

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2017

Department of Agriculture and Water Resources

Question Number: 1

Division/Agency: ABARES

Topic: Trends in terms of energy use on farms

Proof Hansard Page: 35 (25.05.2017)

Senator RICE asked:

Senator RICE: What have the trends been over the short, medium and long term in terms of energy use on farms?

Mr Gooday: We would not have that with us. We can take that on notice, but the general observation would be that energy use will have improved reasonably substantially because the types of equipment that people are using will be allowing that to happen.

Senator RICE: Do you think there will be declining energy use per unit of production?

Mr Gooday: There will have been, over a long period of time, some fairly substantial savings made in the way in which things are grown.

Senator RICE: Is that information publicly available, or can I put it on notice and you can provide it to us?

Mr Gooday: We have not produced it in a report, but we can take it on notice and provide you with some information.

Answer:

There are few estimates available for Australia of change over time in overall energy use per unit of agricultural production.

Change in the quantity of diesel fuel used by Australian grain farms to produce a tonne of grain has been estimated by ABARES from fuel expenditure and crop production data collected in the annual Australian Agricultural and Grazing Industries Survey. ABARES estimates diesel used to produce grains, oilseeds or pulses to have declined from an average for the five years ending 1993-94 of 38 litres per tonne to an average of 24 litres per tonne for the five years ending 2015-16. Diesel is the main energy source used in the production of grains, oilseeds and pulses. Grains, oilseeds and pulses accounted for 88 per cent of the total area planted to crop in Australia in 2014-15.

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ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2017

Department of Agriculture and Water Resources

Question Number: 2

Division/Agency: ABARES

Topic: Fertilizer input across Australian agriculture

Proof Hansard Page: 36 (25.05.2017)

Senator RICE asked:

Senator RICE: Finally, do you track fertiliser input across Australian agriculture?

Mr Gooday: We collect information on fertiliser inputs as part of our farm survey, yes.

Senator RICE: Can you tell me what the trends have been with that.

Mr Gooday: The trend over the last 20 years or more would have been that we have been using more materials and services, which is what fertiliser falls into. We have been using more of that, especially in the cropping industries. That is how the technology has gone.

Senator RICE: So there would be a trend of increasing use. Have you seen a commensurate increase in yield with that use or, as it has increased, has the relative effectiveness dropped off? Maybe take this on notice.

Mr Gooday: There has been an increase in yield, which is what CSIRO and other people report.

Senator RICE: I am interested in tracking fertiliser use. Again, it is embodied energy and it is embodied fossil fuel energy so, if that has increased over time but your overall yields have only increased at a lesser rate, I think that is also a very important statistic that we need to know.

Mr Gooday: We have not done any studies on the relationship between increased fertiliser use and increased yield, but we do have productivity estimates and other things to show what has been happening in aggregate.

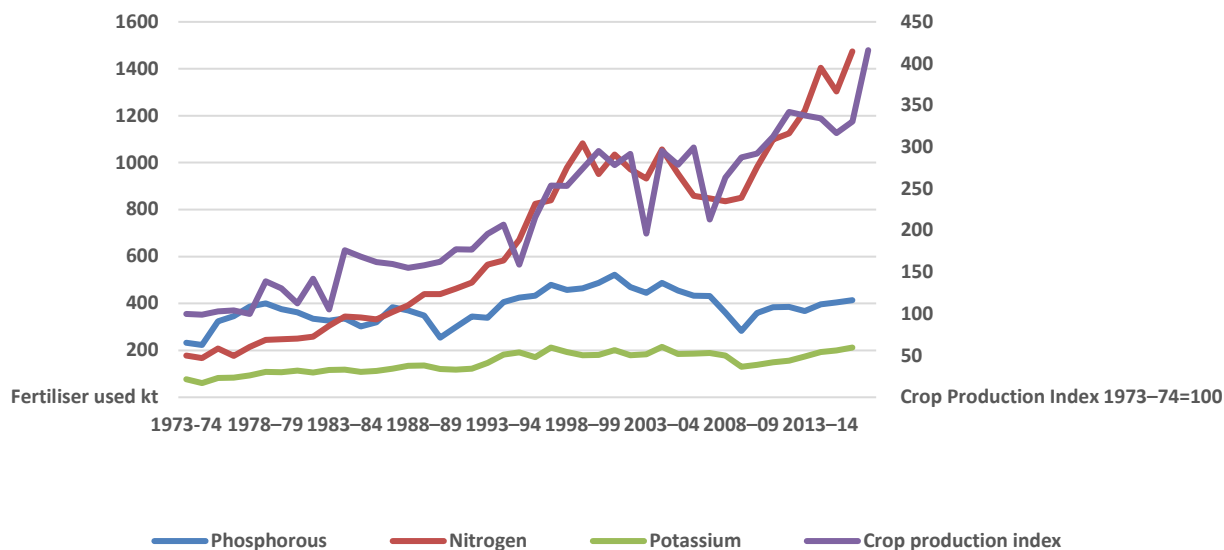
Senator RICE: If you could take on notice and provide whatever information you do have on fertiliser trends and any correlation with yield trends, that would be useful. Thank you.

Answer:

The total tonnage of inorganic fertiliser (nitrogen, phosphorous and potassium) used in Australia increased by 330 per cent between 1973–74 and 2015–16, from 487 thousand tonnes in 1974 to 2.1 million tonnes, according to Fertiliser Australia data.

Question Number: 2 (continued)

AUSTRALIAN FERTILISER CONSUMPTION BY ELEMENT AND CROP PRODUCTION



Source: ABARES; Fertiliser Australia; Fertiliser Industry Federation of Australia

Most of this increase was in nitrogen fertiliser. The tonnage of nitrogen used increased steadily from 0.2 million tonnes in 1974 to 1.10 million tonnes in 1999, declined through the period of drought during the early and mid-2000s to 0.84 million tonnes in 2008, before increasing in the period since to 1.47 million tonnes in 2015–16. The tonnage of phosphorous and potassium used has been relatively steady each year since the mid-1980s. Total tonnage of phosphorous used in 2015–16 was 414 thousand tonnes and the total tonnage of potassium 212 thousand tonnes.

Nitrogen fertiliser is used mainly on crops and the total area planted to crops increased by 80 per cent between 1973–74 and 2015–16, with the majority of the increase in area planted to grains and oilseeds. Wheat alone accounted for 36 per cent of the increase in crop area. Over the same period the volume of crop production increased by much more – 230 per cent - mainly reflecting yield increases as well as change in the types of crops grown.

Nitrogen application rates are higher for intensive crops such as sugar cane, cotton and some vegetable crops. Nitrogen fertiliser use is also relatively high for grain and oilseed crops in the wheat-belt of Western Australia where soil fertility is inherently low. Nitrogen fertiliser applications are also increased when seasonal conditions favour higher yields.

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ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2017

Department of Agriculture and Water Resources

Question Number: 3

Division/Agency: ABARES

Topic: Modelling on the economic benefits in terms of the live export trade

Proof Hansard Page: 68 (25.05.2017)

Senator CARR asked:

Senator KIM CARR: Is the department aware of it? It is nothing about a policy. It is a question for the department. Has the department had any policy conversations on this issue?

Mr Quinlivan: No.

Senator KIM CARR: I take it, then, you have not undertaken any modelling on the economic benefits in terms of the live export trade?

Mr Quinlivan: It is just a media article.

Senator KIM CARR: No, the live export trade. Do you have any modelling on that within the department?

Mr Quinlivan: Not in my time as CEO, but there may well have been—

Senator KIM CARR: When was the last time modelling was undertaken there?

Mr Quinlivan: We would have to take that on notice. There may well have been some.

Answer:

ABARES has not undertaken any economic modelling on live animal exports. However, ABARES did release an analytical report titled “Live export trade assessment” in June 2014 which presented information on domestic and international factors that drive the export of livestock for feeder and slaughter purposes. The report assessed the benefits to producers and the economy in terms of export returns, farm incomes and employment.

The report is available on the ABARES website at:

http://www.agriculture.gov.au/abares/publications/display?url=http://143.188.17.20/anrdl/DAFFService/display.php?fid=pc_leta_d9abca20140708_11a.xml

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2017

Department of Agriculture and Water Resources

Question Number: 4

Division/Agency: ABARES

Topic: Almond Production

Proof Hansard Page: 66 (26.05.2017)

Senator GRIFF asked:

Senator GRIFF: Do you know what proportion of almond production occurs in the Sunraysia area?

Mr Glyde: I do not know the answer to that question. I do not know if anyone else does. I do not have that. We can try to get that.

Answer:

In 2014–15 almond production in the Sunraysia region totalled 50,337 tonnes with a farm gate value of \$397 million.

Source: ABS 2016, Agricultural Commodities, Australia, 2014–15, cat. no. 7121.0, Australian Bureau of Statistics, Canberra; ABS 2016, Value of Agricultural Commodities Produced, Australia, 2014-15, cat. no. 7503.0, Australian Bureau of Statistics, Canberra