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ORGANIZATIONAL STRUCTURING OF
AGRICULTURAL DEVELOPMENT INSTITUTIONS

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1. Introduction

The optimal utilization of agricultural resources can make a substantial contribution to the economic upliftment of the rural areas of Southern Africa. This statement is supported by the fact that at least 20 percent of the gross national product of all countries in Southern Africa is generated in the agricultural sector. A large part of the economically active population of these countries is employed in the agricultural sector (Van Rooyen et al 1987a:186).

As a result of the administrative limitations of government departments, agricultural development institutions have been established in all the independent states and self-governing territories (except KwaZulu, where the function is undertaken by the KFC) to attend to agricultural development (Wallis 1986:67). So that they are able to handle a comprehensive development programme adequately, special attention must be given to the financial and institutional structures of such agricultural development institutions. This paper aims to outline an appropriate framework on which the organizational structure of agricultural development institutions can be based. This is necessary to facilitate the promotion of economic activity in the agricultural sector by creating an environment in which the abilities of farmers and other agricultural entrepreneurs can be improved.

The paper will start off with a brief discussion of the contingency approach towards organizational design.

Attention will then be given to the environment in which agricultural development institutions operate. The macro-economic environment, with specific reference to the Regional Development Policy, will also be addressed. With regard to the internal environment, the mission and objectives of agricultural development institutions will be discussed. Based on this environmental analysis, a strategy for agricultural development institutions will be outlined. Based on this the functions to be performed by agricultural development institutions will be identified. In conclusion an organizational structure will be proposed.

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2. An approach to organizational design

The key variables that influence the formulation of an organization's structure are the organization's strategy and the environment in which it operates (see Figure 1). The first step in organizational design should be the establishment of an effective link between environment, strategy and structure.

/Figure 1/

Opportunities and threats from the external environment, as well as strengths and weaknesses from the internal environment provide important influences on the formulation of the organization's strategy. The strategy is also influenced by the goals of the organization as well as the value systems and beliefs of the management. The strategy will determine which functions are to be performed, by whom and how these functions are to be performed (i.e. the technology to be used). The strategy, in turn, has three mutually consistent and increasing impacts on an organization's structure:

- Strategy determines organizational tasks which form the basis for organizational design.
- Strategy influences the choice of technology and people to be used in performing the tasks.
- Strategy determines the internal environment in which the organization will operate, which also influences the structure. (Stoner 1982:360).

Existing agricultural development institutions already have their strategies and structures in place, which will also have to be taken into consideration when reviewing the organization's structure. In this regard, specific attention must be given to the introduction of the new structure and maintain stability in the work force.

3. Environment analysis

3.1 External environment

The external environment includes everything that influences the organization but cannot be manipulated by the individual organization. It consists of the physical, social, political, technological, economic and institutional environments (De Bruyn 1984:71-75).

In a survey undertaken among existing agricultural development institutions the physical, economic and institutional environments were identified as the most important elements of the external environment. The physical environment includes aspects such as the availability of natural resources and the ecology. The institutional environment is mainly influenced by aspects such as government policy, legislation and government

institutions. The major influencing factor in the economic environment is the regional development policy. In this regard, principles such as maximization of private sector participation in agricultural activities, the devolution of decision making to appropriately structured local institutions, the promotion of economic linkages and the promotion of entrepreneurial activities should receive particular attention (Anon 1987:179, 181).

Three types of external environments can be described:

- The stable environment, where little or no unexpected or sudden change occurs. Products or services change infrequently and any changes can be planned well in advance. Market fluctuations are predictable, new technological developments are unlikely to occur and legislation affecting the organization is also very stable.
- The unstable environment, where innovation or changes occur in all or any of the markets, technology, product or legislation. However, trends are likely to be apparent and changes are not totally unpredictable.
- The turbulent environment is the environment characterized by frequent and unpredictable changes in the product, market, technology or legislation. The environment is seldom permanently turbulent in the sense that organizations usually pass through a temporary period of turbulence before making an adjustment. As soon as the organization has adjusted to the turbulence, it moves back into an unstable or even in some cases a stable environment. Industries where a rapid rate of technological and market change occurs, eg. the computer industry, can be described as operating in a turbulent environment (Stoner 1982:362).

It is therefore clear that in defining the external environment of an agricultural development institution, an analysis should be made of the product or service rendered by the institution, the market in which it operates and the influences of technology and legislation on its activities. The service of agricultural development institutions is agricultural development. This is undertaken through the planning, implementation and development of projects. Each individual project is influenced by unique environmental factors. The implication of this is that each individual project has its own instabilities.

The agricultural development institutions do not, in the normal sense of the words, experience any competition, in view of the fact that they are the only institutions of that nature in each state. The market in which they operate, namely that of the development of rural areas, is however of such a nature that the developmental task must be attended to in an orderly and

well-programmed manner in order to ensure that sustainable progress is made with the development process. It is therefore important that agricultural development institutions adjust quickly to changes in developmental needs in the rural areas. In this regard note must also be taken of the fact that the developmental process is sometimes also influenced by non-economic priorities. Assignments which stem from this must be accommodated on an ad hoc basis.

Agricultural development institutions operate in the rural areas and must therefore accommodate appropriate technology in their activities. It is also important to realize that the improvement of the skills levels of rural communities must form an important element of their work. This is necessary to enable these communities to adjust to improved technology. In terms of the economic environment in which agricultural development institutions operate, the development technology which they apply must facilitate the promotion of private sector involvement in agriculture. This also includes the transfer of appropriate technology to the rural communities and the ability of these communities to adapt to advanced technology (Rondinelli 1987:104).

Although agricultural development institutions were established in terms of legislation promulgated specifically for the purpose, they do experience uncertainty in this regard, because they are often operating in an environment typified by vague agricultural policy (Bembridge 1986:25-26). This matter is, however, receiving attention from the various governments and improvement in this regard can be expected.

Based on the foregoing analysis, the external environment of agricultural development institutions can be described as unstable.

3.2 Internal environment

The internal environment consists of five subsystems:

- strategy, objectives and goals which are derived from an analysis of the external environment,
- the technical subsystem,
- the psychological subsystem which reflects the values, attitudes, expectations and aspirations of employees,
- the structural subsystem. This relates to the relation between the organization and its external environment and determines the objectives, strategies and plans according to which the organization will operate. It also contributes to the creation of the organizational structure and development of control processes (De Bruyn 1984:69-70).

The relationship between the external and internal environments has important implications for the structuring of the organization which must accommodate environmental variables (De Bruyn 1984:64). In a bureaucratically structured organization, the organogram indicates the formal channels of communication only, while informal relationships and channels of communication which form important elements in the decision making process, are not indicated.

In order to be able to operate in an unstable environment, it is important that channels of communication be formalized at all levels. This will facilitate prompt decision making on:

- the technical level,
- the management and administrative levels, which support the technical level by minimizing environmental influences,
- the institutional level which contributes to the achievement of the organization's objectives (Kingdon 1973:10).

From this it is clear that management involvement in decision making at all levels is important in order to minimize environmental uncertainty. This need for decision making at various levels is therefore directly influenced by the uncertainty in the environment.

In an organization where the planning and implementation of projects are the most important activities, early management involvement in the decision making process is important in order to minimize environmental uncertainty also on a technical level. Management involvement alone cannot, however, eliminate all uncertainties and it is therefore important to involve technical expertise at an early stage. The matrix organizational system provides a framework which facilitates early management involvement at a technical level (Kingdon 1973:22).

3.3 Environment as point of departure in formulating a structure

Organizations must be structured in such a way that contingencies in the environment can be handled in the most effective way. There are three classes of structural variance:

- Uncertainty reduction, which involves the absorption of environmental unpredictability and fluctuations in a manner that allows for more rational, informed and orderly administration. This is achieved by capitalizing on opportunities, identifying and allowing for threats, creating a formal hierarchy for delegating authority and applying standard procedures to simplify tasks. In this way contingencies are being handled effectively.

- Techniques of differentiation can also be applied to handle contingencies. In such a way more skills and resources can be applied for continued creativity and innovation. Differentiation may include the delegation of authority and decision making so that technical experts have more say, and the establishment of an operational policy research unit.
- Organizational integration also forms an important mechanism to address organizational variables. The implementation of control systems, utilization of control committees, intensive vertical and horizontal channels of communication and a comprehensive management information system are all mechanisms of organization integration (Miller 1987:57).

/Table 1/

The degree of uncertainty and unpredictability as well as the number of contingencies strongly imply structural uncertainty. Table 1 indicates how the degree of uncertainty should be handled by applying the various techniques.

Agricultural development institutions operating in an unstable environment have the typical features of greater uncertainty and it is therefore important to apply appropriate mechanisms of uncertainty reduction, differentiation techniques and organizational integration to address structural uncertainty.

4. Strategy and functions

4.1 Strategy

A strategy is a programme of action which will enable the utilization of available resources in such a way that the comprehensive objectives of the organization can be achieved (Koontz et al 1984:107). It includes all activities necessary to achieve the organization's objectives. The strategy is implemented by allocating tasks necessary to fulfill the organization's goals. However, the strategy also includes the co-ordination of such tasks (De Bruyn 1984:83-84). The purpose of a strategy can therefore be described as to create an image of the organization's intended activities by means of a system of objectives and policy (Koontz et al 1984:107).

The governments of the independent states and self governing territories in Southern Africa play important roles in the formulation of the objectives and policies of the agricultural development institutions in each state, as the governments are the owners of these institutions, and create these institutions to execute their development policies. These governments are, however, inclined not to become directly involved in the strategy formulation of the agricultural development institutions. The result is that the institutions base their development strategies on implied policy formulation, which

develops as a result of the repeated performance of certain activities (Jorgensen et al 1986:431-432).

As a result, and also due to a lack of a clear development strategy within the various governments, some of the agricultural development institutions developed strategies where they had to embark upon the implementation and operation of agricultural development projects with the aim of generating own income. This was mainly because they needed to generate capital which could be utilized for the funding of economic development. As a result, these agricultural development institutions entered into direct competition with the private sector for scarce resources (Weideman 1977:11-12).

In terms of the Southern African regional development policy, development activities of agricultural development institutions should be such that the activities of existing farmers and other agriculturally related entrepreneurs be enhanced and that new ones be established and supported (Anon 1987:179).

In considering an appropriate strategy for agricultural development institutions, the following three criteria should be applied:

- Is the required economic development possible without the involvement of the agricultural development institutions?
- Will the required economic development flow from the activities of the agricultural development institution?
- Will the activities of the agricultural development institution be to the benefit of the groups that require support? (United Nations 1974:64).

The activities of agricultural development institutions must therefore be such that an environment be created within which local communities, private contractors, individual farmers and groups of farmers, as well as other private sector institutions, are enabled to optimally utilize agricultural resources in the economic production process. Where it is, in terms of the Southern African regional development policy, the aim to create self-sustaining private sector activities in the economy, the activities of the agricultural development institution must be structured in such a way that the institution can be phased out as soon as the activity reaches self sustainability (Anon 1987:181).

The following strategy is therefore proposed for agricultural development institutions:

The private sector should be mobilized to participate actively in agricultural production and associated agricultural services in the developing areas of Southern Africa in such a way that the agricultural sector can develop in a self-sustaining

economic sector in these areas. This can be done through the rendering of the following services;

- the planning of agricultural development activities,
- the establishment of new farmers and other agriculturally related entrepreneurs,
- the creation of the necessary agricultural infrastructure in order to enable the rendering of agricultural support services to existing and newly established farmers,
- the mobilizing of commercial agricultural support services,
- the mobilizing of non-commercial agricultural support services,
- the mobilizing of agricultural finance.

It must, however, be emphasised that the agricultural development institution must always only play a promotive role. The implication of this is that every development project or programme implemented by such an institution must eventually be able to function on its own after the agricultural development institution has completed its development function.

4.2 Functions

In an attempt to identify the functions of an agricultural development institution, it is important to analyze the agricultural sector in its various components.

4.2.1 The components of the agricultural sector

In general the agricultural sector can be divided in the following four components:

- (a) Farming, which is the agricultural production process where the available agricultural resources and factors of production are applied in producing agricultural produce. This activity is normally performed by the private sector, mainly by individual farmers.
- (b) Commercial agri-support services. These include services such as the manufacturing and distribution of production inputs, the processing and marketing of produce, the rendering of mechanization services and the provision of agricultural finance. These services are referred to as commercial services because these services are paid for on a direct basis. These services are normally provided by the private sector in a developed economy.

- (c) Non-commercial agri-support services. These services are needed by the farming community and can in most cases be provided on a collective basis, but are not paid for directly by the farming community. These services include extension, training and research, and are in general provided by the public sector. Some private sector institutions do, however provide some of these inputs as a service to farmers, although farmers do not pay for such services directly.
- (d) The agricultural milieu. This is a combination of all factors necessary to enable the agricultural production activity and the rendering of the necessary support services. These include factors such as economic development policy, agricultural policy and other policy matters relating inter alia to the marketing of produce, health standards and import and export regulations. This milieu also includes cultural factors such as traditions and value systems and the general level of education (Mosher 1971:5-7).

4.2.2 The functions of agricultural development institutions

Within the framework of the proposed strategy for agricultural development institutions as spelled out in paragraph 4.1, these institutions should promote and mobilize some or all of those functions necessary to ensure a stable and self-sustaining agricultural sector.

- (a) Farming: The agricultural development institution must make it possible for individual farmers or groups of farmers to optimally utilize agricultural resources in the production process. This implies that agricultural development institutions must plan new economic farming units for the settlement of new farmers, or must analyze and plan the activities of existing emerging farmers. The agricultural development institutions also have a role to play in facilitating the creation of agriculturally related infrastructure to enable new farmers to be established or the activities of existing emerging farmers to be upgraded.
- (b) Commercial agri-support services are primarily the responsibility of the private sector. The private sector is, however, often non-existent in the developing areas and in order to ensure that these services are available to new and existing emerging farmers, the agricultural development institutions must mobilize the private sector to provide these services. This can be done by, amongst other things, undertaking the services initially but in such a way that a climate is created where it will become attractive to the private sector to become involved. A third function of the agricultural development institu-

tions is therefore the planning and mobilizing of commercial agri-support services.

- (c) Non-commercial agri-support services are generally the responsibility of the government (Van Rooyen et al 1987b:217). In a survey undertaken among the existing agricultural development institutions, they indicated that they render these services as part of a comprehensive support package to farmers. The responsibility for the rendering of these services still remains with government and the role of the agricultural development institutions in this regard should mainly focus on the co-ordination of these services. Where it is for practical reasons important that agricultural development institutions undertake these functions, appropriate funding arrangements should be made between the agricultural development institution and its government.
- (d) The main emphasis in the structuring of the agricultural milieu lies with the formulation and revision of general economic and agricultural development policy. Although primarily the task of government, (Mosher 1971:13), agricultural development institutions are in the position to continuously monitor the development milieu and provide government with inputs for the development and revision of policy.
- (e) Agricultural development institutions operate in rural areas and therefore have an important role to play in promoting the development effort of the government within rural communities. However, it is clear that these institutions must also promote the needs for private sector participation in economic development.
- (f) Funds for the development activities of the agricultural development institutions, must be mobilized in both the private and public sectors.
- (g) Apart from all the functions already mentioned, agricultural development institutions must also perform the normal administrative staffing, legal and secretarial functions.

The functions of agricultural development institutions can be summarized as follows:

- project planning and development, including farmer settlement,
- the planning and development of farmer support programmes,
- the mobilization of commercial agri-support services by enhancing the involvement of the private sector to render these services or to render these services themselves as an interim measure,

- the supply or co-ordination of non-commercial agri-support services,
- the provision of support to the government with regard to the formulation and review of general economic and agricultural development policy,
- promotion of the activities of the agricultural development institutions, both in the rural areas where they operate and in the developed private sector in order to promote private sector participation in development,
- the mobilization of development capital,
- performance of the normal administrative, staffing and other support functions.

5. A proposed structure

5.1 Requirements

Agricultural development institutions operate in an unstable environment which increases the decision making modality. The organizational structure must therefore make decision making at a technical level possible.

The main operational activities of agricultural development institutions revolve around project planning and implementation. A strong co-ordinating mechanism is therefore required to ensure that the general objectives of the institution be met.

The basic function of agricultural development institutions is to promote agricultural development. As such agricultural development institutions should not become permanently involved in the direct operational activities of projects. Their structures must therefore allow for gradual withdrawal from the project, as the project develops into a situation where all the participants in the agricultural sector can play their rightful role. The technical and planning requirements of projects differ, and it is therefore important that the structure allow for the application of the specialist knowledge required for each project.

In order to be able to provide the government with inputs for the formulation and review of general economic and agricultural development policy on a continuous basis, it is necessary that a policy research unit be established. Although this unit will not form part of the line function of the agricultural development institution, it can serve as an important source of information for project planning. Apart from economic development research, this unit will also have to evaluate existing projects in order to apply existing experience in future development activities. The unit should be accommodated as a staff function to the chief executive.

Promoting the activities of the agricultural development institution in both the rural areas and the developed economic sector forms another important function. The structure of the institution must allow for a mechanism where this function can receive top-level attention. As it does not form part of the operational activities of the agricultural development institution, and in view of the importance of this function, it should be accommodated as a staff function to the chief executive of the agricultural development institution.

The structure must also provide for administrative staffing and other support functions to the operational activities of the agricultural development institutions.

5.2 Division of functions

The activities of agricultural development institutions can be divided into three main categories:

5.2.1 Operational category

An operational category would include the planning, development and implementation of projects. To meet the requirements as spelled out in paragraph 5.1, a matrix organization system is proposed, as this system allows for early management involvement at a technical level, the application of specialist services to meet the requirements of each individual project and the co-ordination of project activities (Bedeian 1984:81).

With regard to the project planning function a co-ordinating matrix is proposed. In this matrix system the project leader's role is to co-ordinate the inputs from the various specialists on his team, as it is assumed that these specialists can contribute in a rational way to the achievement of the organization's objectives.

With regard to project development and implementation function, a leadership matrix is proposed. In terms of its definition the project leader fulfills a management function where he plans, organizes and controls the inputs of his project team members (Gunz and Pearson 1977:27).

5.2.2 Financing and administrative support

The provision of these services can to a large extent function individually. These functions serve as important support inputs to ensure the effective operational activities of the agricultural development institutions. A service-oriented divisional structure appears to be applicable.

5.2.3 Staff functions

The two staff functions, namely the promotion function by external relations and the research function, are to be handled as two separate departments reporting at senior level,

preferably to the chief executive to indicate the importance of these functions. Departmentalization should be considered as required. The research unit can for instance be divided into an agricultural research department, a rural development research department and a project evaluation department. A library could also be included in the unit.

5.3 A proposed structure

Figure 2 indicates a proposed organogram for an agricultural development institution.

/Figure 2/

Notes:

- (1) The number of project leaders will depend on the extent of activities and the required planning capacity.
- (2) Only a few specialist areas are indicated. The area in which the agricultural development institution operates will influence the type of specialist required. Where emphasis is placed on rural development and community participation, specialists in these fields also need to be included. Ad hoc requirements can be met by appointing private consultants. Where a policy is followed to use consultancy firms for project planning, the capacity of the function can be increased without appointing more staff. These specialist fields are, however, necessary to comprehensively control the performance of such consultants.
- (3) The number of project managers will be determined by the required rate of development and the rate at which projects reach self-sustainability and at which the agricultural development institution can withdraw from the project. Depending on the number of project managers, the appointment of more than one senior manager; project development and implementation, might be considered.
- (4) This could also be a staff function to the chief executive.
- (5) Project-specific administration is not included in this function and is to be handled by project managers on a project-by-project basis.
- (6) Refers to corporate secretarial services only and includes services to the board of directors, management committee and other permanent committees.

5.4 Implementation

The most important criticism against the matrix organizational system is that it violates the unity of command principle

(Stoner 1982:316). It is therefore important that staff be trained to accept this principle of a dual command system and to recognize the fact that team performance is regarded as more important than individual performance. The following precautions should therefore be taken to ensure effective implementation:

- Due time should be allowed for gradual phasing in of the system.
- Minor adjustments will have to be effected from time to time.
- Clear objectives, goals and strategies need to be formulated to serve as basic frame of reference for all staff.
- Team commitment is important in project activities.
- Mechanisms must be created to effectively handle conflict.
- Comprehensive channels of communication must be provided for.
- Effective training of staff is important (Cleland 1981:39).

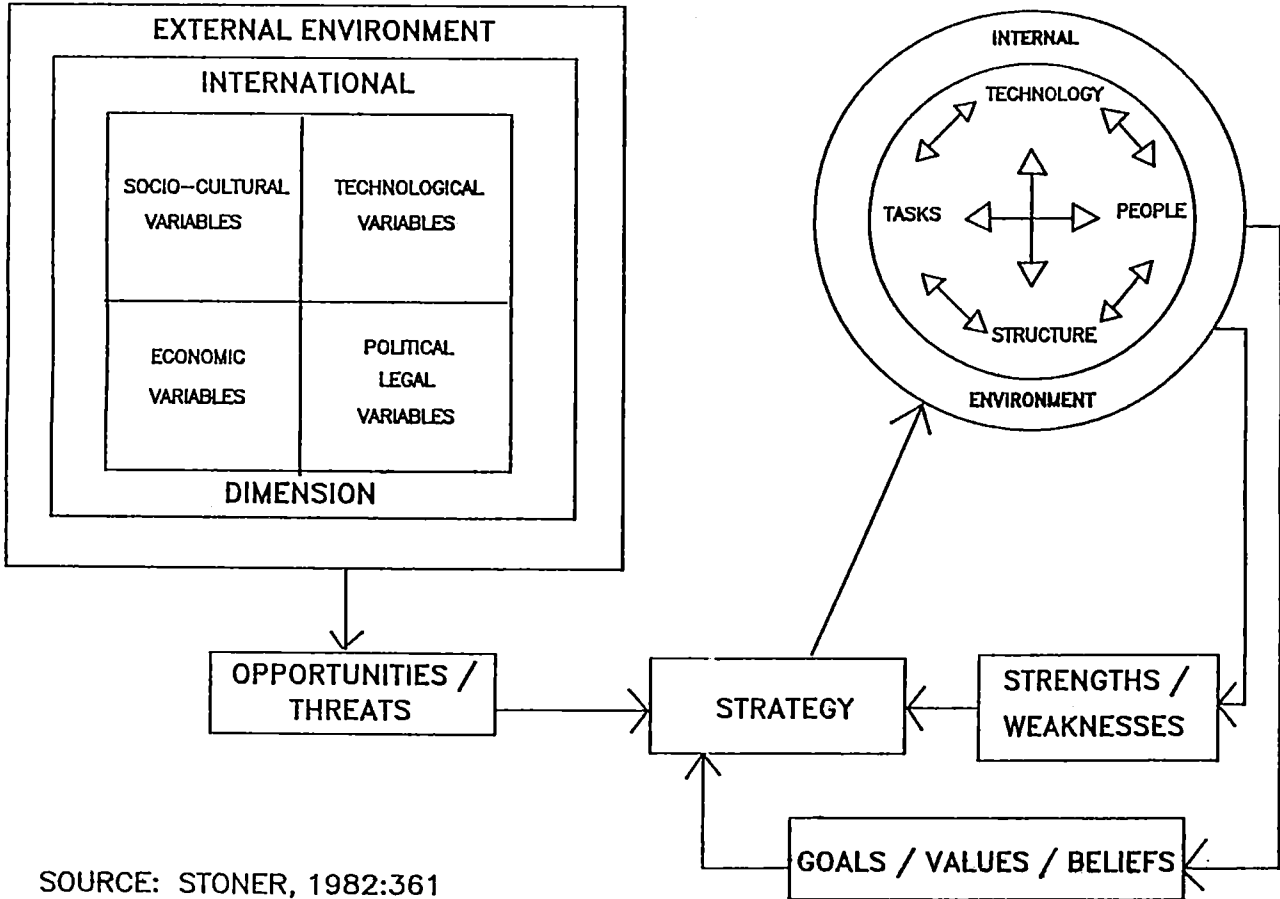
6. Conclusion

A change in approach to agricultural development since the acceptance of the Southern African regional development policy meant that agricultural development institutions had to adapt to new initiatives in agricultural development. The strong emphasis placed on private sector participation in the agricultural processes also required that agricultural development institutions be structured in such a way that they could promote this approach.

The governments of the TBVC states and self-governing territories should realize the important role that agricultural development institutions have to play in achieving the economic development objectives of these governments. The correct organizational structuring of agricultural development institutions forms only one part of their total requirements to fulfill their functions. Another very important matter which needs to receive urgent attention is the correct financial structuring of agricultural development institutions. This will not only assist the institutions to mobilize development capital but will also help them to refrain from direct competition with the private sector.

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FIGURE 1



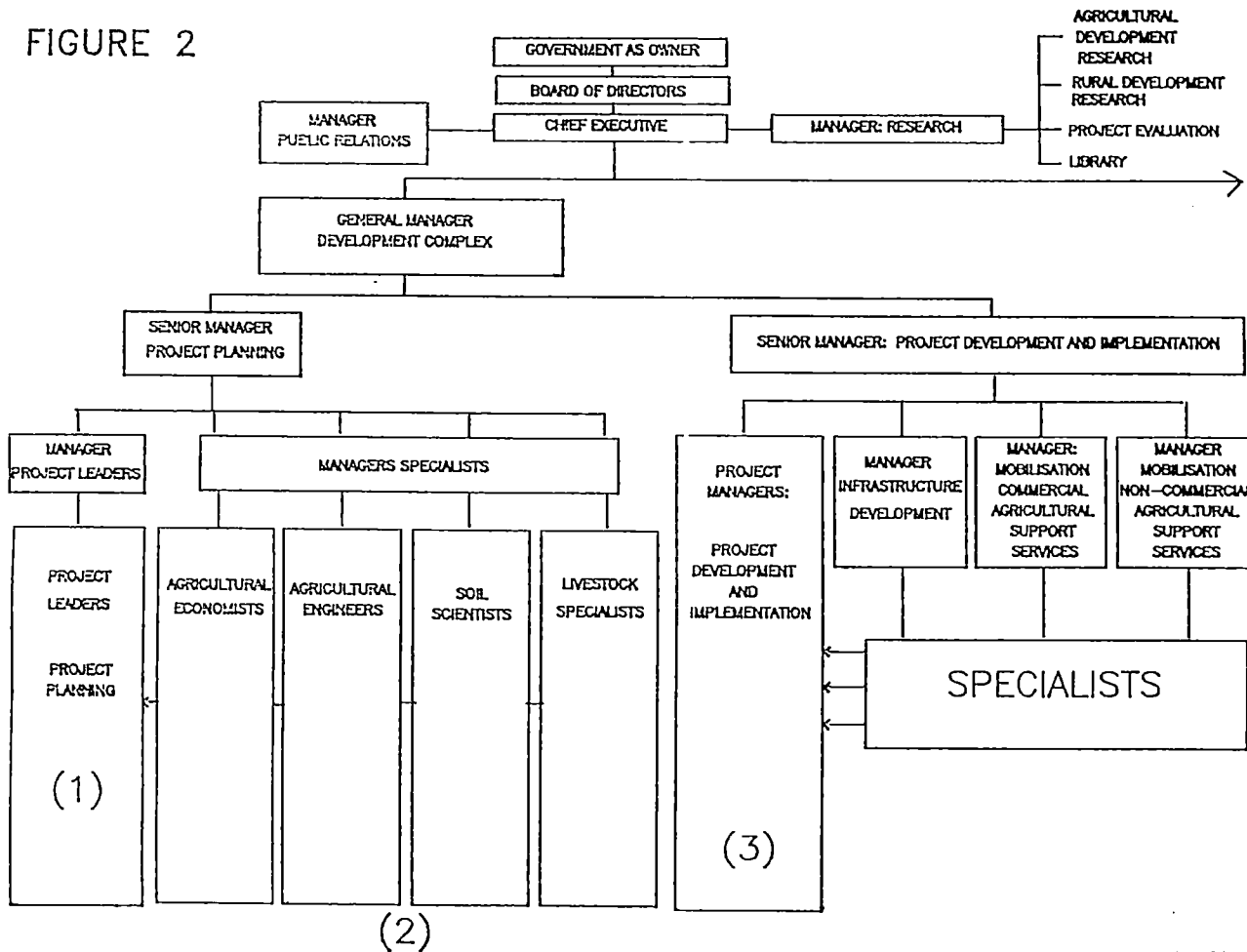
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SOURCE: STONER, 1982:361

TABLE 1

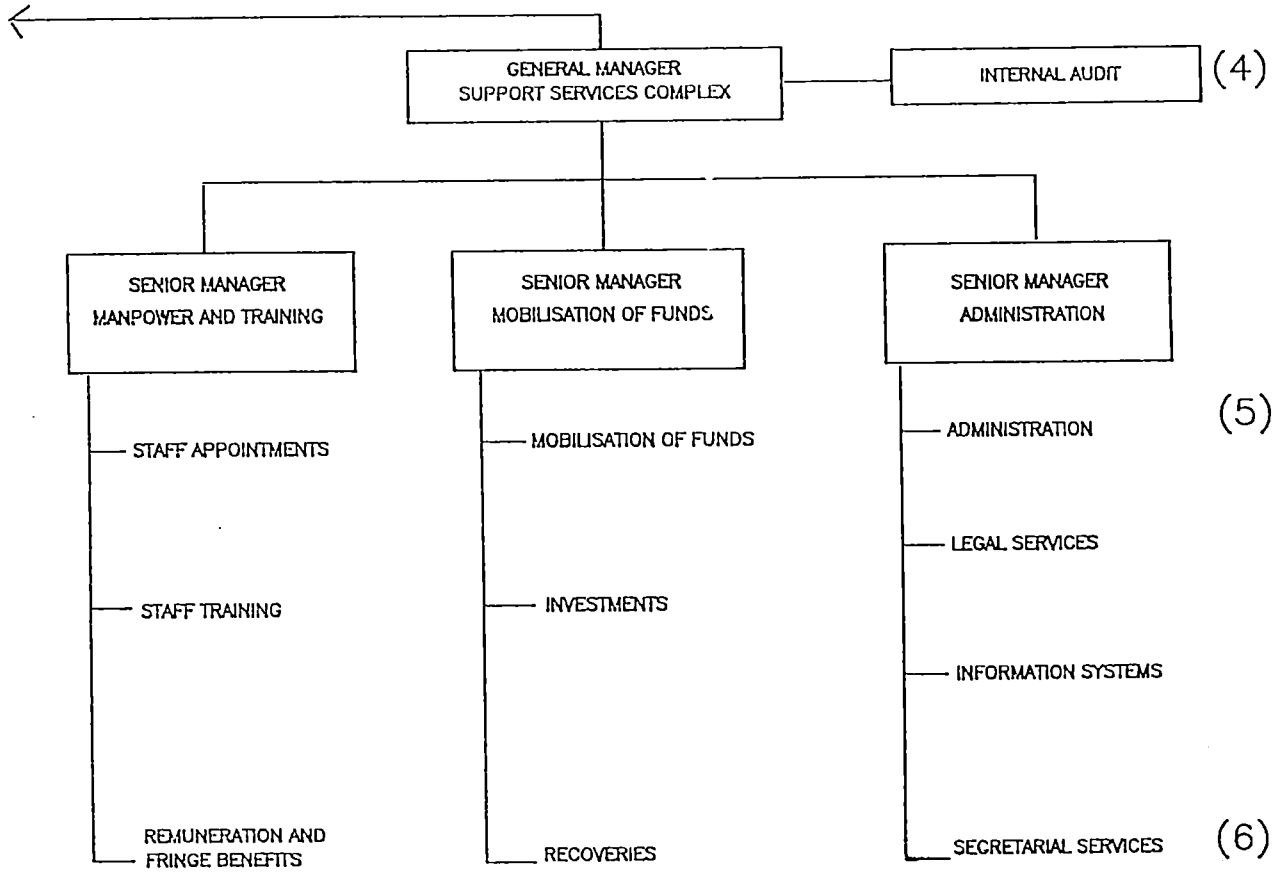
STRUCTURAL UNCERTAINTY	SIMPLE STABLE CONTINGENCIES	GREATER UNCERTAINTY
UNCERTAINTY REDUCTION	FORMAL RULES AND PROCEDURES	ENVIRONMENTAL SCANNING
DIFFERENTIATION TECHNIQUES	DEPARTMENTAL SPECIALISATION	DIFFERENTIATION IN TIME VALUE, INTERPERSONAL AND TASK ORIENTATIONS OF PERSONNEL AND DEPARTMENTS
ORGANISATIONAL INTEGRATION	COST CONTROLS AND MIS	USE OF TASK FORCES, INTEGRATIVE PERSONNEL, COMMITTEES AND MATRIX STRUCTURES

FIGURE 2



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