PAEC Inquiry into the 2018-19 Budget Estimates – Questions taken on notice and further information agreed to be supplied at the hearing

Minister Pulford, Agriculture, Wednesday 13 June 2018

Question 1

1. The *Agriculture Victoria Strategy* states, 'The challenge for governments is to encourage farmers to develop farming practices which mitigate the impacts of climate extremes and…are adaptive…'[1] Is there specific funding in the budget for underpinning these activities in the strategy?

Response

Within the Agriculture Output the Victorian Government funds policy, research and agriculture services to support agriculture climate change adaptation and mitigation.

Policy

The Victorian Government is currently leading national work on adaptation to climate change on behalf of the Agriculture Ministers' Forum. This Victorian Government led project will identify risks and opportunities for agriculture in response to climate change.

Agriculture Victoria is preparing a pilot Adaptation Action Plan for the Primary Production System. The Plan will identify gaps, opportunities and future directions for government and industry investment to support adaptation in the sector.

Other activities include drought preparedness programs and adaptive capacity assessments.

Research

Agriculture Victoria Research (AVR) delivers climate change research focussing on medium-term outcomes listed under Priority Action 10 in the Agriculture Victoria Strategy. Specific examples include:

- *DairyBio* is a major investment for the economic development of the Australian dairy industry that includes projects contributing to adaptation to climate change. These projects include: forage improvement for drought tolerance and persistence, breeding for higher heat tolerance in Australian dairy herds, and reduced methane emissions and improved feed efficiency through the development of a breeding value for low methane emission cows.

- *Dairy Feedbase,* funded by the Department of Economic Development, Jobs, Transport and Resources, Dairy Australia and the Gardiner Foundation, is a large program of work focusing on improving utilisation of the feedbase on dairy farms. Several projects enable farming system adaptation to climate change including: the Cool Cows project that develops forage options for summer and informs nutritional strategies to help dairy cows manage heat events; Pasture Smarts project that enables producers to use advanced technology for real time and predictive pasture measurement to enable better management of seasonal variability; and Smart Feeding project that develops low cost gas sensors for measuring methane and feeding strategies to managing methane emissions.

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[1] Agriculture Victoria, *Agriculture Victoria Strategy*, Victorian Government, 2017, p. 16.

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- *Transformational genetic innovation* research for the grains industry includes genetic innovation to deliver breeding values for heat tolerance in wheat. AVR is working with commercial wheat breeding programs to develop new wheat germplasm with improved high-temperature tolerance.

- *New crop production system options that are more suitable for variable seasons*. For example, AVR is accelerating the breeding of safflower to develop a new biodegradable and renewable oil with the potential to replace products produced from fossil fuels such as lubricants and plastics. Safflower is suitable for hot and dry environments such as the Mallee and its deep root systems enables greater rainfall infiltration and storage.

- *Improving nitrogen use efficiency.* AVR is working on improving nitrogen use efficiency, reducing greenhouse gas emissions, understanding nitrogen loss pathways, precision nitrogen technologies and manure management.

- *Maintaining agriculture productivity under elevated CO_2* research within the Free Air CO_2 Environment (AGFACE) environments. This has generated new knowledge on wheat traits, and nitrogen and disease (barley yellow dwarf virus) management strategies that maintain yield and quality in wheat under elevated CO_2.

- *New tools and models to help plan for future climates.* AVR is enhancing farming system models to help agriculture industries better understand the impacts of climate change. The Catchment Analysis Tool is a modelling framework that assesses current and future farming systems. Recent additions include new extreme weather event factors and impact analyses of climate scenarios on new crop traits. AVR is also working with international partners undertaking blind tests on data from over six countries to improve modelling capability and ability to explore potential climate change impacts and opportunities for farming systems, industries and regions.

Agriculture Services

Agriculture Services activities include:

- The Agriculture Victoria seasonal risk program provides expert speakers and customised climate products for over 100 Victorian agriculture events and forums each year, as well as working with the Bureau of Meteorology and University research scientists to support awareness on climate risk and adaptation options available to farmers and industry.

- Award-winning climate risk communication that engages agriculture stakeholders on seasonal forecasting and climate trends (including "The Break" monthly newsletter distributed to over 3,000 farmers).

- Soil Moisture probe demonstrations to monitor deep soil moisture levels.

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Question 2

2. With respect to Budget Paper No. 3 (p. 130) and the Target One Million goal to have a million recreational fishers by 2020[2], please provide details on the survey methodology used to measure progress towards the target.

Response

The survey methodology used includes studies conducted by Ernst and Young which have shown that Victoria is on track to reach our goal in 2020, with an estimated 838,000 Victorians actively participating in recreational fishing.

Licensing data is not considered an accurate measure of recreational fishing participation due to the various exemptions that apply for children and seniors. To increase fishing among these demographics, the Victorian Fisheries Authority (VFA) runs Vic Fish Kids clinics across the state to promote fishing amongst children, mums and dads. These events have been highly successful and were attended by thousands of children in 2017. The clinics will be repeated across regional and metropolitan areas in 2018.

The VFA also undertakes scientific surveys of fish numbers and these have shown that Victoria will have good seasons for snapper, calamari and whiting in Port Phillip Bay and along the coast in coming years. The availability of trout, Murray cod, redfin and yellow belly fishing for inland waters will also encourage recreational fishing in Victoria.

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[2] Victorian Fisheries Authority, 'Target One Million', viewed 14 June 2018, <https://vfa.vic.gov.au/recreational-fishing/target-one-million>.

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Question 3

3.   Secretary, where is the money in the budget for Animal Welfare Victoria?

Response

The 2018-19 budget allocation for Animal Welfare Victoria is included in the Agriculture output, within the Departmental objective: More productive, competitive, sustainable and jobs-rich food, fibre and resources industries. The 2018-19 budget allocation to the Agriculture output is stated on page 121 of Budget Paper No. 3: Service Delivery.

The 2018-19 budget allocated $4.3 million initiative funding for animal welfare reforms in the Agriculture output.