

## **Winnig the Struggle against Global Warming : switch modern agriculture to family farming in Senegal - by Ibrahima Seck**

**Note:** The author has submitted a long paper on preferred farming practices in Senegal as his contribution to the debate on climate change and ethics. While the paper does not address directly the issues raised in the Brendan Mackey/Song Li essay, readers may find the paper relevant. We have posted it in its entirety below. - Editors]

WINNING THE STRUGGLE AGAINST GLOBAL WARMING:  
SWITCH MODERN AGRICULTURE TO FAMILY FARMING IN  
SENEGAL

### **Contribution of:**

Ibrahima SECK

Coordinator of APEPFI

BP. 563 Thies, Senegal

West Africa Organizer of the

Earth Charter Community Summit

## **I. Problematic**

For the Senegalese Farmer's Movement, the struggle against poverty demands analysis and response to three fundamental questions

- What is the mechanism for the generation of poverty in Senegal?
- What are the mechanisms by which poverty comes to rural populations?
- What are the appropriate solutions to eradicate poverty in rural areas in Senegal?

The Senegalese Farmer's Movement gives clear and precise responses to these three questions.

- Economic policies in general and agricultural policies in particular, which have defined and been put into operation in Senegal, are, essentially, the principal machine for the generation of poverty in rural areas.

- The strategies put into operation have been the mechanisms by which poverty came to the rural populations.

- The institution of a sustainable rural agricultural model of development having as its base a modernized family agriculture, with provision for small, local, non-

agricultural industry, is the only response to eradicate poverty in the rural areas of Senegal.

### **1.1 Action of the State**

From independence up until 1984, the Senegalese rural areas were marked by a kind of "gag order" of populations through a policy of development in organizational forms inherited from doctrines foreign to their cultural identity.

In effect, ignoring the rural voice and government-rural dialogue aided, during this period, in perpetuating ignorance, among policy makers, of all the traditional forms of organization, including the profitability of cooperatives, which must constitute the unique framework of the economic evolution of the rural areas.

These cooperatives, organized throughout the whole country and for all professions must prompt rural development to leave from a strategy of activity, thought up by the General Administration, which kept to itself the prerogatives of conception and execution of rural development.

During this period, the State put in place management staff and assistance operations in the rural areas. Each technical or economic function followed a consistent approach for each homogeneous ecological zone, but with a particular emphasis in the production of revenue.

Thus, was put in place:

- In the North: the SAED for rice

- In the Center: the SODEVA for peanuts
- In the South: the SOMIVAC for rice
- In the East: the SODEFITEX for cotton

This structure was completed downstream by an office of commercialization (O.C.A.S. evolving to O.N.C.A.D.)

For the most part, the farmer no longer had even to think. The State regulated everything for him, following in this its conviction that only a state centralized plan permitted the development of the country.

The great repeated droughts constituted the "drop of water" which made the vase overflow and constituted the prod to the grip of conscience by the State of the impertinence of its choice of development.

Realizing that the farmer was now aware of his "passive irresponsibility," the State undertook a set of reforms which have for their object to reinforce the potential of development by the unlocking of private initiatives and the decentralization to bring the advantage of structures near to the base.

The state recognizes, thus, that the policy of centralized staffing was unable to engender effective participation of civil society in the development of the country.

Today, on the foundation of democratic trends, it appears there are the germs of change, which could favor an entrepreneurial dynamism within civil society, and a repositioning of the State in its essential duties of

administration of public services, of general organizing and of arbitration.

## **1.2 The Popular Response**

The first reactions to the impoverishment of the rural world and to the repeated phenomena of drought, which led to food shortages, have manifested themselves by the phenomena of flight and escape to the cities where one could earn a living by becoming apprentices in small trades and in commerce.

But very quickly, the city became "too full" and rejected those who were coming from the bush. It is necessary to cross over to other alternatives. It is in this context that, little by little, there developed, in the rural milieu, small initiatives of "salud" (expected success) in the form of small projects sustained by western NGO's with the complicity of certain functionaries of the State.

These initiatives come together to increase quickly the extent of solidarity spreading from village to region while passing through the arrondissement and the department.

Their denomination is often significant and conveys the willingness to overcome a difficult situation: thus, such association is called "Tenons Les Coudes" (Linking Arms), "Ensemble, Nous Grandirons" (Together, We Will Grow

Stronger), or "L'Espoir Est Pour Demain" (Our Hope is for Tomorrow), etc.

Each of these associations institutes a new power of which the mechanisms of functioning are essentially inspired by traditional forms of village organization. Several of these associations have already been recognized as useful agents, in their territory, of economic, cultural and political development.

Thus, since the great drought of 1973-74, farmers have begun, more and more, to reflect on their problems and on the changes which have occurred in nature. More and more, they organize themselves in their own milieu of life to develop strategies, finally, to struggle in concert against the obstacles to their development. The efforts concentrate themselves on the constitution of village organizations of development, research and rehabilitation of Cultural Identity, improvement of production, commercialization of products, the regeneration of soils, the construction of barriers to erosion, the construction of dikes to limit salinization, the valorization of functional literacy among the population, technical training of women and giving them responsibility, reforestation, the protection of gardens, of fields and of young saplings of trees by the installation of hedges, the construction of wells and of retainers for water, the mobilization of internal savings accounts and grants of credit among members.

It is thus that farmers' movements and their networks (eg.: FONGS, FNGIEP, FNGIEH, FNGIE, UNCAS, FNGPF, FAFD), to cite only a few of them, have grown and have developed themselves in the country. They are supported by aid organizations for development (NGO's) on the basis of a true partnership. The motivations of these popular movements have for origin the conviction that "Union builds power" and that, for the local milieu, it is necessary to make local effort for local development. Self-sufficiency, self-responsibility, self-management and global autonomy are their principle goals.

Thus, a new dynamic, with new actors, has emerged in the terrain of development; these are the Farmers' Organizations. They begin to adopt the idea that they must exceed from an informal embryonic state, to one of a local enterprise of development which will seek profitability for its members through the mobilization of savings, the granting of credit and the creation of activities to generate revenue for attaining internal self-financing, auto-independence, and self-development.

They are beginning by adopting also the idea of the conservation of nature, of careful management of natural resources and the protection of the environment. But establishing an alternative agriculture that takes account of protection of the environment, supposes that it is necessary to find, not only equilibrium between economy and ecology, but it is necessary, first and above all, to respect and protect the survival of small farmers. In that, farmers' organizations are the conveyors of hope. For the farmers' movement, the door of entry for

sustainable development is sustainable agriculture. For sustainable agriculture, it is necessary to achieve systems of agricultural production permitting a self-perpetuation of plant and animal species, offering to the farmer, in each period of the year a production with remunerative prices, with an economic approach utilizing renewable energies available for direct use while limiting external additives, thus keeping solid protection of natural resources. This form of agriculture will permit farmers the assurance of food security, a constant revenue flow and the achievement of qualitative improvement in their standard of living. Together, they will participate in the advent of a "Project of Farmer's Society," that is to say a flowering of the farmer under a cultural, social, economic, ecologic and political plan.

## **II. The Rationale for Family Farm Agriculture in Senegal**

While conventional agronomic research aims above all for one aspect of an agricultural system, that is to say the increase in production a single species by utilizing abusive chemical additives, family farm agriculture aims for long term equilibrium of the whole system (diversity of production, fertility of the soils, management of territories, etc.)

In effect, in observing carefully traditional agricultural practices, one notes a multi-stage and synergistic agriculture. It is marked by an associative cultural system utilizing a diversity of species with different

characteristics including perennial or semi-perennial, seasonal or multi-seasonal.

The different plants utilized in the intensive native cultural system join together and complete themselves in an extraordinary morphological and physiological diversity conducive to a diversity of production contributing altogether to food self-sufficiency. One notes that the tree is considered as being an element of the agricultural system rather than being solely relegated to the forest.

Like the trees with Wolof nomenclature of "Kad" or "Nguer du Cayor," or "DIMB du Saloum," participate in the fertility of the soil with other multiple uses (food for human and beast, traditional medicine, etc.) The presence of several stages of trees adapted to local ecological conditions, establishing itself in perfect harmony with associative plant cultures (millet, beans; acacia or millet; beans, zucchini, hibiscus, DIMB; or other associations), has a fundamental role to play in the long term viability of family farm agricultural systems.

The rationale of family farm agriculture has several advantages:

- the struggle against the terrible erosive impact of the first rains of the season;
- the great utility of a multitude of plants (biomass) covering the soil in reducing the high temperatures due to the sun's rays;

- greater efficacy in the photosynthetic coefficient;
- slower coefficient of mineralization of organic matter;
- a succession of plantings in order to utilize water efficiently and keep the soils fertile and well constituted;
- efficacious accrual of evapo-transpiration;
  
- reduced costs for production'
  
- multi-stage and synergistic diversity of productions;
  
- intermittent fallow fields;
  
- plant culture rotations;
  
- integration of agriculture and animal husbandry;
- utilization of organic manure to fertilize the soil;
- a natural struggle against the enemies of plants;
- natural conservation and utilization of the varieties of seeds adapted to the ecological conditions of the local milieu;
  
- etc.

The rationale of family farmer agricultural systems is, in fact, the reflection of traditional systems of agricultural production.

### **III. Traditional Systems of Agricultural Production**

Formerly, in Senegal, the modes of exploitation and the cultural methods were centered on the "possibilities and the constraints of the environment." As a general rule, traditional systems of agricultural production make responsible and sustainable use of natural resources

(soils, vegetation, light, water, nutritive substances, biomass, etc.)

These modes of exploitation correspond so well to local situations that even during relatively poor seasons one was able to produce sufficiently to survive. The harvests were guaranteed to a higher degree and the risks of losses were reduced to a minimum; also food security was guaranteed by this subsistence agriculture.

Not only did agricultural systems correspond to the possibilities and constraints of the environment, they responded equally to the possibilities and constraints of the farmers. The agricultural systems responded to the norms and customs, to hierarchical relationships, to the structure of the market, to specific areas and tours; and, norms and customs, the structure of the market, systems of mutual assistance and solidarity, the pricing of goods, etc., likewise, were adapted as agricultural conditions changed over time.

Traditional agricultural systems had certain flexibility and guaranteed as much as possible a natural environment and sound agriculture, food security so that there was a relatively good standard of living for rural populations. Equilibrium existed always between agriculture and the capacity of the natural environment (possibilities offered and constraints imposed).

Today, will there not be actions of rehabilitation, improvement and complementarily between traditional systems of production and modern techniques appropriate

to reach an economical agriculture keeping account of both people and their environment?

#### **IV. Cultural Identity and Development of the Agricultural Sector**

Our cultural identity has been a determinant element in the management of natural resources and the sustainability of systems of agricultural production. The Agriculture called "Modern" has come to break apart this dynamic as this little historical analysis shows us:

- Period before colonization (ourselves)
- Colonization (enculturation)
- Period following colonization (cultural alienation)
- Globalization (crisis)

The time of our ancestors We know that all life functions upon concepts The most important concept which permits the management of space, is the occupation of space. The occupation of space was by clans who existed, who partitioned out space for living, and who, in a zone so determined, organized their activities for self-sufficiency

Moreover, activities were organized to permit people to live, to eat, to construct their places of habitation and to protect themselves against nature in a challenging natural environment.

Equally, this period was characterized by professional jobs. There were farmers who raised plants and those who raised animals. This was a period where, in Senegal, there were Serer and Peulh who raised animals and the other ethnic groups cultivated plants. They were in the rural milieu and together represented 90% of the population.

There were evidently nobility who were charged with managing the populations.

Among these two groups, one could not say that plant farmers were more numerous than animal raisers or vice versa.

One knew that there were two activities which commingled and the breeders put their animals in the fields of the farmers who gave them, in counterpart, some grain. There was thus an exchange between organic manure and grain.

There were conflicts from time to time during the rainy season when the breeders who lived between the villages let their animals graze in the fields.

What can retain of this period is that there was a formal or informal contract between these two groups. They were complementary.

The breeders exchanged milk, meat, organic manure for cereal, protection of their animals by those who stayed at home, for it is necessary to remember that this is the

period where there was nothing of what we call "money" today. Rather we would call it "barter."

What was also characteristic in the course of this period was that the whole space was managed by the people.

There were feudal laws but the great responsibility of management of natural resources was incumbent upon the people in the majority.

Thus at the village level, of the zone, there were levels of responsibility; the very great majority of the population was implicated and had charge of the management of natural resources.

There was equally a small group of foresters. One could call them trades people:

- Those who make the materials for agriculture: the beaming and the . It was necessary;
- Those who fabricate the mortars and pestles for the grinding of grain. One called them "laobés." They represented the forestry farmers. With the wood, they fabricated indispensable tools for the preparation of food, farming enterprises and also mangers and drinking troughs for the animals.

There was, finally, a last group:

- Fishermen.

They were not very numerous during this period, but they existed none-the-less. These were people who lived on the shores of courses of water, by the seashore, on the coast of rivers.

They exchanged their products for others' products (milk and grain). As one might state it, during this period, the fishermen, the breeders or the farmers exercised only one activity and did not have other annexed activities.

During this period, there were, effectively, some traditions which developed concerning the management of natural resources.

- There were trees that one did not cut; they were utilized for healing.

- There were trees which existed as totems that everyone respected.

- There were some sacred forests, some pools where the crocodiles live whom the people venerate.

There were thus folkways that developed over time. For example, there were some moments to light or not to light the fire and all these explanations were communicated from father to son, mother to daughter.

One found, very often, a community management of certain natural resources.

For example, when there was a large pond between several villages, it was a council of wise leaders that was

charged with deciding the moment when the animals could go to drink and the times when they could not go.

This is why, in the course of centuries, the people developed PRINCIPLES which became sacred and which everyone respected in all the ethnic groups and in all the sub-Saharan zones and particularly in Senegal.

The people reflected, invented principals and actions in the sense of sustainability knowing that therein was their true wealth.

They did not wish that this would be limited to themselves and this is why there were all these principles, all these mechanisms, in order to permit a transmission of this natural wealth to future generations.

## **Colonization**

One meets thus a NEW POWER which appropriates these responsibilities. One created services: for example, the services of agriculture, of water, of forests and of fish.

Thus one took the force of responsibility of the people to hold them in trust by these structures.

Now, for all the questions which are placed on natural resources, one is obliged to refer to these structures (when there is a problem which formerly was settled in place, one was obliged to address to the authority who is going to inform one second instance of an authority who is going perhaps towards a third instance: meanwhile the problem could become aggravated.).

Some new professions were born. One created, with the colonial occupation, new needs, the culture of rent, of new equipment. One gave more capacity to the materials of production.

It is at first by forced labor that one imposed the cultures of rent and gave equipment.

One later created money, one created the French school. The connection of these different elements trained new habits and responsibilities.

The colony was under the control of whites who had assistants. There were local governors and forest guards.

They were the masters, now, gave the orders and attended only to their interests, not knowing or caring to know the indigenous people's customs; that which is entirely the norm in colonization. They came not to reinforce our values, but to acculturate us to their ways.

We had our properties sheared of trees, our forests placed off limits, reserves which were placed under colonial administration and which, often, were confiscated from people whose families had occupied them over hundreds of years. There were even populations who were displaced because they lived in these newly appropriated forest reserves.

There were also the roads for transportation and communication.

Railroads were constructed, cut in large swaths of land, forests burned, routes cleared.

Cultures of leased land were developed; machines for planting and the plow were invented or introduced. It was necessary to clear the land, even to displace human populations, and then to plant. The prevailing intent (especially of the French who had the greatest power) was to produce more and more to the maximum extent possible. Little by little, there was a change in agricultural culture.

The new techniques were not bad in themselves, but at the moment when they were introduced, they did not take care to protect THE ENVIRONMENT.

There was an intense exploitation of the forest. Not only was there a culture of leasing but also wood of better quality was used for export for the profit of the colonizers.

## **Independence**

The period was that of 1960. The colonizers bequeathed to us their language, their culture, their way of doing things and these were inculcated into our spirits.

The Senegalese leaders of the movement for independence had been trained in French universities and were subjected to a sort of cultural mix-up. It was the period when our government defined agricultural policies to help the farmers to have a better standard of living.

Self-evaluations were not done. Everything was simply amplified; all that had been imposed on us during the colonial period was further accelerated.

Agricultural services, agricultural technicians and research were developed, as initiated originally by the French, to augment productivity and production.

It was necessary to call for European trainers, at the moment of independence, as Senegalese farmers, under French rule, had not yet achieved the new skills.

This course was taken in order to fill the cash reserves of the State. Peanuts were sold at a good price on the market. It was deemed necessary for the State thus to accelerate the process which took responsibility for the line of peanut production away from the farmers.

New professions were created, forestry to produce lumber for export, the transformation of trees into charcoal to utilize the residue of dead wood, thousands of farmers converted to the use of the new agricultural equipment and fertilizer. All was done to increase the capacity to produce better and always more.

For 25 years, from 1960 to 1985, Senegalese agriculture focused in this way. They then found themselves in the situation where the production of the peanut basin decreased with soil depletion and erosion, and rice production decreased as the resulting salinization of the Casamance River increased.

A considerable sum was allotted to the rural world, construction of dams, roads, and railroads was completed, activities were diversified, but the manner in which this was done did not permit the results anticipated.

## **Globalization**

With independence, and with the new techniques, farmers began to conjoin plant and animal production.

Producers began to organize themselves: one met everywhere associations of both producers and of consumers.

There was a new preoccupation: "drought." It has even become endemic. Desertification was installed through climatic factors but even more was the fact of massive deforestation by the act of man. Forest fires amplified this condition by an aggression against vegetal and animal biodiversity. The agriculture called modern arrived to sever definitively the dialectical interdependence between the different constituents of nature.

## **V. The Orientation of the Agricultural Police called "Modern"**

Since colonization, the government always favored and popularized monocultures be it peanuts, be it cotton, to the detriment of vegetables and grains for consumption which were often left out. The results are well known: overexploitation of the soils with the use of equipment pulled by animals (not just by hand) allowing non-stop planting, degradation, deforestation in order to increase arable land, the necessity of fertilizer with chemical input to defend against infestations more common with

monoculture than with diversity. Demographic pressure had serious repercussions on cultivatable lands. A failure to properly educate farmers in the use of pesticides, dumped on them by the eager government, led to many accidents. Agricultural production decreased, erosion by wind and rain began, the revenues of farmers decreased more and more, natural resources disappeared at an anxious rhythm. Desertification intensified year to year.

In the popularization of agricultural techniques, the State always attributed more importance to techniques which augment the quantity of agricultural production. The hypothesis utilized was always that the revenues of farmers will increase more and more with the augmentation of their production. The privileged method was the augmentation of the land being used at the same time as the intensification of production.

Thus, for small farmers, production became more and more difficult to control. Before, they had control of all the means of production of the land by work of the hand: the tools and the capital. More and more, they were becoming dependent upon means out of their control. Farmers needed improved modern seeds in order to augment their production. By the fact that these modern seeds were less resistant to drought or the attacks of insects, farmers needed fertilizer and chemical pesticides. All these needs translated into the necessity of capital.

Even if farmers happened to satisfy these needs, they then remained continually dependent upon providing these inputs, and if one of the inputs was not available at

the precise moment, it was the farmers who suffered the consequences.

In addition to all of these considerations, there was the problem of the fluctuation in the costs to the producer. And the question is posed of knowing, "Would the farmer have the possibility to sell all of his production at a good price?" In comparing the price paid for nearly stable products to the height of prices for inputs, the interest on credit, the inflation aggravated by devaluation of currency, the Senegalese farmers see, at present, a net loss for which it is difficult to compensate by an increase in the quantity of production. This situation became more and more difficult with globalization which demands competitiveness and blind concurrence. (Selling only with comparative advantage)

**V.1** Conventional Agronomic Research in Senegal  
Since Senegalese independence, conventional agronomic research has been fixed on the objective to increase the agricultural productivity of a few crops for export and to intensify agriculture in order to eliminate food shortages in the country.

All actions of this research were oriented toward the introduction of new cultural techniques, the use of fertilizer and pesticides, and the use of selected seeds.

Thus, all actions of this research located inside research stations, were centered on the analysis of the behavior of high quality seeds of selected varieties and on the study of careful doses of fertilizer and pesticides on the impact of a modern technique of cultivation.

The results from this agronomic research were positive, because varieties of species of high productivity, adapted to local climatic conditions, were identified and tested. The research examined modern techniques of cultivation and types of fertilizer and pesticides adequate to the development of these varieties.

Unfortunately, this approach failed to identify applicability of these results in the farmer's milieu. In effect, the results thus found were not in agreement with the needs and the ways of the farmers. For example, the research was concentrated on monocultures like peanuts, but ignored the local diet of farmers of millet and vegetables, and ignored the difficulty in providing sufficient irrigation in rural areas or the economic wherewithal to maintain adequate supplies of high quality seeds and chemical inputs.

Therefore, a reality-based analysis of this conventional agronomic research needs to be done. A well-supplied research station peopled by agro-scientists is not the same as a farmer's field and cultural milieu. Further the research had:

- too superficial knowledge of farmers' structures and systems of production, of their needs and functions;
- marginalization of farmers in the solution of their own problems; in effect, the socio-economic dimension provided by the research must be introduced from the start and not, like the classic, conventional method, after the new technical dimension has been put in place;
- the techniques proposed are not adapted to the reality

of the farmers, but are the conception of theoreticians or politicians and are not the problems felt by rural populations;

- insufficient active participation of farmers in the definition of their path to development.

The list is not exhaustive, yet is intended to emphasize the degree to which the farmers, who were intended to be the beneficiaries of the research, were excluded from the planning and process.

Therefore, to state the truth, a real gap separates conventional agronomic research and the farmers who, in most cases, have similar fields, but with sometimes different techniques.

Faced with this situation, agronomic research must recognize a new orientation. The objective of this new strategy will be to do research at the level of the farm in association with the farmers through the whole process from the identification of the subject of the research, the conception of the research process, the execution of the project and the evaluation of the programs of research.

## **V.2** An Alternative: The Participative Approach for Research

By building on the vision and inspiration of traditional small farmers, the scientific research could well add benefits which would be accepted by the farmers.

- the bio-socio-economic milieu of the farmer would be taken into account;

- the farmer would be considered a researcher;
- the research will originate in and will take into account all the elements of the farmer's agricultural system;
- the farmer is called to participate in the validation of methods, to reject certain agricultural practices and to appropriate others;
  
- the farmer becomes an element of application and of diffusion of the results of the research to other farmers in his milieu.

Thus, the research could help to fill out the existing techniques in order to better clarify the notions of the yield of the land, the associations between plant species, and the best species succession for planting, etc., and instead of looking by example to find only one variety of corn with high yield, to look also to see the possibilities of plant culture associations for lessening the cost of production, the maintenance of fertility of the soil, the defense of the environment and of the health of the human population.

## **VI. Family Agriculture or Capital-intensive Agriculture**

Two modes of agricultural production coexist in Senegal: family agriculture and agricultural enterprises based on capital infusion. Family agriculture is the reality of peasant societies and of agrarian societies of the Southern Hemisphere. Ninety percent of the farmers of Senegal are doing family farming. They are responsible for most of the agricultural production and most of the products available for export. The revenues produced by family farming are the predominant contributor to the

economy of Senegal. Only sugar cane entirely produced in a region by one agro-industrial enterprise is the exception.

In spite of the current dominant character of family agriculture, more and more, the idea, promoted by urban intellectuals, is that family farming is not capable of being competitive in the global marketplace and must be replaced by industrial agriculture led by trained agricultural technicians.

Family farmers would become farm laborers or be replaced by mechanization. This perspective is being promoted without reflection on the evolution of systems of agricultural production.

### **The Priority of Family Agriculture in the Pluvial Zone**

The reasons for which family agriculture must be the priority of the politics of development are solid. Any agro-economic system, today, must achieve economic efficacy, socioeconomic equity and the sustainable management of natural resources,.

First, there is no economic alternative to the maintenance in the rural milieu of a majority of Senegal's population. In spite of the growth rate of 4% of the urban population, many of whom immigrate to the cities from the rural areas, the rural population also continues a growth rate of 2% per year. (There are education programs in family planning and birth control, now promoted by farmers' organizations and NGO's with some success, but large

families are still the cultural norm.) The urban economy is already no longer capable of absorbing more rural immigrants. It leads only to increased poverty in the urban zone with shanty towns, unemployment and disillusionment, especially of young men and women looking for a chance in life. Given current economic priorities and scarcity, there is little hope for a reversal of this trend in the near term. It is essential to find good ways for the rural population and culture to remain largely intact.

The second reason follows from this. Given that it is necessary to maintain a rural population of considerable numbers, (and knowing that 40% of the rural population is already living below the poverty line at less than \$1 per day) and, given that increased rural and urban populations require more food and sundries, it is necessary to increase local employment to provide rural family income. This can be done through stepped up agricultural productivity of more than 3% per year to meet the growing need plus work opportunities diversified into jobs other than in agriculture, but located in rural areas.

This accommodation cannot be obtained with agriculture based on capital intensification one of whose aims is a reduction in the workforce. Only a minute proportion of farmers, who have a comfortable income augmented from non-agricultural income, can support this type of agriculture. This agriculture has, without doubt, its place in the Senegalese economy and could play an increasingly role in agricultural exportation. However, it does not solve

the problem of the rural population, both intrinsically valuable and still growing.

The third reason is that, taking account of the broad extent of poverty in rural Senegal, the only efficacious method to combat it is, in the short and medium term, not to finance a few, already solvent farmers, but to return to employment and agricultural productivity the majority of small farmers who have been excluded from such investment and do not have the wherewithal to improve their productivity on their own.

The principal question confronting Senegalese agriculture and the rural world is double: what to do for small farmers and, in particular, what to do for the large majority of small farmers who do not have access to irrigation; and, what to do for rural people who must abandon agriculture or develop a complementary activity in order to stay in their community. This is what one could call the farmer's question in Senegal. It is posed in unique historical terms.

Western countries, which have succeeded in modernizing their agriculture, have done it in the context of the strong growth of industry and the resources of the State, of population control, and in a political context where it was possible to protect and subsidize agriculture.

Senegal, like the majority of sub-Saharan countries in Africa, must make a success of the transformation of its agricultural system and develop non-agricultural activities in the rural milieu in a context of liberalization and globalization, of rapid demographic growth and with a

State which has, at its disposal, limited financial resources.

The politics of rural and agricultural development, specifically, must give a priority to the family agriculture and take into account the new national and international context of this agriculture. This politic does not exclude other forms of agriculture but it replaces them in an order of priority corresponding to criteria of efficacy and of equity concerning the distribution of public resources.