Australian Academy of Science

Response to questions on notice following hearing of 12 August 2019

At the hearing of the Senate Legal and Constitutional Affairs Legislation Committee on the *Criminal Code Amendment (Agricultural Protection) Bill 2019*, the Academy took three questions on notice.

Number of Agricultural Scientists in Australia

It is difficult for the Academy to identify precise numbers of agricultural scientists: divisions between scientific disciplines are rarely clear cut, and research into hydrology, genetics, biochemistry, geology and geophysics, atmospheric science, or many other disciplines may find application in the agricultural area. The Academy is not aware of any survey or other study that specifically identifies agricultural scientists.

However, the 2016 Census provides a number of people who identify as working as 'Agricultural and Forestry Scientists' of 5443. Of these approximately three quarters work in the private sector and the remainder in the public sector (national, state or local government).

Agricultural and Forestry Scientists (No.)

NSW		**Tasmania**	
Public NSW	253	Public	104
Private NSW	1055	Private	250
Total NSW	1313*	Total	354
Victoria		**Northern Territory**	
Public Vic	272	Public	23
Private Vic	948	Private	32
Total Vic	1220	Total	55
South Australia		Australian Capital Territory	
Public SA	115	Public	55
Private SA	426	Private	27
Total SA	541	Total	82
Queensland		Other	
Public	329	Public	0
Private	811	Private	0
Total	1140	Total	0
Western Australia		National	
Public	296	Public	1447
Private	442	Private	3991
Total	738	Total	5443

**NSW listed five respondents as "not specified".*

Source: Australian Bureau of Statistics 2016 Census Table Builder: Employment, Income and Education

Attacks on Agricultural Research Facilities

Vandalism

A number of incidents involving environmental groups have coordinating attacks on GM crops in the US and Canada in the 1990s and 2000s. A 2003 article by Leader and Probst[1] cites the Earth Liberation Front and the Animal Liberation Front as believed responsible for "some 600 criminal acts between 1996 and 2002 and some $43 million in damages." The bulk of these acts were arson, sabotage and vandalism, chiefly directed at commercial research facilities but also at developers and logging facilities. These organisations were listed as domestic terrorism organisations by the US Federal Bureau of Investigation.[2]

Note that there are many other examples of examples of attacks in the US by such groups as Greenpeace,[3] California Croppers, [4] and Reclaim the Seeds,[5] as well as anonymous attacks.[6]

In a 2012 article in *GM Crops & Food*, researcher Marcel Kurtz reports on the destruction of genetically modified crops in Europe:

> *About 80 acts of vandalism against academic or governmental research on GMOs are identified, mainly in 4 countries; namely France, Germany, the United Kingdom and Switzerland. Examples are also provided for Italy and Belgium.*

The article describes attacks on a wide range of crops and facilities.[7]

In his book *Seeds of Science*, former anti-GMO activist Mark Lynas describes the actions of environmental groups in so-called 'decontamination' actions targeting genetically modified seed crops in the United Kingdom:

> *"By 2002 in the UK there was not much left to destroy. Total field 'decontamination' actions numbered over 70 in 1999, up from 40 in the previous year and just a handful in 1997 when the movement first began to gain momentum. On one occasion, 10 GM national seed list trials, essential for the approval of commercial cultivation, were destroyed in the same night. Not only food crops were hit: in July 1999 night-time activists chopped down 50 genetically engineered reduced-lignin poplar trees at Zeneca Plant Sciences in Berkshire. The trees were never replanted and the programme was later terminated."*[8]

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[1] Stefan H. Leader & Peter Probst (2003) The Earth Liberation Front and Environmental Terrorism, *Terrorism and Political Violence*, 15:4, 37-58, DOI: 10.1080/09546550390449872

[2] https://www.fbi.gov/file-repository/stats-services-publications-terrorism-2002-2005-terror02_05.pdf/view

[3] https://www.apnews.com/7f3397419d2a1a90ca894cbb2f6f796a

[4] http://www.ainfos.ca/98/nov/ainfos00254.html

[5] http://www.washingtonpost.com/wp-srv/WPcap/1999-10/26/038r-102699-idx.html?noredirect=on

[6] https://archives.fbi.gov/archives/portland/press-releases/2013/fbi-asks-for-help-in-identifying-suspects-in-genetically-engineered-crop-destruction

[7] Marcel Kuntz (2012) Destruction of public and governmental experiments of GMO in Europe, GM Crops & Food, 3:4,258-264, DOI: 10.4161/gmcr.21231

[8] Mark Lynas (2018), *Seeds of Science*. Bloomsbury Sigma, London. pp 30-31

Lynas' account also includes descriptions of anti-GMO campaigners, including the attacks orchestrated by Jeremy Rifkin in the United States. These attacks took place in the 1990s.

Murder

The International Science Council's Committee for Freedom and Responsibility in the conduct of Science (CFRS) maintains a watching brief on academics under threat of their lives, and intervenes when it can in their support. The current CFRS watch list includes:

- 'Ali 'Esa Mansoor al-'Ekri, Bahrain
- Büşra Ersanlı, Turkey
- Omid Kokabee, Iran
- Bahá'í community leaders, Iran

It must be noted that the threat to these academics comes from state actors rather than protest movements.

Following the murder of an Italian student of Cambridge University in Egypt in 2016, the CRFS released an advisory note to researchers undertaking field work in risky settings.[9]

The Academy also notes that in areas of heated public rhetoric (which include topics such as genetically modified organisms, but also stem cell research and climate change) there are often reports of physical threats, including death threats. The Academy does not condone such threats and recommends against incendiary language when discussing such topics.

We have not been able to identify specific instances of agricultural researchers being murdered by activists or protesters.

Changes to the legislation

The Academy maintains its neutrality on the question of whether the Bill is necessary. As stated in our evidence before the Senate Committee, the Academy has not identified a need for the specific provisions against incitement in the Bill as it relates to agricultural research.

The Academy was asked to offer an opinion on what measures should be taken to ensure that scientific facilities are covered by the bill. In this regard, the Academy recommends including a protection for scientific disclosure in Section 474.46 and 474.47:

> *Subsection (1) does not apply to material if the material relates to a scientific disclosure or report made by a person working in a professional capacity as a scientist or researcher.*

The Academy also recommends including "agricultural research" in the definition of "**agricultural land**" in Schedule 1 of the Bill:

[9] https://council.science/publications/advisory-note-responsibilities-for-preventing-avoiding-and-mitigating-harm-to-researchers-undertaking-fieldwork-in-risky-settings

> ***agricultural land*** means land in Australia that is used for a primary production business *or for agricultural research*. For the purposes of this definition, it is immaterial:
> (a) whether a part of the land is used for residential purposes;
> (b) whether a part of the land is used for a business that is not a primary production business

Note that this definition would not include, for example, ANSTO facilities. Because the legislation relates primarily to commercial agricultural properties, extending the definition to all forms of research would seem to go well beyond the intent of the Bill.

Additionally, the Academy recommends ensuring the definition of "**primary production business**" in Schedule 1 of the Bill includes agricultural research:

> ***primary production business*** means any of the following:
> […]
>
> *(r) a business where agricultural research is carried out.*

Note that, again, this definition would not necessarily include ANSTO facilities, or government or university facilities.

In both of these cases, a further formal definition of "agricultural research" is recommended.