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REVIEW: 37TH ANNUAL CONFERENCE OF THE AUSTRALIAN AGRICULTURAL ECONOMICS SOCIETY, 9 - 11 FEBRUARY 1993, SYDNEY

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1. Introduction

The 37th annual conference of the Australian Agricultural Economics Society (AAES) was held on 9 - 11 February 1993 in Sydney. This conference was organised by the New South Wales Group and took place at the University of Sydney. Some 200 delegates from various institutions attended this conference. Seven invited and 107 contributed papers were read. The AAES has approximately 600 full and 400 associate or corporate members.

2. Invited papers

Tim Josling, Stanford University presented the Australian Wheat Board address on agriculture in a world of trading blocks. He demonstrated that trading blocks are only viable if the participating countries have similar characteristics and development status. Without these characteristics, the stronger country will always be the net beneficiary from this arrangement. He showed that trading blocks for Africa and Asia are not viable, but mainly talked on the effects, on Australia, of Mexico's entrance into the US/Canada trade block.

Bob Lindner, University of Western Australia presented an invited paper on privatising the production of knowledge: Promise and pitfalls for agricultural research and extension. He argued that knowledge, as a public good, is non-rival in consumption and impossible to exclude from potential users who are not able to, or willing to pay. Privatisation of knowledge should thus be made price excludable. However, the property of non-rival consumption is intrinsic to knowledge, and unaltered by establishing intellectual property rights or other devices for shielding knowledge. It was concluded that economic theory do not provide a neat answer to commercialisation, corporatisation and privatisation of rural research and extension. It may be asked if adjustments in Research and Development institutions correspond to the public interest.

Gordon MacAuley, University of Sydney followed with his invited paper on educational planning and voucher systems: Implications for departments of agricultural economics. Prof MacAuley argued that the profession of agricultural economics is under a significant threat in Australia, i.e. losing sight and importance in the field of agribusiness, consultancy and education. Especially in the changing environment, the temperate pause in development of the profession should be reshaped and supported by a market-orientated educational system. This was supported in the AAES presidential address on competency standards by Neil Sturgess. He indicated that in times of strongly pushing for standards, he begins to "get

a faint whiff of stale smell of closed shops and catches the glint in the eye that goes with the desire for power".

Other invited papers were read by (a) Mark Rosegrant, International Food Policy Research Institute on determinants of public investment: irrigation in Indonesia, (b) Hesti Wijaya, University of Brawijaya, on developing agriculture with a women's perspective: the challenge, (c) Tim Ryan, Australian Wheat Board, on Wheat marketing arrangements: the way ahead and (d) Jack Knetsch, Simon Fraser University on assumptions, behavioral findings and applied economics.

3. Contributed papers

A wide range of topics were presented in seven parallel sessions, twice a day. A complete list of authors and titles is available from the authors. The different sessions were on land conservation, modelling, beef, risk, other enterprises, policy, pests, wool, water management/policy, evaluation, rice, miscellaneous, forestry, price analysis, livestock, deregulation, food, famine and risk, grain, contingent valuation method, farm performance, inputs, research and development, land management, deregulation and econometrics.

4. Importance to South Africa

From the above topics four broad issues are important to South Africa namely: international trade implications, resource economics, agricultural labour issues and lastly, deregulation, price- and market policies.

Trade

The Australian agriculture contributes 4 % to its GDP and 30 % to its exports value, while the New Zealand agriculture contributes 6 % to GDP and 60 % to exports. Structural adjustments since the late seventies influenced policies away from stabilisation and price support, but towards adjustment assistance. Australia's and New Zealand's producer subsidy equivalents indicate that they have, relatively, the most free-market orientated agricultures. Their market orientated agricultures should gain in comparative advantages when the Uruguay Round negotiations reached an agreement, especially when the Dunkel text is agreed on. GATT changes and own policies support trade between Australia, New Zealand and Asia.

However, the interrelationship between trade and the environmental policies being identified as the "next generation" of issues discussed for the GATT negotiations are of concern to Australia. GATT negotiations should not be delayed by the "disparities" of the above

two policies. The reduction of trade barriers in agriculture, textiles and services through a successful conclusion of the Uruguay Round is still critical for sustainable development. An agreement would help to generate the wealth to pay for environmental protection, and would allow the world's poor to look beyond today's crisis to the well-being of future generations. Two aspects are important for Australian trade namely; Asia's high income elasticity for beef and mutton and that the EC pays a premium for foot-and-mouth disease-free beef. Furthermore, it is expected that growth in the former Soviet countries and Eastern Europe will take place within the next decade and that they will participate in current markets. In this regard Australia and New Zealand lost their comparative advantages in exportation of low quality beef and will compete in the market of high quality and value added goods. Export opportunities for Australia will reduce on the supply side because of improving Asian development, but may improve for value added goods on the demand side.

Identified opportunities on how South Africa can learn from the Australian experience are in their educational reform, privatisation of former state institutions, the reform of agricultural training and extension, institutional building such as markets, distribution systems, market intelligence and rural banking.

Resource economics

Land degradation is considered as Australia's most serious environmental problem. This stems from the fact that nearly half of the arable land is considered to be degraded, while only 10 % of the whole country support viable commercial cropping systems. Furthermore, Australian rivers indicate increasing trends in salinity, heavy sediment loads and building of nutrient levels, leading to increased incidence of algal blooms and disruptions of aquatic habitats.

Australian research in resource economics were done mainly by using the conventional production functions of output, both on regional and national levels. It was hypothesised that increases in land area, labour, fertiliser and debt, increase production, whereas degradation decreases production. Opportunity costs were derived and it was found that the benefit/cost ratios to treat degradation were, in each case, above 1.0. To facilitate a state-wide analysis, the local government area served as the producing area, rather than an individual farm or even a paddock. The results of benefit/cost analysis provided a filter to determine the effects and, more likely, changes in production on sustainability. Modelling land degradation has important roles in policy formulation and should be used in South Africa more often.

The GIS approach provides an effective tool for policy analysis at a lower level of disaggregation than with possible econometric applications. The natural resource accounting (NRA) framework allows for a meaningful incorporation of natural resource data into an accounting system. This is done in such a way that it enables policies which affect natural resource management on overall economic performance. However, a link between the GIS and the NRA is necessary to develop a general equilibrium framework.

Mathematical models for ground water flow were used to manage agricultural systems affected by dry land salinity. Economic simulation techniques were incorporated into a hydrogeological modelling framework to assess the current and future impacts of different catchment patterns on ground water levels. From geological, hydrological and climatological data, calibration data

necessary for steady-state and transient models were estimated, from which ground water levels were determined. Differentiating between the theories of common properties and open access situations incorporated into the transient model of ground water flow, land-use management options were gauged in terms of the supply and demand effects of ground water and measured as a benefit-cost ratio. This method can be used to determine the current land-use situation with the long term effects of alternative total revegetation, the highest land-use, and alternative land-use practices. These approaches and methods can help the community, farmers, land care groups and the government in decision making of how to manage common property. Moreover, the models are generic and could thus be used for the same management purposes in other countries such as South Africa.

Farm labour

In 1992 there were approximately 126 000 farm wage and salary earners in Australia, which include full time farm labour and casual labour, living on the farm or commuting. Women consist 25 % of the above wage and salary earners. The changing role of female labour was felt more in the management and contractual areas than in the wage and salary categories. Unpaid family helpers consist 7% of the on-farm labour force. Since World War II labour numbers in Australia increased considerably until the mid-seventies, when world oil prices increased. A substitution from capital to labour took place, which was supported by general urbanisation trends and a shift away from agriculture. At present, rural unemployment (both on the farm and small town industries) tend to be higher than in urban areas.

The Australian economy has a very high incidence of labour unionisation, with a membership of 47%, compared to other industrialised countries. Unionism is compulsory. However, the unions in agriculture are hampered by low levels of participation and the conservative nature of rural communities. Low levels of participation in unions are typical in rural areas with small workplace industries (e.g. one owner-operator business with one or two hired workers in agriculture). The only real strength unions have in agriculture has been with the shearers, where the union in 1970 successfully prevented the adoption of technical changes in shearing and to disallow New Zealand shearers to work in Australia.

There are several laws governing labour disputes in Australia. Courts determine if any adjustment of awards are needed and employees are obliged to adjust wages and working conditions in accordance with any ensuing changes of awards. Controls over working conditions involve aspects such as sick-leave, recreation, normal leave, noise, chemical and other contamination of the workplace, the amount of space allocated to workers, hours worked, safety equipment used, fresh air and sunlight in the workplace, etc. Ongoing research on farm labour support these issues, i.e. in a study on the incidence and cost of farm injuries, it was found that only age, perceived stress and hours of work were related to injuries with only age having a negative relationship.

Marketing and price analysis

The wool, red meat, sugar and grain industries enjoyed, amongst others, considerable attention at the conference. Pertinent subjects covered were inter alia price analysis of wool; livestock; red meat for the domestic markets; analysis of produce prices and quality issues for the Asian export markets; issues regarding the wool stockpile and wool marketing arrangements; risks; production and marketing arrangements for sugar and grains. The as-

pects of deregulation and privatisation also enjoyed considerable attention.

Price stabilization in the wool industry was obtained through the Reserve Price Scheme and intervention of the Australian wool industry in the international wool market through buying, stockpiling and selling. Price increases in the late 1980's were considered a permanent trend which, together with increases in the reserve price, stimulated wool production. The Wool Corporation bought in heavily to support the reserve price which resulted in a stockpile of more than 4.6 million bales by the end of 1990. More than A\$4.5 billion was spent in vain to defend the reserve price, which was finally abolished by government intervention during 1991. This resulted in a sharp drop in prices (from 700 c/kg to 430 c/kg), elimination of a large portion of the Australian sheep flock and a huge debt for the Wool Corporation. These effects also affected the South African wool and mutton industries. The wool industry in Australia is now totally deregulated and the Wool Realization Commission was established to manage the wool stockpile and debt. Selling strategies to reduce the stockpile, however, influence the world price of wool which in turn influences the rate by which the debt can be reduced. Several models were suggested to simultaneously manage the debt and the stockpile. Results indicate that the wool tax (on production) and sale of stocks are both required to repay debt, but that the balance between these two instruments is critical and depends largely on the elasticity of the demand for wool. The results also indicate low shadow prices (economic value) for the wool in the stockpile, which means that new markets or new applications for wool must essentially be developed. The optimal coordination of wool production and stockpile disposal can however not be achieved centrally with the AWRC (Australian Wool Realisation Commission). Individual transferable entitlements (pay-in-kind certificates to farmers) would redefine the ownership of the stockpile to wool-growers who can more efficiently execute coordinated programs to balance production with inventory reduction and with less dampening price effects.

Beef is the most important meat consumed in Australia, averaging levels of above 40 kg *per capita*. Beef and veal constitutes 47% of the consumption of red meat and about 64% of the production. Queensland and New South Wales are the largest beef producing states in Australia. Over 50% of the national beef and veal production is exported with the United States and Japan being the major customers. Beef accounts for more than 80% of all meat exported. Considerable variation, however, exists between the different states concerning production and percentages of production exported. Concerns about the high costs of marketing and a decline in the producers' share in consumer expenditure, however, also exist. Doubts about the effectiveness of transmitting consumer prices through the marketing chain and the degree of price levelling and averaging at consumer levels resulted in various price spread studies. Although this is a common phenomenon in all the states, the degree and causal factors tend to differ between these states. This may have important implications for policy considerations based on only one market. Beef marketing policy considerations in South Africa may probably also suffer from biasedness, being based mainly on the City Deep/ Witwatersrand markets. South Africa is experiencing similar price and price spread behaviour in the red meat industry, but contrary to the relatively low level of government intervention in the Australian meat markets and price formation process, the South African red meat industry had been heavily regulated.

Australian meat markets and price formation is also relatively free, but similar problems exist than in South Africa. The effectiveness of English cattle auctions, in objective price discovery, is questioned because product heterogeneity and self discrimination resulted in bidders discriminating against themselves. Quality-adjusted prices tend to trend downwards with the result of less consistent valuations of successive lots. It is evident that cattle and pig price cycles still exist in Australia. Biological lags in livestock production and slaughtering patterns are the internal causes of these cycles, but the structure of the livestock industries also significantly influences these cycles. The cattle cycle seems to lengthen (12-13 years) and strengthen, while a dampening of the pig cycle 3-4 years occurred. Weak sheep price cycles 3-5 years also exist.

Exports of Australian agricultural products to Asia is an important component of their agricultural economy. Analysis of these export markets is therefore vital for continued success. North Australian live cattle exports to Asia increased considerably during the past decade. This market prefer non-value-added products which question the Australian policy of a rush to promote value-adding for all their exports. An analysis of the Japanese market for beef revealed that beef is not a homogeneous product in Japan. Grain fed beef has the largest price elasticity, while chilled grass-fed beef is the most responsive to expenditure changes. These results has important implications for Australian beef exports to Japan, which is in direct competition with exports from the USA. The USA exports mostly grain-fed beef to Japan under stiff price competition from Australia, but Australian exports seems to increase, in particular for grass-fed beef. In Indonesia, significant price levelling for vegetables at wholesale and retail level is evident, but price averaging is virtually absent. It is however significant that improved food quality of at the wholesale level can result in profitable pay-offs, but quality is a less significant price factor at the retail level in Indonesia.

Deregulation, privatization and agricultural law

Deregulation of different agricultural industries and the effects of government intervention were major issues at the conference. The papers presented and discussions with individuals at the conference revealed important principles concerning the regulation of agriculture and government intervention in agriculture. Public choice and government policy are essential in the success or failure of regulated industries and in the process of deregulation.

These principles are as follows:

- (a) Market choice, individual choice and the free market principle is superior to regulation - especially in agricultural production and marketing.
- (b) Regulation by government or self-regulation by producers implies government intervention, but government intervention is again essential to effectively deregulate.
- (c) Deregulation with an adjustment to a free market is not *per se* an instantaneous solution to the market distortions created by a period of regulation. Any comparison must therefore allow a deregulated market to negate the cumulative negative effects of regulation and adjust to its natural state of operation.

Discussions with academics from New Zealand revealed that the trade liberalisation and deregulation of agricultural marketing in New Zealand had initial negative adjustment effects, but stabilization occurred which rendered New Zealand a positive trend in its economic growth

rate, creating a basis for sustainable long term and sound economic growth. They are presently experiencing the benefits from this process and are less vulnerable to recessions or world influences. Discussions with an economist (Mr Chris Lightfoot), who acted as the economic consultant for the deregulation process in Fiji, revealed interesting facts. The "self-sufficient" agricultural policy in Fiji resulted in poor economic results, bankruptcy of the economy and excessive inflation. Trade liberalization and abolishment of importation/exportation barriers initially resulted in the elimination of some agricultural industries (eg. domestic production of eggs). The comprehensive deregulation process also included economic, monetary and fiscal policies. Within one year, positive economic results were evident such as a positive growth rate, lower inflation, improved employment and lower consumer prices of food. The previous egg producers were for example assisted to reallocate to other occupations or to become importers/trades. A prerequisite for this type of success is however elimination of present structures, a complete change in the control and management of privatised government utilities, elimination of corruption and vested interest at all levels in government (a change in government took place) and incentives for economic participation in the form of reduction of individual income tax.

The current crisis of the sugar industry in Australia is considered as an effect of unjustified industry regulation. The Industry Assistance Commission was appointed to investigate the sugar industry. Their proposals include abolishment of regulations concerning assignment of quotas, tariffs and other major regulations as well as privatisation of bulk handling terminals. Similar to the current situation in South Africa, stiff resistance is experienced from bureaucratic government officials and a small group of producers who evidently benefit most from the regulations. Having effective control over the industry, in the form of networking representation of producer bodies, they are able to manipulate the system to their advantage with the impression that they represent the wishes of the producers. Deregulation of the Wheat Board in Australia considerably improved domestic wheat marketing, but being a small producer in a highly concentrated world market poses problems in the exportation of wheat. Increased regulation in the major industrialised countries (USA, Japan and EC countries) may be detrimental to the proposed changes of GATT and would effect those countries which embarked on an increasing trend towards deregulation, such as Australia and New Zealand. In Australia, the agricultural policy changed from stabilization and price support to an emphasis on assistance to producers to adjust towards a process of long term profitability. Deregulation had net benefits for the agricultural sector in Australia and did not increase the risks, which is the common perception in South Africa. Although interest rates increased considerably after financial deregulation, improved financial management practices actually decreased the total risk and improved the long term profitability of farmers. The regulation of agricultural marketing and unjustified support or government intervention resulted in extreme market distortions. The example of the wool industry is a case in point where irrational marketing actions of the Wool Corporation resulted in chaos for the Australian wool industry, which also affected the wool industry in South Africa. It is wrongly propagated in South Africa that the abolishment of the Australian reserve wool price caused the problems (a unilateral view from our local regulators), while in reality it is the stockpiling and price support actions of the Australian Wool Corporation which were the causal factors. The current crisis in the South African wool industry is similarly related to in-

adequate financial decisions by the South African Wool Board.

5. Concluding remarks

There is a large degree of similarity between the fields of interests and research practised by the agricultural economists in Australia and in South Africa. The organization and accessibility of AAES conferences is, however, believed to be more appropriate than those of the AEASA conferences. The objective with the AAES conferences is to allow as many as possible speakers to participate (therefore 107 contributed papers) in order to allow the exchange of research and information over a wide range of topics and to promote the presentation of research by post-graduate students. These conferences are also regarded as a stage in the training of post-graduate researchers with their introduction to public speaking and to test their ideas and results with a more experienced audience. The papers by these students are critically evaluated from the floor by their mentors and other experienced economists, while new ideas or different approaches are also suggested. This would inevitably result in quality research and improvement of the overall standard of agricultural economic research in Australia. To encourage a competitive approach, prizes are awarded for the best masters and doctorate dissertation and thesis respectively.

In order to facilitate as many as possible participants at the conferences, the costs of attending these conferences are kept low. This is brought about by low conference registration fees and using inexpensive venues like the different universities (during holidays) on a rotating basis. The use of university lecture halls for presentations and university hostels for accommodation contribute further the accessibility of these conferences by students. The organization of these conferences is also cost effective in the sense that the number of possible participants (or papers) is first determined by the submission of the titles, whereafter short abstracts must be submitted. Only the abstracts are published in a conference document. The author must supply 100 copies of which 20 are reserved for later enquiries. A special form is made available and can be completed during or after the conference should one request any specific paper. These requests are then handed to the relevant authors which can distribute copies of their papers to other participants at a later date.

It is thus evident that the AAES conferences comply to the primary objectives for a conference of this nature, which is not the case of the AEASA conferences in South Africa. Much is to be said for the accessibility and affordability of the AEASA conferences in South Africa. They seemingly developed into a closed shop occasion for a selected group of people attached to large companies or have access to large sponsorships at the most expensive and costly venues (conference centres and high graded hotels). It is the authors' opinion that the AEASA conferences do not obtain the objectives of exchanging research findings or knowledge, nor is it a forum to discuss actualities of the day or to constitute a venue to introduce freshmen in the field of agricultural economics over a wide enough range. This development introduced a sad era in the history of agricultural economics in South Africa which will produce little future benefits for agricultural economics and agriculture in South Africa. "A civilisation which cannot burst through its abstractions is doomed to sterility after a very limited period of progress" (AM Whitehead)