12th August 2021

Dr Helen Scott-Orr
Inspector-General of Biosecurity
Australian Government Department of Agriculture, Water and the Environment
GPO Box 858
Canberra City ACT 2601
Australia

Re: Fire Ant Eradication

Dear Dr Scott-Orr

I write on behalf of the Australian Environmental Pest Managers Association Ltd (AEPMA) in respect of the National Fire Eradication Program.

As you are aware AEPMA is widely recognised as "the voice of the industry" and the go to source for consumers, the media and government when it comes to pest management issues in Australia. More than 80% of Pest Control work undertaken in Australia is done by AEPMA members.

We have been advised by the office of the Hon. David Littleproud MP and the Program steering committee Chair Dr Wendy Craik that you are conducting a review of the National Red Imported Fire Ant Eradication Program (The Program) I understand that our earlier correspondence has been sent to you, however we would also make some additional comments regarding the Program.

We believe the following points should be covered in any strategic review of the Program,

1. **The need for the Program to be put on hold**

   Numerous reviews have been undertaken of the Program, none of which appear to support the notion that eradication is happening. After the expenditure of over $600 million there are now more fire ants infesting a larger area then the when The Program began. It is also noted that fire ants in Texas are spreading slower, with no eradication Program then in Australia which has this Program.

   The fact that the Program is now almost solely aimed at a monogyne population which can fly over 10km adds to the difficulty in their control and elimination.

2. **Research and development**

   The Program has a research committee, but it is not clear or in the public domain of what this committee has achieved. The report by the CSIRO was pretty damming of the underpinning methodology and research.

Industry notes that the Fire Ant Program has been approached in the past in regards to collaboratory funding and joint research projects. It is not clear whether these were dealt with by the research committee or summarily dismissed by the staff. It is also noted that the Program provided funding to Queensland Biosecurity to effectively give credibility to the Program and to suggest that was working.

As fire ants as a species are a well researched insect, it is not clear why the research committee did not query the outcomes from Biosecurity Queensland. Biosecurity Queensland was effectively funded to do the project out of the Program's budget. Surely then they could have queried some of the methodologys and research papers used.

A determination needs to be made whether the Research Committee is doing its job or for that matter any job and whether it is being effective.

3. Need Independent Scientific Advisory Committee

The National Exotic Invasive Fire Ant Scientific Advisory Group (SAG) was established in 2018. The SAG provides specialist scientific advice from national and international invasive ant experts to the Steering Committee including matters such as the scientific basis of the tool techniques, products and strategies used by The Program.

In January 2020, Biosecurity Queensland commissioned the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to review the scientific principles that underpin the National Red Imported Fire Ant Eradication Program (NRIFAEP) and inform the controls the Program implements to mitigate the risk of people carelessly or accidentally spreading fire ants in truck or trailer loads of fire ant carriers like soil, mulch and potted plants.

In December 2020 CSIRO reported on the Program's seven scientific principles. They were created by the Program's Scientific Advisory Group, chaired by Mr Bill Magee. In 2016, Mr Magee chaired a panel commissioned to assess the progress of the Program to determine if it should continue with an eradication strategy or revert to a containment and control strategy. The review panel acknowledged it could not assess the progress of the Program because it does not collect reliable and consistent performance data. Nevertheless, with no supporting data whatsoever, the review panel said it was still feasible to eradicate fire ants from south-east Queensland.

CSIRO said NRIFAEP's seven scientific principles were a mish-mash of poorly referenced biological details and management actions which failed to respond to a major change in the fire ant population in south-east Queensland.

In 2001, the fire ant population was a mixture of polygyne fire ants and monogyne fire ants which spread in very different ways. Polygyne fire ants spread when a newly mated queen walks a short distance from her maternal nest to create her own. Monogyne fire ants spread when a newly mated queen flies 5km on her own, or 30km with the wind behind her, from her maternal nest, to create her own – in attractive nest materials like soil, potted plants, turf, hay, organic mulch, composted growing media, animal manure, gravels, sand and non-soil aggregates, if they are available.

In 2020, the fire ant population in south-east Queensland was almost entirely monogyne fire ants.

CSIRO said the change in the fire ant population in south-east Queensland is a direct result of the NRIFAEP's strategic decision to target polygyne fire ants.

The NRIFAEP claims the change in the fire ant population is evidence its eradication strategy is working.

In 2016, Dr Ross Wylie, senior scientist with the Program, and member of the Scientific Advisory Group, wrote that this change in the fire ant population, not seen in other countries invaded by the red imported fire ant, is the result of the pressure being exerted by the eradication Program.

CSIRO said the significant shift in the fire ant population had considerable ramifications for how the Program controls the movement of fire ant carriers. They were:

- A low density of fire ant nests in an area is not evidence the Program is working. It is evidence of a monogyne population.
- Visual inspection of a property is unlikely to detect incipient monogyne nests.
- There is little value in declaring a property fire ant free when it can immediately be invaded by newly mated, airborne, monogyne queens.
- Consequently, the NRIFAEP needs to:

Place greater emphasis on the risk of spread by newly mated, airborne monogyne queens.

The CSIRO report made this specific comment about the targeting of polygyne queens compared to monogyne queens:

> *Developments in the science: of key importance is the shift from a population of fire ants that was approximately 40% polygyne in 2001 – 02, to one that is now less than 1% polygyne – that is, an effectively monogyne population. This has resulted from strategic targeting of polygyne colonies. The shift has a number of ramifications for the NFRIFAEP, including: (a) a lower nest density in any given setting, and less clustering of nests; (b) greater emphasis on dispersal by airborne mated female alates, as monogyne colonies have only a single Queen, and do not bud, and monogyne alates are larger than polygyne alates and, with approximately 33% more fat reserves, are more successful at colony establishment; (c) greater emphasis on the protection of carriers from infestation by airborne mated female alates (although this is likely to depend on the inherent attractiveness of individual carriers, and period for which they are exposed); (d) reduced effectiveness of visual inspection, with a higher proportion of incipient nests; and (e) reduced value of property freedom, as property boundaries do not provide protection from ingress of airborne mated female alates*

Place greater emphasis on protecting fire ant carriers like soil, potted plants, turf, hay, organic mulch, composted growing media, animal manure, gravels, sand and non-soil aggregates from infestation by newly mated, airborne, monogyne queens.

CSIRO reworded five of NRIFAEP's mish-mash of seven scientific principles, deleted one and added eight of their own. They recommended those thirteen scientific principles underpin significant changes to the Program, including how it mitigates the risk of human-assisted spread of fire ants.

In 2001, international fire ant experts said it was too late to attempt to eradicate a well-entrenched fire ant infestation in south-east Queensland. They recommended tightly containing the infestation and controlling its spread. Instead, the Program chose to chase the last ant to kill it: arguing if the ants were dead, they wouldn't spread. But they have. An infestation of 40,000ha in 2001 now covers over 650,000ha. If the NRIFAEP adopts CSIRO's recommendations for controlling the human-assisted spread of fire ants, it will only be twenty years too late.

Dr Ross Wylie and other QDAF staff recently published another article in an academic journal. A quote from the article is:

> ***When a new detection was confirmed, then the next round of surveillance was pushed out to 5 km beyond that detection, as this is the estimated distance limit for a newly mated queen to fly and successfully establish a colony.***

The article did not cite any of the work from the commissioned CSIRO study. In that study many examples from academic articles were provided of fire ant queens travelling much further than 5 km, especially if wind assisted.

4. Is the Corporate Structure Appropriate?

Minister Furner's Office has advised that the QLD Government is only responsible for funding it's 10% of the nationally cost shared funding agreement from all State and Territory Governments and the Federal Government.

<u>Private sector Pest Management Technicians (PMTs)</u>

As stated in the minutes of the steering committee.

> *The team have trained 250 Pest Management Technicians (PMTs) to date, including technicians from a range of business areas and local councils.*
>
> *The Steering Committee were advised that there is an increase in the number of PMTs treating fire ants. However, not all PMTs are reporting to the Program. The Program is working closely with PMTs to ensure the obligation of reporting is understood and complied with.*
>
> *Other matters discussed included the requirement for having baits commercially available to PMTs and the general public. The use of trained PMTs for hard to access sites such as electrical areas, airports and development sites have also delivered benefits by allowing members of these businesses to treat their own areas without the need to organise special access for Program employees.*
>
> and
>
> *contract staff remuneration - difficult to implement (e.g. payment based on hectares treated). It was agreed that other ways to encourage efficient work performance should be considered*

An alternative method that could be tried is to put out to tender to private sector organisations to find and efficiently treat fire ant nests. Performance criteria and costings could be included in the tender document.

Another example of where private sector technicians can deliver services at a much lower cost than the current Program.

> *the Program's financial performance as at April 2020, including spend on labour hire, helicopters and additional hire of 70 vehicles which are required for social distancing during COVID-19*

The private sector did not need to have one person per vehicle as they used the appropriate PPE masks which allowed 2 technicians per vehicle. The additional costs of hiring 70 vehicles would be quite significant.

A further efficiency issue in terms of the motor vehicles should be investigated. Do the vehicles have to be returned to the 3 depots every day and picked up the next morning? If so how many hours in actually getting to and back from the appropriate areas for work are lost in travel every day? If the vehicles do not have to be returned to the depots, what procedures are in place to ensure that they are only used for specified purposes and not for private consumption uses?

There are some 400 staff now employed by the Program. We would suggest this number be reduced to no more than 50 and the Program's expenditure be undertaken by contractors through competitive tendering.

5. Competitive Pricing

At the end of the day, financial resources will always be a limiting factor and therefore it is essential that the money allocated to the Program is spent wisely and to maximum effect. From day 1 this Program has made little effort to spend money wisely. One clear way would be to seek tenders for much of the Program and achieve the same results at less cost.

As an example, at the beginning of the Program, an AEPMA member approced the Fire Ant Program offering to provide 2 sniffer dogs at no cost to demonstrate it was possible to train these dogs for less than $8000.00 at a time when costing was around $40-50,000. Sniffer dogs being one effective way of detecting fire ants. When this was raised by the Fire Ant Program we were told they lost the letter.

Not to be outdone, when we raised the issue of competitive pricing, the Program put out to tender the dog kennels. Given that these could be purchased at Bunnings for next to nothing or dogs could be take by their handlers, it became clear to all that the Program was not interested examining alternatives then that provided by the staff.

Similarly, the Program was approached by the developers of an app, which would assist with mapping and administration of Fire Ant nests. This was not even evaluated.

6. Adoption of New Technology

The current Program utilises helicopters when the widespread use of drones would be more cost effective.

The fire ant Program is again looking at finding appropriate remote surveillance technology for the detection of fire ant nests. A statement from their minutes was:

November 2019

> *The Steering Committee was provided with an update on the progress of the Remote Sensing Surveillance Project. Images were presented to the Steering Committee to show the quality of imaging the new camera system provides to detect RIFA nests. Despite the trial taking place at the warmer time of the year (unfavourable), the results obtained were promising.*
>
> *Final analysis is being conducted with Outline Global with results due in January 2020. With further iterations of image capture and ground truthing, the accuracy of the technology will improve.*

Similar Programs have been implemented in the past to find a technology that would work in this sphere, and all have failed. Results from this Program do not appear to be publicly available.

A year later the minutes contain the following statement.

December 2020

> *purchasing a second camera pod for remote sensing would be beneficial, allowing up to an additional 60 000ha surveillance each season, and also provides a backup if one was out of action for any reason. The cost of an extra camera pod is estimated at $750 000, plus some setup costs.*
>
> *The Steering Committee:*
>
> ***NOTED** the progress of the Remote Sensing Surveillance Project and the first iteration of imagery.*
>
> ***NOTED** the completion of the field trials, data collection and imagery capture.*
>
> ***NOTED** and **ENDORSED** the recruitment of the Project Coordinator for three years to make the project operational.*

The questions that should be asked on this aspect are how effective are the cameras in detecting fire ant nests as there are no proven successes overseas and the previous work in Australia was a failure. Another question is on the cost. Does the cost of the camera pod include a helicopter for delivering the service? If so what is the breakup of costs between the helicopter and the cameras. Have there been any investigations of using alternative technologies such as camera equipped drones as high-performance, high capability drones can be purchased at a cost generally an order of magnitude lower than what is being paid for helicopters.

There is no dispute that developing an effective technology for remote detection would be of extreme value for the Program.

An alternative to choosing organisations and their own technology is to make it openly competitive by such measures as offering a prize for the development of an effective, economical means of detection of fire ant nests. The value of the prize to the winner could be substantial and measured at least $1 million if not even more if it can be shown to be effective in location of the nests and there subsequent economical control.

7. Compliance

The importance of compliance to the Program was highlighted in the CSIRO study. Efforts in this area had been ad-hoc and administered poorly.

For the Program to succeed, and/or the fire ants contained this part of the Program needs to be reviewed and updated.

8. Equitable Funding / Public Safety

It is totally unreasonable that some members of the community have their Fire Ant problems serviced free of charge, whilst other members pay for cost recovery. In response to the QLD Ombudsman as the result of community concern regarding the time taken to respond to Fire Ants.

The Ombudsman concluded that,

The investigation identified two changes that significantly contributed to the improvement in timeframes:

- Use of new type of treatment (a fast-acting bait, Indoxacarb)
- An organisational restructure and revised administrative processes.

AEPMA has witnessed first hand how this policy has been implemented. We have received calls from the general public who have advised that when they complain of Fire Ants on their property, chemical was posted through the mail. A 71 year old woman complained to our office that she felt that this was inappropriate as her husband has dementia and could easily "put it in his tea" In another instance, a woman was delivered chemical to her door and told to put it on the Fire Ant nest, she rang the office and asked how she should divide the chemical up or if it was for one news.

In the first instance we thought these were crank calls but then one of the chemical company representatives informed us that his company refused to participate to send chemical through the mail.

The question needs to be asked whether this is the appropriate way to control Fire Ants and is it responsible stewardship of chemicals and their handling?

9. Research and Development Funding

10. Stakeholder Engagement

Industry is supportive of Australia's efforts to maintain a strong biosecurity Program. It is clearly in Australia's interest to respond effectively to biosecurity breaches. For

this to occur the community needs to be brought onside and be supportive of biosecurity Programs, including those aimed at eradication.

This Program has failed to gain public trust. It has been reported to the QLD Crime and Corruption Commission (CCC) On Channel 9 Brisbane there has been a call for a Royal Commission into the Program. When information is released on social media as a supposed good news story, there are at least 3-4 replies speaking adversely of the Program. Community stakeholder meetings frequently have become gripe sessions about the Program's failure.

11. Recommendations

In carefully considering the issues, AEPMA would make the following recommendations:

1. The Eradication Program be put on hold for at least 3 years and a Program of suppression put in place.

2. more work can then be undertaken around potential methodology to eliminate the ants including new baiting methods, chemicals, and new detections software which can be used by drones.

It is hard to see the current proposal of using helicopters to identify that the monogyne colonies being effective given the area is now 650,000 sq km.

3. A new corporate structure needs to be implemented to ensure there is proper Corporate Governance of the Program.

4. The body involve the private sector as the primary delivery mechanism to save costs and create more efficiencies.

5. Competitive tendering and proper costings of proposed Program outcomes should be undertaken before any action is taken.

6. The elimination of selective subsidies which allow some members of the public to receive a free service, whilst other have to pay a full commercial rate.

7. Introduce proper accounting procurement and chemical handling processes to ensure that the Program is run well and is transparent.

8. The introduction of a 3rd party auditor, possibly the Inspector General of Biosecurity on at least a 2 year basis to measure the efficiency and measurement of the Programs objectives.

9. The establishment of clear key performance indicators.

10. That the Queensland Treasury and Queensland Audit Office, provide assistance to the Program by drawing up a budget and appropriate Corporate Governance Principles to assist the program in its delivery and reporting responsibilities to the public and the stakeholders.

I look forward to your early advice in respect of the above.
Regards

Stephen Ware
Executive Director