CropLife Australia

14 February 2020

Senate Standing Committees on Rural and Regional Affairs and Transport - Inquiry into the Federal Government's response to the drought, and the adequacy and appropriateness of policies and measures to support farmers, regional communities and the Australian economy

CropLife Australia is the national peak industry organisation representing the agricultural chemical and plant biotechnology sector in Australia. CropLife's members are the world-leading innovators, developers, manufacturers and formulators of crop protection and crop biotechnology products. CropLife Australia represents both large and small, generic and IP, Australian and international companies and therefore only promotes whole of sector supported and beneficial public policy and regulatory solutions. CropLife Australia is part of the plant science industry's 91 country international federation.

CropLife, with its not-for-profit subsidiary Agsafe, is a world-leader in industry stewardship initiatives that contribute millions of dollars each year to activities ensuring the safe, sustainable and international best practice use of crop protection and crop biotechnology products throughout their lifecycle.

CropLife ensures the responsible use of these products through its mandatory industry code of conduct and has set a benchmark for industry stewardship through programs such as its Pollinator Protection Initiative, including the world-first BeeConnected app and successful Agsafe programs, ***drum****MUSTER* and ChemClear®.

CropLife welcomes the opportunity to contribute to the *Federal Government's response to the drought, and the adequacy and appropriateness of policies and measures to support farmers, regional communities and the Australian economy*. We commend the Government for seeking to define the opportunities and impediments to the primary production sectors in these trying times. CropLife's submission focuses on the crucial role innovations – such as those delivered to Australian famers by the plant science industry – play in the creation of a stronger, sustainable and more competitive agriculture sector in Australia.

Australian farmers produce almost 93 per cent of Australia's daily domestic food supply[1]. Australian agriculture and its associated industries generate over $155 billion every year and underpin 12.1 per cent of Australia's GDP. There are over 300,000 people directly employed in agriculture. The complete agricultural supply chain, including the affiliated food and fibre industries, provide over 1.6 million jobs to the Australian economy.

The agricultural sector is facing unprecedented challenges relating to climate. Since 2017, large parts of New South Wales, Queensland and South Australia have suffered from extreme drought conditions. The northern half of New South Wales and adjacent southern Queensland is experiencing the lowest rainfall on record. This is having a devasting effect on the farmers, businesses and communities in these regions. The social and economic losses have been compounded by the bush fires in many of these areas. Drought conditions are expected to reduce farm GDP in 2019-20 by 3 per cent and rural exports by 8.5 per cent. This equates to over $1 billion in lost revenue. The extremely dry conditions are resulting in low soil moisture and dam storage levels, with decreases in both the area of crops planted and average yields. The drought has had a profoundly negative effect on the income of Australian farmers with farm unincorporated business income around 15 per cent less than it was a year ago.

[1] *National Farmers Federation (2018). Food, Fibre and Forestry facts. A Summary of Australia's Agriculture Sector.*

To combat the impacts of climate change, the threat of food insecurity and increasing costs, while remaining internationally competitive, farmers must be able to adopt the latest safe and proven agricultural technologies and innovations. This includes access to agricultural biotechnology innovations, as well as biological and chemical crop protection products. Crop protection and biotechnology solutions can assist farmers in producing high yields with fewer natural resources by developing more resilient, better adapted varieties, reducing water consumption, protecting soils, increasing nutrient uptake and reducing the need for other inputs.

Increased innovation, productivity, investment and trade are not tenable without nationally consistent agricultural regulations that are efficient and effective. The world's population is predicted to increase to 9.7 billion by 2050, requiring an increase in global food production of 70 per cent. Providing enough food in the context of production constraints, volatile consumption patterns and a changing climate will be an unprecedented scientific, economic and public policy challenge. The situation provides an opportunity for Australian farmers to both assist in the global food security effort and profit from increased demand for their agricultural products. By adopting innovative farming practices, such as the sustainable and efficient use of biological and chemical crop protection products and genetically modified (GM) crops, the Australian farming sector will be able to produce more sustainably and with greater productivity.

Tackling the challenge of sustainably increasing food production to meet growing global demand in a changing climate will require science-based policies that support all production systems, including existing and future production tools and technologies. Sustainable production systems will include the conventional systems reliant on the timely, responsible and considered application of crop protection products in ways that maximise yield and manage potential environmental risks. Crop protection products (including fungicides, herbicides and insecticides) are currently relied upon to increase global food production by between 30 and 50 per cent[2]. Supporting the plant science industry to develop and introduce new crop protection products better targeted to Australian pests, climates and crops will help Australia play its part in addressing global food security.

The plant science industry's chemical (both synthetic and organic) and biological crop protection products are critical to maintaining and improving Australia's agricultural productivity and the environmental sustainability of modern farming. All these products are rigorously and independently assessed by the Australian Pesticides and Veterinary Medicines Authority (APVMA) to ensure they present no unacceptable risk to users, consumers or the environment. It takes over 11 years of research and development, requiring the testing of more than 140,000 compounds, to bring just one new successful crop protection product to market. This carries a R&D cost of over US$286 million. Without access to these products, Australian farmers could lose up to two-thirds of their annual production to pests, weeds and diseases.

[2] *Deloitte Access Economics (2018). Economic Activity Attributable to Crop Protection Products, Canberra*

Crop protection products must be used sparingly, carefully and responsibly and Australian farmers have shown a real commitment to world's best practice in crop protection product use. This responsible use of agricultural chemicals must be supported by a regulatory scheme that maximises the benefits associated with their responsible use, while minimising the costs from excessive, unnecessary, inappropriate and/or ineffective regulation. Farmers need these products because of the benefits they provide to their businesses and consumers need farmers to have access to these products to ensure they have safe, affordable, nutritious and disease-free food available. It is important for governments to provide appropriate and rigorous regulation of pesticides and biotechnologies. That regulation, however, must be mindful of the effects that poorly considered and excessive regulation can have. These effects include increased production costs and discouraged investment and innovation, while not delivering any improvement in safety, health or environmental outcomes.

Crop protection products are crucial to modern integrated pest management techniques and systems used by farmers. Access to fewer crop protection tools would facilitate faster development of resistance among target pests, diminishing the efficacy of remaining chemical options. The economic impact of weeds alone is estimated to be in excess of $4.8 billion each year, or $13 million per day[3]. It is imperative that the Federal Government maintain the primacy of science and facts. There is a need for a paradigm shift in thinking from regulating the science (as it has been proven safe) to facilitating the growth of the Australian economy by driving the plant science industry (both in the public and private domain) to its full potential.

GM crops, an application of modern biotechnology, are just the next natural stage in centuries of plant breeding innovation. They are a step along the same path of technological innovation that led to Australian agricultural inventions such as the combine harvester and 'Federation' wheat varieties. The utilisation of these innovations has delivered significant productivity and environmental sustainability improvements in farming that are safe. Over 400 million hectares of GM crops have been cultivated worldwide since 1996 and over 1 trillion meals containing GM food ingredients have been consumed globally. GM crops are the most tested and regulated food product in history. There are no substantiated scientific reports of any food safety issues related to the consumption of genetically modified crops, nor any unexpected effects on ecosystems. The development, planting and consumption of an approved GM crop is safe. Every scientific and regulatory body that has examined the evidence has arrived at the conclusion that GM crops and the foods they produce are as safe as their conventional counterparts. This includes the World Health Organization, the Australian Academy of Science, the European Commission, the American National Academy of Sciences and the Royal Society of Medicine.

[3] *https://invasives.com.au/wp-content/uploads/2019/01/Cost-of-weeds-report.pdf*

Since being first commercially cultivated in 1996, GM crops have contributed to global food security, sustainability and helped farmers to adapt to and mitigate climate change by:

- Increasing the value of crop production by US$186 billion[4]
- Reducing pesticide usage (kg active ingredient) by 671 million kg[5]
- Reducing CO_2 emissions in 2018 alone by 27.1 billion kg[6] (equivalent to taking 16.7 million cars off the road for one year, more than all the passenger vehicles registered in Australia; and 86% of all vehicles registered in Australia)
- Increasing the incomes of more than 17 million small farmers and their families – some of the poorest people in the world, and thereby helping to alleviate poverty[7]

GM crops have helped farmers financially. Globally, GM technology directly increased farm income by US$18.2 billion in 2016[8], with over half the gains going to farmers in developing countries[9]. According to the meta-analysis published by Klumper and Qaim, GM crops have reduced pesticide use by 37 per cent, while increasing crop yields by 22 per cent and increasing farmer profits by 68 per cent[10].

Cultivation of GM crops has equally proven to be beneficial to the environment. Crop biotechnology is an important tool helping farmers become more sustainable by allowing them to produce more while using fewer natural resources and farm inputs. Since GM crop cultivation began, more than 183 million hectares of land have been saved from ploughing and cultivation, leading to improved water storage, limited soil erosion and increased availability of land for other environmental uses.

GM crops currently under research and development in Australia will help our farmers address the unprecedented challenges they are facing in a changing climate. GM traits currently investigated at the national level will be crucial tools for farmers to combat drought, soil acidity and/or salinity, as well as emergent diseases. There is also considerable Australian research into GM traits that will bring health benefits to consumers, such as healthier starches and oils modified to be lower in saturated fats and with improved cooking qualities.

One threat to the potential success of this important agricultural innovation is the lack of a nationally consistent scheme for gene technology regulation in Australia. Unnecessary and overly stringent regulation brings with it an equally unnecessary cost burden. All regulation should be commensurate with the associated risk, cost and benefit to the community. The current gene technology regulatory system in Australia already imposes a much greater level of regulatory burden on the industry than occurs in some other countries. This burden is exacerbated by unclear and inconsistent market interventions by state governments, further disadvantaging farmers already struggling in drought-stricken areas.

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4 *Brookes G and Barfoot P (2018) 'GM crops: global socio-economic and environmental impacts 1996-2016'. PG Economics, Dorchester, UK.*

5 *Ibid.*

6 *ISAAA (2019) 'Global Status of Commercialized Biotech/GM Crops in 2018: Biotech Crops Continue to Help Meet the Challenges of Increased Population and Climate Change. ISAAA Brief No. 54. ISAAA: Ithaca, NY.*

7 *Ibid.*

8 *Brookes and Barfoot (2018) Op. Cit.*

9 *ISAAA (2019) Op. Cit.*

10 *Klümper, W. and Qaim, M., (2014). 'A meta-analysis of the impacts of genetically modified crops'. PloS one, 9(11), p.e111629.*

Without new, innovative agricultural products, Australian agriculture's productivity cannot grow, nor face the challenges of a changing climate. Crop protection and GM products are core components of agricultural innovation, enabling Australian farmers to be better equipped while facing unprecedented challenges, to remain competitive internationally and to benefit the Australian economy.

CropLife submits that the inclusion of crop protection and crop biotechnology products is essential to the development of any measures that seek to support farmers, regional communities and the Australian economy as we face extreme, unprecedented drought conditions. Maintaining the economic, environmental and social sustainability of agricultural production systems will not be achieved by limiting the options for farmers to manage their businesses. Each individual farm faces specific challenges in terms of climate, soil type, farming system, demography and economy. These circumstances all have an impact upon the choices available to farmers to manage their farms.

As farmers face extreme and increasingly unpredictable climatic conditions, stressed natural resources and shrinking available arable land, they need access to the same safe, effective tools and technologies as their international competitors.

Agricultural chemicals and GM crops are currently major contributors to the sustainability and productivity of Australia's food production systems. The benefits they generate for farmers, other users, consumers and the environment far outweigh any manageable or imagined risks associated with their adoption or use.

CropLife and its members are committed to supporting all farming systems in Australia by providing farmers with the innovation, technologies, tools and products they need to ensure sustainable and profitable farming practices. Providing for access to reliable, safe, effective and efficient new technology crops and crop protection products will build both sustainability and resilience into Australia's agricultural system.