

ADDENDUM TO PAPER ON GOVERNANCE: NOTES on the RELATIONSHIP of BIOSECURITY POLICY, STRATEGY and OPERATIONS

10. *Comments on Four Recent Incursions: Two Controlled, Two Now Endemic*

Equine influenza, citrus canker, sugar cane smut and silverleaf whitefly are four serious incursions. Two are now controlled and two have become part of farm life in Australia. Why has it been possible to control only two, with the others becoming endemic? Were the import risk analyses incorrect? Were the pre-border or border quarantine measures defective or inadequately applied? Is it easier to identify and control an incursion of animal disease than plant disease or a plant pest? These rhetorical questions relate to the issues presented below. What values and whose values were significant in the decisions leading to these four incursions and their outcomes? Were the actions taken by government responsible and rational? Did the organisational structures, in place at the times, facilitate or impede the scope and timeliness of the decisions? Were there deficiencies in knowledge and skills? Was the provision of funding and other resources adequate and timely?

11. *Values, Responsibility and Rationality*

In making a judgment about the efficiency and effectiveness of an administrative programme, it is necessary to consider how closely the programme accords with a set of values, as well as whether the programme is likely to achieve those values. A responsive biosecurity programme is one which closely reflects the values demanded by the stakeholders. A rational programme is one for which the administrative measures are designed to have an high probability of delivering outcomes consistent with those values.

There is a wide range of values which have been expressed by stakeholders and administrators, with interests in biosecurity. Examples relating to pre-border and border issues are to be found in a recent report in the financial press. On the one hand are the comments from a trade negotiator. 'Australia operates a "managed risk" [not a "zero risk"] quarantine system, but trade expert Alan Oxley argues that Australia's reputation for scrupulous quarantine management has been compromised by recent BA [Biosecurity Australia] decisions. "There are few public statements by officials of other governments that Australia is willfully mismanaging its quarantine system for political or economic purposes. The norms of trade diplomacy limit that. It is this analyst's experience from private conversations with foreign trade officials, however, that such a conviction is strongly held" says Oxley.' An opposing point of view comes from a farmer. 'The most contentious ongoing quarantine dispute relates to Kiwi apples,..... "Horse flu appears to have run its race, but with some of the exotic plant diseases, they arrive and you have got them for good" says Ashton [Apple and Pear Australia Chairman].' (Sutherland, 2008).

An example of differences in values about post border issues are to be found in an exchange of correspondence with the Commonwealth Minister, at the time of the incursion of sugar cane smut into the Ord River Irrigation Area (ORIA), in 1998 (Attachment 1 and Attachment 2). The letter to the Minister makes a case for decisive action to eradicate the disease from the ORIA. The minister's reply prefers to await the establishment of a number of administrative bodies and relies upon "the full participation" of stakeholders. Subsequently, the effectiveness of the administrative bodies, established by the governments, has been criticised: "The structure of the NMG [National Management Group] was not functional and needs to be revisited. Clarification of what is meant by eradication/containment is required in the EPP Deed [*Government and Plant Industry Cost*

Sharing Deed in Respect of Emergency Plant Pest Responses]. The EPP Deed should clearly define eradication and clarify whether containment can be considered under the Deed.” (Wilcox *et al.*, 2008).

These examples demonstrate a range of inconsistent values relating to the biosecurity programme. Clearly, governance arrangements will need include measures to reconcile a divergence in values, such as in the examples given. It is essential to define what values and whose values are to be used as a basis of biosecurity policy. It must also be acknowledged that in any programme, there will be unanticipated consequences. These can best be dealt with through organisational learning. Two measures are suggested for consideration in developing guidelines for policy development. The first relates to the development and definition of policy and its relation to strategy and operations. In social science research, the method of relating ‘concept’ through ‘construct’ with ‘operational definition’ is used as a means of developing and defining measurable variables which can test models of human behaviour. Can a similar approach be applied to aid the development of concordant biosecurity policy, strategy and operations?. This idea needs to also be blended with the second measure, the concept of the ‘learning organisation’. A practical example of this approach, adopted by the British Army, is outlined by Chapman (1995). As well as some of the recommendations by Nairn *et al.* (1996), the chapter on biosecurity in Corish *et al.* (2006) could be used as a basis to develop and define draft policies and strategies, applying methods similar to those outlined by Chapman.

12. *Some Aspects of Structure*

A number of the successful national animal disease eradication programmes have been carried out by organizations established under administrative orders. One such example was the Brucellosis and Tuberculosis Eradication Campaign, which was administered by the Commonwealth and state government departments, using mainly the state legislation regulating livestock disease. North of the Tropic of Capricorn, the programme faced not only a paucity of basic data on the incidence and prevalence of the diseases, but also many livestock owners lacked the basic infrastructure and herd management practices needed for them to effectively participate. An administrative innovation, by the Northern Territory Government, was the ‘Approved Programme’. This was a commercial agreement between the government and the livestock owner, which set out the timeline for work and the respective contributions from the government and the livestock owner to complete the work. Admittedly, the programme in the north was carried forward during the period of improved returns, following the low cattle prices in the 1970s, and this increased the industry’s capacity to fund its contribution. Nevertheless, the relatively simple structure was effective. This structure was responsive to the Commonwealth and state ministers and through them, to the industry. The weak link in the programme was financial control and accountability. It is considered that this weakness was due to the lack of training and experience of veterinary and other professional staff in public administration, in similar measure to the converse: those experienced in administration lacking the basic biological knowledge to contribute effectively to the management of the programme. No structure can overcome such a gap. For any programme, which depends upon expertness and professionalism (upon which biosecurity is based), professional staff, particularly those close to the field, must have the capacity for and an interest in administration. Equally, if staff with greater administrative experience lack basic biological knowledge, it seems doubtful that their contribution can be positive. The remedy lies not only with the educators and trainers, but also with the persons who become leaders and role models.

The success of private enterprise in delivering socially desirable ends and the push for lower taxes have prompted the introduction of private sector methods to the public sector. This has resulted in a greater emphasis on market-like measures for coordination and control, as well as changes in performance management (“managers must manage”), more reliance on contracting (key performance indicators) and more elaborate audit systems (*ex-post* controls). Some writers have suggested that these changes reduce the capacity of government to develop good policy, as well as weakening its capacity to steer complex programmes. An emphasis on vertical lines of reporting results in poor lateral communication. Moreover, there appears to be a loss of organisational learning. It is suggested that these trends in public administration, called by some the ‘New Public Management’, are not appropriate to biosecurity. Hierarchy remains an important tool for effecting accountability in a complex programme, such as biosecurity.

An important outcome of decisions on structure is that these decisions affect accountability as well as communication. As a starting point, it is useful to review one authors’ definition: “By accountability we mean those methods, procedures and forces that determine what values will be reflected in administrative decisions. Accountability is the enforcement of responsibility” (Simon *et al.*, 1964, p513). An effective biosecurity programme must make appropriate use of all ‘methods, procedures and forces’ of accountability: judicial, legislative, ministerial and hierarchical, as well as those which used to be termed ‘informal controls’. This paper will only consider some recent developments, relating to the last named, which are suggested for consideration by the panel.

Since Simon *et al.* documented the sources of the value premises which are not supplied by the judiciary, the legislature or the minister, there have been theoretical developments in the concept of ‘network governance’, which have relevance to the management of a biosecurity programme. Jones *et al.* (1997) have set out a “General Theory of Network Governance”. Their objective, “...to provide a theory that explains under what conditions network governance, rigorously defined, has comparative advantage....”, led them to the conclusion that “...the network form of governance is a response to exchange conditions of asset specificity, demand uncertainty, task complexity and frequency. These exchange conditions drive firms toward structurally embedding their transactions, which enables firms to use social mechanisms for coordinating and safeguarding exchanges.” The authors claim that under certain circumstances, network governance, as they have defined it, has advantages over hierarchy and the market, because network governance facilitates adaptation and coordination, as well as providing safeguards. Other writers have suggested that in Europe, network governance has been grafted to public sector programmes and there are suggestions that the increased emphasis on border control, security and infectious disease control has been supported by this trend.

The conflicting requirements in the design of a biosecurity programme, involving, as it does, all sectors of the economy, suggest that the proper evaluation of all options for accountability should be on the table. International requirements mean accountability to the parliament and the minister. Freedom from animal and plant pests and diseases means accountability to the private sector (farmers’ livestock and crops and the farm produce value chain) and to households (zoonoses, companion animals and amenity horticulture). At the same time as the programme is needing clear policy direction and coordination, it also needs to be adaptable. It is suggested that the central concept of ‘structural embeddedness’, identified by Jones *et al.*, be considered in the analysis of structural options for the biosecurity programme. Other important considerations, suggested by their work, include the content and

development of ‘macrocultures’, the social mechanisms which support and hinder the programme, the practical size of networks and the power structures within the programme and their effects on operations as well as on policy development and review.

13. *Knowledge and Skills*

Evidence must underpin knowledge, if a biosecurity programme is to succeed. A rational programme depends upon the quality and availability of knowledge and skills. The success of a biosecurity programme depends upon the capacity of professional men and women to apply their knowledge and skills. It is suggested that the essential knowledge required of agriculture and veterinary graduates should include plant and animal pathology, parasitism and ecology (including taxonomy and life history) and epidemiology. It is also essential for these graduates to have a knowledge of the principles and practice of public administration.

There are real dangers from the now common practice of “dumbing down”. At best, such writing might only be misleading, but its incompleteness can lead to serious error. A recent article on ‘biosphere rules’ is a good example (Unruh, 2008).

14. *Sources of Funding*

It is easy to lose sight of the fact that most value adding to farm produce of all types occurs after the farm gate. This being the case, the economic health of the whole value chain, from farm input supplier to produce retailer depends upon effective biosecurity for crops and livestock. It is suggested that consideration be given to broadening the base of the industry contribution to a national biosecurity programme.

15. *Additional Sources*

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P.O.Box 8086,
Bargara, Qld., 4670.
Tel: 07 4159 1647
04 2884 4820
12 August, 1998.

The Hon Bruce Scott MP,
Acting Minister for Primary Industry.
Fax: 02 6273 4120
Canberra, ACT, 2600.

Dear Mr Scott,

The whole Australian sugar industry is facing a potential crisis from the discovery of sugar cane smut in the Ord River Irrigation Area. Will this disease become yet another to be added to the list of once exotic plant pests and diseases now endemic to Australia? Is the comparative and competitive advantage of another one of our plant industries to be eroded by the introduction of this disease? Are we to simply accept this threat to an important source of export earnings as somehow inevitable? The answer to each of these questions should surely be no!

This situation is being made even more difficult by two related factors. The first is the apparent lack of clear national policy direction and funding arrangements for the prevention, eradication and control of exotic plant pests and diseases, should they gain entry. The second follows from this indecision. State-based solutions must be applied to what is really a national emergency.

Leadership is needed to deal with this national emergency. This means timely intervention to co-ordinate the control and eradication this disease, as well as substantial Commonwealth funding.

It would seem that neither the recent initiative by the Agriculture and Resource Management Council, the Australian Plant Health Council, nor the Plant Industries Incursion Management Consultative Committee would be sufficiently advanced with their work to act decisively in this matter. If this is the case, I believe you should consider personal intervention to ensure that suitable administrative arrangements are effective immediately.

The case for substantial Commonwealth funding is twofold. The first proposition arises from a consideration of how plant diseases gain entry to Australia. It is the day to day operations of sectors of the economy, other than the farm sector, such as international commerce and tourism, which create conditions for the accidental introduction of exotic pests and diseases, particularly exotic plant pests and diseases. While there is significant public benefit from the operations of these other sectors, it is the farm sector which bears the risks and costs if exotic disease is introduced. There is a need for measures to assist the farm sector to manage this risk and to meet the costs associated with any breakdown of quarantine. These measures must include transfer payments, as there is no possibility of any market mechanism performing this function.

The second proposition derives from the farm sector's importance as a source of foreign exchange. These earnings, which benefit the whole nation, depend on the maintenance of the

farm sector's comparative and competitive advantage. Freedom from exotic pests and diseases is an important source of this comparative and competitive advantage. Each time an exotic pest or disease gains entry, some of that advantage is lost. Therefore a significant public benefit arises from maintaining effective exclusion of exotic plant pests and diseases.

These public benefits and the external effects of other sectors fully justify a significant Commonwealth financial contribution to an effective programme for the exclusion, control and eradication of exotic plant pests and diseases. I believe you should make available a package of financial assistance, including compensation if that is required, to effectively control and eradicate sugar cane smut.

The Bureau of Sugar Experiment Stations have advised Queensland growers that sugar cane smut is essentially a disease of sugar cane and that, to date, a survey of Queensland cane lands has not revealed any occurrence of smut. There would seem to be a very high probability that sugar cane smut can be eradicated. I fear that this most desirable outcome will not be achieved without Commonwealth assistance, particularly financial assistance. I hope you can provide the leadership needed.

To seek support for this proposal, a copy of this letter has been made available to:

The Hon Kim Beasley MP
Senator Meg Lees
Paul Neville MP
Dr Col Ryan - BSES
Mr Noel Baldwin - Canegrowers Bundaberg

Yours sincerely,

Anthony Thomas

THE HON JOHN ANDERSON MP
Minister for Primary Industries and Energy



Deputy Leader
National Party of Australia

28 AUG 1998

Mr W. A. Thomas
PO Box 8086,
BARGARA QLD 4670

Dear Mr Thomas,

Thank you for your letter of 12 August in relation to the infestation of sugar cane smut in the Ord River Irrigation Area (ORIA) of Western Australia. I fully appreciate the seriousness of the smut issue to the Australian sugar industry and the importance of industries and governments to work cooperatively to maintain Australia's relative freedom from pests, diseases and weeds.

The need for a national focus on plant health matters was recognised by the Government in its response to the Nairn Review into Quarantine. The Government provided funding for establishment of the Office of the Chief Plant Protection Officer and the Plant Health Unit within the Department of Primary Industries and Energy. These groups are working with plant industries, in particular the Plant Industries Incursion Management Consultative Committee (PIIMCC), towards development of an Australian Plant Health Council. PIIMCC is currently examining the various options for the structure of the Council.

The Chief Plant Protection Officer is coordinating the incursion response activities through a Consultative Committee on Sugar Cane Smut. This Committee comprises representatives from industry, the Bureau of Sugar Experiment Stations, Commonwealth and State governments. Emergency response action was taken soon after the disease was detected to minimise the risk of its transfer between cane growing areas by quarantining diseased areas and removing the most heavily infected crops. Thorough scientific and cost-benefit analyses necessary for longer term decisions on control options are underway.

The analyses are being conducted by a Technical Advisory Group appointed by the Consultative Committee. The Group will also undertake a risk analysis of re-entry of the disease from Asia and its transfer from Western Australia to Queensland. This analysis will be considered by the Consultative Committee in coming to final recommendations on future action.

You raised the issue of financial assistance from the Government for eradication activities. There are two funding issues. These are the short term costs of emergency response activities for containment of the disease and the longer term issue of compensation to growers in the event of a decision to eradicate the disease.

With respect to the short term costs, estimates of the cost of response activities to date have been prepared and have been submitted to the Standing Committee on Agriculture and Resource Management (SCARM) which is responsible for decisions on funding for incursion management. Past SCARM practice has been that governments fund preliminary response activities such as eradication and related surveillance on a cost sharing basis.

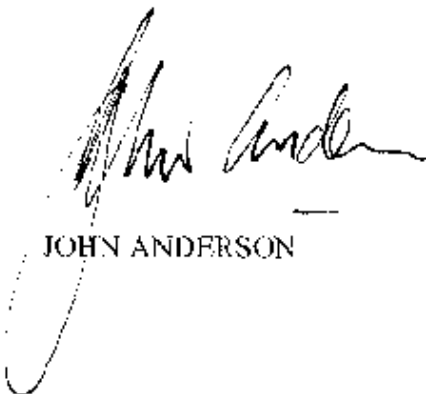
The longer term decisions to eradicate sugar cane smut from a region are likely to require removal of cane from that region for several years and hence would have serious implications for that region. There would need to be clear evidence that this course of action will be successful and such a decision would need to be based on sound scientific and cost-benefit analyses.

In regard to compensation, there is no established national policy but this will be an issue that the Australian Plant Health Council will be asked to consider as a matter of urgency when it is formed.

The Government appreciates the need for prompt action in dealing with incursions and is anxious to minimise the potential impact of this disease on the Australian sugar industry. I have also noted your views that total eradication must remain a consideration, particularly as no diseased plants have been found in Queensland. However it is essential that sufficient time is allowed for careful consideration of all options and that any decisions are based on sound scientific and cost/benefit analysis. Therefore, at this stage I believe it is preferable to await the recommendations of the Consultative Committee during which time containment activities are ongoing.

I assure you that decisions on long term actions to control the disease will be taken with the full participation of representatives of the Australian sugar industry as well as governments through the Consultative Committee on Sugar Cane Smut.

Yours sincerely



JOHN ANDERSON