

Senate Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2006

Agriculture, Fisheries and Forestry

Question: ABARE 01

Division/Agency: Australian Bureau of Agricultural and Resource Economics

Topic: Crude oil stocks

Hansard Page: 94 (24/05/06)

Senator Siewert asked:

Senator SIEWERT—I have been looking at your figures on Australia's energy supply and disposal for June 2005. I have also been looking at the figures of the Department of Industry, Tourism and Resources and I am trying to compare the two. One is in petajoules.....

Senator SIEWERT—What I am doing now is looking at what the Department of Industry, Tourism and Resources has said. They have said in the year 2003-04, '*The crude oil in stock is around two million barrels,*' so what I cannot understand is the difference between what ABARE says and what the department says.

Dr Fisher—I do not believe that I can answer this question on the run, because I do not know which documents we are talking about. I would have to take this on notice. If you can provide us with the relevant reference to the ITR document that you are referring to, then I can compare it with my forecasts.

Answer:

The figures released by the Australian Bureau of Agricultural and Resource Economics (ABARE) in June 2005 on Australia's energy supply and disposal do not contain any figures on oil stocks and therefore cannot be compared with any oil stocks figures published by the Department of Industry, Tourism and Resources. There is a figure relating to '*stock changes and discrepancies*' in Table L, Australian petroleum supply and disposal, but this item is not a stocks figure in itself.

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ANSWERS TO QUESTIONS ON NOTICE

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Agriculture, Fisheries and Forestry

Question: ABARE 02

Division/Agency: Australian Bureau of Agricultural and Resource Economics

Topic: Crude oil stocks

Hansard Page: Written Question

Senator Siewert asked:

The ABARE Aust Petroleum Statistics June 2005 (Australian Energy supply and disposal, 2003-04 – energy units) gives a figure of 196.6 PJ of crude oil in 'stock changes and discrepancies'.

The Department of Industry, Tourism and Resources stock reports for the same period report total stocks as 2,047,600 tonnes.

- a. Does 196.6 PJ equate with around 4 million tonnes?
- b. Can you explain the discrepancy between the two figures?
- c. What do the two sets of figures really mean?
- d. Why are stock changes and discrepancies combined? Does this effectively mask the level of error or uncertainty in ABAREs figures?
- e. These numbers seem to imply that we are unable to account for twice as much oil as we actually have oil stocks. Is this really the case? How could we effectively lose so much oil?
- f. ABARE figures appear to show a similar discrepancy for 3 years running, is this correct?

Answer:

- a. At the standard international conversion of 42.1 GJ per tonne of oil, 196.6 PJ would equate to 4.67 million tonnes of oil.
- b. As noted in ABARE 01, the item appearing for 'stock changes and discrepancies' is not a stocks figure, and therefore cannot be compared with any DITR figures on stocks.
- c. The Australian Bureau of Agricultural and Resource Economics (ABARE) figure of 196.6 PJ for '*stock changes and discrepancies*' in 2003-04 represents the difference between the energy equivalent of the feedstock reported to have been used by domestic refineries in that year, and the energy equivalent of the supplies of feedstock reported to have been available to those refineries from domestic production and net imports.
- d. In internationally accepted methods of energy accounting, stock changes are not normally separated from discrepancies.
- e. After investigating possible explanations for the discrepancy, in its latest historical energy statistics released on 15 June 2006 ABARE has revised upward the oil production figures in Table L, which has reduced the size of the discrepancy.
- f. In the ABARE figures released in June 2005, stock changes and discrepancies for the three years prior to 2003-04 were reported as 123.7 PJ in 2000-01, 167.9 PJ in 2001-02, and 115.9 PJ in 2002-03.

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Agriculture, Fisheries and Forestry

Question: ABARE 03

Division/Agency: Australian Bureau of Agricultural and Resource Economics

Topic: Crude oil stocks

Hansard Page: Written Question

Senator Siewert asked:

Why is it that ABARE sees it should have this role rather ABS?

- a. Does the fact that ABARE is unable to compel data have any impact on its ability to compile complete and accurate figures?
- b. Is this data used by other agencies?
- c. If so, which agencies and for what purpose?
- d. What impact does this discrepancy have on our greenhouse accounting figures?

Answer:

- a. At the request of the Department of Industry, Tourism and Resources, (DITR) and under the research agreement between the two agencies, the Australian Bureau of Agricultural and Resource Economics, (ABARE) compiles and publishes figures on Australia's historical energy production. The figures in Table L (*Australian petroleum supply and disposal*) released in June 2005 were compiled using petroleum sales and production data provided by DITR and petroleum trade data purchased from the Australian Bureau of Statistics, (ABS) so the fact that ABARE is unable to compel the supply of data does not have an impact on its ability to compile figures on petroleum supply and disposal.
- b. Since ABARE prepares these statistics at the request of DITR, we believe DITR would be the primary user of these data. However, the historical energy statistics are freely downloadable from the ABARE web site and available for use by the public.
- c. ABARE believes that DITR uses this data to inform its view on Australian energy issues.
- d. ABARE does not compile Australia's greenhouse accounting figures – however, it is understood that figures used by DEH to prepare Australia's greenhouse accounting figures use estimates of energy consumption and use, which would not be affected by any discrepancy between reported refinery consumption of oil and reported use of domestic and net imported oil in refineries.

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ANSWERS TO QUESTIONS ON NOTICE

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Question: ABARE 04

Division/Agency: Australian Bureau of Agricultural and Resource Economics

Topic: GMOs

Hansard Page: Written Question

Senator Siewert asked:

Is ABARE doing any ongoing analysis of consumer trends in Europe and Asia that investigate consumer concern about GM crops?

- a. If not, why not?
- b. If yes, what does it say?

Answer:

The Australian Bureau of Agricultural and Resource Economics (ABARE) monitors developments in consumer trends for genetically modified crops as part of its routine commodity analysis work. ABARE will publish a research report on market acceptance of GM canola in Australia's domestic and export markets in the first half of 2006-07.

Question: ABARE 05

Division/Agency: Australian Bureau of Agricultural and Resource Economics

Topic: GMOs

Hansard Page: Written Question

Senator Siewert asked:

Are ABARE concerned that as Asian countries get richer their concerns with GM crops will reflect the concerns with GM foods of other richer countries like Europe and Australia?

On what basis and on what evidence does ABARE make their conclusion?

Answer:

The Australian Bureau for Agricultural and Resource Economics (ABARE) is a research organisation and, as such, does not express opinions or concerns about such issues. ABARE monitors developments in consumer trends for genetically modified (GM) crops as part of its routine commodity analysis work. ABARE will publish a research report on market acceptance of GM canola in Australia's domestic and export markets in the first half of 2006-07.

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ANSWERS TO QUESTIONS ON NOTICE

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Agriculture, Fisheries and Forestry

Question: ABARE 06

Division/Agency: Australian Bureau of Agricultural and Resource Economics

Topic: GMOs

Hansard Page: Written Question

Senator Siewert asked:

How were the assumptions about the productivity increases from GM crops arrived at, and other estimates?

Answer:

The assumptions made by the Australian Bureau of Agricultural and Resource Economics, (ABARE) about productivity increases from genetically modified (GM) crops are based on surveys of the scientific and economic literature. The scientific literature on the relative agronomic performances of GM crops is very limited, requiring considerable judgment by economic analysts in arriving at robust assumptions about GM crop productivity.

The assumption of a 5 per cent productivity gain for GM wheat in Australia that was employed by Apted et al is based on a number of studies that have been published on the agronomic benefits of GM wheat. References for this work and the ABARE work are given below.

References

Apted, S., McDonald, D. and Rodgers, H., 'Transgenic crops: welfare implications for Australia', *Australian Commodities*, vol. 12, no. 3, Canberra, pp. 532–43.

Foster, M. 2003, *GM Canola: What are its Economics under Australian Conditions?*, Australian Grains Industry 2003, Canberra.

Blackshaw, R. and Harker, K. 2003, 'Selective Weed Control with Glyphosate in Glyphosate-Resistant Spring Wheat (*Triticum aestivum*)', *Weed Technology*, vol. 16, no. 4, pp. 885–92.

Holzman, J. 2001, The economics of herbicide tolerant wheat in western Canadian crop rotations, Unpublished Master of Science thesis, University of Saskatchewan, Saskatoon.

Johnson, D., Lin, W. and Vocke, G. 2005, 'Economic and welfare impacts of commercializing a herbicide-tolerant, biotech wheat', *Food Policy*, vol. 30, pp. 162–184.

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Question: ABARE 07

Division/Agency: Australian Bureau of Agricultural and Resource Economics

Topic: GMOs

Hansard Page: Written Question

Senator Siewert asked:

Have ABARE done any meta studies of what the academic literature suggests are the range of assumptions and estimates? If so, how does this compare with the ABARE figures?

Answer:

The Australian Bureau of Agricultural and Resource Economics, (ABARE) is constantly monitoring the academic literature on the costs and benefits of genetically modified (GM) crops. The body of information gathered forms the basis for the assumptions used in ABARE analyses of the economics of GM crops and their implications for Australia.

Some ABARE publications report the current state of this information — for example, a study of the agronomic benefits of selected GM crops (as they were perceived at the time) was published in Foster (2001). Other meta studies, for example, Brookes and Barfoot (2005), have found significant net benefits from the adoption of GM crops

References

Brookes, G. and Barfoot, P. 2005, *GM Crops: the Global Socioeconomic and Environmental Impact – the First Nine Years 1996-2004*, PG Economics, Dorchester (www.pgeconomics.co.uk/pdf/globalimpactstudyfinal.pdf).

Foster, M. 2001, *Genetically Modified Grains: Market Implications for Australian Grain Growers*, ABARE Research Report 01.10, Canberra.

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ANSWERS TO QUESTIONS ON NOTICE

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Question: ABARE 08

Division/Agency: Australian Bureau of Agricultural and Resource Economics

Topic: Operations

Hansard Page: Written Question

Senator Siewert asked:

Most professional research houses, including CSIRO and Universities, typically expose their work to independent peer review prior to publishing; as with academic journals. What quality assurance measures does ABARE have in place to ensure that their economic research is of the highest quality, i.e. is objective, balanced and free of vested interests?

Answer:

The Australian Bureau of Agricultural and Resource Economics, (ABARE) utilises a system of internal and external peer review to ensure the quality of its publications.

Commodity outlook and statistical publications are usually cleared in house. External reviews are sought for most of our major research projects, except where the early external release of information may compromise public interest.

Many ABARE reports are collaborative efforts with agencies such as the Commonwealth Scientific and Industrial Research Organisation, (CSIRO) and the Productivity Commission. In addition, ABARE publishes some of its work in recognised international journals.

Question: ABARE 09

Division/Agency: Australian Bureau of Agricultural and Resource Economics

Topic: Operations

Hansard Page: Written Question

Senator Siewert asked:

How does ABARE guard against a narrowing of its internal culture? How does ABARE, as a publicly funded research agency which aims to inform discussion and policy-making in the public interest, ensure that their research professionals are drawn from and engage with wide variety of perspectives in the field of economics, agricultural and natural resource management?

- a. Does ABARE employ social scientists other than economists?
- b. Does ABARE employ any physicists, chemists or other physical scientists?
- c. If not, how does ABARE cross-check the physical and chemical assumptions it relies on for its modelling?

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Answer:

The Australian Bureau of Agricultural and Resource Economics, (ABARE) draws its research staff from a number of professional disciplines. These include economics, commerce, mathematics, statistics, agricultural science, environmental science, natural resource management and geography.

In addition to in-house professional skills, ABARE staff engage frequently with professionals from other disciplines, including the physical and social sciences. This occurs through targeted consultations on specific issues, attendance at professional conferences, and other external networking opportunities. ABARE staff are also encouraged to develop professional networks in disciplines that support its core economic activities.

In addition, ABARE staff collaborate frequently, with their colleagues in the physical and social sciences from the Bureau of Rural Sciences in the Department of Agriculture, Fisheries and Forestry. This occurs at an informal consultative level and also more formally in the preparation of joint reports for clients.

ABARE staff also undertake joint work where appropriate with colleagues from the Commonwealth Scientific and Industrial Research Organisation, (CSIRO), universities and Cooperative Research Centres.