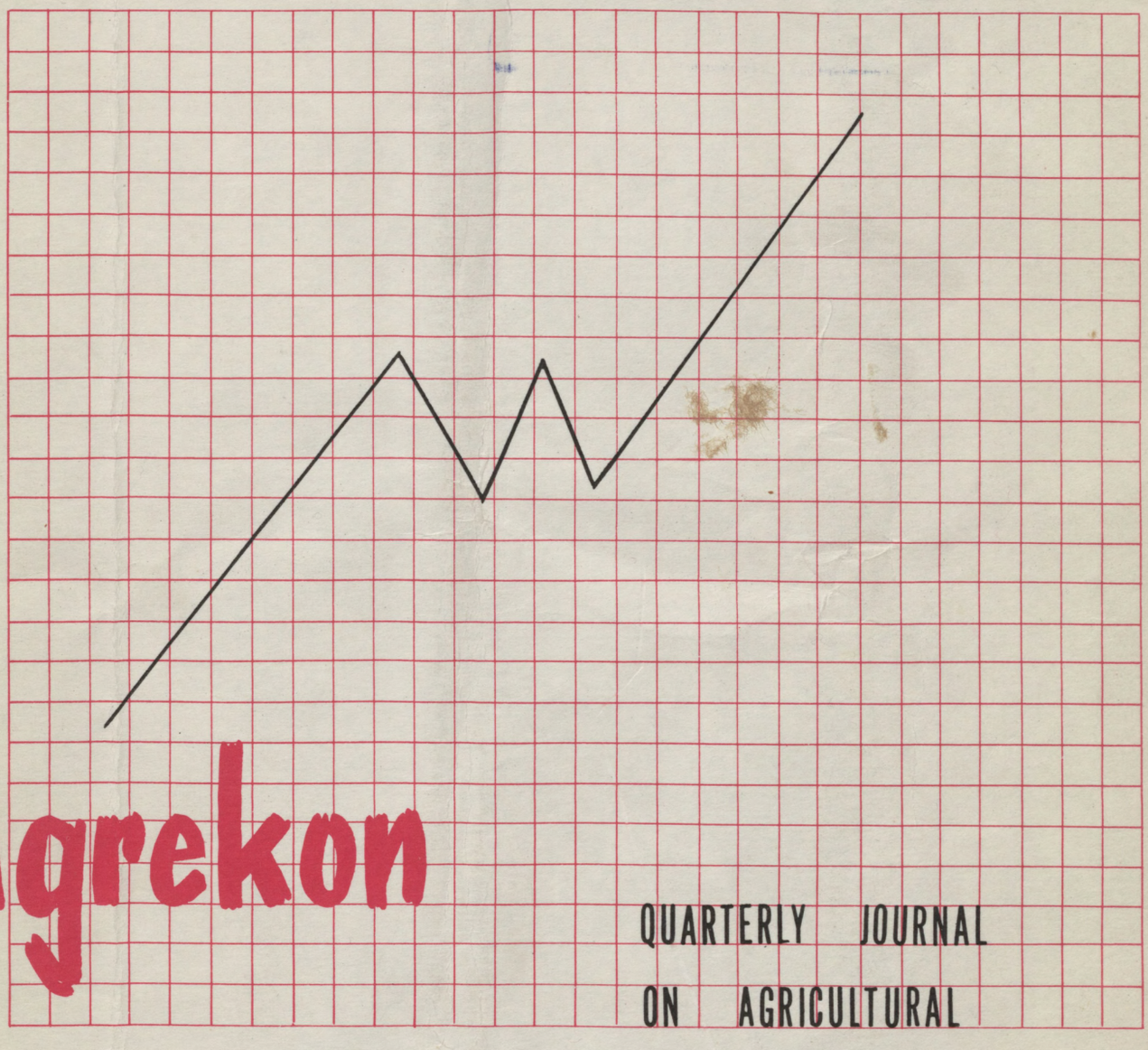
Vol. 16 No. 1
January 1977

Price 25c



Agrekon

QUARTERLY JOURNAL ON AGRICULTURAL ECONOMICS

Issued by the Department of Agricultural Economics and Marketing, Pretoria

PRODUCTION ECONOMICS AND MANAGEMENT

by

J.R. HUDSON
South African Cane Growers' Association

GENERAL VIEW

In attempting to express the views of an employer of production economics and management, orientated graduates on the current relevance of agricultural economics education, I have been constrained initially to view the overall field of education in agricultural economics. This course has been adopted because on analysis I believe that much of the emphasis in employment opportunities is directed initially to agricultural economists and the course bias is secondary to a degree.

In examining the preparatory literature regarding the theme of this conference, I have noted with interest the use of the word "dilemma" with regard to agricultural economics education. Strictly defined, a dilemma poses the choice between two (or more) equally unfavourable alternatives. Pursuing this line of thought slightly further, one is tempted to question whether it is really necessary to consider unfavourable alternatives with regard to our profession. Are we not like Don Quixote creating giants out of windmills?

I suspect furthermore that many of our problems, whether real or imaginary, tend to owe their existence to the current obsession with specialisation and am reminded of the definition of a specialist as one who learns more and more about less and less, until he ultimately knows everything about nothing.

While I do not decry specialisation in its proper context, I firmly believe that one of the major assets of the agricultural economics profession, and the major reason for its rise to prominence, is its versatility. This is evidenced by the variety of positions in many walks of life held by agricultural economics graduates. It would accordingly be tragic if, in a search for specialist identities, agricultural economics lost that characteristic which has gained its prominence.

At the same time, it would be somewhat less than realistic to ignore the fact that there do appear to be certain strains developing and which do have a more direct bearing on those persons associated with the academic training of agricultural economists.

On the one hand we have the almost excessive preoccupation with economics model building. This trend probably owes its origin to Heady's great contribution to the field of production economics. However, as a relative outsider, it appears to me that in their pursuit of the ever more sophisticated model, Heady's successors have tended to lose sight of the original intention of production economics, namely to provide for interpretation of the economic relationship existing among resources used in specific enterprises[1]. In contrast to this original intention, we today find that professional journals tend to be filled with most sophisticated models, most of which appear to have little practical applicability.

Coupled with this tendency, there appears to be an increasing trend towards the use of an ever more technical jargon in writing. These developments are tending to cause a widening "understanding gap" between specialist production economics and the more mundane activities of the general agricultural economist.

At the other extreme, and possibly as a reaction against the elaborate model building, we have a school of thought which sees farm management primarily as a practical vocational matter, well removed from the formal analytics of production economics[2]. There are many who argue that an economics background is irrelevant in the context of many of the functions currently undertaken by agricultural economists.

Stanbridge writes - "Both accountant and agricultural economist ostensibly have the same functions to perform - collection and interpretation of information, policy and planning formulation for example. Yet .... economists generally perform these functions and the management accountant tends to undertake the accounting and administrative responsibilities"[3].

Confronted with a dilemma of choice between the two alternatives of either extreme theory or extreme practicality, perhaps the time has come to re-examine the basis of agricultural economics in the light of the thought expressed by Nourse more than half a century ago. "Agricultural economics should teach us .... the fundamental issues of effective economic organisation of human effort and the natural resources which underlie them[4]".

As an employer of agricultural economists and particularly those with a production economics and management bias, I would certainly hope that we have been able to retain a modicum of this traditional approach in respect of our student training.

EMPLOYMENT OPPORTUNITIES

So much for the overall field of agricultural economics as seen from the viewpoint of one removed from the academic scene. Now more specifically, what about the field of production economics and management and the requirement of the employer in the private sector? There appear to be three basic directions in which such graduates will tend to be employed, namely:

1. The farm management advisory field

This, in my opinion, is the avenue which possibly holds the greatest scope for the extension of our activities during the forseeable future. In response to economic pressures on agriculture, farmer demand for management advice is increasing rapidly. However, compared to progress in many of the more developed nations, we have barely scratched the surface of the field.

Furthermore, emphasis on farm extension, which has for so long given prominence to the technology of production, is now tending to move in the direction of a physico-economic orientation with emphasis on overall resource management. I believe that as the agricultural scientist's appreciation of the economist's potential contribution increases, we will see an ever-increasing joint approach to farm extension and even a tendency for the overall administration of agricultural extension to be vested in the economist.

2. The management function

Strictly speaking, the pure management function should more correctly be considered under the heading of agri-business. Here I refer specifically to the management orientated graduate and his direct integration into the management hierarchy of business organisations with agricultural connections. We already encounter agricultural economists in prominent positions in the management hierarchy of a wider range of organisations. This is, it would seem, recognition of the fact that the agricultural economist's training fits him adequately for such managerial responsibility. However, it does appear that up to present, the persons in such positions have not risen from within the organisation, but have rather been appointed from without. The future could well see such posts filled by agricultural economists with a management bias who have risen from within the organisations.

3. The all-purpose economist

The third category of potential employment is one which defies precise description but which nevertheless typifies the quality of versatility which I have previously stressed. The graduate employed in this field will tend to require a production economics and production bias. However, he will find himself involved in a wide spectrum of activities ranging from applied research at a relatively unsophisticated level through farm management advisory work, to administration and management. In addition, he may also have limited excursions into the fields of policy, development and marketing. Such varied work is stimulating, but poses wide demands in respect of training.

In enumerating these three major potential avenues of employment, I am conscious of omitting research as a potential employment category. The omission is deliberate because it appears that there is currently little scope for the employment of the pure research worker in production economics and management. Notwithstanding the research function undertaken by the various Divisions of the Department of Agricultural Economics and Marketing, it appears that most employees in the Department would better be described as all-purpose economists than as pure researchers. As for the university faculties, these have not yet reached the fortunate position of being able to employ pure research staff and the opportunities for existing academic personnel to undertake pure research are extremely limited due to the heavy teaching load.

GENERAL REQUIREMENTS

Having outlined briefly the major potential avenues of employment for the production economics- and management-orientated graduate, it is next necessary to consider the major demands of the employer in respect of the potential employee. The following points are, I believe, of cardinal importance:

1. Intelligence

It can be argued that intelligence is an inborn asset and not the product of education and training. However, the potential employer can only assume that to have attained a degree infers *ipso facto* a reasonably high degree of intelligence. The academic is thus vested with the responsibility of maintaining existing high standards in respect of the conferment of degrees.

2. Reasoning ability

This, I believe, is the most important aspect of academic training. No degree of inherent intelligence will compensate for a lack of the ability to muster in logical sequence the facts relative to any problem under consideration. However, I am conscious here of the academic's problem in respect of large classes and heavy work load. He is forced into a position of teaching rather than educating and the student tends to become a passive recipient rather than an active collaborator.

3. Decision-making

The indecisiveness of economists currently is as much of a topic for jokes as the perennial mother-in-law, and not entirely without reason. However, in most of the fields of employment with which I am acquainted, the economist is paid to arrive at decisions in order to advise management. There appears to be a role for the academic in

stressing this fact and providing some logical framework for decision-taking.

4. Objectivity and integrity

The graduate's duties will inevitably involve the collection, processing and interpretation of data and the preparation of the necessary reports. He must, during the course of his training, be made aware of the importance of ensuring the veracity of basic data and utter objectivity in the reporting of results.

5. Communication

The ability to communicate thoughts and ideas in writing or verbally so that they are readily understandable, is most important. This also involves the assessment of the type of audience in order to establish the approach most likely to find acceptance.

ACADEMIC CURRICULUM

Finally, and with a degree of trepidation, I find it necessary to turn attention to certain aspects of the academic curriculum. In this respect I use the word trepidation advisedly because, like Luby, I believe that professors know more about education than employers[5]. However, it would be remiss not to enumerate certain aspects which I believe are of specific interest to the potential employer. These can for convenience be subdivided between under-graduate and post-graduate categories:

1. The under-graduate level

In so far as undergraduate courses are concerned, and based on a study of the required curricula at our various university departments of agricultural economics, I do not believe major changes are necessary to satisfy the prospective employer. There may be the possibility of eliminating some overlapping of subject matter, but this is not always easy. However, bearing in mind the existing course content, the following thoughts may be of assistance in planning curricula:

(a) The first priority at the undergraduate level is the provision of a thorough general training. Specialisation is a function of postgraduate study. Our academics must avoid at all cost the tendency which appears to have become prevalent at certain American universities, to emphasise postgraduate education to the detriment of undergraduate education[6].

(b) Obviously, fundamental to the entire curriculum is three years of agricultural economics. To this must be added at least two years of economics and at least one year each of accounting, statistics and mathematics (not necessarily at the mathematics I level). In addition, the student must receive a thorough grounding in the biological and physical sciences as they apply to agriculture plus a limited number of courses in the agricultural production sciences.

(c) In our obsession with economic matters, there has been a tendency to overlook the behavioural sciences. Fundamentally, the interests of the agricultural economist have sprung from two branches of knowledge, namely the bio-physical sciences underlying agricultural production and the socio-economic sciences underlying the economic organisation of agriculture[7]. Here I must agree with Stanbridge in his judgement: "Farmer goals may not always or even necessarily be those of proper maximisation. Research has shown that profit is only one of a number of competing goals. Others include asset growth, farm ownership and psychic utility (i.e. use of leisure time)"[8].

It is necessary to help students understand these apparent contradictions to pure economic principles. I do not envisage a detailed study of psychology or sociology but rather an introductory course in "people science" which would include elements of sociology, psychology and communication.

(d) Consideration must be given to a greater recognition of the management orientation. Despite my earlier remarks regarding the undesirability of undergraduate specialisation, this aim could possibly be achieved through requiring two years study of both economics and business management with a final year option of one of the two to complete the second major.

(e) Two further subjects which should receive more attention are law and taxation. I am not suggesting the training of lawyers or tax specialists. However, these two subjects play an important role in farm management advisory work and the graduate should be placed in a position -

(i) to give straightforward advice when necessary and possible; and

(ii) to recognise when problems in this field require specialist advice.

Furthermore, I do not believe that these subjects should form part of the already crowded agricultural economics course but should rather constitute a separate entity.

In a general, summing up of employers' requirements in respect of under-graduate training, I can do no more than echo Luby's sentiment: "It is important to produce a product or graduate that is capable of changing and learning and growing"[9]. If the academic can satisfy this requirement of undergraduate education, no employer can ask for more.

2. Postgraduate training

It is at the postgraduate level that the scope for specialisation should enter into academic training. The student, having completed an initial degree, should be better equipped to choose a specialist field. However, in considering production economics and management, and excluding research as a field of employment, we are dealing

with a fundamentally practical subject matter and the course orientation should, as far as possible, take account of this fact. As a purely personal preference, I would like to see potential postgraduate students gain at least one year's practical experience before commencing such studies. This experience, and the added maturity would, I believe, be of benefit to both student and teacher. Carrying this line of thought further, one is tempted to speculate on the advantage to the employer who sponsors such study and is able, to some extent, to direct specialised post-graduate study along lines best suited to his own requirements. Possibly the society could, in conjunction with academic staff, weigh up the advisability of publicising this viewpoint to prospective employers.

CONCLUSION

In respect of the academic training of his employees, the employer is in both an unfortunate and a fortunate position. On the one hand, he has a very limited degree of control over the educational process but on the other, and because of this, he is in a position to criticise freely without bearing the consequences. By providing this opportunity for an exchange of ideas the society has performed a most valuable service to both employer and academic and hopefully served to remove misconceptions on both sides. I can only hope that in my own contribution I have been of some assistance to our academic colleagues.

Agricultural economics is still largely a science of applied common sense despite attempts to surround it with mystique and jargon. Provided we accept this principle and apply it in improving and building on the basic foundations which already exist, I see no real problems for the academic in satisfying the needs of the employer of production economics and management orientated graduates.

REFERENCE

1. WILLIAMS, D.B. (1969). Production economics, farm management and extension. Amer. J. Ag. Econ. 51:57-69.
2. DILLON, J.L. (1972). The outlook for agricultural economics. Aust. J. Ag. Econ. 16:73-81
3. STANBRIDGE, R.J. (1976). Agriculture and management accounting. Man, accounting 54:356-358.
4. NOURSE, E.G. (1916). Agricultural economics. University of Chicago Press, Chicago.
5. LUBY, P.J. (1975). Perspective from the meat packing industry. Amer. J. Ag. Econ. 57:791-795.
6. MANDERSCHEID, L.V. (1969). Better teaching - some curricular aspects. Amer. J. Ag. Econ. 51.
7. SJOE,J., ORAZEM, F., BIERE, A. (1973). Under-graduate program revision at Kansas State University. Amer. J. Ag. Econ. 73:604-610.
8. STANBRIDGE, R.J., op.cit.
9. LUBY, P.J., op.cit.