

The new age of rice extension in Australia

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Oral presentation

Key Words

Innovation, adoption, decision-support

Introduction

Rice growers in Australia have traditionally been quick to adopt new research and technology but the old system of extension has changed and a restructure of extension delivery was required. Connecting commercial agronomists, researchers, industry and growers in a coordinated approach to rice extension has been the focus of the new Rice Extension program. These groups are coordinating their efforts and focusing on productivity, efficiency and competitiveness through the adoption of new technology and innovative practices.

The Australian rice industry is under pressure to make changes to the way rice is grown. Improved water productivity is a priority for the Australian rice industry and the adoption of technologies and innovations in water management will alleviate limited water supply issues as a result of drought, climate variability and increasing competition from other irrigated crops. Maximizing the tonnes of rice grown per ML of water will increase production and improve the consistency of supply which will improve the profitability, sustainability and marketability of the Australian rice crop and will provide improved returns to rice growers.

Government commitment to support for rice industry extension has declined over the last 10 years. The loss to the rice industry of the state Department of Primary Industries district agronomists and the Australian Government's regional coordinators under the Environmental Champions Program forced the rice industry to re-assess investment in extension. Levy funds are collected from those growing rice and matched at a specified level by the Australian Government through the Rural Industry Research and Development Corporation (RIRDC). The Rice Research and Development Committee (RRDC) of RIRDC therefore decided to commit funding for a coordinated and collaborative extension system. Extension was considered vital to ensure relevant research and development information reaches rice growers in a way that it can be readily understood and practically implemented on farm.

Extension to rice growers has been more effective by coordinating the resources of the commercial agronomist network as well as private and public sector experts. Adoption of new innovations and technologies will improve the competitiveness and sustainability of rice farming systems. The new age of extension in the rice industry is well placed to ensure better outcomes for the Australian rice industry in the future.

Results and Discussion

Delivery of extension in the rice industry involves working closely with the team of researchers, industry and advisors. Understanding of growers' needs and converting the outputs from research and

development to be relevant and adoptable on farm is a high priority. The relationships forged with industry, growers and commercial and public sector agronomists have ensured a feedback mechanism for identifying new issues. These new issues can then be addressed with targeted research and development programs. Rice Extension input into the tailoring of research and development also assists in the delivery of adoption pathways with practical outcomes that relate to production at the farm level.

Support for projects that promote the Australian rice industry's environmental sustainability practices with international recognition are important for the extension system to deliver as they are not often a priority of other industry stakeholders. The promotion of Australia's high quality, clean, 'green' food production allows access to premium markets, and ensures industry sustainability in the long term.

New innovations and technologies are becoming accessible to rice growers. Rice breeding has targeted shorter season, cold tolerant varieties with high yields while using less water. Rice agronomy research has developed agronomic packages for growing rice with improved yields and less water use. Growers can now achieve 1.2tonnes of crop per megalitre of water. Rice can now be an option for a double cropping farming system which will further improve water productivity and whole farm profitability. Precision agriculture developments in farm machinery, imagery and technologies in automation have contributed to lifting the water use efficiency and crops yields. Managing the farm business is being refined with sophisticated farm software packages and decision support tools readily available on smart technology. Grower innovation in water management and crop management has increased yields while reducing costs. The adoption of these new technologies and innovations on- farm is a major focus of the Rice Extension team.

The production of online decision support tools on smart devices, hard copy guides to keep in the farm work vehicle, publications to read at the table at morning coffee and timely, targeted updates via email have underpinned the program of support for the grower and their agronomist. Hands-on, face to face sharing of new innovations and management practices through field walks, discussion groups and workshops have been employed effectively to improve on farm adoption.

Conclusion

Extension in the Australian rice industry has changed. Now a coordinating approach utilises new technology and public and private service providers to best inform and incite rice growers to adopt new practices. The extension system is more focused on rice in the farming system, environmental sustainability and the adoption of the most up to date research and development. The new extension system has been successfully operating over the last two and half years, after the decision to fund rice extension through the industry levy system managed by RIRDC. An effective extension system was considered essential for improved uptake of rice research outputs on farm.

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