TECHNICAL REPORT

FARM INVESTMENT BEHAVIOUR

DAKAHLIA GOVERNORATE

Prof. Dr. Mohamed Hamdy Salim

Cairo
AN EVALUATION REPORT OF THE AGRICULTURAL INVESTMENT BEHAVIOUR STUDY IN DAKAHLLA GOVERNORATE

1. BACKGROUND:

In its efforts to promote applied research in the Arab Republic of Egypt, the International Development Research Center of CANADA (IDRC) made a contract with a group of researchers from the Agriculture College at Mansoura University headed by Doctor Mohamed A. Eweida to prepare a study of "Agricultural Investment Behaviour in Daqahilia Governorate". The research project started in November, 1990, and continued for three years and produced the study under evaluation in this report.

On the request of the IDRC the following evaluation report of the above mentioned study was prepared by Professor Doctor Mohamed Hamdy Salim.

2. OBJECTIVES:

The research problem for this study was described as follows:-

a. Declining relative importance of agricultural investment to only about 8% of national investments led to creating many social and economic problems in the Egyptian rural areas.

b. The largest share of farmers remittances were used in non-agricultural (mainly unproductive) activities, thus the agricultural sector lost a great opportunity.

On the basis of the preceding it seems that, capital accumulation represent the focal point of this research. So,
the study focused on dealing with the following objectives:
- To outline the factors affecting the rate of farming capital accumulation including farm investment behaviour and farm profile.
- To study the pattern of investment of farmers and to compare the economic rates of return of the different activities such as:
  a) Field crops.
  b) Vegetables.
  c) Fruits.
  d) Animal production.
  e) Other activities.
- To evaluate the policies of credit institution (PBDAC, Commercial banks and other sources), to determine to what extent they might be creating distortions in the efficient allocations of resources, and to assess:
  a) Credit availed (Borrowing).
  b) Credit requirements (need of farmers).
  c) Credit gap.
- To propose policies, programmes, procedures and legislations required for encouraging and rationing the agricultural investment behaviour.

3. METHODOLOGY:

A descriptive analysis procedure was used by the study team, and supported by some statistical analysis to test the significance of the variables under study, and to produce some statistical indicators in order to help in providing clear under-
standing and presentation of the subject. Mainly analysis of variance and descriptive statistics procedures were used in this study.

3.1. DATA BASE:

The data base used in this study can be classified into:

3.1.1. Secondary data base: including information and data published by official governmental organizations on available agricultural resources, current production patterns. The study team used this data base in describing and presenting the subject under study, and in forming the framework that was used to select a sample of production activities.

3.1.2. Primary data base: including quantitative and qualitative information that was the result of a questionnaire designed and distributed by the study team to a sample of productive projects in the following fields: livestock, poultry, honey production, agricultural machinery, agricultural industries, non-traditional crops production, land reclamation and improvement, and fisheries.

3.1.3. Information obtained from seminars and workshops:

Beside using the questionnaire as a primary data collecting tool, the research team made workshops and seminars with producers representatives, agricultural cooperative leaders, Governmental bodies, local council leaders, agricultural inputs agents, agriculture credit and development Bank, retail and wholesale dealers Trade champre, Food technology components and agricultural survive agencies.
The following working teams were organized:

1. Poultry.  
3. Fish.  
4. Vegetables.  
5. Fruits.  
6. Ornamental & Medical Plants.  
7. Food industry.  
8. Bee keeping  
9. Silk worms.  
11. Soil conservation.  
12. Land reclamation.  
13. Field crops.  
14. Farm mechanization.  
15. Seeds and fertilizers.  
17. Marketing & financing.  
18. Extensional training.  
20. Social organizations.

Each team has a committee 3 persons, the staff members, producers and administrative officers. These committees prepared a primary working paper referring to the field studies.

The groups made individual meetings upon 3 days and discussed all points, a complete working paper was outlined in the following main points:

1. The present condition of the agricultural production in each activity.
2. The objective position.
3. Problems facing the objectives.
5. Role & responsibilities of participating agencies for implementing the recommendations.

Seminar were conducted in 3 districts and 4 villages representing the agricultural activities in the Governorate, the
4. STUDY OUTPUTS:

4.1. Research Output (Reports):

The study under evaluation includes three parts:

Part 1:

This part is concerned with the comprehensive study of agricultural investment behaviour in Dakahlia Governorate. It was the end result of 8 subsectoral reports, and it has 3 main chapters, 11 sections, and references.

The comprehensive report include a presentation of the study theoretical framework, research method used, and the current state of agricultural production in Daqahlia Governorate. Moreover, 4 major dimensions of agricultural investment behaviour were studied, namely: major features of the current investment in different agricultural production filed, the current state of agricultural production activities, determinants of agricultural investment behaviour, and problems facing a sample of investors.

Part 2:

This part includes 8 volumes, each presents agricultural investment behaviour in one of the production fields under study: poultry production, livestock production, honey production,
agricultural machinery, agricultural industries, non-traditional crops, land reclamation and improvement, and fisheries. Discussion of investment behaviour in each one of these 3 volumes included the following 4 elements:

1) Description of the current state of agricultural investment.
2) Description of the current state of agricultural production.
3) Identification of factors affecting investment behaviour.
4) Identification of problems facing investors.

Part 3:

This part presents summary of the study and major findings of seminars and workshops organized by the study team. Farmers, cooperative organization leaders, and government officials were all invited to these workshops in order to present findings of the study and to test the applicability of proposed programs and policies.

4.2. SOCIAL OUTPUTS:

The relations between producers, agricultural policy makers, executive representations, cooperative leaders and local council members are one of the most important features of the study. The research team succeeded in making a great interaction between producers, officials and non-governmental organization working the agriculture development. This was attained through the continuous meetings and discussion in all the activities.

The main object of these meetings was the enhance to concerned persons to take part in diagnosing the problems and to suggest the suitable solutions. According to this new methodology
in the agricultural studies, it was possible to implement, evaluate and develop the results of this study. Eventually the gap between the academic staff and planning personnel, officials and producers was overcome.

5. RESULTS:

The objectives of the study could be concluded in 4 points including knowledge of the farm investment behaviour, Farm investment pattern, evaluation of credit institution, and suggesting the suitable recommendation.

5.1. First Objective:

5.1.1. Problems Facing Agricultural Investment:

The study outlined the problems facing agricultural investment and its effect on farm investment behaviour:

a) Problems of Agricultural Development in Dakahlia:

Legislations come in the first category of the problems facing agricultural investment. Licenses, approvals, routine work and application as well as tax-regulations and multi supervision and continued are common difficulties.

Financial problems come in the second category, as interest rate is high, shortage of capital, credit conditions, bank regulations and religious rules are included.

Problems of the project management represent the third category, since price fluctuates, defecence of inputs, high wages of labour, shortage of trained personnel, difficulty of marketing and experienced managers are rare involved.

Investment environment problems come into the fourth
category. This includes instability of markets, project losses, unsuitability of investment, risk and duplication of projects.

Capital problems represent the fifth category, as sometimes there is absence of partnerships, infrastructure in weak and small holdings.

Other problems may include slow capital rotation, competition and the presence of many projects in the market.

Information problems represent the 7th category, experience transfer is limited, visibility studies are not common, absence of information, shortage of technical managing experience of the investors.

Family and personal problems represent the 8th category. Expenses hinder expansion of the project, low family income, escape of sum from marking in the projects, investors working only part time, and sometimes family resist expansion of the projects.

Investment ambitions represent the 9th category, include loss of trust in success, directing income simple to cover family requirements, advanced age of the investors and escaping from risk.

b) Determinantal Factors of Investment Behaviour:

To study the problems affecting investment, the relation between all involved problems and each of the farm investment behaviour varieties were examined. According to the obtained results, multible regression relations between each of these variables and the significant problems has been studied. The following are main results:
- Problems determining investment information:

These include, investment ambitions, information and others respectively.

- Problems determining investment tendency:

These include investment ambitions, environment, personal and family aspects, information and others.

- Problems determining marketing:

These include legislations, information, finance and capital.

- Problems determining investment ambitions:

These include information, environment, and management.

- Problems determining risk tendency:

These include management, investmenal environment and information.

- Problems determining production compatibility:

These include legislations, capital, information, personal and family aspect, and finance.

5.1.2. Study of Factors Determining Investment Behaviour:

These factors could be summarized in the following points:-

1. Investment information.
2. Investment tendency.
3. Marketing tendency.
4. Investment ambitions.
5. Risk tendency.
6. Production compatibility.

The study examined the relation between farm investments
determinities with the farm investment variables.

Factors Affecting Farm Investment Behaviour:

These factors could be summarized in the following points:

1. Main source of finance:

About 67% of the investors depend on themselves, 26% have mixed sources, while 7% obtain bank credits. The group in the most positive in investment behaviour.

2. As holdings are concerned it was found that 41% of the investors are small ones, 28% are medium, and 31% are big holders. The last group is the most effective in farm investment behaviour.

3. With regard farm experience factor, it was found that 28% of the investors are of little experience, 33% with medium experience, while 34% are having long experience. The medium experience group was more effective on farm investment variables.

4. Regarding the main occupation, it was found that 60% of the investors are having agricultural and veterinary activities, 26% government officer, and 14% traders and manual workers. The first group is more effective on farm investment variables.

5. Investors with full time are about 40%, while others with part time are about 60%. The full time investors are more effective in farm investment variables.

6. With regard to land holdings, it was found that 2.5% possess
no land, while 26 % with small holdings and about 70 % are big ones. The last group is more effective in farm investment variables.

7. The study also disclosed that 8 % of the investors possess farm machines, while 92 % of the investors have nothing. Even though the difference between the two group was not significant in affecting the farm investment variables.

8. Regarding ownership of livestock, 91 % of the investor are possessing, while 9 % only have nothing. It was clear from the study that the first group is more effective in information variables, marketing tendency and production compatibility. The other group was more effective in investment tendency, ambition and risk tendency.

9. The study also found that investors with low level of education represent about 41 %, medium level 29 %, and high level 30%. The last group is more effective in investment variables.

10. With regard to the age of the investors, it was found that 35 % are young, 35 % medium, and 30 % of old age. The first group was more effective in investment information, marketing tendency and risk. The medium group was more effective in information and production compatibility. While the older group was more effective in investment variable and production compatibility.

11. Regarding membership of local social organizations, it was
found that 81% are members, and 9% are non-members. The first group is more effective in the investment variables.

12. With regard to the future view of the investors, it was found that 41% desire to continue in the activity at the level, 30% desire to expand their activity, 9% desire to decrease their activity, 11% desire to stop the present activity and start a new project, and 9% desire to stop their activity. The desired to stop their activity and start a new one were more effective in the investment information and marketing tendencies. The group desired to expand their activity was more effective in investment ambecious and risk tendencies. The last group desired to stop their activity completely was the least effective in the investment variables.

5.1.3. Investment Environment:

The study outlined the most important factors and components of investment environment related to capital accumulation in the agricultural sector in general. Also of each agriculture activity separately. These factors are:

- Investment environment is determined by the stability of legislations controlling investment activities, the availability soundness of infrastructure elements, flexibility of the concerned governmental department and stability of political, economical and social situations. Within this frame, the study showed that these are multi-investment legislations, many official agencies concerned with the procedures as well as complications and long time to obtain a licence.
- The study also showed insufficient main frames necessary for encouraging the investment, such as roads, transportation, communication, public surfaces, housing especially in the rural areas.
- Besides the marketing and pricing obstacles, these channels are not efficient and listed for the consumer and neglecting the producers.
- Economical policies are not stable including taxes, customs and exchange rates.
- Most of the investors having insufficient information about the available opportunities of investment, procedures, and shortage of economical and statistical data.
- Shortage of production elements such as feeds, veterinary medicines, spare parts, machines and equipments, and importing instead of using local products.
- Fluctuation of exchange rate and political problems and terrorism has their adverse effects on investment.

5.2. Second Objective:

This includes farm investment pattern in the study area and comparing the rate of economical returns. They dealt with the first part of this objective in detail.

5.2.1. Agricultural Resources in the Government:

After viewing the land resources, water, human and capital resources, it was found that the cultivated land is estimated by 671,000 feddans which represent 81.4% of the total area of the Government, and about 10.3% of the total area under agriculture.
in Egypt. Most of the agricultural lands suffer from high water table and requires improvement and addition of gypsum. The main source of irrigation in the river Nile. Since most of inhabitants line in the rural areas, and there is excess in man power working in agriculture and allied services. A large part of the agricultural man power suffer either permanent, seasonal or hide unemployment.

5.2.2. Types of Agricultural Activity:

The study showed that the dominant agricultural activity in the Government is traditional and based on field crops; cotton, Cerials, Barsim, Legumes, Livestock and Poultry. Also, the study showed some differences between the districts. The northern region is more specialized in fishing; Mansala district; the central region is characteristic by the traditional activities; Dekerness, Sherbine and El-Mansoura. The western region is having much reclamation soils; Belkas. The southern region is famous with growing fruits and vegetables as well as small investment activities.

5.2.3. Features of Agricultural Activity:

The study has screened in detail, and from the results of questioner representing the various agricultural districts in the Government. The indicators of land use in traditional agriculture, farming and reclamation patterns. The results could be summarized in the following:

a. Common Characteristics:
- Less relative importance of women in the farm works to about 3-6% of the total holders.
- The number of qualified holders is relatively low, 10.5% but this number is in positive relation to holding size.
- The number of land owners is relatively high, 48%, while holders by monitoring rest represent 10%, and others by sharing are 7%.
- Field crops represent 94% of the crop pattern in the old land, 93% in the new lands, and 67% in the reclaimed lands.
- There is a tendency towards house poultry production reaching about 35% of the holders.
- The relatively high percentage of tractor users than other farm machines. This relation is positively with land size.

b. Specific Characteristics:
- The relative increase in the number of the permanent employment from the same family of the holder in the reclamation lands, 72% while it is 62% of each of the traditional and cultivation patterns.
- Number of holdings is also divided into pieces within the three patterns; 2.1, 1.9, 1.8 piece with the average of 2.0, 3.3, 5.3 feddan for traditional, cultivation and reclamation respectively.
- The river Nile represents the main source of irrigation water. It supplies 99% for the traditional agricultural, 60% for reclaimed lands. The other resources are covering cultivation in the new lands.
- Open drainage systems is dominant in both new and reclaimed
lands, while both systems are available for the traditional pattern: 70% open and 30% covered.

- The relative importance of livestock is increasing in the reclamation pattern for big holdings. This includes 25% for cows, 33.3% bawfallows and 7% poultry for the total number of holders having more than 20 feddans.

- The tractor is the most common machine, and the member of farm machines increases according to the size of the holding. This phenomena is more clear in the new lands.

5.2.4. Classification of Agricultural Activities According to Investment Returns:

The study did not compare the agricultural activities according to IRR for the projects of each activity, but it arranged them according to the economic return level. Seminars and workshops reviewed the following results:

1. Dairy and Food Technology Products.
2. Floriculture and Medicinal Plants.
3. Vegetables.
4. Livestock.
5. Fishing.
6. Honey.
7. Fruit Production.
8. Soil Development.
9. Land Reclamation.

It is worth mentioning that the activities were classified on
the above order according to their returns. Although it is generally correct, the obtained returns from the investment projects, and the preference of the investors differ from place to another, and change from time to time, and also vary between one group of farmers to the other according to the differences and change of the conditions of each case.

5.3. The Third Objective:

Evaluation of credit foundations:

The study handled this subject from 3 directions:

- Evaluation of the policies of the credit foundations working in the agricultural sector.

- Determination to what extent these policies made distortion affecting the efficiency of using the available resources.

- Evaluation the availability of credits, credit needs and the gap in credits.

5.3.1. Evaluation of the Policies of the Agricultural Credit Foundations:

The study evaluated that the policies of the credit foundation from the view point of the beneficier and with the reaction with the planners and disision makers at the principal Bank of Development & Agricultural Credit (PBDAC), intermediate leaders in the Gov. Bank and the representatives of Village and Districts. The subject has been dealt with from different angles:

- Sufficiency of credit supply for the agricultural sector.

- Suitability of the used interest rate with the nature of agricultural investment patterns and the range of risk in each pat-
Suitability of the used interest rate with the nature of the agricultural activities.

- Reflection of change of Bank Policy after the elimination of subsidized credits on the agricultural development.

- The utilization of agricultural cooperation savings by the Bank without paying any interest. This policy depleted the cooperatives from the self-financing to these activities.

- The adverse effect of financing non-agricultural projects by the Bank.

5.3.2. Effect of Credit Policy on Using the Resources:

The study showed the effect of the credit policy according to the following points:

- The subsidizing policy of the credit bank in the past to the poultry production reflected unrationa l extension in this sector. This led to a type of price competition and reduction of poultry prices and the investors faced great losses that made many projects close and failed to repay there credits to the bank inspite of it was subsidized.

- The wrong use of resources due to credit allocation policy between different activities and zones without taking into consideration the variation between the economic efficiency in each district.

- The credit bank at a certain stage dealing in consumption durable goods with easy loans and credit facilities. This diverted the Bank from the main objectives to secondary one far from
5.3.3. Evaluation of the Credit Gap:

a. The study estimated the available credits in the area of study in the frame of the outlined policies and actual application of these policies.

b. The study also estimated the credit requirements for the investment patterns based on the cost of production and investment requirements for different agricultural requirements.

c. The study estimated the credit gap, and it was found that some activities obtained credit-supply more than its real needs, while other suffered from shortage of supply. This reflects imbalance in the credit and economic policy.

The available data showed shortage in credits estimated by about 28% in calves, 97.1% Milk production, 24.1% Eggs, 100% in turkey, duck, rabbits and the activity of fisheries, 95.9% Beekeeping, 52.6% land cultivation, 95.6% Green houses, and 46% food technology.

On the other hand, the study showed a credit surplus of about 59.5% in breading of bullocks, 22.3% poultery and 15.4% in ducks.

The presence of credit gap indicates that the investors depend on self-finance for their projects or other resources outing from the bank. The credit surplus indicate that the growers obtain the loans, but they use it for covering some family needs and consumption goods.
The study also indicated the type of grantee required by the Bank to give the credit. These grants made only big growers benefit from the credits especially in mechanization, livestock, poultry and the investment activities as a general. The high cost of credits services is about 4.5% over the interest aggravates the problem. This may explain the limited power of the bank to give credits with suitable interest to the growers. The bank is also unable to achieve the targets since the credits cover only about 50% of the production costs of the different agricultural activities. Also the size of loans does not exceed 1000 pounds as a yearly average for those dealing with the bank.

On the light of the economical changes in Egypt and with the high rate of interest, millions of small farmers and cooperatives failed to pay the credits to the bank, and their loans became more with the delay penalties. Accordingly, some striking features appeared in the field to the extent that some growers stopped their production and working in other activities more profitable, or even selling their lands due to the increasing depts.

5.4. The Fourth Objective:

Methods of Encouraging Agricultural Investment:

The strategy of development on some principles which includes making a frame to cover the problems and obstruction with complete compatibility of the objectives of the strategy and the general objectives of investment. Also taking into consideration the development according to a general view of the obstructions.
This may require the development of investment ligilizations and the main frame works as well as the economic stability. This could be explained as the following:

- Development and improvement of agricultural investment environment.

* Development of ligilization includes reducing the number of laws, and insuring some flexibility in the investment rules.

* Increasing gratis and simplicity of exchanging the capitals and interests.

* Insuring economical and political stability in regard with financial policy.

* The need for a net of economical specialized banks and easy exportation of the products.

* The presence of the principle frames for investment like roads, transportation, local and outside communications.

* Increase of survices at the project places including police stations, hospitals and schools.

* Increasing the efficency of financial supply to the projects, simplicity of obtaining the credits, increasing the period of free intrest, reducing the intrest rate, reducing the grantees and increasing the amount of credits.

* Availability of foreign exchange, tabulating the depts of some projects as those working in land reclamation.

* The importance of investment propaganda, preparing good information programmes including investment data, and a guide about investment to prepare the general openion for backing the policy of privatization.

- Simplicity of Steps for Preparing the Projects:
This includes development of presenting quotations and specifications. the presence of experts in the motor, catalogues of machines and equipment. simple customs and application of free duties.

- Development of Project Application: Easy to obtain the permits to establish service areas, availability of machines and equipment, reducing the price of energy, fuel and strong infrastructure.

- Increasing the efficiency of Production in the Investment projects by providing pure types and strains of animals, poultry and fish. Production requirement like water, forage, technical labour, fertilizers, seeds, plant hormones, and spare parts must be available. Increasing the efficiency of agricultural extension, protecting local products imposing more customs on exports and alternatives. Increasing the efficiency of marketing agencies and subsidizing and encouraging agricultural exports. Following a justic pricing policy not listed to the consumer and ignoring the producer.

- Planning an agricultural investment map showing the areas of investment in the country, and making a short term as well as a long term plan for investment.

- The importance of arrangement between the Ministries and Gov. Departments.

- Increasing the investment to the agricultural sector.

- The need to develop the agricultural Credit Bank to become a real Bank not only a part of the Government management sector.
This requires increasing the capacity of the Bank and following new policies suitable for free economy.

- Agricultural cooperatives must play a big role in providing credits to the members. This requires fundamental changes in legalization, and methods of work to develop the objectives of cooperation.

- Importance of organizing an agricultural pricing fund. Its purpose aiding the growers about the difference between the minimum gustic price of the agricultural prices and the actual price of the market if reduced than the minimum price.

- The need to establish a fund for agricultural development in the old lands its duty activating the development programmes, the agricultural research, and technology transfer to the agricultural sector.

- Establishment of a fund to develop land reclamation and development in the new communities.

- Directing the activities of the bank above to its present role in financing crop production to include the new lands, agricultural food technology, local marketing, exportation, farm mechanization and technology transfer.

6. Findings of Study Evaluation:

The above mentioned study was evaluated taking into consideration its objectives and the work done to achieve these objectives. The following is a summary of this evaluation res-
ults:
- The research under evaluation, covered the most important aspects. However, some less important areas were ignored, namely, the area of supportive agricultural services in general and marketing services in particular. One should note that areas covered by the study team were representative of investment activities available in the region under study, and investment behaviour determinants for activities not included in the study are expected to be similar to the reported here.

- The sample size was relatively small, however, one should expect a sample of this size to produce acceptable results for two reasons:
  a) Investment behaviour's nature and determinants are influenced by local culture and governmental rules and regulations. Thus, investment behaviour determinants are expected to be very similar in the sample.
  b) Limited resources available for the conduct of the questionnaire to the use of a sample of this small size.

- Methods used for analysis in this study were successful in analyzing the data base and producing results sufficient to achieve the study objectives. However, analysis methods concentrated on social aspects. It would have been more appropriate to study both social and economic aspects.
- The study findings clearly show major determinants of farmers investment behaviour in the agricultural sector of Daqahliya governorate. However, some of the aspects were ignored:
i. One of the major reasons for low investment in agriculture is the unavailability of appropriate levels and patterns of low cost technology.

ii. Another major reason for low investment in agriculture is the lack of appropriate presentation and promotion of investment opportunities. This is the result of many factors. For example, governmental agencies' role in this field is very limited, and the same will apply to non-governmental organizations. The end result was that most of farmers' savings were invested in non-agricultural or unproductive activities.

iii. Limited financial resources available for the extension services and the low quality of its staff led to weakening the relationship between farmers and extension workers, thereby limiting their ability to influence agricultural investment decisions.

- Even with all the above-mentioned shortcomings, the study produced some important results:
  i. Problems facing and determinants of agricultural investments decisions were determined in the study fields.
  ii. Major forces influencing agricultural investment behaviour in Daqahliya Governorate were determined.
  iii. A set of proposals and recommendations were presented to solve investment problems, and improve investment climate in the study region.
  iv. Governmental and non-governmental organizations' roles in
implementing the study recommendations were determined.

v. The study proposed some mechanisms to implement its recommendations, for example:

a. To establish a regional agricultural development board to be concerned with planning, design, and coordination of agricultural development policies.

b. To establish regional funds for financing agricultural development programs in the governorate, such as: new land development fund, cooperative credit fund, agricultural research and extension fund, and agricultural insurance fund.

c. To upgrade the performance and structures of agricultural cooperative in order to fill the institutional gap created by the structural adjustment policies.

d. To improve the relationship between universities and local communities.

It is important to recognize the new and unique approach used in this study to produce its findings and recommendations:

- Research results derived from applying research methods to the database were presented to workshops of targeted groups.

- Representatives of governmental and non-governmental organizations participated in designing proposal to improve agricultural investment climate and solve its problems. This approach made these proposal more creditable and enhance their chances for implementation.

- Refering to the results and recommendation of the study, the
Governorate of Dakahlia has made a decrease of establishing "The Local Council for Agricultural Development". The objective arrangement between the agricultural sector in the Gov., establishment of a fund to develop agriculture into old lands, and another for the new lands. Also composing specialized technical committees for converting the suggestions of the study to become programmes for agricultural development in all activities.