Senate Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2010

Agriculture, Fisheries and Forestry

Question: RIRDC 01

Division/Agency: Rural Industries Research and Development Corporation
Topic: Space age crops
Hansard Page: 101 (25/05/2010)

Senator HEFFERNAN asked:

Senator HEFFERNAN—Could you give us a list of the crops that you think are 'space age', as it were, on notice?
ACTING CHAIRMAN (Senator O'Brien)—Senator Heffernan, can we just have one questioner at a time. If you have questions after Senator Nash is finished, I will give you the call.
Senator NASH—There will be plenty of time. If you could provide that on notice, Mr Byrne, that would be very useful. Obviously with those sorts of projects you would need to do trials, I would imagine, on farm.
How do you connect with farmers out on the ground? How do you pick where you are going to do the trials for any of these new products?

Answer:

RIRDC is funding research and development work on a wide variety of native plants and plant products including for human consumption as a food or flavour enhancer; as a health food; and as a nutraceutical / pharmaceutical for medical or veterinary use. Some of the species include Lemon myrtle (leaf and oil); Anise myrtle (leaf); Wattleseed; Bush tomato; Davidson plum; Riberry; Kakadu plum; Muntries; Lemon aspen; Desert limes; Quandong; Mountain pepper Tasmania lanceolata (leaf and berry) and Warrigal greens.

Senate Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2010

Agriculture, Fisheries and Forestry

Question: RIRDC 02

Division/Agency: Rural Industries Research and Development Corporation
Topic: Funding in 2010 for new Rural Industries
Hansard Page: 101 (25/05/2010)

Senator NASH asked:

Senator NASH—…Obviously with those sorts of projects you would need to do trials, I would imagine, on farm. How do you connect with farmers out on the ground? How do you pick where you are going to do the trials for any of these new products?
Mr Byrne—The location will depend on being able to engage with both the researchers and farmers. We attempt, in establishing the R&D program for a particular crop, to ensure that there is engagement with producers.
Senator NASH—I assume you have to have somebody to grow it for you, so you would need a producer.
Mr Byrne—Yes.
……
Mr Byrne—We try and do that to effectively build in a pathway to the future, when the results are available and there is interest in adopting the crop.
Senator NASH—So how do you find a farmer to do these for you—just in general. I am just interested in how it works. You have RIRDC over here and you have farmers out there that are going to need to grow this stuff. Do you sort of bump into them at the pub or do you have a way of identifying who are going to be appropriate landowners for you to work with?
Mr Byrne—In the case of the new rural industries, we start with a planning process in which we try to set up an advisory committee of people who may already be trying out these crops. That might have representatives of the people who are already trying it out, with some research capacity representation to try and develop a plan for future R&D.
Senator NASH—How much funding for the next financial year is going to be allocated to those types of projects?
Mr Byrne—I have not got the figure, but I can provide it.
Senator NASH—That is all right. If you could take that on notice, that would be useful.

Answer:

The total funding allocated to new rural industries research and development by RIRDC in 2010-11 is $7.165 million. The following table indicates the funding allocated to each of the programs in RIRDC's New Rural Industries portfolio for 2010-11:

Question: RIRDC 02 (continued)

Program	Core (a)	Other (b)	Total
	$'000	**$'000**	**$'000**
New Plant Products	866	398	1,264
New Animal Products	913	203	1,116
Rare Natural Animal Fibres	155	75	230
Wildflowers and Native Plants	240	110	350
Essential Oils and Plant Extracts	271	124	395
Tea Tree Oil	242	234	476
Olives	286	178	464
Bioenergy, Bioproducts and Energy	420	1,466	1,886
New Rural Industries Australia*	147	45	192
PISC*	88		88
Other salaries	704		704
Total	**4,332**	**2,833**	**7,165**

(a) RIRDC's direct appropriation
(b) Industry contributions, industry levies and government levy matching funds
* Including salary

Senate Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2010

Agriculture, Fisheries and Forestry

Question: RIRDC 03

Division/Agency: Rural Industries Research and Development Corporation
Topic: Funding cutbacks affecting natural resource management R&D
Hansard Page: 102 (25/05/2010)

Senator NASH asked:

Senator NASH—You go on to talk about the sustainable environmental resource management area and, again, projects that you are doing. These ones relate to opportunities for farmers to be more environmentally sustainable. What sorts of projects are you doing in that area?
Mr Byrne—We have had a program for a number of years on agroforestry, looking at the prospects for trees to deal with groundwater recharge and the impact on salinity. That is probably the principal area that we have been involved in.
Senator NASH—Have any of the funding cutbacks affected your ability to continue with these particular types of projects?
Mr Byrne—The agroforestry program has been going for about 10 years and has continued just as individual projects, but I would have to take the question on notice to give you the exact projects that were affected.

Answer:

The funding cut to RIRDC in the 2009/10 budget did not result in any RIRDC natural resource management projects being terminated.

Senate Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2010

Agriculture, Fisheries and Forestry

Question: RIRDC 04

Division/Agency: Rural Industries Research and Development Corporation
Topic: Methane to markets program
Hansard Page: 103 (25/05/2010)

Senator NASH asked:

Senator NASH—You talk about a number of programs. What is the methane to markets program?
Mr Byrne—The methane to markets program is a joint program with a number of the other RDCs. It focuses on using methane from animal production sources as a fuel.
Senator NASH—What have you found in the project so far? Has it kicked off yet?
Mr Byrne—It has kicked off, but I would have to provide you with the detail on notice.

Answer:

The Australian Methane to Markets in Agriculture Program (AM2MA) was established in June 2007 by collaboration between the Australian Government and industry, and forms part of the international Methane to Markets Partnership.

The program was funded by the Department of Agriculture, Fisheries and Forestry from the Natural Heritage Trust and the National Landcare Program. Industry funding and support has been received from the Rural Industries Research and Development Corporation, Dairy Australia, Australian Pork, Meat and Livestock Australia, the Australian Lot Feeders' Association, the Australian Chicken Meat Federation as well as the industry and research partners of the individual projects in the program.

The objectives of the first stage of the program were to:

1. Develop and adapt methane capture and use technology for application in the Australian intensive livestock industries.
2. Reduce the uncertainty, risk and cost of installing methane capture and use systems.
3. Effectively communicate the projects' outcomes.
4. Facilitate the commercialisation of on-farm systems for methane capture and use technology.
5. Derive the maximum benefit for Australia from the international Methane to Markets (M2M) Expo in Beijing in November 2007.

The research found that the Australian intensive livestock industries possess a unique set of factors that make the direct adoption of methane capture and use technologies that have been developed overseas inappropriate and difficult. In particular it has been found that if methane capture and use technologies are to be widely adopted by the Australian intensive livestock industry, on-farm anaerobic digestion needs to be

Question: RIRDC 04 (continued)

proven for Australian farms and conditions, while capital and operating costs need to be reduced.

The recommendations from the research are:

1. A wider demonstration of methane capture and use needs to be considered that:
   (i) allows installation costs to be further reduced; and
   (ii) demonstrates and investigates a greater range of approaches to retrofitting anaerobic digesters at Australia's intensive livestock facilities and their related processing sites.
2. A range of designs could be tested including floating covers, fixed covers, and sludge management by mixer, submersible chopper pump, and pipe networks with a pump mounted on the embankment.
3. A range of biogas use options could be trialled including:
   (i) using gas for hot water generation
   (ii) use of low cost electricity generators
   (iii) use of absorption chillers.

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ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2010

Agriculture, Fisheries and Forestry

Question: RIRDC 05

Division/Agency: Rural Industries Research and Development Corporation
Topic: Biofuels and Bioenergy
Hansard Page: 74 (25/05/2010)

Senator NASH asked:

Senator NASH—You talk about investigating new feed stocks for biofuels and bioenergy to mitigate against and adapt to climate change. What are you doing there? What sorts of feed stocks for biofuels are you looking at, and what are you planning to do?
Mr Byrne—I need to take that on notice. I have been in this position only three weeks, and I am not across the detail of everything that is being done in the organisation.
Mr McAllister—I might be able to help. There was a conference held in Queensland last year and that whole methane market is looking at all sorts of things, including algae, et cetera. It is right out there.
Senator NASH—Could you perhaps come back with a detailed plan of what RIRDC is planning on looking at within the new feedstocks for biofuels, particularly if you are focusing it all on lignocellulose. If there is any work being done there, that would be very useful for the committee.

Answer:

RIRDC's Bioenergy, Bioproducts and Energy Program is supporting investigations into the following prospective new feedstocks for bioenergy and biofuel production:

Indian mustard–This project proposes to rapidly develop mustard cultivars suitable for economically viable biodiesel production. The project has three components, 1) the genetic improvement of mustard for biodiesel production; 2) establishment of the feasibility of producing biodiesel from locally grown mustard in northern NSW and 3) evaluation of the model of regional biodiesel self-sufficiency.

Native oilseed trees–This project focuses on finding suitable native tree species for biodiesel production in Australia. Objectives include:

i) Identification of potential native species that can produce appreciable amounts of raw materials for biodiesel production, and grow well on degraded and grazing lands of Central Queensland.
ii) Testing the seeds for oil content, and the oil for its quality and biodiesel production.
iii) Economic analysis of biodiesel production from native species grown on degraded lands of central Queensland.

Question: RIRDC 05 (continued)

Agave–The key objective of the project is to demonstrate to the satisfaction of growers, industry, investors and regulators, that it is feasible to farm cultivars of Agave as feedstock for biofuels (ethanol) production in Australia.

Native trees–A'second generation' biofuels industry could be built on Australian forest species. Such species would be selected to grow in marginal land areas, areas with low rainfall, or be complementary to conventional agricultural crops and systems for access to land, resources and market share. The objectives of this project are to improve the capacity of the forestry agencies to:

i) extend the evaluation of woody species with biomass production potential from southern Australia to a national level; and
ii) conduct a comparative analysis of biofuel conversion properties for woody species.

Eucalypt mallees–This project is assessing eucalypt mallees as potential short rotation bioenergy crops for subtropical and tropical drylands.

Native grasses–The project aims to evaluate the potential for the production of cellulosic biomass from a range of Australian native grasses. It will provide some reliable data on the total biomass that can be produced quarterly, biannually and annually from a selected range of native grasses.

Giant reed (*Arundo donax*)–This project will provide indicative data on the commercial potential of the new biomass grass, Arundo donax (Adx) as a renewable, non food source of extremely high biomass yield for pulp/fibre/paper, or biofuels grown on marginal and arable soils. In this project, the weed risk assessment of Arundo donax and preparation of a weed risk management guidelines handbook will resolve where Adx can be grown in sustainable systems.

Plantation and farm forestry biomass–The project aims to assess potential for sustainable production and use of plantation and farm forestry biomass for commercial scale bioenergy production. This project will:

i) determine biomass in residue fractions following harvest of Pinus radiata forests in NSW;
ii) assess how new bioenergy agroforestry crops could be established in the case study region.

Sweet sorghum–This project aims to assess and establish opportunities to develop a sweet sorghum industry in Australia through evaluating the viability of a sweet

Question: RIRDC 05 (continued)

sorghum cropping and production system for commercial co-production of renewable energy and food.

Oil Mallee–An important part of the development of the oil mallee industry will be to ensure optimised and synchronised supply of material from the field to the mill. This would reduce the costs of harvesting and hauling biomass to maximise farmer and processor returns. The specific objectives of the project are:

i) Review the material harvest, handling and processing requirements for a sustainable mallee biomass industry.
ii) Investigate tools, processes and models used in similar biomass industries (such as sugar) which are potentially applicable to the mallee industry.
iii) Develop a conceptual framework to assess harvest/supply issues.
iv) Undertake a desktop assessment of the logistics for mallee supply.
v) Identify critical elements, gaps and opportunities for further development of a sustainable mallee industry.
vi) Determine key performance criteria for components within the harvest supply chain.

The eucalypt mallees, native grasses, giant reed and plantation and farm forestry biomass projects relate to development of lignocellulose as a feedstock.

RIRDC has also funded a review on national and international development in the approaches to sustainability of biofuels, bioenergy and biobased products, *Sustainable Production of Bioenergy – A review of global bioenergy sustainability frameworks and assessment systems*.

Senate Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2010

Agriculture, Fisheries and Forestry

Question: RIRDC 06

Division/Agency: Rural Industries Research and Development Corporation
Topic: Rural women's mentoring program
Hansard Page: 105 (25/05/2010)

Senator HEFFERNAN asked:

Senator NASH—Absolutely. Finally, what is the Rural Women Mentoring Program and how does it work?
Mr Byrne—It is a new program associated with the Rural Women's Award. It has been going for a year and it is a method of trying to ensure that the recipients of the current award are able to keep in touch with each other and also able to maintain contact with past recipients who have the experience of undertaking their projects as winners and the success of their own activities once they have completed them.
Senator HEFFERNAN—What is the budget allocation?
Mr Byrne—I have to take that on notice. It is not a large amount.

Answer:

The Australian Government provided $50,000 to RIRDC for the Mentoring Rural Women for Success project.

These funds were awarded to RIRDC under the Community Networks and Capacity Building (CNCB) Program, a component of Australia's Farming Future, which aims to build the leadership and representative capacity of specific target groups to strengthen the productivity of primary industries and community resilience to climate change. These groups include women, young people, Indigenous Australians and people from culturally and linguistically diverse backgrounds.

Senate Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2010

Agriculture, Fisheries and Forestry

Question: RIRDC 07

Division/Agency: Rural Industries Research and Development Corporation
Topic: IP and Gene Patenting - The Council of Chairs
Hansard Page: 107-108 (25/05/2010)

Senator COLBECK asked:

Senator COLBECK—Mr McAllister, is there a piece of research, a paper or something that is going to come out of that process that might inform the inquiries that are being undertaken surrounding the issues of IP and gene patenting and things of that nature? Obviously it does have some potential implications for the research work that is done. I think that is the foundation. The fact that the chair's committee is looking at it is a good thing, but will there be some comment, paper or piece of research coming out of the processes occurring at the chair's level?
Mr McAllister—I am unaware of that because I do not participate in the chair of chairs. I have only been to one meeting, so I am not fully across that.
Senator COLBECK—Perhaps we could ask you to take that point on notice and come back to us, because it is an issue that is of interest to members of the committee. That actually deals with Bill's issue in the sense that it is being addressed in a form, but the question of what will come out of it being addressed is the thing that we need to get an answer on.
Mr McAllister—Yes.

Answer:

The Council of Rural Research and Development Corporations is not currently undertaking any specific work in relation to the issue of Intellectual Property (IP). However, the Primary Industries Standing Committee Research and Development Subcommittee is undertaking an examination of IP issues in the context of the development of the Research, Development and Extension Framework.

Senate Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2010

Agriculture, Fisheries and Forestry

Question: RIRDC 08

Division/Agency: Rural Industries Research and Development Corporation
Topic: Gene patenting
Hansard Page: 108 (25/05/2010)

Senator HEFFERNAN asked:

Senator HEFFERNAN—I would like to make it explicitly clear that the research industry for agriculture needs to come to terms with patents that do not define the inventive step away from the discovery. The gene is the discovery; the work on the gene, the methodology and the outcome are the invention, but the patents that have been granted now to Monsanto and other people are locking up access to the gene. So Billy Bloggs cannot have a crack at it, if he is a one-man operation, unless he pays someone.
ACTING CHAIR—Is there actually a question here? This is estimates, not speech time.
Senator HEFFERNAN—Yes, but I just want to make sure you understand what the problem is.
Mr McAllister—I understand.
Senator Sherry—We are taking it on notice—the extent to which the chairs meet and consider this issue— and we will respond.
Senator HEFFERNAN—My question then is: having done that, could you come back to this committee with an impact statement on the potential damage of those broad patent applications succeeding in access to the gene?
Senator Sherry—It is not the remit of RIRDC to do impact statements at your request. They will come back with as much relevant information within the ambit responsibilities of RIRDC. We will take that on notice and they will do their best to come back and report on the information they can make available.

Answer:

RIRDC has recently completed a study which explores the trends in the patenting of plant and animal related innovation in Australia, the United States and Europe. In addition to these trends, the complexities and issues surrounding patent law (in regards to these sectors) is examined. The report includes considerable discussion on the scope of patents on genes in Australia, the United States and Europe, and the implication of this on research and innovation. This report is called *Recent Trends in the Patenting of Plants and Animals in the United States, Europe and Australia* and is available on the RIRDC web site at:
https://rirdc.infoservices.com.au/items/09-062

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ANSWERS TO QUESTIONS ON NOTICE

Budget Estimates May 2010

Agriculture, Fisheries and Forestry

Question: RIRDC 09

Division/Agency: Rural Industries Research and Development Corporation
Topic: Funding from Land and Water Australia and DAFF
Hansard Page: 108-109 (25/05/2010)

Senator COLBECK asked:

So can we get a split up of how much funding came from Land and Water Australia and how much came from DAFF, and the respective obligations that came with that funding along with the list of projects that RIRDC has had to relinquish because of the overall budgetary constraints?

Answer:

RIRDC received additional funding of $0.753 million from the Department of Agriculture, Fisheries and Forestry for delivery of a number of projects in 2009–10 in the National Rural Issues portfolio and $1.597 million from Land and Water Australia.

In response to the Australian Government's decision to reduce RIRDC's appropriation in 2009–10 by $3.1 million, RIRDC reduced its activities in the following areas:

- New Rural Industries portfolio - total savings of $1.1 million from projects in the New Plant Products; New Animal Products; Wildflowers and Native Plants; Essential Oils and Plant Extracts; Rare Natural Fibres; Bioenergy, Bioproducts and Energy; and Tea Tree Oil programs.
- Established Rural Industries portfolio– total savings of $0.2 million from projects in the Rice R&D; Matching Fodder Crops; and R&D Support – fodder crops programs.
- National Rural Issues portfolio – total savings of $1.6 million from projects in the Global Challenges; Food Integrity and Biosecurity; and Community Resilience programs.
- Corporate portfolio – total savings of $0.2 million from Human Resources; Information and Communication Technologies; Communications; and Governance.