

## Submission

to

### **House of Representatives Agriculture, Fisheries and Forestry Standing Committee inquiry into the impact on agriculture of pest animals**

#### **Introduction**

QFF is strongly supportive of policies aimed at the protection of agricultural productivity from the impacts of pest animals. The capable management of pest animals is a major issue for the Federation and a major issue for the primary producers represented through QFF's member organisations. Indeed, it is generally considered that weed and pest animal control is deemed by most primary producers to be the highest priority land degradation issue. An ABARE survey of producers in 1997 ranked pest animals and weed infestations significantly above other better-funded land degradation issues like salinity and soil acidity (Trewin 2001).

Pest animals have a considerable detrimental impact upon and pose a significant threat to agricultural production within Queensland. Pest animals can significantly reduce the productivity and viability of agriculture industries through damage to crops, predation of livestock and contamination of produce. Pest animals can also pose a disease risk to humans as well as livestock and native animals through their potential role as vectors.

Pest animal management in Queensland involves management of both native and invasive pests. As such, this submission is approaching the term 'pest animal' to include both exotic animals such as cane toads and foxes; and native animals such as flying foxes, which cause, or have the potential to cause, a significant and wide ranging impact on agriculture. The following range of native species and invasive pest impacts on agriculture was considered during the preparation of this submission:

- Trade/loss of market access (eg foot and mouth disease impacts on trade),
- Human health (eg fire ants),
- Vector of disease (eg foxes and rabies, feral pigs and foot and mouth disease,
- Loss of production/yield (fruit flies, flying foxes, locusts, native rats, foxes, wild dogs, cormorants, macropods etc),
- Contamination (eg rodents and stored grain),
- Distress/fear and nuisance (eg mice, pigeons, crocodiles), and
- Increased operating costs associated with control (eg baiting programs).

In addition to their impact on primary production, QFF believes that pest animals pose a significant threat to and negatively impact upon the natural environment. Pest animals have the potential to interrupt and compromise natural ecosystem functions. These negative impacts on the environment, including biodiversity and conservation values, have not been considered in the preparation of this submission as they are outside the inquiry's terms of reference.

This submission provides general feedback and comment from the Federation. Although the management of pest animals is a priority issue for QFF, due to the nature of pest animal issues, management of pest animals in many cases continues to be a commodity-specific issue.

## The challenges from pest animals to Queensland

The threat to Queensland's agricultural sector posed by weeds and pest animals is significant and increasing. On the world scale, invasive species are an emerging problem threatening agricultural productivity everywhere, evolving and adapting as they spread. Increasing global trade has the potential to increase outbreaks of invasive species, pest animals and diseases, which may result in these species and diseases becoming resistant to current treatments. Some pest animals will be imported deliberately whilst others may enter accidentally. Many weeds, pest animals and diseases have already entered Queensland. Changing climatic conditions also means that ranges for certain pests and currently inert species are steadily extending within Queensland and across the country.

Weeds and pest animals are issues that are possibly of greater relative importance to Queensland's economy than to that of other States. This is due to the ambient climate and diverse physical attributes of Queensland that subsequently provide the ideal environment for a wide range of pest animals to survive and spread; along with the wide range of primary industries that are and potentially can be impacted upon.

The true cost of the impact of pest animals on Queensland's agricultural sector is unknown, though considered to be quite substantial. For the 2003-2004 financial year, the total value of Queensland's primary production has been projected to be \$9 billion dollars (Queensland Department of Primary Industries and Fisheries, 2004). Even without specific data on the impacts of pest animals, a reduction of just 2% would equate to a cost more than \$180 million annually. This is considered a conservative figure, as the agricultural impacts of feral pigs alone have been estimated to exceed \$50 million per year through predation, competition and destruction of crops and pastures (Department of Natural Resources, Mines and Energy, 2004).

Australia has a record of being significantly affected by pest animals. Many people in the community know about the impacts of rabbits, foxes and feral cats on our environment and to a lesser degree their impacts on agriculture. This perception is often reinforced in the media. Many of these pest animals have been in the country a long time, but despite vigilance and prevention activities within the last five years, there have been significant pest insect incursions/discoveries into Queensland, including Papaya fruit fly, spiralling whitefly, red imported fire ant, red banded mango caterpillar, and introduced marine pests Caribbean tubeworm and Asian Green mussel. Recent discoveries of a population of the exotic Red-eared Slider Turtles on the Sunshine Coast in March this year and a quarantine breach by a Giant African Snail, a major agricultural pest, found at an industrial property on the Gold Coast in January this year demonstrate the need for a constant vigilant focus on pest animals.

Identifying and reducing the negative impact of established pest animals across Australia and Queensland is a huge challenge due to the scale of the problem, which includes gaining community acceptance, identifying who is responsible, as well as the complexity of the response required. These issues combined with the problems of preventing future incursions of pest animals, controlling, containing and eradicating species in the event of an incursion, and managing to prevent the escalation of so called 'sleeper' species (species already found in the country but yet to become a widespread problem), compounds the challenge faced considerably.

The complexity of the challenge faced by Queensland's agricultural sector can be seen in the number of pest animals declared under numerous pieces of State legislation. These include six exotic mammals and three native insects under the *Land Protection (Pest and Stock Route Management) Act 2002*, which prevents the importation of all mammals, amphibians and reptiles not native to Queensland, 17 species of noxious fish, 162 non indigenous fish, nine genera of mammals and exotic birds, 18 pests of bees, and 188 diseases and vectors of animal diseases declared under a variety of other legislation. In addition to these declared pest animals there are

the impacts of exotic animals such as cane toads that are not declared and the impacts of native pest animals.

## Commonwealth, Queensland Government approaches to pest animal issues in Queensland

Responsibility for pest animal management is perhaps best described in the context of how a pest is managed depending on the impact a pest animal has and what risks the pest may cause. The three levels of management are generally applied to invasive species, including pest animals:

- **barrier to entry** - preventive or barrier approaches to restrict and preclude pest animal incursions, such as quarantine measures,
- **incursion management** - management actions and programs aimed at the early detection, containment and eradication of newly incurred species and species yet to become a widespread problem, and
- **established species management** - management actions and programs for the mitigation and control of naturalised invasive species to minimise their environmental, social and economic impacts.

### Barrier to Entry

Traditionally, the Commonwealth Government has been responsible for barrier control undertaken by Australian Quarantine and Inspection Service (AQIS), within the Department of Agriculture, Fisheries and Forestry (DAFF) under the powers of the *Quarantine Act 1908*.

Pre-border and border protection represent a significant focus of barrier control efforts. QFF understands that most of DAFF's efforts and responsibilities are aimed at exotic invasive species and protection and response (as distinct from established pests).

Three key elements make up DAFF's border protection regime:

- Assessing risks and identifying policy and measures necessary to address those risks (through Import Risk Analysis) managed by Biosecurity Australia. Objective of policies is to prevent or control the entry, establishment or spread of pests and diseases that will or could cause significant damage to human beings, animals, plants, other aspects of the environment, or economic activities.
- Implementing border protection measures - managed by AQIS.
- Developing surveillance systems and complementary measures in neighbouring countries (Northern Australian Quarantine Strategy), together with off shore and overseas inspections - managed by AQIS.

In recent times the use of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), particularly the listing of key threatening processes and subsequent development of threat abatement plans (TAPs) by the Department of Environment and Heritage (DEH) to address the impacts (on the environment) of some pest animal species, has elevated the involvement of this Department in addressing pest animal issues. Notable pest animal areas of concentration by DEH include the listing of threatening processes from feral rabbits, foxes, feral goats, feral cats, feral pigs, and tramp ants.

In relation to import controls, the EPBC Act (along with the *Quarantine Act 1908*) regulates the entry of live animals into Australia. The EPBC Act though, only controls the import of live animals from an environmental perspective - aiming to minimise the likelihood of importing an exotic species with the potential to have a significant impact on the environment. The EPBC Act has a list of species suitable for live import and prohibits the import of any species not on the list.

State agencies in Queensland also provide barriers to entry into the State from other States and into other States. Currently the State prevents the sale and distribution of virtually all non-indigenous mammals, reptiles, amphibians and some fish and birds.

## **Incursion Management**

In Queensland incursion management is a shared responsibility between the Commonwealth and the State. Three State agencies are directly involved in responding to outbreaks of pest animals in Queensland – Department of Primary Industries and Fisheries (DPI&F), Department of Natural Resources, Mines and Energy (NRM&E) and Environmental Protection Agency (EPA), with minor involvement by Queensland Health (QH) and Queensland Transport.

Incursion management is often undertaken by an intergovernmental or interdepartmental taskforce led by the State agency with primary responsibility for the particular type of pest under management. For example NRM&E is responsible for certain pest animals, EPA for certain exotic bird species and DPI&F for exotic fish under the *Fisheries Act* 1994. Increasingly, joint Commonwealth and State action is being done under the auspices of Ministerial Council. In regards to vertebrate pest animals this is the Primary Industries Ministerial Council.

## **Established Species Management**

Under current legislation in Queensland, the management of most pest animals is the responsibility of landowners. The primary piece of pest legislation is the *Land Protection (Pest and Stock Route) Management Act 2002* (proclaimed 1 July 2003), administered by the Department of Natural Resources, Mines and Energy (DNRM&E), under which landowners are obliged to take reasonable steps to keep their land free of declared pests. Local Government has legislative responsibility for overseeing most of these activities (State agencies have a compliance role for some species), and can issue pest control notices to landowners to enforce this obligation. Under the Act, Local Governments are required to develop a Local Government Area Pest Management Plan by 1 July 2005. Currently there exist no mandatory property level pest management planning requirements for landowners.

DNRM&E is responsible for certain pest animals (mammals, amphibia and reptiles) and native locust plagues along with certain weeds declared under the Act. The agency provides legislation, policy, research, extension and training primarily to support land managers and local governments to keep their land free of declared pests. Local Government generally undertakes this by monitoring and enforcement on private lands and direct control on lands under their management. DNRM&E also provides limited pest animal baiting services and with joint funding from local government, maintains the wild dog barrier fence, is responsible for pest management on unallocated State land, and maintains links to national invasive species management planning, policy and programs.

DPI&F plays a role in pest animal management through:

- Biosecurity systems which:
  - Deliver surveillance for major pest animal and disease risks, eg foot and mouth disease,
  - Implement responses to detected pests to eradicate, such as bovine tuberculosis, or to contain, e.g cattle ticks to specific areas, and
  - Build emergency response capability for incursions through emergency planning.
- Research in terms of minimising the impact of pests on the viability of rural industries in the context of best management practice and control, and
- Regulation of the State's fisheries resources, including regulation and control of exotic fish and the management of the State plantation forests.

In regards to pest animal biosecurity issues, DPI&F maintains links to national planning, policy and programs through the Primary Industries Ministerial Council, DAFF, and the corporate body Animal Health Australia (AHA).

The EPA's role in pest management is driven by its obligation to maintain and protect natural processes and as such is focused on the impacts of pest animals on the environment rather than impacts on agriculture. Its' principle responsibility for pest animal management is as land manager of eleven million hectares of land including National Parks, protected areas and State forests not under the jurisdiction of DPI&F. The Agency is also involved in pest animal management to address threatening processes (i.e. part of a conservation/recovery plan for a threatened species), management of pest animals species as a part of the Queensland Parks and Wildlife Service (QPWS) *Good Neighbour Policy* (i.e. wild dogs and feral pigs) and in the coordination of marine pest responses at the national and State level and to local incursions.

In 2002, the State Government attempted to improve the coordination of the management of pest animals and weeds by creating the Interdepartmental Pest Management Committee (IPMC), which consists of the aforementioned State agencies plus the Department of Premiers and Cabinet, Qld Treasury, and Department of Local Government, Planning, and Sport and Recreation (DLGPSR). Although it is considered that the State agencies with responsibilities for pest management efforts to date are satisfactory, QFF believes further improvement in both coverage of pest animal management and liaison and cooperation between agencies is needed.

A recent invasive species activity by NRM&E, EPA and DPI&F resulted in the development of the '*Queensland Weeds Strategy 2002-2006*' and the '*Queensland Pest Animal Strategy 2002-2006*'. They are enshrined in the *Land Protection (Pest and Stock Route) Management Act, 2002* and create an agreed framework to improve invasive species and native pest management in the state. The State Government has also developed a number of pest species management strategies for certain declared species under the *Land Protection (Pest and Stock Route) Management Act, 2002*, including for feral pigs, wild dogs/dingos, and rabbits.

Commonwealth involvement in the management of established pest animals is limited generally to funds delivery for research or specific on ground activities but some planning activities do occur. As noted in earlier discussion on the role of the Commonwealth in pest animal management, this planning activity, specifically TAPs under the EPBC Act, has elevated the Commonwealth's involvement in the management of established pests. Discussion of the effectiveness of TAPs in managing established pest species is provided in a subsequent section of the submission.

The Commonwealth also provides representatives on national consultative Committees e.g Vertebrate Pest Committee, and therefore helps set direction for some established pests. The Bureau of Resources Sciences (BRS), has over the past decade developed a number of technical publications on the impacts and management of feral animals, for example Choquenot et al. (1996) for feral pigs. This agency has also developed a risk assessment model for vertebrate pests and funded various projects on pest management and thus helps provide national input into the management of some established pest animals.

# Achieving greater coordination on nationally significant pest animal issues

## Nationally significant pest animal issues

There are a variety of means to distinguish nationally significant pest animal issues. One option for detailing issues could be by examining issues specific to pest animal species found across multiple jurisdictions on a species by species basis, such as impact and management issues associated with the cane toad, red imported fire ant, European fox to name but a few. Given the arduous nature of this approach the Federation has opted to discuss what it believes to be nationally significant pest animal issues, in a general fashion referring to particular pest animal species and rural industry circumstances to support its point of view.

QFF considers the following pest animal issues as nationally significant warranting a national focus:

- Disease risk posed by pest animals to livestock and humans through pest animals’ role as disease vectors,
- Balancing conservation values/production values with managing the negative impacts of native pest animals on agricultural productivity,
- Surveillance, monitoring and containment of ‘sleeper’ pest animal species, and
- Raising the profile of pest animal management.

### Disease risk posed by pest animals to livestock and humans through pest animals’ role as disease vectors

Pest animals pose a serious threat to not only Queensland’s but also the nation’s livestock industries and human health through being a carrier, or amplifier, of many endemic and exotic diseases.

Perhaps the most of concern and often-cited disease risk posed to livestock and humans by a pest animal is that of feral pigs who carry a range of endemic and exotic species (Listed in Table 1)

**Table1: - List of endemic and exotic diseases carried by feral pigs**

Endemic	Exotic
<ul style="list-style-type: none"> <li>• Brucellosis (<i>Brucella suis</i>)*</li> <li>• Murray Valley encephalitis*</li> <li>• porcine parovirus</li> <li>• leptospirosis (<i>Leptospira spp.</i>)*</li> <li>• melioidosis (<i>Burkholderia pseudomallei</i>)*</li> <li>• sparganosis (<i>Spirometra erinacei</i>)*</li> </ul>	<ul style="list-style-type: none"> <li>• foot and mouth disease (FMD)</li> <li>• classical swine fever</li> <li>• Aujesky’s disease</li> <li>• Japanese encephalitis*</li> <li>• Swine vesicular disease</li> <li>• African swine fever</li> <li>• trichinosis*</li> <li>• rabies*</li> <li>• screw-worm fly infestations*</li> </ul>

\* Zoonoses (diseases that affect both humans and animals)

(Source: - Department of Natural Resources, Mines and Energy 2004)

Of the exotic diseases, foot and mouth disease (FMD) is of most concern and is considered to pose the greatest threat to both the Queensland and national agricultural sector. FMD is a highly contagious viral disease and not only affects and is carried by feral pigs but all cloven hoofed animals (cattle, sheep, goats, domestic pigs, camels, etc) and can spread rapidly via contact with animals, transmission via people or transport, or through the air. A report (Productivity Commission, 2002) into the potential social, economic and environmental consequences of an FMD outbreak in Australia estimated the cost under the Commission’s worst-case scenario would

be between \$8 and \$13 billion of gross domestic product, closure of key beef and lamb exports for 15 months, and the consequences of the outbreak would be felt for nearly 10 years after the event.

Although the impacts of a FMD outbreak have not been costed for Queensland it would surely be significant given the agriculture in the State is largely export-orientated, that the State has the largest cattle herd of all the States and the largest estimated feral pig population of all the States (Choquenot et al., 1996).

Although the potential role of feral pigs in an outbreak of FMD is unclear, given they are highly susceptible to FMD and are difficult to manage, an outbreak of FMD in feral pigs could delay its detection, increase the threat and extent of spread, make eradication of the disease expensive, time consuming or impossible, and complicate and delay declaration of disease-free status following an outbreak.

In addition to the feral pigs, a whole host of pest animals act as vectors for a range of diseases both endemic and exotic and of the exotics if found in the country impact greatly upon agriculture and human health and if not, should they enter pose a very serious threat. Often these diseases can affect both livestock and humans and can be carried by a number of different pest animals.

In regards to human health, rats both introduced (*Rattus rattus*) and native (*Melomys burtoni* and *Rattus sordidus*) have in the past posed a disease risk in the sugar cane industry by incidences of Leptospirosis (called Weils' disease in humans) in workers and surrounding community dwellers, though since the automation of industry, incidence of the disease has decreased, as there is less human contact with the areas that the rats dwell in. The banana industry, however, unable to adopt a similar process of mechanisation continues to risk health issues associated with Leptospirosis. In grain growing regions of the State, predominantly the Darling Downs as well as on nearby feedlots, vegetable, pig and poultry farms, mice (*Mus domesticus*) can pose an elevated risk to human health during plague times as they can transmit Salmonella which causes food poisoning as well as causing extensive damage to crops and stored produce, and nuisance damage to homes and telecommunication infrastructure.

Both exotic and native birds can transmit avian diseases such as Newcastle Disease (ND), which is a highly contagious viral disease that during recent outbreaks in NSW in 1998, 1999 and 2000, and in Victoria in 2002, demonstrated that responding to an outbreak of the disease is costly and that further mutations of the Australian strain of the virus could be expected regularly. The implications were that both industry and government could not commit large sums of money in response to outbreaks on a regular basis and that Australia's poultry health status could be adversely affected if outbreaks continued with resultant export, import and interstate trade implications.

### **Balancing conservation values/production values with managing the negative impacts of native pest animals on agricultural productivity**

As noted previously, pest animal management in Queensland involves both native and invasive animal species.

Native wildlife in certain circumstances impact markedly on agriculture productivity. Managing pest animals for multiple outcomes and achieving a balance between conservation objectives and managing for impact reduction, usually through some form of population control, can result in conflict.

Perhaps the best-known example of a situation in which the objectives of conservation of a native species and the reduction of its impact on agricultural production have come to a head concerns the Spectacled Flying-fox (*Pteropus conspicillatus*) and its impact on north Queensland's horticulture industries.



Since the *Booth -v- Bosworth* (2000) case, where an application by a conservationist for an injunction under the EPBC Act to restrain the culling of Speculated Flying-foxes by a large aerial electric grid on a 60ha lychee farm in North Queensland, was not granted but subsequently granted as a result of a full trial, there has been considerable confusion in the North Queensland lychee industry in terms of what farmers can and cannot do to protect their orchards and crops from flying foxes. Whilst there have been guidelines released by DEH covering the Spectacled Flying-fox, this confusion has not been eased.

In Queensland, native wildlife is protected under the *Nature Conservation Act, 1992* (NC Act) and the taking (including killing or injury) is an offence against s 88 of the Act unless, authorised under a permit (mainly a Damage Mitigation Permit (DMP)). Circumstances authorised under the Act, where taking may occur include instances where it native wildlife is impacting on crops, stock or other property or there is significant loss to individuals.

QPWS, administers the NC Act and to issue a DMP must be satisfied that landholders taking wildlife will do so in an ecologically sustainable manner, that the landholder has unsuccessfully taken action to prevent damage or loss caused by the wildlife, and that the way of taking is not likely to cause unnecessary suffering. QPWS policies and decision support guidelines approach the management of native pest animals by using conservation strategies for individual species and by using a range of mechanisms that focus on the individual animal or population.

The significant difference between native pest animals and exotic pest animals is the goal of management, which in reality is not easy to distinguish. What the flying fox case did was highlight the occurrence of competing interests in the management of a species. Given now the species has been listed as a threatened species under the EPBC Act, jurisdictional responsibility has become less clear.

### **The Sugar Industry and Native Rats**

Rodents are the second most serious pest in the Queensland sugar industry destroying approximately 825 000 tonnes of sugarcane valued at \$25 M during the 1999 and 2000 seasons. Since the establishment of the sugarcane industry in northern Queensland in the 19<sup>th</sup> century, the industry has tried to manage the impact of two native species of rodent, *Rattus sordidus* (canefield or ground rat) and *Melomys burtoni* (climbing rat). Both species can affect up to 150 000 ha of cane-growing areas from Sarina in the south to Mossman in the north and isolated cases of crop damage have been reported in southern Queensland cane growing areas. Ground rats are the predominant pest with over 90% of all rodent damage in areas south from the Herbert River regularly attributed to this species. Ground rats are also responsible for a large proportion of damage in areas north of the Herbert. However, there is a greater incidence of climbing rat damage in the highly dissected, narrow valleys of the more northerly districts.

The systems for managing the species have changed significantly over the last three decades as the ecology and biology of each species has been better understood. The framework of legislation and regulations within the State of Queensland governing management of native animals has also changed.

The Queensland sugar industry has recently implemented a comprehensive integrated pest management (IPM) system to minimize crop losses from two native rodent species. Both of these rodents are listed as common wildlife under the schedules of the *Queensland Nature Conservation (Wildlife) Regulation* 1994. The IPM program is based on understanding the ecology and biology of each species and incorporates a large-scale monitoring program aimed at providing early warning of imminent rodent build-up to avert major outbreaks.

QFF member organisation CANEGROWERS has also developed a memorandum of understanding with the Queensland State Government, which delivers on the industry's pest management needs, whilst providing an improved system of accountability for the taking of two of Queensland's native wildlife species. The consensus reached between the co-operating parties (The Bureau of Sugar Experiment Stations (BSES), CANEGROWERS, regionally-based Cane Productivity Services, and the QPWS) provides a blueprint for other industries in how effective, cooperative outcomes can be negotiated between rural industry and environmental interests.

In addition to conflict between management goals concerning conservation values and impact reduction, conflict may also occur when a species can be viewed both as a pest and a production resource.

### **Feral Pig – Pest or Resource?**

The Australian feral pig is both ecologically and physically similar to the European wild boar and there is significant export of wild pig meat to European Union markets (particularly Germany, France, Italy, and to a lesser extent, Sweden) as well as Japan. Commercial use of feral pigs began in the early 1980s and in the 1990s Australia supplied some 20-30% of the wild boar consumed worldwide (Ramsay 1994, cited in Department of Natural Resources, Mines and Energy, 2004). Though the export market is very volatile, with sales and prices fluctuating from year to year, the value of wild boar exports has varied between \$3 and \$5 million annually over the last few years (Wild Pig Export Figures, ABS).

While the game meat industry and recreational hunters play an important role in controlling feral pigs in some localities, there is however, a net cost to the boarder community from feral pigs. The damage done to crops, pastures, fences, water facilities, and livestock can be approximated (\$100, 000 million), which is well in excess of the estimated value of the wild boar market – even without the potential costs from an emergency disease outbreak Australia and costs to the environment.

If intense and frequent enough, commercial harvesting has the potential to lower feral pig densities to a level where damage they cause is reduced though the game meat industry tends only to take ‘commercial’ size feral pigs, thus adopting a sustainable harvest rather than control and eradication.

### **Surveillance, monitoring and containment of ‘sleeper’ pest animal species**

In addition to the management of the impacts of established pest species and the control and eradication of exotic species incursions, QFF considers the threat from exotic species found already in the country but not yet considered to be a widespread problem (so called ‘sleeper species’ and the like) as high and a significant pest animal issue warranting a national focus. Whilst the most effective response to a pest animal is ideally to prevent them from entering the country, early rapid detection of any newly introduced or spread of established pest animal is the key to timely and cost effective intervention and provides the best opportunity for eradication and containment.

In a slightly different context it is considered there are multitudes of threats from climate change induced alterations to host parasite relations in agriculture. Currently these are not well understood with the most likely consequences are changes in the severity of pests and diseases within current geographic distributions or shifts in geographical distribution. Projected warming could increase the ability of some pests to survive winters, and could accelerate development of most species that are active in summer. Changed climate will enable tropical species such as the Queensland fruit fly and the cattle tick to spread southwards and threaten exclusion zones established to protect interstate and international trade. Plant pathogens are likely to have greater impacts in areas with dry summers as the frequency of summer rainfall events and humidity levels increase. Much more research in this area and subsequent surveillance and monitoring is required.

### **Raising the Profile of Pest Animal Management**

Please refer to the last section of the submission for a discussion on ways to promote community understanding of an involvement in pest animal issues to raise the profile of pest animal management.

### **Achieving Greater Coordination**

National focus on nationally significant pest animal issues does not necessarily mean that Commonwealth take ‘lead’ responsibility where constitutional responsibility does not lie with the Commonwealth. Rather, focus at the national level by the Commonwealth should be through

national leadership, for pest animal planning and strategy development, in incursion responses and pest animal research priorities, within a framework of cooperation with States and assist States in the management and control of established pest animals.

In regards to pest animal research, coordination is required across the country on research into the current and potential impacts of pest animals on agriculture and agreed management measures needed to eradicate and contain pest animal species of national significance. The Commonwealth should provide funds as part of a nationally agreed program, to address national priorities in these areas.

Achieving greater coordination across jurisdictions and the success of pest animal management endeavours across State boundaries is highly dependant on clarity in the roles and responsibilities of the parties involved, be that Commonwealth, State and local governments, landholders and rural industry. This includes clarity in cost sharing arrangements as well.

### **Barrier to entry**

As mentioned in the previous section, there are two pieces of Commonwealth legislation that regulates the introduction of new species into Australia to prevent the introduction of invasive species; the *Quarantine Act* 1908 and the EPBC Act, which together contain a large number of taxa either listed as permitted or prohibited for entry. New species entering the country not yet on the lists, require some form of risk assessment before being added to the lists.

QFF considers that the barrier protection role undertaken by AQIS as laudable. The exception to this is in relation to quarantine efforts associated with marine pest animals, which in addition to negative impacts on the environment may pose a productivity risk to salt water aquaculture ventures such as prawn farming.

QFF supports the process of animal risk assessment undertaken by Biosecurity Australia (BA) and considers the agency's performance as satisfactory, though found highly questionable the conclusions of the recent import risk analysis (IRA) report for pig meat importations as well as revised draft IRA reports for apples and bananas. QFF is aware that both DEH and BA do not currently carry out full risk assessment processes on all proposed import species. For example recent risk assessment for deer species by BA did not take account for the pest potential of the imported deer species.

In similar fashion to the listed species under the Quarantine Act 1908 and the EPBC Act, several pieces of State pieces of legislation permit or prohibit entry of certain species into the state. Some of these species may either not yet be in the country, and so may overlap with the Commonwealth legislation, or are present in other states and not yet found in Queensland. Minimising dual listed species will aid in reducing confusion over jurisdictional responsibility.

Given Queensland is the state most often affected by quarantine breaches, QFF considers maintaining existing levels of protection essential. Barrier activities at the national level are generally well funded and effective though increases in funds and activities are required to match burgeoning threats presented by pest animals and diseases not yet found in Australia such as Avian influenza.

### **Incursion management**

It is considered that processes for responding to nationally significant incursions of agricultural pests and diseases are generally effective, with groups including the Office of Chief Veterinary Officer (OCVO), part of the Product Integrity Animal and Plant Health (PIAPH) of DAFF providing national direction on responses. Emergency actions for dealing with outbreaks of animal and aquatic animal diseases are outlined in documents such as Austvetplan. Generally these activities have delivered because groups involved, including rural industry have agreed to

cost share for these species and diseases. It is however considered that responses could be delivered more rapidly to enable maximum amount of time for containment and eradication.

Successful containment and eradication is contingent upon early detection and although national surveillance is carried out for high-risk plant pests including exotic fruit flies, screw worm flies and Asian Gypsy Moth, early detection systems for pest animals are generally under-developed, under resourced, and require far better coordination. Quarantine surveillance around ports and airports for pests and diseases do not include the aquatic/marine environment.

Achieving eradication requires a number of conditions; proper planning, commitment to complete, putting the entire population of the target species at risk, removing them faster than they reproduce and preventing reinvasion. Although up front costs of eradication programs may be significant, it is generally considered that control activities after a pest has become established is costly and time consuming and so quick action will be a more cost effective option if available. It is believed that the Commonwealth needs to take a strong lead when incursions of new introduced species occur, especially due to a breach of quarantine.

Currently two insects are targeted in Queensland for eradication, Crazy Ants (*Anoplolepis gracilipes*) and Fire Ants (*Solenopsis geminata*). Successful eradication programs have already been carried out in the State on papaya fruit fly and Asian bees.

Australia's response to the Fire Ant incursion highlights the kind of incursion response that currently occurs if a pest is considered to pose a sufficiently severe risk to either humans, the environment, agriculture or all three, and if it is considered that there is a window of opportunity to eradicate or substantially contain the spread with coordinated action. The success of the eradication program is dependent on a nationally coordinated approach to shared funding and movement controls. To date, the fragmented reactive response to the Fire Ant incursion has been less than ideal and illustrates the need for clarity in the roles and responsibilities between the Commonwealth and States and between Qld government agencies in the event of nationally significant pest animal incursion in the State.

As mentioned in the previous Section a primary tool used by DEH to coordinate its action on environmental pest animals is the threat abatement planning process provided under the EPBC Act. It is considered the existing TAP framework may have a limited capacity to assist in coordinated action for the early detection of a pest animal such as the Fire Ant. In theory a TAP could have been used to establish a plan for the eradication effort but the statutory timeframes associated with the listing and approval of such a plan would have made it unworkable, as quick coordinated action was required. Instead the current National Red Imported Fire Ants Eradication Plan was developed and in effect it is a threat abatement plan for Fire Ants. Intriguingly, the Commonwealth has now decided to proceed with the development of a TAP for invasive species known as tramp ants, which includes the Fire Ant.

### **Managing established pests**

It is in the area of management of established pests where lack of clear distinction in roles between States and Commonwealth leads to duplication, uncoordinated service delivery and ineffective use of funds. A major problem appears to be poor communication on priorities and programs between the two levels of Governments, slightly mismatched management aims, and jurisdictional 'turf wars'.

As previously noted, recent Commonwealth involvement in the management of established pest animals has been elevated under the EPBC Act through the provision for the listing of key threatening processes as related to pest animals and the creation of threat abatement plans (TAPs). Notable pest animals of concentration by DEH include feral rabbits, foxes, feral goats, feral cats, and feral pigs.

QFF believes that TAPs under the EPBC Act may provide a national approach to listed pest animal species, however the majority of plans developed to date have often not been fully implemented. QFF has noted in Queensland that although TAPs are statutory, they have limited applications, Commonwealth lands, and for all other lands they need Qld Government cooperation. QFF supports the TAPs as they possess good intentions and start off well in that they collect interested parties to develop draft plans, but final plans are rarely well resourced, largely administrative and have not delivered measurable on ground outcomes, due to lack of community and industry ownership.

The apparent eagerness by DEH to develop more TAPs may jeopardise the outcomes being aimed for under already completed TAPs. Under current Commonwealth resourcing it is likely that the development of more TAPs may result in less money for the implementation of current TAPs. Unless more funds are assigned for national pest animal species management less activity is likely on the pest animal species subject to existing TAPs. If TAPs are to follow through with their intention they need to be both better resourced and developed in a process that ensures that they deliver actions across all tenures and through cooperative arrangements with states and rural industry.

Perhaps one good example of Commonwealth/State co management in regards to established invasive species is the National Weed Strategy, and the corresponding NHT1 National Weed Program funding, overseen by DAFF and DEH. This strategy may serve as a model for achieving greater coordination and consistency, The Strategy and funding program has enabled the delivery of effective national coordination on a number of weed issues including national barrier protection, extension activities, national competency standards for pest management, weed seed spread initiatives and mapping. The Weeds of National Significance program has increased interstate coordination and discussion on various issues. This has delivered outcomes including best practice manuals for pests, which occur in 5 states e.g mesquite and national maps at the same scale.

A similar national strategy has not been developed for vertebrate pests. To date this has meant that NHT1 funds delivered under the National Feral Program Animal Control Program that was established to develop and implement a program to reduce the damage to agriculture caused by nationally significant pest animals, has not had a nationally agreed strategic focus or direction. For example Pestplan developed using Commonwealth funds and intended as national model for community engagement in pest planning is not consistent with Queensland delivery of pest management at a local government level and so cannot be used effectively in this state.

Currently, there are no national co-management committees for some species, for example there are none that deal with exotic pest fish. There is however, a recently established group, the National Introduced Marine Pest Coordinating Group (NIMPCG), under the supervision of the Natural Resource Management Ministerial Council which is currently developing a national strategy for managing introduced marine pests which will cover potential introduction via all vectors, including vessels aquaculture and aquarium trade.

It understood that as a part of a review of the functions of the Vertebrate Pest Committee, the Committee is currently considering the development of a national strategy that would address the impact and management of all invasive animal species, similar to the approach developed for weeds, and as such provided the impetus for this inquiry. QFF would welcome the development of such a national strategy, provided it clearly enunciates the roles and responsibilities of the Commonwealth and States - led by the Commonwealth but within a framework of cooperation with States, establishes agreed national direction and priorities, and is adequately funded and resourced to achieve on ground actions.

## **Adequacy of Queensland Government expenditure on pest animal control in the context of other conservation and natural resource management priorities**

(With particular reference to National Parks)

There is a significant amount of expenditure invested in pest animal management initiatives within Queensland from primary producers, in addition to investment from all levels of Government (Australian, State and Local Government). It is difficult to quantify the expenditure on pest animal management by the State Government as pest animal management expenditure is rarely considered and costed independently of weed control and management. It is also difficult to quantify the expenditure on weed and pest animal management by landholders, as weed and pest animal management expenditure is rarely costed separately to general property maintenance.

As an indication of State and local government expenditure on the regulation, control and management of declared weeds and pest animals, a study commissioned by the Local Government Association of Queensland to examine the economic impact of Department of Natural Resources, Mines and Energy (NRM&E) and Local Government expenditure on declared weed and pest animal management initiatives in Queensland found that on average over the past eight preceding years NR&M spent approximately \$10.2 million annually, with Local Government spending approximately \$12.0<sup>1</sup> million annually on the control and management of declared weed and pest animals (AEC Group 2002).

This translates to expenditure per annum of \$22 million spent by NRM&E and local governments on the control and management of declared pest plants and animals. As noted previously the economic impacts of feral pigs alone have been estimated to exceed \$50 million per year and given this, \$22 million per annum on all pest animals and weeds appears largely inadequate.

QFF considers that pest animal control and management, especially established vertebrate pests have fallen to some extent by the wayside at the expense of other hot topics, such as salinity. Weeds have managed to maintain a higher profile in the eyes of the general community and so policy circles, though not due to their impact on agriculture but more so because of their impact in the environment.

Landholders are already spending considerable amounts on the control and management of pest animals and whilst there are sufficient production incentives, there are insufficient economic incentives to encourage the private landholder to invest sufficient funds to ensure the full suite of benefits are realised from expenditure on pest animal species. This is particularly relevant to the management of pest animals for biodiversity purposes. QFF considers that establishing a clear position between public and private benefits in pest animal issues will be a future challenge in minimising the impacts of pest animals on agriculture.

In the context of spending on other natural resources management priorities such as vegetation management, expenditure by the State Government on control and managing pest animals is considered to be inadequate. Chiefly, this inadequacy is in relation to the control and management of pest animals on National Parks.

As noted previously, control of pest animals on National Parks has principally been to minimise their impacts on the environment – control of foxes is an important element of species recovery plans (e.g Brush tail Rock Wallaby program at Crows Nest National Park) and usually control strategies focus on particular species. During the 2003/2004 year about \$0.5 million (excluding

---

<sup>1</sup> Includes Local Government budget and precept payments.

salaries) have been allocated for pest management, both weeds and pest animals, on protected areas (Queensland Government 2003) to support these programs.

One circumstance that illustrates the inadequacy of national park expenditure in relation to the control of a pest animal species and its impact on agriculture can be seen with feral pigs and the large impact they are having on sugarcane crop productivity in the Mackay district. Large numbers of feral pigs continue to increase in the Mackay district and are causing economic loss to the industry and damage to national parks. Many of the parks in the region abut cane-growing areas with several of them containing ideal strategic feral pig habitat and so harbor considerable populations. Due to the high mobility of feral pigs, cane growers are experiencing difficulty in controlling the pigs.

Current QPWS staffing and budget constraints do not allow for control of feral animals (unless deemed for conservation purposes as part of species recovery plans) on parkland and so large parcels of land in the district are not being addressed in regard to feral pig management. Thus strategic control cannot be achieved. It should be recognised that farmers and QPWS would achieve optimal outcomes in a collaborative effort in control of these pests.

Currently, a combined trapping program is underway on freehold land in an attempt to reduce impacts, though at a recent community meeting it was agreed that all landholders should participate in a community control program and that there should be some attempt to control the pest on National Park and State land as well as freehold land. Several traps are soon to be supplied by QPWS to assist in the trapping, yet the program is still restricted to freehold land because of QPWS policies and public liability issues. This is despite the preparedness of key stakeholders, including the Mackay City Council and Mackay Sugar, to financially assist the expansion of the trapping program to parks and investigate the potential for QPWS to allow third party trapping within parks and forests.

Responding to increasing community pressure to control pest animals and weeds in National Parks, the Queensland Premier, Peter Beattie announced, as a part of his re-election campaign prior to the State election earlier this year, a funding commitment of \$6 million over three years to improve fire, weed and feral animal management in the State's National Parks. Currently there are 6.75 million hectares gazetted as National Parks in Queensland. The funding boost equates to approximately 30 cents per annum per hectare of National Park, not considered to be adequate at all.



## Scope for Industry Groups and R&D Corporations to improve response to landholder concern about pest animals

According to the Queensland Government's 5 species pest animal strategies, industry groups, as an identified stakeholder in pest animal management, are responsible for a number of actions.

These generally being:

- Promote availability and 'conditions of use' of control techniques,
- Promote the need for, and assist with, formation or operation of landholder groups for coordinated control,
- Raise awareness of control issues with media, and
- Contribute to the coordination of the particular pest animal species management.

It is considered for a variety of reasons including lingering impacts from the drought on production, rural industry groups capacity to effectively carry out the above responsibilities is currently extremely stretched with very limited scope for improvement. Over the coming years, significant resourcing challenges will need to be overcome to even maintain the activity by QFF members in the area of pest animal management.

QFF member organisation CANEGROWERS are currently experiencing a number of issues associated with their capacity to maintain, let alone improve their capacity to respond to pest animal issues affecting their industry. Key issues from a sugar cane industry perspective are:

- Maintaining ongoing funding of positions for pest management. To date these key roles have been carried out by Bureau for Sugar Experimental Stations (BSES). Reduction in cutbacks in staff from 160 persons to 100 has impacted upon the capacity for this organization to deliver pest animal management services.
- As an industry group CANEGROWERS has worked closely with BSES, State Government and the Cane Productivity Boards for the development of an MOU for rodent control (as outlined in a previous section). The implementation of this MOU to date has been successful, however continued success is based upon the ongoing funding of key positions so that implementation can be completed. Again these key positions sit within BSES. BSES receives funding from the Sugar Research and Development Cooperation (SRDC), cane growers' levies and State Government funding with funds slowly declining because of low sugar prices.
- The Integrated Pest Management (IPM) strategy adopted for both cane grubs (considered the second biggest pest animal to the sugar industry) and native rodents depends upon knowledge of the life cycle of the pests. This has been undertaken to some extent but more work is needed in this area to optimise results. This area is a key R and D challenge and support is needed to keep key people funded.

## **Promoting community understanding of an Involvement in pest animals and their management**

Part of the solution to managing pest animals is raising public awareness of the cause and finding an appropriate response to the problem. The level of education on pest animals is increasing yet more targeted public education is needed. A higher public profile for the problems caused by pest animals is needed both in terms of impact on agriculture and the environment.

One area in particular where QFF believes a higher public profile should be established is in relation to birds and urban pests, which includes pigs, dogs, cats. In an urban environment, these species lack acceptable control measures, as rural options cannot be used and it is important that urban residents are aware that pests can, in addition to degrading parklands and waterways, impact on neighbouring agricultural pursuits such as market gardens. In this instance, perhaps a good means of ensuring the message hits home is to promote and publicise the impacts of pest animals that directly and indirectly impact upon people such as disease risks posed or through increased costs for produce respectively.

Another area QFF considers important for promotion to communities are the impacts of native pest species on agriculture and that this be done from a balanced perspective. In many cases, pest species are both a production and environmental problem, which underscores the need for an all-encompassing approach.

In regards to achieving and promoting rural community involvement in pest animal management, extension activities and other necessary programs are essential components for effective management of established pests. Producers cannot deliver best management practice if they do not know what it is. Extension and awareness raising activities can return significant benefits, especially if aimed at effecting an attitudinal change.

QFF considers that a nationally developed and funded awareness program on pest animals, perhaps as a component of national weed and pest program, both on those 'not yet here' and those in backyards, may have a long term benefit. The campaign would need to target community responsibility for managing pest animals and weeds, under a common banner.

## References

- AEC Group 2002, *Economic Impact of State And Local Government Expenditure on Weed and Pest Animal Management in Queensland*, Local Government Association of Queensland, Brisbane.
- Choquenot, D., McIlroy, J., & Korn, T., 1996, *Managing Vertebrate Pest: Feral Pigs*. Bureau of Resource Sciences, Australian Government Publishing Service, Canberra.
- Department of Natural Resources and Mines, 2002, *Queensland Pest Animal Strategy 2002-2006*, The State of Queensland, Brisbane.
- Department of Natural Resources, Mines and Energy, 2004, *Queensland Pest Animal Strategy: Feral Pig*, Department of Natural Resources, Mines and Energy, Brisbane.
- Department of Primary Industries and Fisheries, 2004, *Prospects for Queensland's Primary Industries - April 2004 Update*, Department of Primary Industries and Fisheries, Brisbane.
- Productivity Commission 2002, *Impact of a Foot and Mouth Disease Outbreak on Australia*, Research Report, AusInfo, Canberra.
- Queensland Government, 2003, Submission to Senate Environment, Communications Information Technology and Arts References Committee Inquiry into Invasive Species, unpublished.
- Trewin D., 2001, *Australia' Environment: Issues and Trends 2001*, Australian Bureau of Statistics, Canberra.