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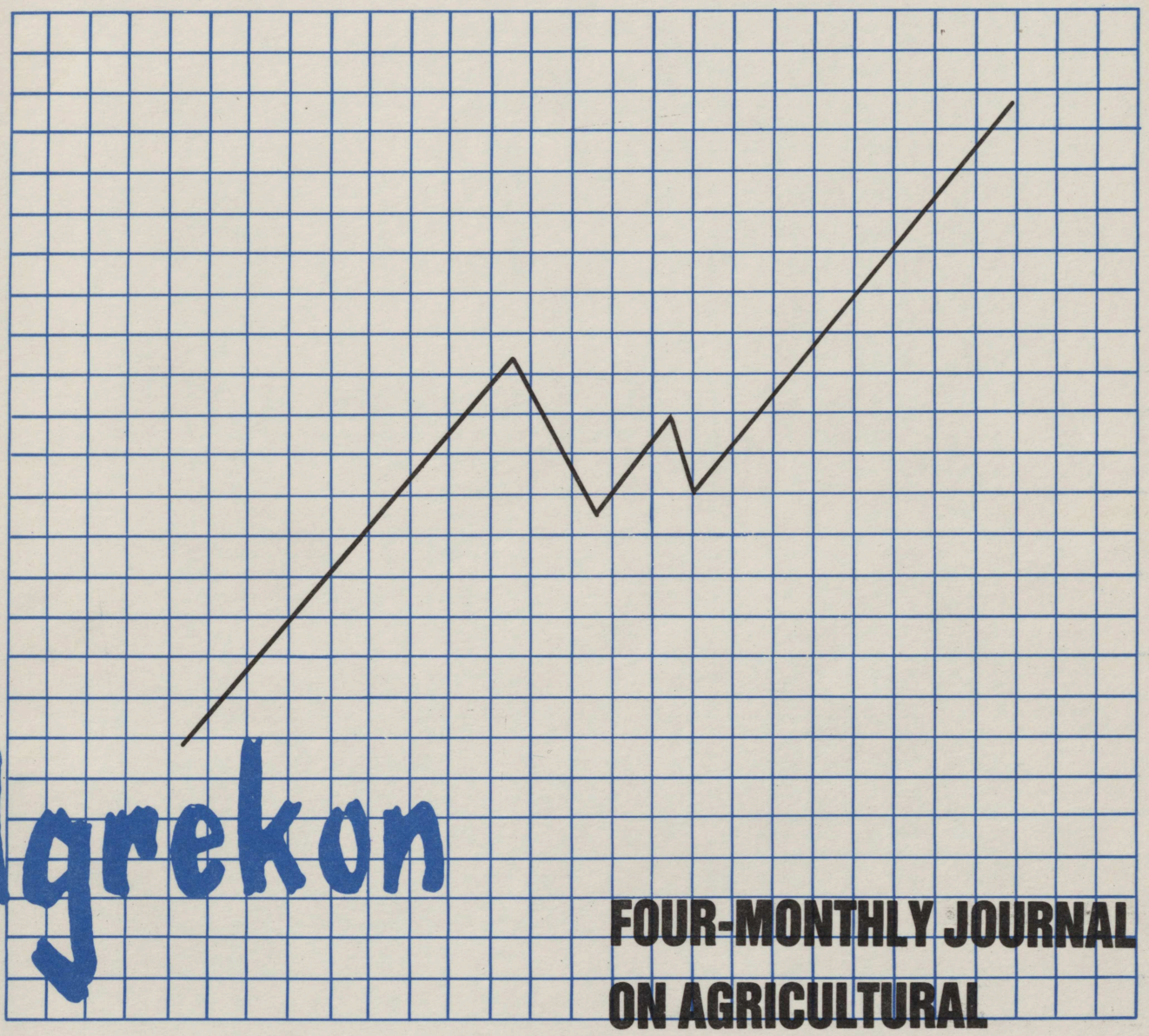

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THE INFLUENCE OF THE ECONOMIC/ FINANCIAL ENVIRONMENT ON FARM MANAGEMENT AND DECISION-MAKING

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INTRODUCTION

Farming enterprises are found in various forms; these may be commercial farming, family farming, co-operative farming, collective farming etc.

Although these individual enterprises may be categorised according to various standards, such enterprises will always be subject to the same set of farm management principles.

Each enterprise is unique in terms of its situation, history, resources and human components. It is therefore logical to assume that although the general principles of management and decision-making may be applicable to all units, the application of such principles will differ as a result of the uniqueness of each enterprise.

Furthermore, the individual farming enterprise is surrounded by a set of environmental factors that bear an interactive relationship to the farming system, through the medium of physical, information, economic, sociological and legal transactions and restrictions. Each farming system is influenced by general as well as unique environmental parameters (Dillon, 1978).

The general environmental factors that can affect farming systems may be categorised as follows:

- Cultural,
- technological,
- educational,
- political,
- legal,
- climatic,
- demographic,
- sociological, and
- economic/financial.

The economic/financial environmental factors are probably the most important determinant of the decision-making process and they form the main subject of this paper.

THE ECONOMIC/FINANCIAL ENVIRONMENT

The fundamental causes of the financial problems of farmers may be ascribed to the changes that have taken place in the economic/financial environment. These changes are fairly dramatic and undoubtedly require a different strategy from the farmer as a businessman if he wishes to survive successfully at the financial level.

The environment within which the farmer operates is characterised by -

- sustained high rates of inflation,
- high interest rates and a shortage of capital,
- changes in local market requirements,
- an oversupply of important commodities both locally and overseas, and
- a fiscal policy that encourages the misallocation of resources.

The above environmental factors have caused several economic problems in the agricultural sector. The most important is a relatively unfavourable relationship between agricultural input and output prices, with a corresponding shrinkage of the profit margin, an increasing dependence on external financing and a rapid increase in total agricultural debt. This condition has been aggravated in large parts of the Republic by a number of years of successive droughts and other unfavourable natural conditions.

Within individual farming enterprises the problem manifests itself largely in the form of shrinking net farm incomes or even negative net farm incomes, unfavourable debt burden ratios, high interest obligations, liquidity problems and an unfavourable rate of exchange.

Inflation, interest rates and debt burden

The eighties were characterised by a high inflation rate which in turn resulted in high nominal interest rates; the converse was not true, despite what producers may have wished. Negative real interest rates up to 1983 encouraged producers to substitute asset appreciation for income generated from farming. There was therefore a great demand for credit to purchase movable capital assets and fixed capital assets.

In the process inflation also obscured the management efficiency and cash flow problems.

From 1980/81 onwards nominal interest rates showed unprecedented rises, in line with the general trend of thought towards freer and more competitive financial markets.

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TABLE 1 - Consumer price index for all items

Year	Index*	Percentage increase per annum %
1970	36,1	
1980	100,0	11,0
1981	115,2	15,2
1982	132,1	14,7
1983	148,4	12,3
1984	165,7	11,6
1985	192,6	16,2
1986	228,5	18,6

*1980 = 100
Source: Directorate of Agricultural Economic Trends

TABLE 2 - Interest rates of the most important credit institutions

Year	Land Bank	Co-operatives	Commercial banks	Average
Weights	29,6	35,5	34,9	100,0
1973	6,41	8,50	7,98	7,70
1980	7,75	9,21	9,57	8,90
1981	10,49	11,98	13,67	12,13
1982	15,09	16,17	19,07	16,86
1983	14,01	14,57	16,45	15,06
1984	17,77	15,29	22,05	18,38
1985	19,42	14,54	21,74	18,50
1986	13,99	9,73	14,38	12,61

Source: Directorate of Agricultural Economic Trends

The following arguments were advanced for this line of thought: (Joubert, Van Wyk, Siertsema, 1986)

- Promote the optimal use of resources,
- help bring inflation under control,
- promote long-term economic growth,
- contribute to the protection of the external value of the rand.

High interest rates together with the decline in incomes and land values meant that entrepreneurs who had a high debt burden experienced increasing problems in meeting their obligations. The security position of these producers was also threatened as a result.

It is, however, important to understand that the broader dimensions of the present farming problem are more deeply seated and involve more than low prices, high interest rates and low farm incomes. If one looks back in history there were also periods during which low income problems were experienced but the entrepreneurs were not exposed to the same financial pressure as they are at present. In addition to lower real income levels, enterprises are at present faced with a considerably higher debt-to-income ratio than was the case in the past.

The data in Table 3 show that in 1974 farming in the R.S.A. was carrying a debt of R1,12 for each R1 of net farm income generated. This ratio increased by 167 per cent in 1985 and the table shows that in that year farms were carrying a debt of almost R3 for each R1 of net farm income generated. The ability of enterprises to pay off debts therefore deteriorated dramatically. In order to maintain the same debt settlement capacity that applied in 1974, the net farm income will have to increase about 2,7 times.

TABLE 3 - Ratio of total debt to net farm income

Year	Total debt R1 000	Net farm income* R1 000	Debt: NFI R
1974	1 785,5	1 590,8	1,12
1980	3 838,6	2 608,4	1,47
1981	4 838,7	3 132,5	1,54
1982	5 785,5	2 780,7	2,08
1983	7 408,9	1 837,4	4,03
1984	9 495,3	3 220,6	2,95
1985	11 117,6	3 714,9	2,99

*Adjusted to reflect the net farm income by definition
Source: Directorate of Agricultural Economic Trends

Another change in the balance sheet that has probably taken place in many farming enterprises is the decrease in liquidity. For example, a study of the gross capital renewal in agriculture shows a sharp decrease in livestock numbers whereas operating and cost studies in the summer cropping areas also show that the investment in movable capital items has dropped relative to fixed capital items. In the past sufficient liquidity was a kind of safety valve for entrepreneurs who did not generate sufficient income to meet their debt obligations. Entrepreneurs in that position could use part of their liquid assets to meet their obligations without liquidating productive assets such as land, implements and breeding stock. At present liquidity has probably reached such a low point that some entrepreneurs are being obliged to sell part of their fixed assets to meet their obligations.

The imbalance on the assets side of the balance sheet can only be corrected by generating more income and using the additional income to correct the imbalances in the balance sheet. Even if entrepreneurs are using the increased income for restructuring the balance sheet, the process will be slow, which leads one to the conclusion that financial pressure will be a long-term problem in the agricultural sector.

It was also mentioned previously that declining asset values are a further serious problem leading to increased security risks. A further consequence of this situation is that the second safety valve for farmers unable to meet their obligations is threatened because refinancing is becoming increasingly difficult.

Effect of fiscal measures

The secondary effects of fiscal measures as environmental factors have contributed to inefficiency and a consequent deterioration in the long-term liquidity position of entrepreneurs. Inefficiency in terms of over-capitalisation, with special reference to mechanisation and breeding stock, is a telling example. The present system also contributes largely to the misuse and mismanagement of natural resources.

The present method according to which the purchase prices of capital goods and breeding stock are fully written off during the year of purchase and the method of valuing livestock for tax purposes are

major causes of the above-mentioned problem (Directorate of Agricultural Production Economics, 1986).

A further problem is the fact that interest rates are insensitive to inflation, which means that farmers have had to sacrifice an increasingly large share of farming profit to taxes. This has led to the misuse of fiscal benefits, had an adverse effect on cash flow, weakened the debt position of farmers and had a detrimental effect on their ability to compete internationally and to finance capital formation (Blignaut, 1987).

Changes in market requirements

When one is planning for future agricultural production, planning is subject to a wide range of factors such as historic food consumption, income trends, income elasticity of the demand, differentiated population growth, urbanisation rate, technology etc.

For example, the Non-White sector of the market is expected to represent an estimated 82% of the demand for food in the year 2000, as against 64% in 1980. In terms of volume this represents a growth of over 200% in 20 years (Willemse, 1986).

It is also calculated that the income elasticity of the demand for virtually all types of food is far greater among Black people than among Whites and that a generally growing economy and higher standard of living will create not only a generally higher demand for food but also a differentiated relatively higher demand for meat, fruit, nuts and vegetables, to mention only a few commodities (Van der Merwe, 1986).

In comparison with many other countries the R.S.A. has a proud record in the sense that it has been increasingly able to meet the food requirements of its population. Between 1950 and 1980 agricultural production in the R.S.A. increased at a rate of 3,7% per annum. In contrast the population grew by 2,8% per annum over the same period (Joubert, 1983).

In the short term that fact that agricultural production and especially the production of certain commodities, has increased more rapidly than the demand has not been without its problems. The R.S.A. was compelled to enter the export market and we are all aware of our present impaired ability to compete internationally. This weak competitive position has to do not only with trends in the supply and demand situation on world markets, but also with policy directions followed by other countries with regard to overseas trade. In addition there are the uncertainties that have been brought about by fluctuating rates of exchange over the past few years.

With regard to the export market it would surely be appropriate to refer to the dilemma in which the world grain trade finds itself. In the U.S.A.'s attempts to recover its share of the market in Europe, the U.S.A. and the E.E.C. are heading for a confrontation that will undoubtedly have an adverse effect on South African maize exports. In the process other exporters such as Argentina and Australia have also been compelled to reduce prices in order to maintain exports. It is also necessary to note the fact that China has now emerged as a major exporter of grain where it used to have to import grain in the past. According to experts last year's record grain crop in Russia was due not only to the climatic conditions but also to large-scale structural and political changes.

In view of the situation in the world markets and the surpluses supplied on the home front, structural changes will undoubtedly have to be introduced in time. These structural changes are not only essential for the financial survival of our producers, who are at present struggling with serious financial problems, but also for the preservation of our natural resources.

Price support measures that did not keep pace with the realities of the supply and demand situation gave rise to the exploitation of marginal resources and this resulted in the suboptimal utilisation of resources (Joubert, 1984).

SOLUTIONS

Fundamentally there are two basic approaches that may be followed in counteracting or relieving the financial pressure on agricultural enterprises. The first approach could be to change the environment, in other words to introduce policy measures that will result in relatively low interest rates, rapid increases in land prices, the expansion of export markets, relatively high product prices and consequently increased profit margins. The second general strategy that could be followed to relieve financial pressure is that the agricultural industry and individual enterprises should adapt to the "new" environment. The latter implies a restructuring with a view to survival during times of low profit margins, high interest rates, low asset values and strong competition on the international markets, as is the case at present.

It is highly unlikely that the environmental factors will change in the way indicated under the first alternative. By implication we can infer that the most realistic approach would be for the agricultural industry and individual enterprises to adapt to the environment.

Structural changes

The fact that the agricultural sector is characterised by a low return on capital implies that this sector has surplus production capacity. On the other hand we are faced with the problem that the productive capacity of some of our resources is deteriorating as a result of excessive soil erosion. This fact, together with the present market requirements both locally and overseas, leaves no doubt that certain structural adjustments are justified.

Studies in the summer rainfall field cropping areas show that the average long-term yields from most crops are generally low and that there is also a

relatively high variation in yields from year to year (Du Toit, 1984).

Information obtained by the Director: Highveld Region, shows that from the agricultural point of view there are major differences between the farming pattern that is actually applied and the one that is recommended (Highveld Region, 1980). If long-term stability is the objective the principle of the "right" land for the "right" crop should be applied.

Economic planning should fit in with this in that income and cost estimates on a whole farm basis as well as a branch of farming basis should be used to implement the most profitable plan within the given physical-technical limitations.

However, the producer will not only have to be able to make the grade during a transitional phase of this kind but will have to be supported in the decision-making process. As a result of the poor financial position in which many producers find themselves, bridging finance in the form of "soft" loans will have to be provided for producers in the short to medium term.

It is very important to guard against the injudicious propagation of individual industries without giving thorough consideration to all alternatives. Information with regard to cultural practices, income and cost patterns, profitability, financing possibilities etc. will have to be put at the disposal of the producer through the extension service, after which the producer would make his own decision.

Adequate and efficient agricultural economic information and advisory services have now become vitally important.

Further structural changes that could be initiated and considered by the Government are -

- the total or partial withdrawal of highly vulnerable and already damaged agricultural areas;
- the elimination of non-viable farming units;
- the promotion of farming by tenants and part-time farmers as an interim measure before they graduate to full-time ownership/occupancy; and
- the expansion and/or intensification of irrigation possibilities to reduce the risk.

Diversification

Economic factors have contributed to an over-emphasis on specialisation in certain cash crops. Excessive specialisation naturally leads to an increased risk for the producer.

Through judicious diversification certain risk factors can be reduced or eliminated and the pursuit of the highest possible profit in the long term can be promoted.

Diversification generally affords several advantages such as -

- better utilisation of labour and other resources;
- spreading of risks over various branches of farming, which reduces the chances of a complete financial setback;
- better cash flow in that income is received throughout the year and/or at shorter intervals instead of once a year;
- the utilisation of land according to potential; and
- the utilisation of complementarity (e.g. legumes in rotational cropping with maize) and supplementarity (e.g. the utilisation of maize residues by livestock) between the various branches of farming.

However, besides the higher demand on management, successful diversification is dependent on the fact that the prices and yields of crops cultivated simultaneously, must not be highly and positively correlated, since this may give rise to an unstable income. Studies by Du Toit (1984) show that the correlation in yield between crops and between regions in the summer rainfall field cropping areas still shows major variations that confirm the possibility of crop diversification.

However, the livestock factor merits a more important place and greater priority in the farming pattern in the summer field cropping areas. A more favourable cash flow can be established and livestock are assets that can be sold fairly quickly and so converted into cash if circumstances should require this.

Conservatism

If farms are not as profitable as expected, expenditure, production costs and land prices must be related to this fact. Furthermore, after a good agricultural year producers are inclined to be over-optimistic regarding expected yields and profits.

Instead of striving for maximum physical yields, it would be better to strive for maximum long-term economic yields. This approach would reduce risk and consequently losses. In many cases it would mean that producers would have to switch to more extensive cultural practices by scaling down yields and inputs.

It is important to note that there is no general recipe. The production function of each individual differs and his particular set of parameters will have to be considered before recommendations can be made and plans carried out.

It is again important to emphasise that most producers will not be able to bring about these essential changes without the necessary extension and advisory services.

Economic/financial management

In order to bring about essential changes, major emphasis will have to be placed on the performance analysis of resources, land, labour, capital and management. This implies that the economic/financial information needs of farmers can be expected to increase drastically. In order to meet these needs the Government, co-operatives and the private sector will have to take co-ordinating action in order to

increase the scale and quality of economic/financial products and services.

On the producer's side the emphasis will have to fall on efficiency. Producers will have to adapt in order to become less dependent on credit by building up capital reserves. In this way amendments to the Income Tax Act could stimulate its effect. Furthermore, the planner will have to take into account the fact that the provision of credit will in future be based increasingly on the ability of the enterprise to generate income.

With a view to survival more emphasis will have to be placed on improved cost control, because boosting productivity lies largely within the control of the entrepreneur and price control largely outside his control. In the latter regard it may be expected that in future there will be more collaboration of financially strong farmers in order to undertake purchases on a joint basis. This will mean that bodies that serve agriculture will have to take a critical look at the efficiency of the services they render.

For the forseeable future inflation will remain a reality in South African agriculture and the farmer will have to take inflation into account when planning. The more efficient and effective use, utilisation and replacement of resources and inputs will be necessary (Louw, 1987).

Furthermore, a comprehensive crop insurance programme is of cardinal importance and should receive greater support. Greater involvement by individual entrepreneurs will mean that premium levels will show greater realism.

In the last instance, it should be emphasised that the financial room for manoeuvre by entrepreneurs is becoming increasingly limited as a result of the special economic/financial environmental factors. This necessitates the application of good and disciplined financial management. Cash flow and financing budgets, knowledge of repayment terms and knowledge of effective and nominal interest rates are essential for survival and growth in agriculture.

SUMMARY

The set of environmental factors in an economic/financial context, together with the unfavourable climatic conditions, are currently placing great financial pressure on individual enterprises. The problem is largely manifesting itself in declining net farm incomes, the unfavourable debt burden ratios, high interest obligations, liquidity problems and an unfavourable rate of exchange.

Producers no longer have safety valves such as high liquidity and security values that will enable them to meet their obligations.

Two approaches may be followed when attempting to relieve the financial pressure. These are -

- for the environment to be changed, or
- for entrepreneurs to adapt to the "new" environment.

The latter appears to be the most practical and logical solution and it can be effected by giving attention to meaningful structural changes, diversification, improved financial management and the exercise of greater conservatism in future planning. The emphasis should be placed on higher efficiency throughout.

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