

SUBMISSION FROM OFA/SASA FOR PRODUCTIVITY COMMISSION'S REVIEW OF RURAL R&D

We are providing comment in regards to the following Draft Recommendations:

DRAFT RECOMMENDATION 6.1

The Australian Government should retain a modified Rural Research and Development Corporation (RDC) model.

- **It should establish and fund a new RDC, 'Rural Research Australia' (RRA) to sponsor non-industry specific R&D intended to promote productive and sustainable resource use by Australia's rural sector.**
 - **RRA's remit should broadly encompass land, water and energy use, with the precise coverage of its activities determined having regard to the further input to this inquiry.**

AND

DRAFT RECOMMENDATION 8.1

Principles to guide the future operation of the RDC program. As a condition of receiving government funding, Rural Research and Development Corporations (RDCs) should:

- **invest in a balanced project portfolio that includes longer-term, riskier and potentially higher-reward research, as well as short-term, low-risk, and adaptive research**

RESPONSE:

We would like to strongly support the development of a new RDC, namely Rural Research Australia. We think that the creation of such a RDC may go some of the way to readdressing some of the unbalance that currently exists in the current funding of organic agricultural research in Australia. We believe it is fundamental for a new agricultural body of funding to focus on how to achieve the best outcomes for sustainable, long-term agricultural research in Australia. We have provided some comment below on these areas that the Productivity Commission may find useful.

Reasons for Government Involvement in Organic Agriculture

Enhancing or encouraging the adoption of ecologically sustainable agriculture has not been seen as a priority in Australia in the past, and indeed government and industry policies have undermined farmer incentives to invest in sustainable agriculture. Apart from correcting the impact of previous government involvement, it seems likely that government involvement in organic farming is warranted because of its public good characteristics, which are elaborated upon in the next paragraph.

There is a very wide literature that has examined all the spillovers that exist with organic agriculture. In brief summary, organic farming has been found to exhibit high levels of sustainability, as compared to conventional farming (MacRae et al., 1990; Rigby and Caceres, 2001, Wheeler and Crisp 2010), with environmental benefits in reduced pesticides, improved soil conservation, enhanced biodiversity, improved air and water quality (Conacher and Conacher, 1998; Eltun et al., 2002; Pattison et al. 2008, Kasperczyk and Knickel, 2006,

Wood et al. 2006, Pattison *et al.* 2008). There also seems to be some personal farmer benefits in terms of health and wellbeing (Rickson et al., 1999), animal welfare benefits (Conacher and Conacher, 1998; Lund and Algers, 2003), positive regional externalities (Lohr, 2005) and food quality benefits (Brandt and MØlgaard, 2006).

The existence of externalities in the practice and research of organic farming means that it is harder to create property rights around it as compared to other agricultural activities. Research into organic farming systems is often unpatentable research, because of its' holistic nature (Jennings, 1997). The public good nature of organic agricultural research means it feeds back to forming new knowledge and can create an 'appropriability problem' and research and development may be considerably less than socially optimal (Nelson, 1959; Arrow, 1962). For farmers that develop new farming methods that cannot be patented, there is little incentive to transfer their knowledge to others if they cannot capture appropriate returns and will also incur large transaction costs in the process. There is a strong argument that transaction costs for organic farming are considerably higher than transaction costs for conventional farming because of the availability (or lack of) information. Traditionally, many public extension departments have not provided information about organic farming techniques (Marshall, 1991), and this is still the case for many states in Australia. For farmers who wish to convert, they have to spend a much longer time collecting, deciphering and adapting sustainable farming information, increasing the transaction costs involved with adoption.

Current Situation for Organic Research in Australia

There is a wide disparity in Australia of the research funds that are provided for organics versus conventional agriculture. Worldwide, research on organic farming slowly increased in the 1970s and 80s, and rose steadily in the 1990s and 2000s (albeit from a very low base) (Jennings, 1997, Lipson, 1998, Watson and Atkinson, 2002, Watson *et al.*, 2008). There has been a small provision for research on organic farming in Australia from 1996 onwards through the Rural Industry Research and Development Corporation (RIRDC). From the late 1990s, other mainstream funding bodies such as the Grains Research and Development Corporation (GRDC) started funding limited organic research (Neeson, 2001). The actual amount spent on organic farming research is extremely small (Pillarisetti, 2002). Wynen (2003) found that in 2000-01, the dollar amount of money spent on organics was estimated to be at least 40% less than the amount actually collected from organic farmers' contributions to R&D. The dollar amount spent on organic farming represented 0.0004% of R&D expenditure in agriculture, veterinary and environmental science in 2002-03, which was far less than the current adoption of organic farming across Australia, as well as being far less than the amount organic farmers pay in levies.

Another issue for organic research is that it seems to be the first agricultural funding to be eliminated in times of budgetary pressures by all research bodies. For example, GRDC dropped its funding for organic projects because of drought in the mid to late 2000s and current RIRDC budgetary cuts have meant they have eliminated their organic systems research area after the current round of project funding finishes in 2010-11. There needs to be some equity or reallocation in place for investment in various systems of agricultural research.

Guidelines for Future Sustainable Agricultural Research in Australia

Having information is one of the major positive influences on why farmers adopt sustainable innovations, hence this is why it is critical to have strong institutions in place that can create the right incentives for sustainable research. Agricultural R&D has traditionally played a large role in creating new ways to deal with environmental problems, and increased research will lead to more understanding about the nature of agricultural environmental problems and ways in which sustainable innovations (such as biological innovations, systematic research, natural resource management practices, or integrated nutrient/pest management and organic farming) may help reduce the problems. We need to incorporate comparative research, systems research, holistic and reductionist research approaches and trans-disciplinary methods. Such research is long-term, it is riskier, it involves combining disciplines and personalities but it will be more beneficial for potential outcomes in the future. It is our hope that the current RRA model will seek to move agricultural research in this area for the future gain of Australia.

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