revised eligibility requirements for the oxen program to allow women as well as men farmers to join, subject to the same requirements	Introduced a Women's Programme to supplement ongoing PAFSAT extension activities in areas of specific concern to women: food storage and preparation, improved stoves  Relied on pre-existing women's groups as a way to introduce an unfamiliar technology (oxen traction) to them.  Shortened residential farmer training programs to better accommodate women participants Conducted seminars for women's group leaders, further legitimizing and strengthening the groups

Theme 1: Focus on Small Farmers

3.05 A large body of literature points out the tendency of extension services to concentrate on the more advantaged farmers (Leonard, 1977; Roling, Achcroft, and Chege, 1981; and Moore, 1984 among others). Resource-poor, illiterate farmers cultivating subsistence crops on smaller than average holdings

deviate from the ideal of a "progressive" or innovative farmer are thus less likely to receive the attention of the extension service. In addition, the literature points out that among small or poor farmers are a disproportionate share of women-headed households and women-managed farms.<sup>2</sup>

3.06 At the same time there is ample evidence that small farmers -- women and men alike -- produce most of the food in Africa and much of the cash crops as well. As noted in Chapter 1, in Cameroon small farmers produce virtually all of the food crops and most of the three major agricultural exports -- coffee, cocoa, and cotton. Thus to improve agricultural productivity, it is imperative to remove the bias against small farmers. This can be done by adopting an integrated extension service that deals with food, as well as cash crops. It can be done by utilizing an extension strategy that relies on extension groups rather than on individual contact farmers or that uses aural or visual communication rather than written. And it can be done by concentrating, at least initially, on those improved practices that do not require much additional inputs of either scarce labor or scarce cash and focuses on the crops grown by small farmers, be they male or female.

3.07 From the description in Chapter II, it should be quite evident how fully MIDENO pursued this theme. From the initial PAR design, with its specific goal of reaching small farmers, through Plan MIDENO, where the extension strategy was modified to rely on groups rather than individual contact farmers, to the present, the concern for reaching small farmers has been pervasive. Table 11 summarizes the principal means adopted by the extension, adaptive research, and credit programs to reach small farmers. Only the PAFSAT program cannot truly be said to have a small-farmer focus. This is because the requirement for two hectares of arable land puts animal traction at the upper limit of what is considered a small farm in the North West Province. Nevertheless, PAFSAT's credit program to assist with the purchase of the animals and equipment and its ongoing research into establishing a permanent farming system based on human labor demonstrates its attention to overcoming the bias in its approach.

3.08 Most of MIDENO's programming to reach small farmers has been explicit and intentioned. However, in the case of extension perhaps one of the most significant elements was accidental. NWCA's financial collapse paved the way for a single, integrated extension service rather than one bifurcated between cash crops and food crops. Integrated extension is important for reaching small farmers because small farmers themselves generally farm in an integrated manner, mixing food and cash crop production, often on the same plot. An integrated service is thus able to adopt a farming systems perspective and deal with the important interactions between various types of crops.

### Theme 2: Redress the Male Orientation

3.09 There is frequently a male bias at two levels in agricultural development programs. At one level most extension or other service delivery programs still operate on the erroneous assumption that agricultural activity

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<sup>2</sup> This is one of the consistent points made in all 12 of the case studies of Sub-Saharan Africa reported by Delancey, Berger, and Mellencamp (1984). See particularly, Pala's (1977) study of the Joulou of Kenya.

is only performed by men. The extent that women are included in programming is usually in the area of home economics. As an example, Perraton, Jamison and Orivel (1983) report that about equal numbers of men and women participated in courses offered by agricultural training centers in Malawi. But where the courses for men dealt with farming, animal husbandry, and credit, the women despite the fact that they were just as involved in crop production as men were instructed in nutrition and home economics. Clearly, as long as this bias persists extension or other agricultural services will be ineffective because they are missing a large segment of their client population.

3.10 At another level there is a male bias within extension services when distinctions are made between male and female agents. Often women agents are given less rigorous training and are relegated to working with women on "women's concerns" like kitchen gardens or home economics. Sometimes this distinction is carried to the extreme of creating a separate women's wing or women's extension service. This is the pattern that prevailed in the North West Province prior to MIDENO's creation and it is the pattern that prevails in much of Africa and nowhere does it work. Separating the focus of women and men agents cannot work because it is based on the same erroneous assumption that men farmers do most of the work and women play only a supporting role. Moreover separating the tasks of men and women agents almost always means that the "women's service" receives less organizational and financial support. In short, separate is not equal or equitable.

3.11 All of MIDENO's agricultural activities have made considerable efforts to redress the male bias on both levels. At the beneficiary level, all of the design and planning documents, including the initial PAR, have emphasized the importance of reaching women farmers. In some cases, as with credit, women have been specifically targeted as the principal beneficiaries. But it should be noted that this type of targeting is different from separating out services for women. Here, targeting is based on full recognition of women's predominant role in food crop production and a desire to ensure that women have the same access to improved technology. In short, targeting allows women to overcome barriers to fully benefit from technical services available to men; separate women's programs exclude women from the technical services available to men.

3.12 In redressing the male bias within delivery services, MIDENO's success is evident. In both agricultural extension and the PAFSAT program, significant numbers of women have been added to the respective services. More importantly, women and men are given the same pre- and in-service training and are expected to work side-by-side as colleagues. The results (Table 9 p.28) indicate that this approach is effective.

3.13 An important contribution to MIDENO's success in redressing male biases has come from the way in which this theme was pursued. As was described in the previous chapter, MIDENO adopted a technical or efficiency strategy, not only in extension, but in its other activities as well. Thus efforts to reach women beneficiaries and to increase female presence in various services stemmed not from an ideological or moral agenda to empower women but from a technical or pragmatic view that recognized that the a major segment of the client population were women and that in some cases special, additional efforts might be necessary to assure that this group was served. There is no question that this efficiency

approach has its limitations, but in the Cameroonian or African context this approach goes a long way in avoiding the pitfalls of separating out women's activities at the same time as defusing some of the apprehension about initiatives couched in Western feminist terminology.

### Theme 3: Recognize Women's Roles in Rural Society

3.14 Women throughout Africa have a number of unique roles to play in rural society. In almost all cultures they are principally responsible for rearing children and feeding the household. In most societies they have clear, and often deferential, roles to play toward men. And, of course, women usually have specifically assigned roles and divisions of labor in economic activities. For extension or other rural service delivery programs to reach women, these roles must be recognized and incorporated into programming. For example, women's responsibilities for child care often preclude them from attending residential training programs, as the PAFSAT program learned. Similarly, the deferential roles women assume towards men create unfortunate dynamics between women farmers and male extension agents. Or, the introduction of new technologies, that reduce the burden of male contributions to agriculture, such as animal traction to clear and prepare land, may increase the burden on women whose roles as planter, weeder, and harvester do not benefit from the new technology.

3.15 This theme is the most difficult to incorporate into development programming. To recognize women's roles not only means appreciating them, but also identifying ways to use of existing roles constructively. This is not easy, but in the long-run it is more effective than working from the premise that a new set of roles has to be interposed. Because of the difficulty involved, it is in addressing this theme that innovations are most needed. MIDENO's experience shows the promise of two related innovative approaches.

3.16 Groups. The first is the creative use of groups. The existing single-sex and mixed-sex groups of the North West Province have proven a convenient and efficient way for extension agents to reach men farmers and indispensable for reaching women. And groups provide a readily accessible audience for the delivery of agricultural services. Therefore, all of the MIDENO-supported agricultural delivery services -- extension, credit, and animal traction -- have used group contact as the principal means of reaching the rural population. The importance of having a convenient point of contact, particularly for women, should not be underestimated. One of the explanations given for the gender gap in extension has been the lack of obvious means for extension services to contact women farmers.

3.17 In addition, groups facilitate women's access to services in other ways. First, as was described in Chapter II, groups provide a socially acceptable way for male extension agents to work with women farmers, an interaction that would not be possible between an individual male extension agent and an individual female contact farmer. Moreover, groups provide a supportive environment that helps to make the relationship between farmers and extension agent more balanced and equitable.



3.18 Second, it appears that women farmers, who have less education and lower literacy rates than their male counterparts, are more likely than men to be persuaded by the types of information provided in group settings. Koons' research in the North West Province argues that women farmers are more receptive when the message is presented in the form of a demonstration or supervised practice than when the message is presented in the form of a lecture or written hand-outs (Koons, 1988). Koons' research also points out that women were less likely than men to rely on information passed on by other farmers.

3.19 Third, gender-based groups do provide women an opportunity to develop much needed leadership, management and economic decision-making skills. Even the most informal groups designate members to leadership positions and often expand beyond their initial organizing rationale into savings, credit, or marketing activities. Some groups even purchase and register land, something individual women are generally unable to do. All in all, groups provide women with an opportunity to interact and to develop skills in a supportive and egalitarian environment that is consistent with social roles.

3.20 MIDENO is by no means the first development project to see the potential advantages of promoting and working with groups. However, one of the reasons MIDENO has succeeded with this strategy has been a willingness to recognize that groups have rationales and limitations. For the most part, local groups arise from the realization that individual interests can be furthered by acting cooperatively. An individual farmer sees the advantage of cooperating in a rotating credit society because of the realization of a high disbursement in a time of need or cooperating in a joint purchase of palm oil because of the advantages of realizing the benefits of volume price discounts. Thus groups operate to the extent that members benefit individually and in some relation to their contributions. As such, local groups are not the expression of some traditional communalism or altruism.

3.21 MIDENO has succeeded where others have not because it has kept this distinction in mind. Whether groups are used as a point of contact for extension or as a means of distributing credit, there is always an individual benefit to be gained. For example, women's groups granted food crop loans are not required or expected to use the credit to plant a communally-owned and -worked farm. On the contrary, the group simply provides a mechanism through which credit can be distributed to individual women farmers for use on their own farms.

3.22 Gender Targeting. Gender targeting is a logical complement to a group approach for reaching women farmers. Groups are not all the same and vary in terms of cohesion, rationale, age, and other indicators of group strength. Suppose that groups can be divided into three categories measuring group strength: high, medium, and low/non-existent. Gender targeting may not be a necessary component of a strategy to reach groups in the "high" group strength category, but it is certainly necessary if groups of women in the other two categories are to benefit from agricultural services.

3.23 Women's groups exhibiting high-levels of cohesion may not require the initial phase of working with a woman extension agent because: (1) such groups and the idea of group activity are likely to be well-integrated into the local culture and (2) such groups are likely to have had previous experience with male

animators -- from the community development, cooperative, or extension services. As a result, the dysfunctional dynamics arising between male development agents and women farmers that gender targeting is intended to counteract, may not arise in these cases and so gender targeting is not necessary.

3.24 MIDENO's experience shows that gender targeting can be a useful strategy for reaching groups of medium cohesion. For these groups, initial contact with a female extension agent provides an opportunity for developing rapport and two-way communication between the agent and the group and acceptance within the larger society. In this way a sufficiently strong foundation can be created so that a transition is possible to a system where male and female extension agents can work with groups of either sex.

3.25 In the case where group cohesion is low or where groups are not prevalent, something more than gender targeting will be necessary. Here, the temporary contact with a woman extension agent will not be sufficient to create the conditions necessary for the group or pre-group to interact productively with a male extension agent. More time will need to be spent on the mechanics of working together than on working with the extension agent; more energy will need to be devoted to establishing productive relationships among group members than on establishing open and equitable relationships with the extension agent. In such instances, a preliminary, "pre-extension" phase utilizing women animators and concentrating more on group rationale, dynamics, and process rather than on extension advice may be a required first step. Once a moderate level of group cohesion has been built, gender targeting could be used as a means to incorporate the group into extension activities.

#### Putting the Three Themes Together

3.26 As noted earlier in this chapter, the three themes together form a strategy for reaching women with agricultural services. Pursuing one theme alone ; not enough; programs need to focus on small farmers and redress the male orientation and recognize women roles. This is not easy, but MIDENO's experience also shows that this task is simplified when there is a good knowledge about local conditions and when women farmers are explicitly identified as a key target group.

#### The Strategy is More than the Sum of the Themes

3.27 The relationship between the success of the MIDENO-sponsored extension program in reaching women and its adoption of an extension strategy that incorporated all three themes should be clear by now. But perhaps the best example of the additive nature of the three themes is the PAFSAT animal traction sub-project. The sub-project began with little specific attention to women. Evaluations criticized the project for not reaching women farmers, so the project responded by establishing a separate women's program. However, the separate approach did not work, for all of the same reasons noted earlier in this chapter. PAFSAT was again criticized by outside evaluators for not reaching women farmers and again PAFSAT altered its strategy, this time to begin redressing the male orientation of the sub-project. It introduced the idea of the farming couple

and allowed women to be the lead farmer in a couple.

3.28 But this alone was not enough. PAFSAT realized this and took further steps to redress the male orientation and went on to introduce modifications that recognized women's roles. PAFSAT hired a cadre of women demonstrators and fully integrated them into its demonstration service. It shortened its residential phase of training, it began working with women's groups, and it changed the mission of the women's program from one of being separate to one of being supplemental. The women's program is now an important adjunct that ensures that the technical service reaches all of its intended clientele. Although it is a too early to tell if this new approach will be more successful than previous ones, if these themes have prescriptive power then the answer should be affirmative.

#### Information is Crucial for a Sound Strategy

3.29 A crucial element in the success of MIDENO's strategy in extension or other agricultural services was the availability of high quality baseline data. Making intelligent interventions into the farming systems of small farmers and in creatively responding to women's roles required a thorough understanding of the agricultural and social environment.

3.30 MIDENO was fortunate that the North West Province was well-studied anthropologically and economically. When the initial design team came, they were able to draw on existing studies that pointed out the importance of groups and women's contribution to agriculture and these perspectives were incorporated into the design. Moreover, the design team did survey research of its own to fill in gaps. Thus MIDENO was better integrated into the existing environment than most projects. MIDENO also benefitted from a variety of economic (Wertime, 1986), anthropological (Koons, 1988), and agricultural (Eyben, 1984) studies that were conducted during the course of implementation and which influenced the direction of MIDENO's strategy toward women farmers. Information from monitoring the differential impacts of implementation on women and the disadvantaged has also proven valuable in refining interventions.

3.31 MIDENO was much less successful in providing the necessary post-implementation monitoring information. Due to competing demands for limited resources and the untimely withdraw/transfer of senior staff, monitoring has been sketchy with, in particular, a lack of gender-disaggregated data.

#### An Explicit Goal Provides Strategic Direction

3.32 It is hard to overestimate the importance that the PAR's stated objectives of reaching small farmers and women farmers had on the course of implementation. The ideas were carried forward in Plan MIDENO and both objectives are repeated time and again in quarterly reports, internal monitoring reviews, and the reports of evaluation teams. It is not a profound insight that articulating goals and objectives helps to focus attention on attaining them. But when small farmers, much less women farmers, are left out of program goals, it is worth remembering how crucial the omission can be.

MIDENO'S SUCCESS IN REACHING WOMEN FARMERS:  
HOW SUSTAINABLE? HOW REPLICABLE?

How Sustainable?

3.33 MIDENO is registering considerable success in reaching women farmers with extension services and agricultural inputs. Substantial increases in food crop production and incomes from production are the result. The sustainability of this success depends on whether the women farmers participating in the program will continue to implement the recommended practices and whether an effective extension service can be maintained.

3.34 Conversations with women farmers during the research for this paper indicate that they recognize the value of recommended changes in maize production. However, their ability to sustain production increases is dependent on input supply. If the fertilizer is not available, the yields of the improved maize are lower than those of the traditional varieties. The credit package in kind is popular as it provides all the needed inputs. Efforts are underway to improve the availability of agricultural inputs through regular market channels, which may resolve this problem even if the credit program is discontinued.

3.35 MIDENO's extensive, well-equipped, and well-staffed research and extension program may not be maintained at the previous levels as the donors and the GRC may be unwilling to continue the necessary financial resources. However, as the first part of this chapter has pointed out, the reasons for MIDENO's success in reaching women has more to do with the strategy than the structure of the extension service. Moreover, the components of that strategy, including the innovations in working with groups and utilizing gender-targeting, have minimal cost implications.

3.36 This does not mean that the extension service's continued success in reaching women farmers is assured. Two further issues are numbers of female agents and the utility of the messages. The most likely candidates for the planned reduction in the number of extension personnel are those with contracts with MIDENO and not those employed by MINAGRI. Since almost all of the women VEWS have MIDENO contracts, the remarkable percentage of women extension agents in the North West Province is in serious jeopardy.

3.37 Although a decline in the number of women agents would be unfortunate, the long-term implications are less clear. Throughout this paper, allusion has been made to the ongoing debate about the necessity of women's representation in the extension service in order to reach women farmers. A few (Knudson and Yates, 1981) argue that women's representation in the extension service is necessary and sufficient to reach women farmers. The received wisdom (Delancey, Berger, and Mellencamp, 1984; FAO, 1983b) is that women's representation is necessary but not sufficient. A more recent view (Spring, 1987) is that women's representation is not necessary; male extension agents can reach women farmers. The experience of MIDENO seems to suggest another, more complex, angle on the debate.

3.38 There is very little in the three themes or MIDENO's success that argues that a high percentage of women agents is necessary. Theoretically there

is no reason to believe that an exclusively male extension service cannot focus on small farmers, be trained to recognize that women as well as men deserve extension advice, and be sensitized to the roles women play in rural society. In many areas of the North West Province this is precisely the experience of the extension service. If this were universally the case, then the MIDENO case would confirm Spring's (1987) contention. However, the need for gender-targeting in some parts of the province and the times that the PAFSAT women's program has been called upon to troubleshoot a problem that a male demonstrator cannot handle points out that there are times when adhering to the theme of recognizing women's roles necessitates female representation in the extension service.

3.39 Thus the MIDENO experience suggests that the issue of women's representation in the extension service depends on the social situation confronted by the service. In areas where social custom limits contact between men and women, a large female presence in the extension service will be needed if women farmers are to be reached. In other areas, where males and females are on a more equal social footing, it may be possible for a male-only extension service to reach women. However, as most places in the world do not conform to these extremes, the norm would be a level of representation of women dependent on the prevailing social situation. For the North West Province, which has strongly cohesive groups, a tradition of male development agents working with women's groups, and some exposure to gender-targeting, it would appear that the requirement for women's participation in the extension service would be less than in other areas.

3.40 Perhaps a more salient concern in the long term viability of the extension service is the continued utility of extension messages. For the most part, the basic extension message in the maize-based regions has not changed since MIDENO started extension activities. In those areas that have benefitted longest from MIDENO's extension program, there is a growing discontentment among farmers because the research and extension services have offered few new ideas. The continued success of any extension program lies in the value and credibility of the advice it offers.

#### How Replicable?

3.41 In August 1988, the replicability of the extension program was a major topic of discussion within the Provincial Delegation of Agriculture and the MIDENO project office. The North West Province had been selected by the World Bank as the model for the long-awaited National Extension Project. As an initial step, the World Bank and the GRC had agreed on a 18-month pilot phase during which the MIDENO model would be introduced in six divisions, two in each of three other provinces.

3.42 Clearly, if the elaborate and expensive research and extension structures of the MIDENO model are not sustainable in a region of high agricultural potential like the North West Province, they are unlikely to be sustainable, and therefore replicable, anywhere else. But as was argued earlier, the unsustainable aspects of MIDENO's programs do not seriously affect the approach for reaching women.

3.43 The issue of replicability of the strategies to reach women farmers goes beyond sustainability to a determination of whether the conditions or setting in the North West Province are so unique that MIDENO's innovations have limited applicability. The setting described in Chapter 1 -- social and farming systems, constraints, policy -- is similar to settings found elsewhere in Cameroon and in much of Sub-Saharan Africa. MIDENO's experience suggests that an extension strategy based on groups and relying on gender targeting is likely to be widely replicable but, as there are conditions that limit the applicability of both approaches, they cannot be said to be universally appropriate. The aim of the distillation of lessons earlier in this chapter was to show that MIDENO's adoption of the three guiding themes was more important than the specific measures it took. These three themes have universal applicability, though the form of their realization will vary from locale to locale.

3.44 The limiting conditions with respect to an extension strategy relying on groups is that groups need an internal rationale to form; they cannot be administratively imposed from outside. Furthermore, the sociological and economic factors that give rise to a group's rationale and level of cohesion vary from ethnic group to ethnic group and region to region. For the most part, the peoples of the North West Province have traditions and economic needs that are highly supportive of group activity. But this cannot be taken as a given elsewhere. Instead, the applicability of a group-based extension strategy must be based on an analysis of the conditions prevailing in the particular area of concern.

3.45 For Cameroon as a whole, there is growing evidence that group-based extension strategy would be replicable. Bryson (1979, 1980) has analyzed anthropological studies dating back to the 1940s which show indigenous group activity in the highlands of the West Province, the forest regions of central Cameroon, and the savannah of northern provinces. A 1989 survey of group activity conducted nationwide by the Ministry of Agriculture's Division of Studies revealed group activity in all ten provinces (MINAGRI, 1989). More encouraging for group-based agricultural extension, this survey also found that women's groups were the most common type in each province and that agricultural production was the most common group activity (MINAGRI, 1989: 13;18). However, the report also noted that group activity and prevalence varied significantly from region to region (MINAGRI, 1989: 13). This observation only underscores the fact that the applicability of group-based extension will depend on an analysis of the area in question.

3.46 The limiting conditions for gender targeting are of two types: internal and external. As was discussed in paragraphs 22 to 25 of this chapter, the necessity or value of gender targeting is based on the internal characteristics of particular groups. For groups at the high end of the scale measuring cohesion, gender targeting is probably not necessary. These groups have the legitimacy and strength to work with extension agents of either sex from the beginning. For groups at the low end of the scale, gender targeting is also likely to be of little value. As they struggle for stability, these groups will benefit far more from generalized animation than from the technically-oriented advice from a male or female extension agent. In other words, these groups need to pass through some type of "pre-extension" phase before gender-targeted extension will be cost-effective. However, for the groups that fall between the

two extremes of high and low cohesiveness, gender targeting offers an innovative way of reaching women farmers.

3.47 The other limiting factor to gender targeting is external. Even where there are large numbers of women's groups that could benefit, the extension service must have the critical mass of women extension agents to provide this service. As was noted in the preceding discussion of sustainability, the size of this critical mass is dependent on sociological and historical factors that cannot be determined in isolation from the particular area in question. Consequently, the staffing implications for the extension service are going to vary. Staffing implications are the most significant where there are large numbers of women's groups of moderate cohesion that could benefit from gender-targeting but where women are not sizably represented on the extension staff. One solution is to hire and train more women extension agents, as MIDENO did. However, this is often not financially feasible. Another possibility is creating provincial or departmental women's coordinating and troubleshooting units along the lines of PAFSAT's women's section. There are surely others. The key is for development programmers and agricultural officials to adopt the three universal themes and apply them creatively. Solutions will suggest themselves.

3.48 In 1984, in the seminal work on women and extension of the time, Berger, Delancey, and Mellencamp (1984) were able to write that "very little is yet known about what 'works' to bridge the gender gap in extension." In 1989, in light of the MIDENO experience this is no longer the case. MIDENO's success provides a much needed example that extension can be made to work with women using a little creativity and not necessarily at great cost, while MIDENO's experience provides a number of general, viable, and replicable lessons about what will work to bridge the gender gap in extension and other agricultural delivery programs.

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