

**REVIEW OF SUBMISSIONS ON:**

**Feeding of Food Waste to Pigs  
MAF Discussion Paper No. 01/26  
November 2001**

**Biosecurity Authority  
Ministry of Agriculture and Forestry  
Wellington  
New Zealand**



**October 2002**

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## **PURPOSE**

In November 2001, the Ministry of Agriculture and Forestry (MAF) released a discussion paper on the feeding of food waste to pigs [Ministry of Agriculture and Forestry Discussion Paper No. 01/26: *Feeding of Food Waste to Pigs*. November 2001].

This document summarises the issues raised in the submissions, and presents the MAF response to each.

## **DEFINITIONS**

Unless otherwise indicated, terminology used will be consistent with that outlined on page 6 of the Discussion Paper.

Where this paper refers to food waste containing meat, this includes food waste that may have come into contact with meat or other animal material (not including milk, or rendered material).

Food waste will only be regarded as not containing meat if it can be established it does not contain, and has not come into contact with, meat or other animal material (not including milk, or rendered material).

## **READING THIS DOCUMENT**

There is considerable repetition in this document, as it addresses similar points made in different submissions. Readers are encouraged to take the time to read the entire document if they seek to fully understand the MAF response.

## EXECUTIVE SUMMARY

In November 2001, the Ministry of Agriculture and Forestry (MAF) released a discussion paper on the feeding of food waste to pigs.

MAF received sixteen submissions, from a wide range of stakeholders.

After reviewing the submissions, MAF considers that, although risk may not have increased since the 1998 decision to allow regulations to lapse, industry and public views on acceptable risk may justify a more cautious approach on behalf of government.

Accordingly, MAF recommends a package of control measures designed to be more cost-effective than the system in place before 1998, and to address concerns around backyard pigs, where the greatest risk is generated.

MAF proposes that the risks of feeding food waste to pigs can be effectively managed through a package of inter-related measures:

- maintenance of high levels of border security, and enhancement of these measures when opportunities for improvement are identified;
- permitting the feeding of food waste to pigs, providing that any waste containing meat must be cooked (ie. prohibiting the feeding of uncooked meat to pigs) with heavy penalties for non-compliance;
- collection, distribution or trading in food waste should only be permitted on the basis that any product containing meat and intended for pig food will be cooked before feeding;
- food waste to be deemed to contain meat, unless it can be established that it does not contain, and has not come into contact with, meat or other animal material (not including milk, or rendered material);
- cooking to be defined as heating throughout to 100°C for 1 hour, or an equivalent standard approved by MAF – this could include cooking as part of a routine industrial process;
- the regulation to be reinforced by an education program, targeted at food waste producers, suppliers and feeders, to inform them about the risks involved in waste feeding and the penalties for non-compliance;
- reactive enforcement activity, responding to reports of suspected breaches;
- support for industry initiatives to develop and promote a code of practice for feeding of pigs on food waste, and a voluntary farm registration system.

Any additional costs of complying should be absorbed by food waste traders and by farmers who utilise food waste. Costs of education programs and enforcement activity would be borne by the government in recognition of the impact on the national economy that a serious exotic animal disease would have, and the costs of collecting levies in an equitable manner from all farming beneficiaries. The proposed regulations and package of inter-related measures may eventually become part of a suite of regulations and measures dealing with risks emanating from animal feeding practices.

# INTRODUCTION

## Background

The feeding of food waste to pigs, sometimes referred to as “swill feeding” or “garbage feeding”, is not regulated in New Zealand.

MAF is reviewing the feeding of food waste to pigs because it can transmit livestock diseases. For example, if meat infected with a serious exotic disease such as foot and mouth disease was brought into New Zealand and fed to pigs in garbage, an outbreak of foot and mouth disease could result.

The 2001 outbreak of foot and mouth disease in the United Kingdom has focused attention on the lack of regulations in New Zealand to control feeding of food waste to pigs, although the risks to New Zealand are much different from those to the United Kingdom.

The absence of direct controls over swill feeding is problematic in public relations terms because the severe consequences of an outbreak of foot and mouth disease are widely recognised. On the other hand, a total prohibition of feeding of food waste to pigs would have significant disadvantages, as the practice has significant environmental and economic benefits.

Rather than prohibit feeding of food waste to pigs, or continue with no direct controls, the discussion paper suggested that it might be preferable to implement systems to manage the biosecurity risks associated with feeding of food waste to pigs.

## Submissions

MAF received sixteen submissions - fifteen from within New Zealand, and one from Australia. Copies of the submissions are available from MAF.

This document summarises the issues raised in the submissions, and presents the MAF response to each.

Amongst other things, the submitters commented on the specific control options listed in the discussion paper.

All submitters considered that additional controls over the feeding of waste to pigs were warranted, although two suggested that no new regulations were needed. MAF accepts that additional controls are appropriate.

Some submitters recommended a voluntary code of practice to control feeding of food waste. MAF accepts this position.

Some submitters recommended a prohibition on all feeding of food waste. MAF does not support a total prohibition. The practice has environmental and economic benefits and should be permitted provided risks can be managed.

Several submitters recommended a prohibition on all feeding of food waste containing meat. Several others considered this option impractical because of the difficulty of separating meat

from food waste. MAF acknowledges that sorting mixed waste is impractical (and ineffective for disease control). However, waste streams within food premises can be segregated and records maintained. MAF considers that this issue can be effectively addressed by regarding all food waste as containing meat except where it can be established that it does not contain, and has not come into contact with, meat or other animal material (not including milk, or rendered material).

Several submitters recommended that feeding of food waste containing meat only be permitted under approved programs, while several others rejected this option. MAF does not support this proposal. MAF considers that a system of approving programs, or registering or licensing piggeries or operators, would be expensive to administer and would impact only on the commercial pig industry. It would less effectively address the area of highest risk, the small and backyard piggeries. Detection of unlicensed operators, or licensed operators not reliably following their approved programs, would be difficult in this group.

The discussion paper (page 13) discussed the reasons that MAF considers that small and backyard piggeries constitute the area of highest risk. The majority of submissions supported this position, while none disputed it. This is not to say that all small or backyard piggeries necessarily constitute a greater risk. Owners of these herds can feed pigs safely by ensuring that any waste containing meat is thoroughly cooked beforehand.

Two submitters considered that all piggeries should be registered. MAF opposes this suggestion for the reasons outlined in the previous paragraph. MAF notes that the New Zealand Pork Industry Board is developing a voluntary farm registration system that should identify the majority of pig farmers.

Although half of the submissions received recommended that food businesses that are the source of food waste for pigs should be regulated, MAF does not support this proposal. The additional regulatory burden on well-managed food and accommodation businesses would not add significantly to biosecurity, while the waste producers most likely to constitute a risk would be hardest to identify and to police.

Submitters generally considered that adequate controls already exist over keeping of pigs in non-rural areas, and none supported specific controls over small pig herds. MAF agrees that no action is required in this respect.

Submitters generally supported the use of education programs, targeted at food waste producers, suppliers and feeders, to inform them about the risks involved in waste feeding and the penalties for non-compliance. Several submitters recommended heavy penalties, to encourage compliance. MAF supports these approaches.

## **Conclusions**

MAF considers that the biosecurity risk created by feeding of waste food to pigs has not increased since the 1998 decision to allow regulations to lapse. Nevertheless, industry and public views on acceptable risk may justify a more cautious approach on the part of government.

MAF therefore proposes a package of measures designed to be more cost-effective than the system in place before 1998, and to address concerns around backyard pigs, where the greatest risk is generated.

MAF suggests that management of the biosecurity risks involved with feeding of pigs should use a package of inter-related measures:

- maintenance of high levels of border security, and enhancement of these measures when opportunities for improvement are identified;
- permitting the feeding of food waste to pigs providing that any waste containing meat must be cooked (ie. prohibiting the feeding of uncooked meat to pigs) with heavy penalties for non-compliance;
- collection, distribution, and trading in food waste should only be permitted if any product containing meat and intended for pig food will be cooked; collectors, distributors and traders would be required to take reasonable steps to ensure that food waste handled by them would be cooked before feeding to pigs; reasonable steps would include cooking to the recognised standard, or supply to a person who has supplied name, address, and a written undertaking to cook the waste to the recognised standard, before feeding to pigs.
- food waste to be deemed to contain meat, unless it can be established that it does not contain, and has not come into contact with, meat or other animal material (not including milk, or rendered material);
- cooking to be defined as heating throughout to 100°C for 1 hour, or an equivalent standard approved by MAF; where cooking does not occur at the piggery, the pig owner must ensure that cooking is carried out to the required standard.
- the regulation to be reinforced by an education program, targeted at food waste producers, suppliers and feeders, to inform them about the risks involved in waste feeding and the penalties for non-compliance;
- reactive enforcement activity, responding to reports of suspected breaches;
- support for industry initiatives to develop and promote a code of practice for feeding of pigs on food waste, and a voluntary farm registration system.

Additional costs of complying with these measures will be minimal, and should be absorbed by food waste traders and by farmers who utilise food waste. Costs of education programs and enforcement activity would be borne by the government in recognition of the impact on the national economy that a serious exotic animal disease would have, and the costs of collecting levies in an equitable manner from all farming beneficiaries.

MAF believes that these measures will further reduce the already small likelihood that pig feeding practices might contribute to the introduction or spread of a serious exotic animal disease in New Zealand. The proposed regulations and package of inter-related measures may eventually become part of a suite of regulations and measures dealing with risks emanating from animal feeding practices.

# SUBMISSIONS

## 1. New Zealand Pork Industry Board

The New Zealand Pork Industry Board (NZPIB) accepts that the risk of introducing an exotic disease in meat, with current levels of border security, is low, and likely to be less than in 1998. However, while the likelihood is low, the consequences for New Zealand would be disastrous.

*MAF comment:* This is consistent with the position put by MAF in the discussion paper.

- 1.1** NZPIB recommends that the feeding of food waste of any type to pigs be permitted under licence only. The licence would require that a standard be met, and independently audited on an annual basis. NZPIB is prepared to assist in developing a standard for MAF approval.

*MAF comment:* MAF agrees that licensing could increase the sense of security felt by industry. However, the risks created by the sector of the commercial pig industry that uses food waste are small, compared with the risks created by owners of small herds including “backyard” operators. It is likely to be difficult to enforce licensing in this latter group and to detect unlicensed operators or licensed operators that are not reliably applying the standard. MAF therefore does not support licensing of waste feeders. MAF does support mandatory requirements that food waste containing meat must be cooked to an approved standard.

- 1.2** NZPIB outlines the key elements of the standard. Product of nil risk (where no meat or “meat co-products” is present in, or has come in contact with, the product) need not be cooked. All other product must be cooked at 100°C for one hour, or equivalent.

*MAF comment:* MAF supports this proposed standard.

- 1.3** NZPIB recommends that MAF Biosecurity is the responsible regulatory authority for issuing of licences and surveillance of compliance. NZPIB “and key farmer stakeholders” support individual farmers being responsible for the cost of implementing the standard and auditing, to meet the licensing requirements administered by MAF.

*MAF comment:* MAF does not support licensing of waste feeders. MAF agrees that the costs of meeting the requirements to cook food waste containing meat be borne by the individual farmers.

- 1.4** NZPIB recommends that licensing costs be minimal and fines for unlicensed feeding of food waste be “very substantial”.

*MAF comment:* MAF supports the proposal for substantial fines for feeding of uncooked waste containing meat.

- 1.5** NZPIB considers that release of food waste from food companies and premises should be controlled. NZPIB notes that the Ministry of Health rejected this approach after the *Garbage (Feed for Swine or Poultry) Regulations 1980* lapsed in 1998.

*MAF comment:* MAF does not support this suggestion. The additional regulatory burden on well-managed food and accommodation businesses would not add significantly to biosecurity, while the waste producers most likely to constitute a risk would be hardest to identify and to police.

- 1.6** NZPIB considers that traders of food waste for pig feed should be licensed, and should only on-sell to licensed operators.

*MAF comment:* MAF does not support licensing of traders that supply food waste, but considers that these traders should be regulated to require that they cook waste containing meat to an approved standard, or take reasonable steps (see page 8) to ensure that food waste handled by them would be cooked before feeding to pigs.

- 1.7** NZPIB stresses the environmental benefits of using food waste for pig feed where the risks can be managed.

*MAF comment:* This is consistent with the position put by MAF in the discussion paper.

- 1.8** NZPIB notes that it has no control over operations of its enrolled members, who are generally the “larger commercially focused farmers”. NZPIB can work with enrolled members to inform and educate them on biosecurity issues, but cannot impact on the operations of other pig farmers. These include many of the smaller farmers, “craft” farmers and the keepers of pet pigs, which may be the group presenting the greatest biosecurity risk. NZPIB has no enforcement powers, limited resources and is not subsidised by government.

*MAF comment:* MAF notes this limitation on NZPIB’s ability to impact on risk management.

- 1.9** NZPIB notes that feeding of food waste to pigs under a licensing system will effectively manage biosecurity risks, and suggests that MAF should promote this message to relevant publics (particularly farming groups).

*MAF comment:* MAF does not support the need for a licensing system. MAF agrees that promotion to farming groups of the total package of measures to manage the risks of pig feeding may benefit the image of the pig industry.

- 1.10** NZPIB notes that licensed education and surveillance programs should target “pockets of risk” that present the greatest biosecurity risk, and that these pockets of risk should be investigated and understood.

*MAF comment:* MAF accepts that education and enforcement activity should be targeted to areas of highest risk.

- 1.11** NZPIB recommends that biosecurity risk be managed as a “national good”, and that public funding be used for information and education programs.

*MAF comment:* MAF notes that the primary beneficiaries of freedom from exotic disease are the farming industries, and acknowledges that an outbreak of a serious exotic disease such as foot and mouth disease would impact on all New Zealanders. MAF agrees that education and enforcement costs could be borne by government, in recognition of the impact that an outbreak of a serious exotic animal disease would have on the entire economy, and the costs of collecting levies in an equitable manner from all farming beneficiaries. Other costs of implementing control measures should be borne by food waste suppliers, traders and farmers.

- 1.12** NZPIB recommends that surveillance programs should aim to confirm that all pig operators feeding food waste do so under a licence. NZPIB offers to assist MAF in developing a surveillance system, and notes progress in developing a voluntary farm registration system which should identify the majority of pig farmers, but not all of those “pig keepers” who present the greatest risk.

*MAF comment:* MAF notes this offer of assistance. MAF does not support the licensing of pig operators feeding food waste. MAF considers that a system of licensing operators would be expensive to administer, and would impact only on the commercial pig industry without effectively addressing the area of highest risk, small and backyard piggeries. Detection of unlicensed operators, or licensed operators not reliably following their approved programs, would be difficult in this group. MAF questions the effectiveness of active surveillance to confirm compliance (and detect non-compliance) with pig feeding regulations. Experience up to 1998 indicates that many of the smaller pig operations, which constitute the greatest risk, are difficult to locate, and that farm visits do not readily provide an accurate indicator of what is being fed to pigs or whether it is cooked and to what standard. MAF prefers to use education programs and deterrent fines to encourage compliance, plus reactive investigations into reported breaches. MAF endorses efforts by the pig industry to develop a voluntary farm registration system.

- 1.13** NZPIB recommends that key pathways for introducing exotic disease into New Zealand must be identified and action be taken to close any gaps.

*MAF comment:* MAF notes this recommendation.

## **2. Federated Farmers of New Zealand Inc**

**2.1** Federated Farmers notes that it did not support the 1998 decision to remove controls on the feeding of food waste to pigs, and restates its 1997 recommendations for:

- a standard for treating organic material prior to feeding to pigs,
- a system to survey and record operations that feed organic waste to pigs, and
- legal backing to stop unsafe feeding practices.

*MAF comment:* MAF notes Federated Farmers' position is unchanged from that taken in 1997.

**2.2** Federated Farmers comments on the principles listed in the discussion paper (pp. 5-6):

- in respect of Principle 5 *The benefits of regulations should exceed the cost*, Federated Farmers notes that the magnitude and impact of an exotic disease outbreak must be considered when assessing the benefits of controls.
- in respect of Principle 6 *Costs should be carried by beneficiaries or exacerbators*, Federated Farmers notes the environmental benefits that accrue to the public from the use of food waste for feeding pigs. Additionally, Federated Farmers stresses the benefits to the public and to the economy from managing exotic disease risks.

*MAF comment:* MAF notes that the primary beneficiaries of freedom from exotic disease are the farming industries, and acknowledges that an outbreak of a serious exotic disease such as foot and mouth disease would impact on all New Zealanders.

**2.3** Federated Farmers considers that New Zealand should not rely on border controls to manage risks from pig feeding, that border controls cannot be completely effective, and notes that the consequences of an outbreak to affected industries and the economy would be extreme.

*MAF comment:* MAF supports these views.

**2.4** Federated Farmers notes the severe economic impact that an FMD outbreak would have on the New Zealand economy. Federated Farmers refers to Biosecurity Council policy that “the acceptability of scientific uncertainty in biosecurity risk management diminishes as the severity of potential negative effects increases”, and urges that this policy be applied to management of risks of serious exotic diseases.

*MAF comment:* MAF accepts that the Biosecurity Council policy statement is relevant in this context.

**2.5** Federated Farmers believes that border security measures should be backed up by controls on feeding food waste to pigs, ongoing surveillance and public education.

*MAF comment:* MAF agrees that effective controls over feeding of pigs would enhance the already high level of protection. MAF contends that cost-effective surveillance for compliance is best achieved by having regulations reinforced by education programs and substantial deterrent fines, and by reactive investigations rather than by active surveillance to confirm compliance (and detect non-compliance).

- 2.6** Federated Farmers submits that controls over feeding of food waste to pigs should be reinstated; that responsibility for managing biosecurity risks should be shared between food waste suppliers and users; and that controls should include carriers of food waste.

*MAF comment:* MAF believes that any regulations should be targeted at those who feed waste food to pigs, or who trade in food waste for feeding to pigs. Extension of regulations to food waste sources and transporters would increase the cost and complexity of any regulatory system without a commensurate increase in effectiveness.

- 2.7** Federated Farmers considers that food safety programs, required of food businesses under the Food Act 1981, could be used to regulate food waste at its source. Federated Farmers identifies several issues which relate to this approach.

*MAF comment:* MAF Food and the Ministry of Health have indicated that they consider it inappropriate to use food safety programs for this purpose.

- 2.8** Federated Farmers recommend an education program targeted at food businesses, tourist operators, backpackers' hostels, hotels, bed and breakfast businesses and transport operators.

*MAF comment:* MAF supports this proposal.

- 2.9** Federated Farmers notes the benefits to the environment of using food waste to feed pigs, considers that piggery owners should manage risks created by feeding of food waste to pigs, and states that a standard is required to define safe practice.

*MAF comment:* MAF supports this proposal.

- 2.10** Federated Farmers recommends a prohibition on feeding food waste containing meat to pigs, unless it is cooked under an approved program.

*MAF comment:* MAF supports a restriction on the feeding of food waste containing meat to pigs, requiring that such waste be cooked. MAF does not support a mandatory requirement for approval of individual farm programs.

- 2.11** Federated Farmers recommends that approvals require a documented, independently audited, risk management system incorporating automated temperature recording. Federated Farmers sees this requirement as possibly excluding smaller operations, but notes that having only a small number of approved operators would simplify enforcement.

*MAF comment:* MAF does not support a mandatory requirement for approval of individual farm risk management programs. MAF does support a requirement that food waste containing meat must be cooked to an approved standard.

### **3. Porkcorp New Zealand Ltd**

- 3.1** Porkcorp New Zealand Ltd (Porkcorp) believes the likelihood of an outbreak of a serious exotic disease from the feeding of food waste to pigs is low, but considers that further measures to reduce the risk are justified in view of the serious consequences of an outbreak.

*MAF comment:* MAF notes that this is consistent with views expressed by other submitters.

- 3.2** Porkcorp believes the greatest risk is generated by smaller, lesser recognised pig operations and in the keeping of pigs for domestic waste food consumption.

*MAF comment:* This is consistent with the position put by MAF in the discussion paper.

- 3.3** Porkcorp proposes that it be illegal to knowingly feed to pigs untreated waste material containing meat; and that suppliers of food waste for pig consumption must advise the farmer of the presence of meat in the waste. Porkcorp recommends that suppliers of food waste “conscientiously isolate any meat product from such waste food for separate disposal”.

*MAF comment:* MAF supports the concept of a prohibiting the feeding of uncooked food waste containing meat to pigs. MAF considers that all food waste should be considered to contain uncooked meat, and therefore must be cooked, unless the farmer can ascertain that it does not contain, and has not come into contact with, meat.

- 3.4** Porkcorp proposes that regulations be accompanied by a Code of Practice setting out compliance guidelines including treatment standards, to aid in awareness. Porkcorp also recommends a publicly funded awareness program targeted at producers, traders and feeders of food waste.

*MAF comment:* MAF supports the concept of a Code of Practice and treatment standards developed by industry and recognised by government and of an education program.

- 3.5** Porkcorp proposes that costs of implementing the above measures be publicly funded and administered by MAF.

*MAF comment:* MAF agrees that education and enforcement costs could be borne by government, in recognition of the impact that an outbreak of a serious exotic animal disease would have on the entire economy, and the costs of collecting levies in an equitable manner from all farming beneficiaries. Other costs of implementing control measures should be borne by food waste suppliers, traders and farmers.

- 3.6** Porkcorp contends that regulation may be appropriate and effective even where resources to ensure complete compliance are not available.

*MAF comment:* MAF accepts that risk can be managed without systems to confirm complete compliance. Educational programs, deterrent fines, action on complaints received and demonstrable evidence of enforcement activity may be sufficient.

- 3.7** Porkcorp proposes that costs of implementing the above measures be publicly funded and administered by MAF.

*MAF comment:* MAF notes that the primary beneficiaries of freedom from exotic disease are the farming industries, and acknowledges that an outbreak of a serious exotic disease such as foot and mouth disease would impact on all New Zealanders. MAF agrees that education and enforcement costs could be borne by government, in recognition of the impact that an outbreak of a serious exotic animal disease would have on the entire economy, and the costs of collecting levies in an equitable manner from all farming beneficiaries. Other costs of implementing control measures should be borne by food waste suppliers, traders and farmers, as the primary beneficiaries of the continued availability of the option of feeding food waste to pigs.

- 3.8** Porkcorp considers the likelihood of FMD entering New Zealand from Asia as having increased in the recent past.

*MAF comment:* MAF considers that the greatest risk of FMD entering New Zealand is from Asia.

- 3.9** Porkcorp considers the costs of a registration (or licensing/approval) system for waste feeders unjustified.

*MAF comment:* MAF agrees that such a system would not impact on the highest risk area of backyard pigs and small herds, and that the costs are unjustified.

- 3.10** Porkcorp considers that compliance among commercial pig producers would be high, and offers to assist in identifying and addressing potentially non-complying areas; and suggests that MAF surveillance resources (acknowledged as being limited) should be focused on small “non-commercial” piggeries.

*MAF comment:* MAF agrees that the risks created by the sector of the commercial pig industry that uses food waste are small, compared with the risks created by owners of small herds including “backyard” operators. It is likely to be difficult to enforce regulations in this latter group.

- 3.11** Porkcorp suggests “relatively severe” penalties to act as a deterrent to any party seeking to profit from non-compliance.

*MAF comment:* MAF supports this approach.

## **4. Hospitality Association of New Zealand**

- 4.1** The Hospitality Association of New Zealand (HANZ) acknowledges the value of livestock industries and exports to the New Zealand economy, and the potential impact of a serious exotic disease, including impacts on tourism and hospitality. HANZ recognises that controls over pig feeding are required, and believes these should be appropriate to the small likelihood of an outbreak, and should not unnecessarily compromise profitable industries and environmentally friendly practices.

*MAF comment:* This is consistent with the principles set out in the discussion paper.

- 4.2** HANZ opposes the imposition of new regulations, and supports the use of a voluntary Code of Practice to define standards for the pig industry. HANZ supports the proposal of an education program, to address the need for exotic disease protection and the role of industries in protecting biosecurity.

*MAF comment:* MAF supports the concept of a voluntary Code of Practice and of an education program. MAF considers that a voluntary Code of Practice would have limited impact on the feeding practices of owners of small herds and backyard pigs, where a substantial part of the risk is generated, and therefore considers that regulations are also required if the risk is to be reduced significantly below current levels.

- 4.3** HANZ strongly opposes a prohibition on all feeding of food waste, and considers that a prohibition on the feeding of food waste containing meat would be impractical. HANZ considers a ban on the feeding of food waste containing meat, except under approved programs, to be complicated and difficult and costly to administer and enforce. HANZ considers that controls over sources of food waste would be ineffective, inequitable, costly and complex.

*MAF comment:* MAF agrees with HANZ that a prohibition on all feeding of food waste is not justified. MAF recommends a prohibition on the feeding to pigs of uncooked food waste containing meat, but does not support a system whereby each farmer must have an approved program in place. MAF agrees with HANZ that a system of approved programs would not be cost-effective. MAF does not propose controls over sources of food waste.

- 4.4** HANZ suggests that a prohibition of keeping of pigs in non-rural areas, or of small (non-commercial) herds, has merit in that it would target the problem in high risk areas with minimal effect on the hospitality industry. However HANZ concludes by indicating opposition to these options.

*MAF comment:* MAF notes these HANZ comments.

## **5. Dairy InSight**

- 5.1** Dairy Insight notes that the likelihood of pig feeding resulting in an exotic disease outbreak is low, but that an outbreak would seriously affect all agriculture industries and the national economy, and jeopardise the \$14 billion dairy industry which accounts for 22% of export earnings and 7% of GDP.

*MAF comment:* MAF agrees with these observations.

- 5.2** Dairy Insight supports the continuation of a high level of public funds for border security and education.

*MAF comment:* MAF notes the views of Dairy Insight, and expects to maintain current high levels of border security.

- 5.3** Dairy Insight considers the risk of an FMD outbreak in New Zealand has increased since 1998, and in particular notes the increased risk of introduction of a serious exotic disease through intentional economic sabotage.

*MAF comment:* MAF considers that New Zealand's stronger border security measures have counteracted the increased threat created by the PanAsia strain's propensity to spread. In the wake of the September 11, 2001 terrorist attacks in New York, the threat of bioterrorism has increased, but it is difficult to gauge whether the threat to New Zealand has increased significantly. MAF agrees that, as pathways for unintended introduction of exotic diseases are increasingly closed by tighter border security measures, the *relative* importance of intentional introduction increases.

- 5.4** Dairy Insight considers that suppliers of food waste should be regulated, and targeted with an education program. Dairy Insight acknowledges that enforcing regulations on smaller and remote suppliers would be difficult, and considers that education about the potential risks is critical. Dairy Insight considers backpacker and B&B accommodations pose the greatest risk, and that the backyard or "family pig" presents little risk.

*MAF comment:* MAF does not support the regulation of food businesses that supply food waste. The additional regulatory burden on well-managed food and accommodation businesses would not add significantly to biosecurity, while the waste producers most likely to constitute a risk would be hardest to identify and to police. MAF recommends regulation of collection, distribution and trading in food waste (see page 8), and proposes that pig farmers using food waste should be required to cook any food waste containing meat. MAF supports the suggestion of education programs targeted to producers, traders and users of food waste.

- 5.5** Dairy Insight accepts that prohibiting the feeding of food waste to pigs would be impractical and unenforceable. Dairy Insight considers that heat treatment of food waste containing meat must be compulsory, to strict guidelines, and monitored.

*MAF comment:* MAF agrees that a prohibition on all feeding of food waste is not justified. MAF supports compulsory heat treatment of food waste containing meat, to strict guidelines. MAF considers that cost-effective surveillance for compliance is best achieved by having regulations reinforced by education programs and substantial deterrent fines, and by reactive investigations rather than by active surveillance to confirm compliance (and detect non-compliance).

- 5.6** Dairy Insight considers it impractical to limit the locations where pigs are kept. Dairy Insight notes that keeping of pigs could be banned on home stay and youth hostel premises.

*MAF comment:* MAF considers that the risk created by home stay and youth hostel premises would not be substantially reduced by such a ban, as they would remain a source of food waste for pigs not on their premises. Other strategies for managing this risk are required.

## **6. Meat New Zealand**

- 6.1** Meat New Zealand (Meat NZ) considers that the most effective method to manage the risk is to control the problem at its source, and that the major exacerbator is the tourism industry, while the major source of risk is the inbound traveller.

*MAF comment:* MAF agrees that effective risk management in regard to feeding of food waste must be underpinned by effective border controls to minimise the likelihood of infected material entering New Zealand.

- 6.2** Meat NZ considers that the risk of an FMD outbreak in New Zealand has increased since 1998, and in particular notes the increased risk of introduction of a serious exotic disease through intentional economic sabotage.

*MAF comment:* MAF considers that New Zealand's stronger border security measures have counteracted the increased threat created by the PanAsia strain's propensity to spread.

- 6.3** Meat NZ notes the risk that new settlers in New Zealand may receive food packages from overseas containing meat or meat products.

*MAF comment:* All incoming mail is x-rayed and any suspicious items are checked by Quarantine staff. This risk should be minimal.

- 6.4** Meat NZ questions the wisdom of the 1998 decision to remove controls on the feeding of food waste to pigs, and the motives for that decision ("diminished resources and lack of ability to enforce").

*MAF comment:* MAF notes this concern, and notes that the 1998 decision re-deployed resources to the border to provide more cost-effective risk management.

- 6.5** In regard to controlling disposal of food waste at its source, Meat NZ rejects a prohibition on feeding of food waste to pigs, favouring a compulsory risk management program approach that would apply only to food waste producers whose waste includes meat. Under this proposal, suppliers of food waste containing meat must cook it under an approved program or sell only to a piggery with an approved risk management program. MAF could approve a cooking process that takes place during manufacturing, with waste going to a (voluntarily) registered piggery. A targeted educational program would explain these requirements.

*MAF comment:* MAF does not support the regulation of food businesses that supply food waste. The additional regulatory burden on well-managed food and accommodation businesses would not add significantly to biosecurity, while the waste producers most likely to constitute a risk would be hardest to identify and to police. MAF recommends regulation of collection, distribution and trading in food waste (see page 8). MAF does not support a mandatory requirement for approval of individual farm risk management programs. MAF recommends that food waste containing meat must be cooked to an approved standard. MAF supports the suggestion of education programs targeted to producers, traders and users of food waste.

- 6.6** Meat NZ suggests that pig owners should be prohibited from feeding food waste containing meat, unless it is cooked under an approved program. Approvals would only be granted to operations with approved, documented and audited risk management systems, with independent auditing and automatic temperature recording. [The Biosecurity Amendment Bill would provide access to piggeries for time-temperature sampling to establish compliance with food waste regulations.]

*MAF comment:* MAF recommends a prohibition on the feeding to pigs of uncooked food waste containing meat. MAF does not support the registration (or licensing/ approval) of individual farms that feed food waste. Such a system would not impact on the highest risk area of backyard pigs and small herds, and the costs are unjustified.

- 6.7** Meat NZ prefers an educational program targeted at backyard pig owners and small herd owners, rather than controls over keeping of pigs in domestic areas. Meat NZ suggests all pig farms, including smallholdings, should be registered to aid in communication and compliance monitoring.

*MAF comment:* MAF agrees that an important target of an education program is backyard pig owners and small herd owners. MAF does not support the compulsory registration of all pig farms for this purpose.

- 6.8** Meat NZ considers that food waste producers and users should bear the costs of complying with new regulations, and that public funding of education and compliance activities is appropriate, given the impact of a major exotic disease on the national economy.

*MAF comment:* MAF notes that the primary beneficiaries of freedom from exotic disease are the farming industries, and acknowledges that an outbreak of a serious exotic disease such as foot and mouth disease

would impact on all New Zealanders. MAF agrees that education and enforcement costs could be borne by government, in recognition of the impact that an outbreak of a serious exotic animal disease would have on the entire economy, and the costs of collecting levies in an equitable manner from all farming beneficiaries. Other costs of implementing control measures should be borne by food waste suppliers, traders and farmers.

## **7. The Meat Industry Association**

- 7.1** The Meat Industry Association (MIA) considers that New Zealand should impose appropriate procedures to minimise risks of feeding food waste to pigs. The MIA supports a requirement that food businesses which supply food waste for feeding of pigs must have an audited risk management program in place. Failing this, The MIA supports a total ban on the feeding of food waste to pigs.

*MAF comment:* MAF does not support the proposal to regulate food businesses. The additional regulatory burden on well-managed food and accommodation businesses would not add significantly to biosecurity, while the waste producers most likely to constitute a risk would be hardest to identify and to police. MAF does not support a total ban on feeding of food waste to pigs. MAF considers that there are environmental and economic benefits to the practice, and that it should be permitted provided biosecurity risks are satisfactorily addressed.

## **8. Department of Agriculture, Fisheries and Forestry – Australia**

- 8.1** The Department of Agriculture, Fisheries and Forestry, Australia (AFFA) notes that Australia prohibits feeding of food waste (containing meat), with some exceptions<sup>1</sup>; notes the importance of FMD-contaminated meat, meat products or garbage in outbreaks of FMD historically; and notes that border security cannot be guaranteed. AFFA notes that controls over the feeding of imported meat to pigs assist in prevention of exotic diseases other than FMD – for example, new or emerging diseases, or diseases with low virulence strains such as classical swine fever.

*MAF comment:* MAF acknowledges these points. MAF notes that due to Australia's relative proximity (compared with New Zealand) to countries with these diseases, and the difficulty of policing its coastline, the risk created by pig feeding practices may be greater in the Australian context. MAF appreciates that Australia must address this risk in a manner appropriate to this context.

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<sup>1</sup> According to AFFA, these exceptions “occur under tightly controlled conditions and... only permit the feeding of waste from sources such as bakeries where the origin of the raw ingredients is known. Swill feeding of household garbage and restaurant waste, where the origin of the material is not known, is strictly prohibited.”

- 8.2** AFFA notes that New Zealand's lack of controls over feeding of food waste to pigs may impact on its ability to export. In particular, AFFA notes that Australia has recently determined that frozen porcine semen may only be imported into Australia after a period of storage, to allow for new diseases to be detected in the country of origin. This policy applies to all countries including New Zealand.

*MAF comment:* MAF acknowledges that importing countries must consider the effectiveness of New Zealand's biosecurity systems in deciding on import requirements. However MAF considers it essential that the entirety of the biosecurity system as a whole is considered, and asserts that even without controls over the feeding of food waste to pigs, New Zealand's biosecurity system is sound. MAF notes the implication that, should this review process result in controls over feeding of food waste to pigs, the restriction on porcine semen from New Zealand could be reviewed.

- 8.3** AFFA recommends against the approval of feeding food waste to pigs except in situations where the origin of raw materials can be guaranteed.

*MAF comment:* MAF recommends that the feeding to pigs of uncooked food waste containing meat be prohibited, that this prohibition be reinforced by education programs and deterrent fines, and that industry develop and promote codes of practice for feeding of food waste to pigs.

## **9. Institute of Veterinary, Animal and Biomedical Sciences, Massey University**

- 9.1** Massey University's Institute of Veterinary Animal and Biomedical Sciences (IVABS) does not recommend that food waste producers take responsibility for biosecurity risks involved in feeding their waste to pigs.

*MAF comment:* MAF also does not support the regulation of food businesses. The additional regulatory burden on well-managed food and accommodation businesses would not add significantly to biosecurity, while the waste producers most likely to constitute a risk would be hardest to identify and to police.

- 9.2** IVABS considers that prohibiting the feeding of all food waste to pigs except under approved programs would create an excessive regulatory burden on large piggeries, while small piggeries would ignore the prohibition.

*MAF comment:* MAF agrees with this view.

- 9.3** IVABS recommends a ban on the feeding of mammalian meat to pigs, unless it is included in a commercially produced pig feed.

*MAF comment:* This would effectively stop the practice of feeding food waste to pigs. MAF considers that there are environmental and economic benefits to the practice, and that it should be permitted

provided biosecurity risks can be effectively managed, by requiring cooking to approved standards of all food waste containing meat.

- 9.4** IVABS considers that compliance should be monitored by officials, possibly MAF welfare inspectors, visiting farms and physically checking on feeding practices.

*MAF comment:* MAF questions the effectiveness of active surveillance to confirm compliance (and detect non-compliance) with pig feeding regulations. Experience up to 1998 indicates that many of the smaller pig operations, which constitute the greatest risk, are difficult to locate, and that farm visits do not readily provide an accurate indicator of what is being fed to pigs or whether it is cooked and to what standard. MAF prefers to use education programs and deterrent fines to encourage compliance, plus reactive investigations into reported breaches.

- 9.5** IVABS considers that pig owners should pay the costs of complying with regulations, while public funding should pay the costs of monitoring compliance.

*MAF comment:* MAF supports this proposed allocation of costs. Pig owners should pay the costs of complying with regulations on their farms. MAF considers that education and enforcement costs should be borne by government, in recognition of the impact that an outbreak of a serious exotic animal disease would have on the entire economy, and the costs of collecting levies in an equitable manner from all farming beneficiaries. However, MAF does not envisage widespread surveillance to ensure compliance.

- 9.6** IVABS considers that controls over where pigs can be kept are “a matter for district plans”, and opposes controls over keeping of small herds of pigs.

*MAF comment:* MAF agrees with these conclusions.

- 9.7** IVABS considers that prohibiting the feeding of all food waste to pigs except under approved programs would create an excessive regulatory burden on large piggeries, while small piggeries would ignore the prohibition.

*MAF comment:* This is consistent with MAF’s recommendations.

- 9.8** IVABS suggests that waste meat from the marae should be fed to chickens or another non-risk species, and that owners of backyard pigs could separate out meat from waste to be fed to pigs.

*MAF comment:* This is agreed. However MAF considers it impractical (and ineffective for biosecurity) to remove meat from food to be fed to pigs, whereas it may be feasible in some situations to keep meat separate from other food waste. Under the package of measures recommended by MAF, food waste containing meat could be fed to chickens or another non-risk species, or fed to pigs after cooking to an approved standard.

- 9.9** IVABS considers that all costs should be paid out of general taxation, in view of the impact on all New Zealanders of a serious exotic animal disease outbreak.

*MAF comment:* This is inconsistent with IVABS earlier view [9.5 above], supported by MAF, that pig owners should pay the costs of complying with regulations, while public funding should pay the costs of enforcement and education programs. MAF notes that the primary beneficiaries of freedom from exotic disease are the farming industries, and acknowledges that an outbreak of a serious exotic disease such as foot and mouth disease would impact on all New Zealanders.

- 9.10** IVABS considers that most problems are likely to arise from backyard piggery operations, that recovery of costs from offenders may be unrealistic, and recommends that penalties be set at a level reflecting the seriousness of an FMD outbreak.

*MAF comment:* MAF supports these conclusions, and recommends that educational programs be targeted at (amongst others) backyard piggery operations and that restrictions be reinforced by deterrent-level fines.

## **10. AgriQuality New Zealand Ltd**

- 10.1** AgriQuality New Zealand (AQNZ) considers that suppliers should ensure that no illegal foreign meat or animal products are in their food [waste]. AQNZ considers that requiring waste producers to have approved programs for disposal of waste would be impractical and impossible to effectively implement.

*MAF comment:* MAF does not support the proposal to regulate food businesses. The additional regulatory burden on well-managed food and accommodation businesses would not add significantly to biosecurity, while the waste producers most likely to constitute a risk would be hardest to identify and to police.

- 10.2** AQNZ considers that a prohibition on feeding of food waste would impact significantly on large and medium waste feeding operations but may well be ignored by a large number of smaller owners. AQNZ considers that it would be impractical to effectively separate meat from food waste before feeding to pigs.

*MAF comment:* MAF agrees and does not support a total prohibition on feeding of food waste to pigs, nor a total prohibition on the feeding of food waste containing meat.

- 10.3** AQNZ notes that a prohibition on feeding of all food waste except under approved programs would resemble the system in place until 1998. AQNZ considers that such a system would be expensive and difficult to enforce.

*MAF comment:* MAF agrees.

- 10.4** AQNZ recommends an industry code of best practice for waste feeding of pigs, which should be widely publicised. Reporting of non-compliance would be encouraged. Peer pressure and public awareness would assist in ensuring compliance.

*MAF comment:* MAF considers that a voluntary Code of Practice would have limited impact on the feeding practices of owners of small herds and backyard pigs, where a substantial part of the risk is generated. MAF therefore considers that regulations are also required if the risk is to be reduced significantly below current levels. MAF agrees that reporting of non-compliance should be encouraged, and that peer pressure and public awareness would assist in ensuring compliance, and notes that these concepts are reflected in MAF's recommendations for education and enforcement.

- 10.5** AQNZ considers that controls over the location of pigs should only apply where pigs create a nuisance in non-rural areas.

*MAF comment:* This is consistent with other comments on the keeping of pigs in non-urban areas. MAF notes that controls already exist over keeping of pigs in non-rural areas and considers that intervention to address biosecurity concerns would be unproductive.

- 10.6** In regard to backyard pigs, AQNZ considers that a code of practice, an educational program, and action on complaints are the most practical safeguards.

*MAF comment:* MAF recommends that the feeding of food waste to pigs be permitted, providing that any waste containing meat must be cooked. MAF considers that this restriction can be reinforced by a targeted education, deterrent penalties for non-compliance, and enforcement by investigation of reported breaches.

- 10.7** AQNZ considers that development and the maintenance of a code of practice and PR programs could be funded by industry while enforcement could come under the jurisdiction of territorial authorities and/or MAF.

*MAF comment:* MAF considers that education and enforcement costs could be borne by government, in recognition of the impact that an outbreak of a serious exotic animal disease would have on the entire economy, and the costs of collecting levies in an equitable manner from all farming beneficiaries. Other costs of developing standards and implementing control measures should be borne by food waste suppliers, traders and farmers. MAF considers that enforcement activity should be managed by MAF.

- 10.8** AQNZ considers that additional legislation is unnecessary.

*MAF comment:* MAF recommends that the feeding of food waste to pigs be permitted, providing that any waste containing meat must be cooked, to further reduce the likelihood of a serious exotic disease entering or spreading in New Zealand's livestock populations.

## **11. Environment Canterbury**

- 11.1** Environment Canterbury (EC) considers that discussions on the feeding of food waste to pigs should be held within a wider context of the risks of an outbreak of FMD, and that the Biosecurity Strategy presently under preparation should identify the need for a comprehensive policy for FMD and other exotic diseases.

*MAF comment:* MAF works with industry and government agencies to develop plans for exotic disease preparedness and response. EC's response has been referred to the Biosecurity Strategy Development Team. The proposed regulations and package of inter-related measures may eventually become part of a suite of regulations and measures dealing with risks emanating from animal feeding practices.

- 11.2** EC supports development of a code of practice to ensure that food products being fed to pigs and other animals do not present a risk of an exotic disease outbreak. Such a code should be mandatory, driven by the affected industries and developed with scientific input.

*MAF comment:* MAF supports the development by industry of a voluntary code of practice. However, MAF considers that a voluntary Code of Practice would have limited impact on the feeding practices of owners of small herds and backyard pigs, where a substantial part of the risk is generated, and therefore considers that regulations are also required if the risk is to be reduced significantly below current levels. While the code of practice would not be mandatory, MAF recommends that cooking of waste containing meat be mandatory.

## **12. Industrial Food Waste Distributors Ltd**

- 12.1** Industrial Food Waste Distributors Ltd (IFWD), a company which trades in food waste for pig feeding, provides information on the standards applied in their operations. IFWD indicates their willingness to work with industry and government in regard to this matter.

*MAF comment:* MAF notes this offer of cooperation. While MAF supports self-regulation by industry, MAF considers that regulations are also required, for reasons outlined above (for example, see 11.2).

## **13. Liz Chambers**

- 13.1** Ms Chambers, a lifestyle block owner with pigs, favours the prohibition of feeding of food waste containing meat to pigs. She acknowledges the difficulty of separating meat from food waste, and of ensuring compliance among owners of small herds. She advocates an educational program on the risks and to encourage compliance.

*MAF comment:* MAF recommends that feeding of food waste to pigs should be permitted provided that all waste containing meat is cooked to an approved standard. MAF recommends that this provision be reinforced by education programs and substantial deterrent fines and by reactive investigation of reported breaches.

## **14. George Doole**

- 14.1** Mr Doole points out that swill feeding is believed to be the initiator of the 2001 outbreak of FMD in the United Kingdom. He stresses the need for measures to prevent spread of FMD should it penetrate border security measures, and the severe impact that an outbreak would have on New Zealand, and recommends prompt action to prohibit feeding of food waste.

*MAF comment:* MAF agrees with Mr Doole's views on the seriousness of this matter. MAF does not support a total prohibition on feeding of food waste, or food waste containing meat, to pigs. MAF considers that there are environmental and economic benefits to the practice, and that it should be permitted provided biosecurity risks are satisfactorily addressed.

## **15. Ewen McIntyre**

- 15.1** Mr McIntyre considers that food waste generators have a responsibility in respect of the biosecurity risks of feeding their waste to pigs. He recommends an education program and that a well-planned auditable waste disposal scheme should be part of a food licence.

*MAF comment:* MAF believes that regulations should be targeted at those who feed waste food to pigs. Extension of regulations to food waste sources and transporters would increase the cost and complexity of any regulatory system without a commensurate increase in effectiveness. MAF Food and the Ministry of Health have indicated that they consider it inappropriate to use food safety programs to regulate biosecurity risks associated with waste disposal.

- 15.2** Mr McIntyre considers that a ban on feeding of food waste to pigs would be ineffective as non-compliers would know that they were unlikely to be caught, less likely to be prosecuted, and even less likely to subject to a heavy penalty.

*MAF comment:* MAF agrees that ensuring compliance would be difficult under a total ban.

- 15.3** Mr McIntyre considers it impractical to separate meat from food waste.

*MAF comment:* MAF agrees that it is impractical (and ineffective for biosecurity) to remove meat from food to be fed to pigs, although it may be feasible in some situations to keep meat separate from other food

waste. MAF agrees that food waste should be regarded as having meat included, except where it can be established that it does not contain, and has not come into contact with, meat or other animal material (not including milk, or rendered material).

- 15.4** Mr McIntyre considers that pig owners should be allowed to feed food waste only under approved programs. He considers that such programs should be mandatory, as “most at-risk pig managers would ignore any restraints”. He acknowledges that a large enforcement team would be required, and considers that enforcement costs should be from the dairy, beef and sheep industries, as the major beneficiaries.

*MAF comment:* MAF does not support the need for approved programs for pig operators feeding food waste. MAF considers that a system of approved programs would be expensive to administer, and would impact only on the commercial pig industry without effectively addressing the area of highest risk, small and backyard piggeries – in line with Mr McIntyre’s comment that “as “most at-risk pig managers would ignore any restraints”. Detection of unlicensed operators, or licensed operators not reliably following their approved programs, would be difficult in this group. MAF agrees that enforcement costs would be large under a system of approved programs. MAF considers that education and enforcement costs, provided these were reasonably contained, could be borne by government, in recognition of the impact that an outbreak of a serious exotic animal disease would have on the entire economy, and the costs of collecting levies in an equitable manner from all farming beneficiaries. Other costs of implementing control measures should be borne by food waste suppliers, traders and farmers, as the primary beneficiaries of the continued availability of the option of feeding food waste to pigs.

- 15.5** Mr McIntyre notes that very small pig herds constitute the greatest biosecurity risk. He does not support controls on location of pigs, notes that councils usually prohibit keeping of pigs in non-rural areas, and contends that dissatisfied neighbours usually ensure these rules are followed.

*MAF comment:* MAF notes these comments.

- 15.6** Mr McIntyre notes that some food waste used as pig feed creates no biosecurity risk – for example, bread, cereal by-products, brewery by-products and many baking products do not contain meat. Use of these products for pig feed should not be restricted.

*MAF comment:* MAF agrees with this approach.

- 15.7** Mr McIntyre recommends that trading by third parties of products containing meat should not be permitted, as this would create an unacceptable pathway to spread disease widely.

*MAF comment:* MAF considers that trading in food wastes for feeding of pigs should be permitted providing the risks can be managed. MAF proposes that such trading should only be permitted if any product containing meat and sold for pig food is or will be cooked to the prescribed standard.

**15.8** Mr McIntyre notes a potential for contamination of ruminant feeds with ruminant protein through food trading practices.

*MAF comment:* This comment will be addressed by MAF in the context of its ruminant feeding controls. The proposed regulations and package of inter-related measures may eventually become part of a suite of regulations and measures dealing with risks emanating from animal feeding practices.

## **16. Barry Zwies, Pater-ship Farming**

**16.1** Mr Zwies notes that risk goods can penetrate border security measures, and considers that food waste should only be fed if it is industrial food waste such as bakers' waste or brewers' grain, and that swill or garbage feeding should not be permitted. Mr Zwies notes that feeding of pigs and disposal of waste food would be more costly but considers the added costs are justified to provide added safety for the national economy.

*MAF comment:* MAF acknowledges that border security cannot be completely guaranteed. MAF considers that there are environmental and economic benefits from the feeding of food waste and that it should be permitted provided the biosecurity risks can be satisfactorily addressed.

**16.2** Mr Zwies considers that food businesses should be heavily fined for feeding their waste to pigs.

*MAF comment:* MAF believes that any regulations should be targeted at those who feed waste food to pigs, or who trade in food waste for feeding to pigs. Extension of regulations to food waste sources and transporters would increase the cost and complexity of any regulatory system without a commensurate increase in effectiveness.

**16.3** Mr Zwies considers it impractical to separate meat from food waste.

*MAF comment:* MAF agrees that food waste should be regarded as having meat included, except where it can be established that it does not contain, and has not come into contact with, meat or other animal material (not including milk, or rendered material).

**16.4** Mr Zwies considers that restrictions on feeding of pigs should be compulsory and include a registration of where pigs are kept.

*MAF comment:* MAF proposes that the feeding of food waste to pigs be permitted, providing that any waste containing meat must be cooked. Compliance would be encouraged by deterrent fines, and by an education program stressing the risk to New Zealand and the heavy penalties for non-compliance. MAF does not support the compulsory registration of all piggeries. Registration of all piggeries would be

useful if sufficient resources were available to police all registered piggeries – this level of policing is not justified as those piggeries that constitute the greatest risk are the ones which are likely to be unregistered and difficult to detect.

- 16.5** Mr Zwies considers that non-complying pig feeders would be detected by other pig farmers and by MAF. Advertising would raise awareness and encourage reporting of breaches.

*MAF comment:* This is consistent with MAF’s recommendations, except that MAF would not envisage widespread active surveillance to confirm compliance (and detect non-compliance) with pig feeding regulations. MAF considers that an effective education program, to inform farmers of the risks to the nation and of incurring heavy fines, and reactive investigation of reported breaches, would be the most cost-effective strategy for achieving compliance.

- 16.6** Mr Zwies considers that costs should be shared between taxpayers and farmers – more specifically between MAF and a levy on all livestock industries. Mr Zwies also suggests that waste producers should help in funding regulatory costs.

*MAF comment:* This is broadly consistent with the MAF proposal. MAF considers that education and enforcement costs could be borne by government, in recognition of the impact that an outbreak of a serious exotic animal disease would have on the entire economy, and the costs of collecting levies in an equitable manner from all farming beneficiaries. Other costs of implementing control measures should be borne by food waste suppliers, traders and farmers.

- 16.7** Mr Zwies considers that pigs should not be kept in non-rural areas, and notes that controls are already in place by local and regional councils.

*MAF comment:* This is consistent with the views of other submitters. MAF will convey this view to local territorial authorities.

- 16.8** Mr Zwies considers that pigs at marae may be fed on food waste from the marae but not on food waste collected from restaurants and institutions.

*MAF comment:* MAF considers that it should be illegal to feed pigs uncooked meat. This restriction targets the greatest area of risk (meat) without impacting on feeding of non-risk food wastes such as bakery products not containing meat.

- 16.9** Mr Zwies notes the difficulty in stopping “house owners feeding their own food waste to a couple of pigs”.

*MAF comment:* MAF sees this as the area of highest risk and greatest difficulty in achieving compliance. MAF believes that restrictions reinforced by education, substantial fines and reactive investigations, would address the difficulty in achieving compliance from this sector.