Vol. 26 No. 3
OCTOBER 1987

Price R2,OO
(+ GST)

Agrekon

FOUR-MONTHLY JOURNAL ON AGRICULTURAL ECONOMICS

Issued by the Department of Agricultural Economics and Marketing

THE PRODUCER AS DECISION-MAKER

by J.A. GROENEWALD*

MANAGEMENT, PROFIT AND RISK

Any economic entity needs to be managed. This includes households. It includes production units. It includes combinations of households and production units. It includes commercial and subsistence farm units.

In a conventional, static situation - the domain of traditional economic theory, including much of the theory of the firm - there is neither an explanation for, nor a motivation and least of all a rationale for the existence of management and/or profit. The classical theory tends to define these out of existence by assuming a world of perfect knowledge, perfect foresight, completely rational behaviour and perfect distribution of proceeds among factors of production. Perfect equilibrium is attained under perfect conditions.

These assumptions, useful as they are in abstracting a model of economic behaviour, have limited the ability of the classical theory of the firm to handle management.

Production consumes time. This in itself forces entrepreneurs - producers - to formulate the best expectations they can as to the number of consumers who will be willing to pay for their products (Keynes, 1936). Production plans are based on these expectations.

The mere mention of expectations indicates an absence of perfect knowledge. It is from imperfect knowledge, hence risk and uncertainty, that we have the origins of management and of risk (Knight, 1957). This observation is by no means a very recent one. Von Thünen, in his classical work, "Der isoliert Staat", argued in 1826 that profit was the residue after labour and capital had been compensated for their contributions. This residue (profit) consisted of two parts, *viz.* compensation for risk bearing and the additional productivity emanating therefrom that the entrepreneur works for himself - his "sleepless nights" while he plans the business (Knight, 1957). A further component of profit may have a windfall nature - results may be more favourable than expected (Knight, 1957).

Another component of profit may be the result of innovational action. Successful innovation will cause an entrepreneur to land on a higher production function (and hence, lower cost functions) than the industry, and hence to achieve profits. This innovational profit gradually diminishes and disappears as others imitate the innovator (Schumpeter, 1961). Continued innovational profits will be dependent on continued successful innovation.

*University of Pretoria

Farm producers operate under conditions of risk and uncertainty, the most important sources of which are product and input prices, physical yields, technology and the social and judicial environment (Heady, 1952).

Recent developments - and in this respect the USA and the RSA have experienced similar trends - have increased the risk exposure of farmers; increased variability in prices of some farm commodities, increased real costs of inputs such as land and capital (Jolly, 1983). The point is that margins of error are becoming smaller.

Three decades ago, Dr Glenn Johnson (1957) made the point that production economics was necessary, but not sufficient, to understand and direct management. Other agricultural and economic sciences are important. Over two decades ago, Dr Peter Drucker (1964) identified three dimensions in the economic task of the manager:

- The present business must be made effective;
- its potential must be identified and realized;
- it must be made into a different business for a different future.

Although these three task dimensions require different approaches, ask different questions and often come out with different conclusions, they are inseparable. They have to be made simultaneously - today.

THE PROCESS OF MANAGEMENT

A number of authors, in the fields of both agricultural and business economics, have described managerial processes in terms of actions to be taken by managers. Some have described these processes in terms of four functions *viz.* planning, organizing, motivating (leading) and control (e.g. Newman *et.al*, 1967; Kazmier, 1969; Hodgetts, 1979). A similar classification comprises planning, implementation and control (Boehlje and Eidman, 1984). Another view ascribes to management the actions of observation, analysis, decision-making, action-taking and bearing of responsibility (Johnson, 1957). A synthesis of these approaches (Hill, 1974) may be condensed into the following steps:

- Observe and assess the business environment.
- Analyse facts from this assessment - examine each important alternative solution.
- Decide on objectives and strategy.
- Take action. This step should consist of the four smaller steps of planning, organisation, motivation and control.
- Bear responsibility.

Knowledge has proved to be of vital importance. The steps of observation, analysis and planning involve improvement in stocks of knowledge. Knowledge has its own marginal value product and marginal cost, and the optimum level is reached when these two partially subjective concepts are equalized (Johnson, 1959).

In the whole process, certain business realities, as formulated by Drucker (1964), have to be faced:

(i) Neither results nor resources exist inside the business. They exist outside. A business has no profit centres, only cost centres.
There is only one distinct resource in a business: knowledge. What makes a business distinct is its ability to use knowledge. All other resources are transitory.

(ii) Results are obtained by exploiting opportunities, not by solving problems.

(iii) Resources must be allocated to opportunities.

(iv) Economic results are earned by excellence, not by mere competence.

(v) Excellence is transitory and short-lived unless it is continually renewed. If it runs out management is in danger of going back on a problems focus.

(vi) What exists is getting old.

(vii) What exists is likely to be misallocated. Therefore (in terms of the often heard 80-20 statement) revenue money and cost money are rarely the same money stream.

(viii) Concentration is the key to real economic success.

RISK AND MANAGEMENT ACTION

Any decision or action taken by a manager carries some risk. Inactivity and indecision are not less risky. A riskless situation is about as real as a free lunch - a mere figment of the imagination. From the managerial point of view, the decision as to which risks and what degree of risk to accept and the decision as to how to handle risk are vitally important. These cannot be viewed completely separately from opportunities.

The manager has to decide which opportunities he will pursue and what risks he will accept while doing so. Opportunities are basically of three types; additive, complementary and breakthrough opportunities (Drucker, 1964). Additive opportunities more fully exploit existing facilities. Complementary opportunities will change the structure of a business if pursued. They require some frank self-appraisal on the part of management, and carry considerable risk. Breakthrough opportunities change the fundamental characteristics and capacity of the business. They require great effort, and must be pursued only if rewards appear to be very promising.

They warrant large inputs in terms of observation, analysis, decision-making and planning. They should not be pursued without careful consideration and sufficient resources.

Risk should also be classified on a users basis. A useful classification is the following (Drucker, 1964):

(i) Risks one has to accept, which are an integral part of the business.

(ii) Risks one can afford to take; those risks that cannot wreck the business if the worst happens and everything goes wrong.

(iii) Risks one cannot afford to take, which are partially the opposite of risks one can afford. But there is another dimension; inability to exploit success. There is no sense in planting a fruit orchard if, when the trees reach bearing age, the farmer will not be able to afford the required packhouses and harvesting equipment. Cash flow analysis and discounting procedures may be prerequisites to determine whether some risks can be afforded or not.

(iv) Risks one cannot afford not to take. Breakthrough opportunities involve such risks. In these cases, rewards if the effort does pay off must be expected to be very large indeed.

Drucker's classification of risk acceptability is a handy starting point. One needs to reflect somewhat to decide how the opportunity-risk continuum will be perceived by people in different circumstances. The opportunities and risks are obviously dual in nature, consisting at least partially of financial considerations, but they are also perceived subjectively.

Risk involved with continuance of present activities will be better understood by most operators, but when one thinks in terms of complementary and breakthrough opportunities, things tend to be different. Logic would lead one to expect more cautious behaviour concerning complementary or breakthrough opportunities and the risks involved, but one starts to doubt this when one considers how many fads have swept through farming communities in the past, causing financial havoc among many of the "imitator" group of farmers. Such fads have included tomato and cucumber production in plastic tunnels, the rapid expansion of mohair production, rabbit production (for non-existent markets), switches to certain cattle breeds and centre pivot irrigation. Many farmers have obviously accepted risks they could not afford.

Other factors which may have increased risk have been overindulgence in terms of extra land purchases in times of rising prices and over-mechanisation - once again, two modes of behaviour which have exhibited all the characteristics of fads. In the Western Transvaal, for example, the farmers realising poorer results during the recent droughts were those who had invested more per hectare of farmland in land and fixed improvements and also more in machinery and equipment. In addition their fixed costs contributed more to total costs than was the case with farmers obtaining better results (Janse van Rensburg and Groenewald, 1987).

It has been pointed out that farmers with liquidity problems should adopt more conservative strategies - they should avoid risk (Van Zyl and Groenewald, 1986).

Entrepreneurial and managerial behaviour has been considerably different in the subsistence agricultural sector. Risk aversion has obviously been rampant, and seems to have all but completely inhibited the pursuit and adoption of complementary and breakthrough opportunities. And pursuit of these very opportunities is exactly what is needed to transform the traditional subsistence sector into a modern agricultural sector. In this sense, there may be justification for authorities to try to shield emerging modern farmers in the subsistence sector from some types of risk, but taking the commercial farm sector as an example, much caution is needed, particularly in the light thereof that farmers in enterprises less protected by controlled marketing are now not worse off than those in the more highly protected branches such as grain. A protected industry or protected business is like a protected plant or child; it loses its ability to compete. In the United States, Shepard and Collins (1982) could find no evidence that agricultural support programmes since World War II have induced, deferred or reduced farm failures.

RISK MANAGEMENT

According to Jolly (1983), risk management conceptually consists of two broad fields *viz.* attempts to control risk exposure and attempts to control the impacts of risk. Control of risk exposure consists of a choice of which set of probability distributions will confront the farm business, but once this decision has been made, it becomes essential strategy to control the impact of the resultant risk. A breakdown of these two strategic issues appears in Table 1.

Some strategies are likely to be interdependent. Reductions of price risk, for example by spreading fruit varieties (control of risk exposure), may on the one hand reduce expected revenue within any particular year (no form of insurance, formal or informal is free), but may also, because of the smaller degree of risk, induce firm growth which in itself has an effect on risk.

Such interdependencies render it fruitful to approach the management process from a systems point of view. One way of viewing this is by considering subsystems such as procurement, production, marketing and finance, which have unilateral relationships with one another, but are all bilaterally related to management, so entering a multilateral relationship not only in a mutual sense, but also with the external environment (Oosthuizen, 1981).

TABLE 1 - Risk management

A.	**Controlling risk exposure**	
	1.	Enterprise selection and diversification
	2.	Marketing
	3.	Insurance
	4.	Government programmes
	5.	Volume of business
B.	**Controlling risk impacts**	
	1.	Asset and debt structure
	2.	Credit reserves
	3.	Business organisation, operating agreement
	4.	Tax management
	5.	Productivity, efficiency

Source: Jolly (1982)

THE ACTORS

It is relevant to consider who should be regarded as the actors in the decision-making drama. Organization is important, particularly in the sense in which it is interpreted by Kazmier (1969) and Parsons (1978), *viz.* determination of activities to be performed, grouping of such activities and assigning (delegating) managerial authority and responsibility.

Many of the older textbooks have enumerated tasks to be performed by a farmer, ending up with a long list of subjects he should be expert at, disregarding that not even King Solomon in all his wisdom could conceivably have been an expert on such a wide front. The twentieth century has in addition witnessed such an expansion of knowledge and necessary knowledge, that a person attempting to perform all those tasks would, if he were to employ a labour force or even only a sizeable family, end up as a fragmented manager.

A fragmented manager works long hours giving attention to many and an ever-increasing number of problems, and he succeeds in solving very few of them. This, in addition, forces him to focus on problems instead of opportunities. Opportunities pass him by unobserved and unnoticed. He gets left behind. His time is also increasingly devoured by operational aspects of management while strategic and tactical management get neglected. He tends to rely increasingly on recipes which, while they may move some to call him "enterprising", push him steadily further down from a position of mediocrity.

Some activities can be purchased rather than performed on the farm itself - depending on the infrastructure and organisation within the farm business. This relates particularly to some specialised activities.

Knowledge, according to the above arguments, is the only real distinct resource in a business. The human brain has its limitations. Therefore, in any farm business approaching anything more than a very small size, management should become a team effort with the producer (or appointed manager) acting as head executive. Stocks of knowledge and expertise within the business but not necessarily within the head executive can now be identified, developed and utilised.

This will, in many cases, first of all involve the producer's wife. Proper utilisation of her abilities and what seems to be a natural female predilection for tidiness could strengthen many farm management teams by at least 80 per cent. There can no longer be any justification for the old tradition, prevalent among White and Black South Africans, of keeping wives in the dark about business matters. There is no place for such prejudice either in the developed agricultural sector or in the other sector which one hopes will emerge from subsistence to modern farming.

Organization and delegation should increasingly be carried out systematically at the vertical level. Excellence can only be achieved by developing managerial skills, human motivation and pride in achievement on a multilevel scale.

Awareness of the importance of this aspect is fortunately increasing rapidly - witness, for example the wide distribution of a human resource utilisation text recently written specially for the farmers' market. (Mol, 1983). Utilization of human resources is of paramount importance for successful agriculture in Southern Africa - and for other industries as well. This also implies delegation in decision-making, leaving the producer enough time to contemplate, study and decide on those strategic issues that will eventually shape his business and his future.

CONCLUSION

This paper is concluded with a few simple statements:

(i) Decision-making today is more complex than it was some time ago, and will in future become even more complex.

(ii) Management must be focussed on opportunity, not on problems. Risk management ought to be practised within this particular framework.

(iii) Farm level decision-making and management must increasingly become a team effort on as many production units as possible.

(iv) There is duality in the challenge. In the commercial farm sector, stabilisation and recovery are sought. Modernisation is a goal for the subsistence sector.

(v) The development of the subsistence sector is possible and should be promoted without the new emergent commercial producers repeating all the mistakes of the established (or de-established?) commercial producers.

(vi) While some guidance and protective action are needed, the latter should be kept to a minimum. Africa has repeatedly witnessed the failure of top-down bureaucratic decision-making, sometimes more aptly called bureaucratic ineptitude.

(vii) In the balance the farm producer is the person who should make decisions. It is the role of the bureaucrat to see to it that there is an environment that gives the producer space to make his own decisions. The bureaucrat should realise that he himself is exceptionally poorly equipped for involvement with agricultural production and marketing decisions. These should be left to those better equipped - the producer and the businessman.

BIBLIOGRAPHY

BOEHLJE, MICHAEL D. and EIDMAN, VERNON R. (1984). *Farm management* New York: John Wiley & Sons

DRUCKER, PETER F. (1964). *Managing for results* London: Pan Books

HEADY, EARL O. (1952). *Economics of agricultural production and resource use* Englewood Cliffs, NT: Prentice-Hall

HILL, J.N.S. (1974). *Modernisation of management techniques in large agricultural operations* D.Sc. (Agric) thesis, University of Pretoria

HODGETTS, R.M. (1979). *Management: theory, process and practice* Philadelphia: W.B. Saunders & Company

JOHNSON, GLENN L. (1957). Agricultural economics, production economics and the field of farm management: *J. Farm Econ.* 39:441-450

JOHNSON, GLENN L. (1959). *Managerial concepts for agriculturalists* Kentucky Agr. Exp. Sta. Bull. 619

JOHNSON, GLENN L. (1957). Methodology for studying decision making. *J. Farm Econ.* 39:1 215-1 226

JOLLY, ROBERT W. (1983). Risk management in agricultural production. *Amer. J. Agr. Econ.* 65:1 107-1 113

KAZMIER, L.J. (1969). *Principles of management* New York: McGraw-Hill

KEYNES, JOHN MAYNARD (1936). *The general theory of employment, interest and money* London: McMillan

KNIGHT, FRANK H. (1957). *Risk uncertainty and profit* (Eighth impression) New York: Kelly & Millman

MOL, ARNOLD (1983). *Motiveer jou plaasarbeider* Pretoria: Folio Uitgewers

NEWMAN, W.H., SUMMER, C.E. and WARREN, E.K. (1967). *The process of management* Englewood Cliffs: Prentice-Hall

OOSTHUIZEN, L.K. (1981). *Die ontwikkeling van 'n bestuurstelsel vir beter benutting van Swart werkers in 'n boerdery-onderneming, met verwysing na personeelbestuurspraktyke in die Brandfortdistrik* Ph.D.thesis, University of the OFS

PARSONS, S.D. (1978). Organisation and delegation: managing the entrepreneur's time. *Agrekon* 17(2): 13-16

SCHUMPETER, JOSEPH A. (1961). *The theory of economic development* Translated by Redvers Opie. New York: Oxford University Press

SHEPARD, LAWRENCE E. and COLLINS, ROBERT A. (1982). Why do farmers fail? Farm bankruptcies 1910-78. *Amer. J. Agr. Econ.* 64: 90-615

VAN ZYL, J. and GROENEWALD, J.A. (1986). Economically optimal maize cultivar selection under conditions of risk. *Agrekon* 25(1): 10-19