Submission to the Quarantine and Biosecurity Review

Australian Biosecurity Cooperative Research Centre for Emerging Infectious Disease

Stephen Prowse

CEO

Executive Summary

1. Research is a critical component of the biosecurity and quarantine sector, providing information that underpins risk assessment and risk management. However, the translation of research outcomes into operations and policy remains difficult. A more collaborative, linked approach between biosecurity research and operations is needed.

2. Technology and research developments are changing the way in which we approach surveillance. Surveillance strategies need to take into account, new surveillance tools and processes offered by new technologies.

3. Pre-border, border and post –border activities. Global disease spread continues to represent a significant threat. Pre-border surveillance remains a critical part of our biosecurity preparedness. There needs to be an appropriate balance between pre and post border activities based on an assessment of the risks.

4. New approaches to disease intelligence gathering and analysis allow improved forecasting and threat assessment. This information must be analysed and used more effectively in setting priorities and assessing threats.

Introduction

The Australian biosecurity community engages in the full gamut of activities including research, analysis, policy development, adoption, education, service provision, emergency response and regulation. These activities make up our national livestock biosecurity capability. Biosecurity concerns include the domesticated animal, human, plant, wildlife and aquatic sectors. The biosecurity sector has added complexity with stakeholders from government, industry and research sectors all involved. This is a complex matrix of stakeholders that are required to address an increasing biosecurity threat from emerging infectious disease as well as dealing with endemic disease matters and diseases that affect international trade. The development and application of new tools and technologies in a number of areas have the potential to improve our national biosecurity capability and capacity.

Biosecurity research, adoption and uptake

Biosecurity research is a key component of the national biosecurity system. Research activities generate data and information that is critical for risk assessment, risk management and setting priorities. However the uptake of research outcomes and the optimal use of information flowing from research activities remains challenging. A number of initiatives are in place to improve this. A further critical gap is the collaborative involvement of biosecurity research scientists, policy makers and operational workers in the planning and performance of research projects. This type of collaborative planning has the potential to enhance knowledge and technology sharing as well as the uptake of research outcomes. This talk of joint planning would also allow closer linkages between research and service delivery.

There is also a significant social dimension to the uptake of biosecurity research that involves ownership, innovation and change management. This aspect of biosecurity is rarely addressed.

Cooperative research centres in the biosecurity sector (most notably the Australian Biosecurity Cooperative Research Centre and the National Plant Biosecurity Cooperative Research Centre) are ideally placed and are at the forefront of promoting and facilitating engagement between the biosecurity research community, operational activity, policy development and producers. The centres have partners in all sectors of the biosecurity community. Further, the centres facilitate active engagement between research providers and research users. This interaction ensures that research outcomes are taken up and translated into policy and practice.

Surveillance

The resources available for surveillance have steadily reduced over the last 30 years. However the threats from new diseases as well as the threats from current diseases have increased. Biosecurity research programs have resulted in the development of new surveillance technologies and tools that have the potential to improve surveillance processes, making them more efficient and more effective. These include new methods of data collection, different approaches to participatory surveillance and the application of field tests. Surveillance programs and strategies need to take into account these new tools, processes and approaches. The application of some of these technologies requires significant changes in policy and approach by practitioners.

Border activities

Border, pre-border and post border activities are a critical part of our quarantine processes. With regard to emerging diseases, our region is considered to be an area of high risk with high population densities, substantial land clearing and social changes. Many of the new diseases which have appeared in Australia, have arisen in our intensive livestock industries located in the temperate regions of the country. These include Menangle virus, Newcastle disease virus and Bungawannah virus.

An appropriate balance between pre-border, border and post-border activities is required. This must be based on an assessment of risk. In order to undertake an assessment of risk, adequate resources and skills must be available.

Cooperative research centres play a key role in the development of skills in this sector. The Australian Biosecurity Cooperative Research Centre has 60 PhD students and has undertaken professional and para-professional training programs. The centre has also supported the development of graduate and undergraduate units in risk assessment training. These training activities of very important in addressing a broad loss of specialist skills and expertise.

Intelligence gathering

As a result of the application of new technologies in research and practice, more biosecurity related information than ever before is now available. However access to this information can be problematic in that issues of ownership, management and storage of this information need to be addressed. In addition, the skills required to analyse this information are scarce. The National Collaborative Infrastructure Strategy has provisionally allocated $16 million towards the establishment of an Australian Biosecurity Intelligence Network (ABIN) that will go some way towards addressing this need. However ongoing investment will be required at the end of this three year program.

The improved sharing of information will improve our national forecasting capability which will in turn improve our biosecurity status. However this will only be achieved if there is a proactive involvement in initiatives such as ABIN by the operational arms of the biosecurity sector. The current default position is to keep information confidential. This position is counter productive. The default position regarding biosecurity information should be to share information broadly within the biosecurity community unless a case is made in the national interest to maintain restricted access to this data. An example of such data is the information on disease and pest intercepts in imported material.

In considering forecasting, it should be recognised that there is a need for generic response capability. Despite the best intelligence gathering and analysis, there will always be completely unforeseen disease events. The emergence of the SARS virus remains one of the salient examples of such an event.