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A supplementary Submission from the Conservation Agriculture Alliance of Australia and New Zealand to the following 'Terms of Reference'

As a point of clarification following questions from the panel during evidence provided on July 14 2009, CAAANZ would like to submit the following supplementary comments.

CHAIR—Should there be better ways to help farmers to be innovative in that way? I do not know what techniques there are. I suppose it is a claim on you, as a cost of making your income, but I am just thinking about ways that could assist farmers to do that.

The Committee to inquire into and report upon:

Current and prospective adaptations to the impacts of climate change on agriculture and the potential impacts on downstream processing.

The role of government in:

- augmenting the shift towards farming practices which promote resilience in the farm sector in the face of climate change;

As outlined in our first submission farmers are often leading the development of sustainable farm practices. They do this by solving many logistical problems associated with new practice changes recommended by other farmers or from extended research.

A recent example is the transfer of innovative wide row legume practices from Victoria to South Australia.



Victorian No-Till Farmers Association (VNTFA) member Rob Rudwoldt explains his wide row legume system to visiting members of the South Australian No-Till Farmers Association (SANTFA).

After being inspired by Mr Rudwoldt, South Australian Farmer Dan Wandel undertook a substantial wide row beans trial on his Blyth property in 2008 (Mid North of SA). The wide row beans yielded nearly double that of the traditional row spacing which was an outstanding result given the tough seasonal conditions and the reduced input costs. A case study detailing Mr Wandel's experience was published in the SANTFA No-Till Journal in January 2009 and several other local growers have subsequently implemented wide row beans for the 2009 winter season. Many local growers will be visiting and learning from Mr Wandel during SANTFA's 2009 cropwalk program. Within the next 3 years it is anticipated that wide row beans will be a common practice in the region.

The significant practice change outcomes of this example are derived from an innovative farmer prepared to share his knowledge, another farmer prepared to listen and learn, and from the co-operation of the No-Till farmer groups under the CAAANZ banner. This has been very a cost effective mechanism, relatively low risk and delivered outcomes that growers do want to know about in the face of climate change.

Another example of grower innovation coupled with targeted extension is drawn from the use of 'Global Positioning Technology' and 'Control Traffic' farming. These technologies have been a key platform for minimising resource inputs such as fuel and has provided improved soil health by minimising compaction. However, problems have arisen in that continuous passes of heavy machinery over the same tracks can cause deep ruts in certain soil types that affect drainage.

Valuing the benefits of this shift in farming practices but also recognising the inherent problems associated with changes. Farmers have very often sought their own solutions to managing problems that would otherwise limit uptake of beneficial farming practices. They do this from their own resource and communicate it to other growers via grower groups such as the CAAANZ members.

Paddocks ruts on black soil flood plains as seen below saw a local farmer developed a prototype machine that assists in renovating wheel ruts when they become too much of a problem.



The invention is not a commercially developed product, nor was it developed in research facilities. It is however gradually being adopted by other farmers to renovate problem paddocks.

Other examples include:



A home made planter by Robert and Peter Bach following a study tour of the US



David Gooding discusses his modification to his MaxiMerge planter

This type of cross regional knowledge exchange and local problem solving done by farmers would represent one of the most cost effective extension mechanisms available. However such communication and extension system has no base funding of its own and would benefit greatly from the direct support of government by investing in farmer organisations. A recent independent analysis by Agtrans for the GRDC on the value of investment dollars into a CAAANZ member farmer organisation over 9 years indicated;

".. investment in no-till farming research has found that the Corporation's \$9 million investment has returned \$327 million in benefits to the grains industry – a benefit-cost ratio of 36 to one.'

"The most important characteristic of the investment has been its integrated R&D and extension nature. This has undoubtedly led to quicker and more effective application of no-till technologies. The investment has raised awareness of no-till opportunities and benefits and provided greater confidence to those willing to undertake change."

"The outcomes in this case are also a credit to the highly professional approach taken by the members and researchers involved at WANTFA."

This type of R&D combined communication support between farmers via grower groups allows farmers to be involved and help each other solve problems that arise from changes in the farming system.

- promoting research, extension and training which assists the farm sector to better adapt to climate change.

The concept that farmers can assist each other is well documented and CAAANZ recommends that governments invest directly in supporting communication activities by grower groups with financial members. This would provide excellent return on research investment (Agtrans 2009 - Impact Assessment: An Economic Analysis of GRDC Investment in Western Australian No Tillage Farming Association) by allowing a mechanism for research extension. Most grower groups have strong on ground farmer support but limited resources, relying mainly on farmer subscription, to compete for project tenders when compared with highly resourced government institutions and corporations.

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