

Agricultural Competitiveness White Paper Submission - IP626  
Central West Farming Systems Inc  
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## “Farmers Advancing Research”

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### AGRICULTURAL PRODUCTIVITY WHITE PAPER SUBMISSION April 2014

#### Background

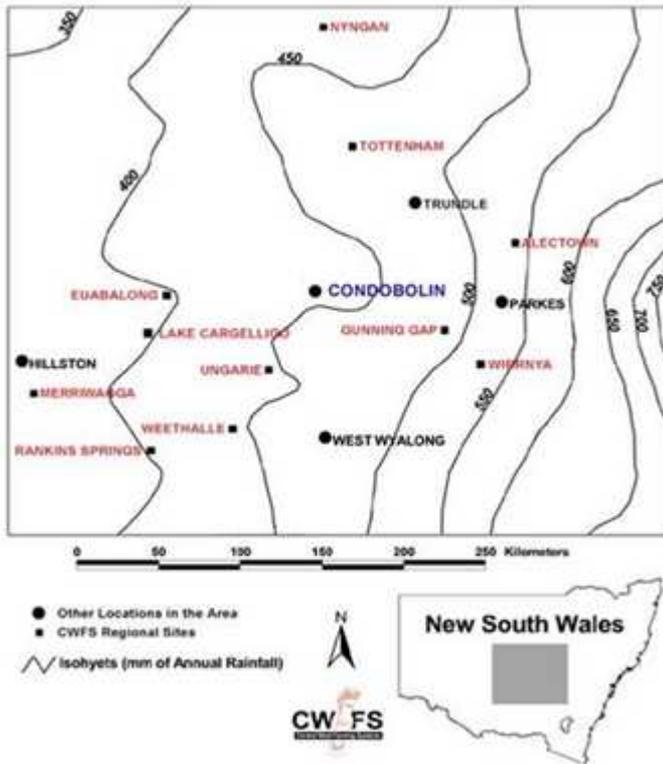
Central West Farming Systems (CWFS) is an independent, membership based, farmer driven, not for profit Agricultural research organisation which covers an area of over 14 million hectares in the low rainfall (300-550mm) mixed farming zone of Central Western NSW. Formed in 1998, CWFS boasts a current membership of over 400 members and is composed primarily of local farmers and is supported by advisors and researchers from both the private and public sector(s) and agribusiness.

The principle aim of the organisation is:

*“To be the leading regional group effectively demonstrating, extending and promoting farming innovation to assist farmers manage their businesses for long term economic, social and environmental viability.”*

As an organisation, our primary goal is to conduct independent research and facilitate the delivery of outcomes - as well as other relevant information - to our members, project partners and the broader Agricultural community. This is achieved via our highly reputable publications, field days, workshops and other targeted extension activities.

CWFS is based at the Condobolin NSW Department of Primary Industries Agricultural Research Station; however further research and extension activities are conducted at 11 regional trial sites located within a 250 km radius of Condobolin. These regional sites are run by local member committees which meet regularly to set the direction for locally relevant research and extension activities (strong “hands on” over the fence learning). These 11 trial sites further provide the opportunity for CWFS to conduct nationally relevant Agricultural focussed research, enabling the comparison of Agricultural variables between the ranges of rainfall, soil type and farming systems unique to this part of the NSW.



In August 2013, CWFS was granted NSW Ministerial approval to take over management of the 112 Ha Lachlan Irrigation Research & Advisory Council (LIRAC) Site at Condobolin and have commenced irrigation RD&E activities for the 2014 season. The Lachlan Valley has been through a decade of limited to zero irrigation water allocations. With water allocations reinstated, this has created an exciting opportunity for the site to be used to showcase the latest irrigation technologies and techniques.

CWFS has, and continues to, address a large number of projects.

- Stubble Initiative, soil acidity, sow early, a number of Action on Ground projects (including soil carbon & soil health), Crop Sequencing, Women and Youth forum, Rain n Grain n Stubble - to name a few.

Funding is received from a number of sources, including GRDC, Dept of Agriculture, Vincent Fairfax Family Foundation, Woolworths, Landcare Australia, CSIRO, and collaborative projects. CWFS collaborate on projects at a national, state and regional level with universities (including University of Adelaide, SARDI, Charles Sturt University, University of South Australia), State Government Departments (eg NSW DPI, CMA's), private industry and other farming systems groups with the aim of ensuring all locally relevant issues faced by the farming community are addressed.

CWFS is currently representing farming systems nationally in the development of a CRC, and is a founding member of the GRDC funded Low Rainfall Collaboration Group (LRCG). This group combines representatives from the 5 low rainfall farming systems groups, including CWFS (NSW); Birchip Cropping Group, Mallee Sustainable Farming (Vic); Eyre Peninsula Agricultural Research Foundation, Upper North Farming Systems (SA). LRCG has been a highly successful model and is now used as the base model for group development. The strength of LRCG has been not only the widespread geographical diversity of the regions which are represented, but also the issues pertaining to low rainfall agriculture and the strength of the network which has been developed.

## Why is CWFS writing this submission?

CWFS believes continued agricultural RD&E is a critical factor for a competitive and productive agricultural industry. The White Paper Taskforce identified in its workshop the “*Efficiency & competitiveness of inputs into agriculture value chain – skills, training, education and human capital, R&D and critical infrastructure*” as an issue to be addressed. This submission seeks to provide input into future policy development around RD&E issues.

Current research has shown “that the single, most important factor separating countries that have successfully sustained long term productivity growth in agriculture is their capacity for R&D” (US Dept Of Agriculture’s Economic Research Service 2013:361). Countries with national research systems capable of producing a steady stream of new technologies generally achieve higher growth rates in agricultural TFP (total factor productivity). Policies that improve economic incentives for producers, strengthen rural education and agricultural extension services, and improve rural infrastructure and markets are factors that have been identified as increasing agricultural TFP (US Dept of Agriculture’s Economic Research Service 2013: 361). Over the last decade, state governments have withdrawn from agricultural extension services, CSIRO has significantly reduced its agricultural activities, and agricultural RD&E funding is declining year by year. Farming Systems groups are cost effective for RD&E activities but require some type of core funding from government (at both levels) to meet the increased demand being placed upon them.

CWFS pilot programs which are aimed at raising awareness of the many facets of employment in agriculture, long term sustainability and succession planning for farming systems groups in RD&E. We believe the Agricultural Productivity White Paper can incorporate these pilot projects easily and cost effectively to increase agricultural productivity and long term growth in this industry.

These pilot programs include:

### Traineeship program –

CWFS (and many other industry stakeholders) has identified a major impediment to the long term sustainability of the agricultural industry as the lack of younger generations attracted to a career in the agricultural sector. To address this, CWFS is undertaking a mentoring role for 2014 Year 11 & 12 students at Condobolin High School through the Beacon & Vincent Fairfax Family Foundation community supporters program. These students will then be included in CWFS RD&E activities with potential traineeship being offered at the end of their schooling. This would be a 12 month cycle – participants would then be encouraged to join other farming systems groups or industry stakeholders for future employment or tertiary studies. CWFS will pilot this model for 2014 and intends to include the Low Rainfall Collaboration Groups in 2015. The aim of this pilot is to make this model available nationally to all Farming Systems groups in 2016. Not only will this help the agricultural sector but also the rural communities by encouraging and supporting local youth employment.

A second aspect of this program is the proposed development of a Graduate training level. Ag. Science graduates are often unfamiliar or lack appreciation for the many and varied requirements necessary to undertake an agronomic research position. Training currently, even at university, focuses on information transfer rather than giving a grasp of skills needed in the field; however developing a ‘hands on’ perspective would provide an important link between technical information and real life agronomic work. Both the CWFS traineeship program and the CWFS Women & Youth in Agriculture model will support this training. For example, CWFS has a strong focus on soil management (which supports the National Soils

RD&E Strategy), and this could serve as a basis for trainees to begin their practical education.

### Women & Youth in Agriculture project

Rural women play a significant role within farming enterprises in rural areas - support, training and education will only further assist businesses. It is imperative women have a good understanding of the environment the business operates in, and how to increase profitability and productivity.

To this end, CWFS has responded to a growing need to access expertise to provide education and support for women and youth. The CWFS “Rural Women & Youth in Agriculture – Building a Sustainable Future” project aims to upskill and increase awareness of sustainability in agriculture by encouraging women and youth more fully in all aspects of this industry. Highlighting the social dimension and the key linkage of women in the social environment area needs to be acknowledged and understood to break down barriers for women in the agricultural industry. A number of specific workshops designed around various issues identified by our established women’s group (>360 women on database) including marketing, communication, new technology, livestock agronomy and cropping practices.

This links closely with the CWFS’ youth extension activities. CWFS have already included a number of high school students in activities at their local CWFS regional sites; including preparation and sowing of trials, maintenance and harvesting. Students have been able to see firsthand how RD&E activities and equipment is used.

Youth involvement in the agricultural industry is necessary to maintain Australia’s long term food security and sustainability. This pilot project is proving to be an exciting opportunity for students and teachers as it not only incorporates components of the current curriculum, but provides new learning experiences (eg plot seeders and harvesters are not the usual type of equipment students are exposed to).

CWFS has seen the benefit and enthusiasm of participants, and intends to author a paper on this project to encourage industry stakeholders to adopt this model. CWFS believes that Government funding should be directed towards the implementation of this model for industry stakeholders (particularly at a non-tertiary level).

Another component to this model has been the integration of a highly successful “Corinella Dreaming” model. This project has been incorporated into the curriculum at Corinella Public School NSW. The program has been recognised internationally at the Kids Teaching Kids (KTK) Conferences in Adelaide and Melbourne, with students presenting their trial work at those Conferences.

“Corinella Dreaming” has been included as a case study in the Review into Agricultural Education and Training in NSW developed by Prof. Jim Pratley.

### **Conclusion:**

It is widely accepted that over the fence learning is more adoptable by farmers. This type of RD&E is utilised by farming systems groups when identifying and addresses issues. Farming systems groups have developed the expertise to show farmers where the value lies in adoption of practices (ie where the benefit lies in what is being trialled) and therefore increase agricultural productivity.

CWFS funding – A cost effective and easily implemented agricultural productivity strategy would be support for the pilot programs described above. CWFS currently collaborates with many farming systems groups and industry stakeholders, and aim to roll out these initiatives at a national level.

It is imperative any future policy targets increasing the capacity for RD&E at a national and state government level. Research capacity and extension and education capacity have been found to be major constraints on productivity growth (Fuglie in *Agricultural Policy Monitoring & Evaluation* 2012:72).

A major impediment for a productive agricultural sector is the lack of long term funding for RD&E projects. For example, the CWFS Youth in Agriculture project requires a minimum of a 6 year funding cycle as participants begin at the Year 11/12 level and continue through to University, TAFE or informal apprenticeship to complete their training as Graduates or fully trained Agricultural Technician. Development and implementation of innovative programs to overcome agricultural challenges takes time, and policy makers need a long term perspective for the successful rollout of policies.

Many countries have neglected agricultural education and young people are less inclined to work in this sector. This is problematic with insufficient human capital, and an increasing disconnect between farmer knowledge and research & extension; which results in the lack of adoption of innovative practices by farmers (*Agricultural Policy Monitoring & Evaluation* 2012: 81)

#### References:

*Agricultural Policy Monitoring & Evaluation*, 2012. 'Fostering innovation and productivity growth in agriculture' in *Agricultural Policy Monitoring & Evaluation* 2012 OECD Countries, Part 1, Chapter 2, pp. 72, 81.

US Department of Agriculture's Economic Research Service, 2013. 'Productivity Growth in Global Agriculture' in *Population and Development Review* 39(2): (June 2013) pp. 364, 365.

*Review into Agricultural Education and Training in New South Wales Report* July 2013 (see pages 64-66)

#### **Provide contact details:**

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**Public release – Agree.**