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EFFECTIVENESS AND EFF
OF AGRICULTURAL ECONO

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ABSTRACT

The main challenge for agricultural economists is eff
forts to those endeavours rendering the highest retu
be system directed problem solvers. Failures to clea
sive problems. Effectiveness requires such recognitio
agriculture and food consumption. Production an
uitabilities meaningfully. They have been effective
vironment in a holistic sense, nor with institutions,
decreased by some tool-oriented research. In South
maintenance research. Efficiency requires use of ap
on so-called elegant analytical tools and simultaneous

SAMEVATTING

Die hoofuitdaging vir landbou-ekonome is eerder
bemoeienis na daardie pogings wat die hoogste opb
Landbou-ekonome behoort sisteemgerigte probleem
aktiwiteite in die geheelsisteem te erken, veroorsaak
menslike welvaaart. Ernstige onbillikhede bestaan
dualisties sonder dat landbou-ekonome onbillikhede
van die kommersiële landbou, nog van die makro-om
effektiwiteit is verder verminder deur sommige meto
probleemoplossingsanalise: aanpassings- en instandh
metodes en gegewens. Dis in onlangse tye verlaag d
verwaarlosing van behoorlike data-inwinning. 'n Reo

1. Introduction

The main objective in this paper is a critical evaluat
contributions of agricultural economists to today's s
its culture, and more specifically South African societ
tural economists do not exist for their own sake.
there to fulfill a specific social purpose and to satis
needs of society, communities and individuals. A
economists have some things in common with mana
sometimes misconceive themselves as an end and th
tions as means to his end - something which Druc
labels as a degenerative disease.

The main challenges to agricultural economists an
stitutions consist of some interdependent facets whi
be performed simultaneously:

(i) They must define, in clear terms, their m
relates to society, the specific commun
specific individual(s)/ firm(s) served by th

(ii) This definition of mission should be seen
of symbiosis with the environment. No so
munity, individual or firm is an island
stormless lake. There is interaction amon
communities, individuals and firms. The
tions are both inward and outward. S
librium, while being a useful analytical too
really occur. The internal and external en
change continuously.

The question is not how we can do better in what we have done; it is rather effectiveness: how to channel our limited resources into doing that which will maximize socio-economic returns and secondly, efficiency: doing it as well as possible.

The first prerequisite is to ask the right question and then to find good answers. Finding the right answer to the wrong question may be efficient, but certainly not effective. It maybe both efficient and irrelevant.

2. What is the mission?

Kendrick (1975) regards an agricultural economist mainly as a system-directed problem solver. Thus the interactions among constituent parts, actions and events should be part and parcel of the considerations of the agricultural economist. It should be at the core of his operational philosophy. Dent (1975) identifies four levels in agricultural systems:

(i) biochemical and physical systems, eg. nutrient-growth systems in animals and plants;
(ii) plant and animal systems, eg. animal-pasture and crop rotation systems;
(iii) farming systems, including physical biological and financial parameters as well as systems of marketing firms or institutions; and
(iv) national and international systems which envelop industrial and sectoral relationships, supply and demand situations and matters pertaining to wealth, poverty, growth and stagnation.

The main emphasis of agricultural economists will clearly be on the third and fourth levels. Continuous interaction however occurs among the four levels. A lack of clear leadership on the part of agricultural economists resulted, for example in uneconomical high applications of some intermediate inputs (eg. fertilizer and feed); this in its turn, contributed to economically and ecological maladjusted plant and animal systems and therefore also to financially unsound farming systems in the commercial sector which contributed to maladjustments in South Africa's national and international economy. Failure to read and interpret events on the fourth level filtered through to errors on the third, second and first levels.

In order to be effective, the agricultural economist must recognize past developments, he must analyze the present setup, do his diagnosis and develop prescriptions for future action, while continuously monitoring the prognosis of change.

It is the mission of the agricultural economist to contribute meaningfully, through his analyses, advice and leadership to the optimal improvement in human welfare in primary and secondary production, trade, services and consumption at all levels of the system he is involved in. Though, as pointed out by Boulding (1958), his skills mainly lie in the behaviour of commodities rather than in the behaviour of men, it is the human being that occupies the centre of his mission. If he directs his effort to the areas with the highest potential marginal product, he will be effective, if he does it well, he will be efficient.

3. The playing field

It is necessary at this juncture to do a brief analysis of the playing field - the workshop within which human welfare needs to be improved in the South African context.

South African economic development in general, and agricultural development in particular, have been shown to have been highly inequitable over a time span of approximately 350 years. Through their territorial expansion, backed up by superior weaponry and military technology, Whites in South Africa have (as in Australasia and North America) in the 19th century, gained dominion over about all the land and imperium over the indigenous population (Kassier and Groenewald, 1990). Min-

This implies a few tasks: Agricultural economists sh
volved in studies on sustainable development b
ecological and social sense. Opportunities ought
equal for all people - intratemporarily, but also
porarily (Batie, 1989).

Equity has in the past received very little atten
though it is a vital cog in the wheel of human welfa
tural economists have veered away from this concep
because it was expedient in the political climate pr
many decades, but also because they have not be
measure either equitability or inequitability in a
way. However, we can know something is "good" or
if we are not able to measure it (Johnson, 1986).

Considerations of equity as well as the deregu
privatization embedded in a move away from inef
inefficient centralized decision - making immediat
more system - directed study of institutions. I
economics has been largely neglected by South Afric
tural economists. In such studies, a commonly enco
ror, that of a weak goal orientation (Barkley, 198
avoided.

Institutional economic studies ought to be concerne
existing institutions (perhaps with emphasis on fo
stitutional pathology as set out by Alderson, 1957
development of institutions which will optimally
needs for a new future.

Consumer problems and urbanization trends also re
creasingly imperative for agricultural economists to
attention away from the farm as a production u
problems of rural families as units of consumption
again, to evaluate how institutions serve the needs of
call made over twenty years ago with respect to
(Bishop, 1967).

South African agricultural economists should fu
devote more attention to Consumption Economics (
rural). Given the extreme diversity in the South A
sumers' public, what product mix, prices mix and in
mix will optimize consumer satisfaction, farmers' rev
profits in the market place? Also once more rever
stitutionalism, what should be the shape and extent o
tion?

The question of equity also revolves around facto
land tenure, the difference between property and po
inputs, equal opportunity, equal (or at least equitable
factor and product markets, and equitability in the
the proceeds of development.

This, off course, should not be treated as being indep
development or growth themselves. Dividing a sh
capita cake equitably serves no purpose.

An interesting list of structural shortcomings that ne
tion to and/or correction by restructuring is pr
Haasbroek (1990). In includes: shortage of skilled
shortage of production capital; obstacles to smal
development; retrogression in exports; interest confli
sonal industrial relations; population development; p
the lost generation, trade union participation and ris
tations.

It should furthermore be remembered that most
related research is of a multi-disciplinary nature. Fo
of effectiveness and efficiency, agricultural econo
cooperate with other physical, biological, economic
scientists.

6. Efficiency considerations

Whereas effectiveness relates to doing the right things, efficiency involves doing it well. This pertains equally to the logic employed in analyses, the models used and the data involved. It involves both empirical and pure reflective research. In cases where data are non-existent and/or impossible to obtain or where effective analytical tools do not yet exist, there is no scope for empirical research. Efficiency will, in those cases, be decreased by adding empirical research to the effort.

Pure reflective, logical observation will, however, in most cases not yield optimal results. A check with real life is needed. Results should be monitored. In the absence of such empirical backups, faults in logic or probably more frequently and serious, in premises are likely often to lead to erroneous results and therefore to inefficient practice by the agricultural economist.

Agricultural Economics has, more than most other economic disciplines, made its reputation as an empirical science (Bonnen, 1988). To be efficient, the agricultural economist must apply the appropriate analytical tools to appropriate data. Failure to do so will not only destroy efficiency but also effectiveness.

Unfortunately fadism has repeatedly plagued agricultural economists in their choice of analytical tools. Examples spring to mind: Least square regression models, simplex linear programming, Monte Carlo simulation, integer linear programming, stochastic dominance, factor analysis, discriminant analysis, etc. The tail has often swung the dog. This form of inefficiency (which is even worse when problems are sought for the sake of using an analytical tool) stems from mental immaturity and is often a symptom of a desire to gain peer adoration irrespective of whether the analysis aids in understanding any problem whatsoever. Unfortunately over elaboration in tool selection has been a form of pathology not even remotely rare in our profession.

A further problem arises from empirical logical procedures. It has become a common practice, since the advent of the computer, to fit many models and then to select the one that seems best. This reverses the scientific method by using statistical analysis to determine hypotheses (Tweeten, 1983). There is a real danger that the profession may be so mesmerized by its ability to handle quantitative techniques, that it looses sight of the important issues (Barkley, 1986). A result is that in the USA, Leamer (1983) has come to the conclusion that "hardly anyone takes anyone else's data analysis seriously" - a statement which seems to be true also in South Africa.

The efficiency of agricultural economists in the USA (Bonnen, 1988) and most certainly in South Africa has been substantially eroded by a cavalier approach to data. This is partially due to the cost and effort to collect primary data from farmers, traders, workers and consumers. Hoch (1984) mentions an aversion to survey data collection. But the mental or academic snobbery related to elegant, refined statistical or mathematical models has also led many agricultural economists astray, and has yielded a false aura of excellence around refined manipulation of third-rate data. Too many have forgotten of the "Garbage In - Garbage out" adage. This has undermined efficiency of agricultural economists.

A raw empiricism has also reduced efficiency. The practice of employing statistical analysis to derive he hypotheses on which they should be based, is a dull (certainly not shining) example.

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