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Cover page

Title	Modern Extension and Technology Transfer Methodologies – public and private perspectives and approaches in Australia.
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Abbreviations	Cotton CRC (Cotton Catchment Communities Cooperative Research Centre)

Modern Extension and Technology Transfer Methodologies

– public and private perspectives and approaches in Australia.

Abstract

The delivery of extension services in Australian agriculture has been provided by public and private organisations and agencies for many years. Whilst traditionally a public role of government agencies such as state departments of agriculture, there has been a rapidly increasing engagement of private service providers in the past 20 or more years. Extension in the Australian cotton industry has always involved a public private sector mix in which professional crop consultants and agribusiness organisations have provided critically important crop management services with a dominant emphasis on pest management to cotton growers. Public sector services focussed on regional and national issues have been provided by the state departments of agriculture in a partnership with industry research and development organisations particularly the Cotton Research and Development Corporation (CRDC), the Australian Cotton Growers Research Association (ACGRA) and the three Cooperative Research Centres since 1993. The informal collaborative arrangements of earlier years have been further developed through the Cooperative Research Centre (CRC) partnerships and more formalised in the current Cotton Catchment Communities CRC, an incorporated joint venture including partnerships with public and private participants and affiliates providing extension services. This paper provides an overview of public and private perspectives and approaches in Australia for panel discussion during the Modern Extension and Technology Transfer Methodologies Discipline opening session.

Keywords

Best Management Practice

Extension

Introduction

Public and private sector extension perspectives in Australian Cotton Industry

The delivery of extension services in Australian agriculture has been provided by public and private organisations and agencies for many years. Whilst traditionally a public role of government agencies such as state departments of agriculture, there has been a rapidly increasing engagement of private service providers in the past 20 or more years. Extension in the Australian cotton industry has always involved a public private sector mix in which professional crop consultants and agribusiness organisations have provided critically important crop management services with a primary emphasis on pest management to cotton growers. Public sector services focussed on regional and national issues have been provided by the state departments of agriculture and primary industries in a partnership with industry research and development organisations particularly the Cotton Research and Development Corporation (CRDC), the Australian Cotton Growers Research Association (ACGRA) and the three Cooperative Research Centres since 1993. The informal collaborative arrangements of earlier years have been further developed through the Cooperative Research Centre (CRC) partnerships and more formalised in the current Cotton Catchment Communities CRC, an incorporated joint venture including partnerships with public and private participants and affiliates providing extension services.

Extension service delivery Australia

Extension service delivery has been the subject of several studies in Australia in recent years. Recently, most have been coordinated by the Cooperative Venture for Capacity Building in Rural Industries (CVCB) project managed by the Rural Industries Research and Development Corporation for its partners. The Cotton Research and Development Corporation is a partner.

A CVCB study, Mapping Rural Industry Service Providers, Roberts *et al* (2005), reported that, generally, service providers provide information, research, technology, skills and other processes to land managers to facilitate positive change. This report referred to Fulton (2003) who indicates that service providers include:

- public sector extension officers (e.g. in departments of primary industries and agriculture, Landcare, Bushcare, Waterwatch)
- private sector consultants (e.g. management, finance, taxation advice)
- agribusiness field officers
- product sales advisers
- stock agents
- scientists and researchers.

Roberts *et al* (2005) suggested that another way to gain a picture of the extension environment is to look at the different organisations that are concerned with service provision. There are the traditional institutions which include State and Federal governments, universities and research institutions.

Recently, other organisations have taken a more prominent role, including:

- farmer organisations
- seed, fertiliser and chemical companies
- local government
- marketing boards
- research and development corporations
- cooperative research centres (Marsh and Pannell, 1998).

The report by Roberts *et al* (2005) continued citing work by Roling (1988), Nettle (2003) which provides a highly useful snapshot of the nature of the extension field and its broad directional thrust:

"Although definitions of extension are continually being contested and modified, in general, extension is an intervention (premeditated, planned, systematically designed, goal directed purposeful activity), extension uses communication as its instrument to induce change, extension can be effective only through voluntary change, extension focuses on a number of

different target processes and outcomes which distinguish it from other communication interventions (2003: 16)."

Although the term "extension" is elusive to define precisely, and definitions that emerge are generally broad in nature, to encompass the diverse range of extension mandates, roles and responsibilities, it is useful to refer to work by Coutts (1994). He notes that extension can exist at two ends of a spectrum, from persuasive extension at one end, to facilitative extension at the other. Persuasive extension assumes that there is an established, correct way of doing things and that the role of the extension officer is simply to present the new knowledge (techniques, processes, skills etc.) in a manner that ensures the rural producer or land manager adopts them more or less unquestioningly. The facilitative model has gained increasing prominence in recent times, with the express belief that extension will be most successful in those circumstances where rural producers and land managers, who face certain challenges and imperatives to change, can draw upon their own experience under the guidance of service providers.

In later work, Coutts (1997) identified five approaches to extension in Australia providing a more precise understanding of what extension actually entails. These categories have been slightly modified by current work by Coutts *et al.* (2003). The five models identified on the basis of their underlying philosophies and the way they operate are:

The facilitation model, where participants increase their own capacity in planning and decision-making and in seeking their own education and training needs based on their situation. Groups may undertake their own research. The project will often provide or fund a facilitator to help groups define their own goals and learning needs and to help them realise these.

The technological development model, where individuals work together to develop specific technologies, management practices or decision support systems which will then be available to the rest of the industry or community. It often involves local trials, demonstrations, field days and on-site visits.

The training model, where specifically designed training programs and workshops are delivered to targeted groups of landholders, community members, government personnel and others to increase understanding or skills in defined areas. These can be delivered in a variety of modes and learning approaches.

The information model, where individuals and groups can access a broad range of information from a distance at a time that suits them. It can be based on a website, information centre or other centralised locations.

The consultant model, where a mentor or consultant works over time with an individual or community to improve their managerial, technological, social or environmental situation.

Each of the models have been adopted by both private and public service providers according to program and industry needs.

Extension service delivery in the Australian cotton industry

Research and extension funds for the industry (grower levies matched by Commonwealth government funding) are channelled through Cotton Research and Development Corporation (CRDC). The Cotton Catchment Communities Co-operative Research Centre (Cotton CRC) is charged with responsibility for delivery of research and extension services for the industry. Funding for the Cotton CRC is provided by government as well as CRDC and partner organisations which include research institutes, private companies and NRM bodies. The extension group within the Cotton CRC consists of regionally-based staff supported by a network of specialist extension positions in NRM, water use efficiency and education.

The Australian cotton industry is implementing a voluntary Best Management Practices (BMP) program. The program is owned by CRDC and Cotton Australia, the prime grower advocacy body for the Australian cotton industry responsible for its delivery. This delivery is undertaken by Cotton Australia's Grower Services Managers located in the cotton-growing areas.

Industry extension officers work with Cotton Australia to support the implementation of the BMP program which provides an ideal framework for the delivery and adoption of information and management strategies as growers develop and implement management action plans.

In 2004, Cotton CRC conducted a project conducted by Callan *et al* (2004) to determine how information and knowledge about water management and water use efficiency was being used and managed in irrigated cotton and grains. The outcomes of the project are equally applicable to all aspects of cotton production. It indicated that, in regard to the roles of public and private service providers, growers and consultants had similar perceptions, but with some differences in their emphasis. Growers described the public providers' (research and extension) role as being about identifying growers' needs, and having research completed and communicated back to growers to address their needs about irrigated crops and related issues. Consultants spoke more about the role being limited to having research commissioned and communicated back to the industry, with the implication that the consultant's role was more about identifying growers' needs than it was for the public provider. Consultants believed that they played a more hands-on role or day-to-day role in working with the grower to decide and to implement the crop and water management strategies for the season. At the same time, growers expected to see a cooperative relationship between consultants and extension. In general, growers and consultants felt that there was a lot of cooperation though the sharing of materials and knowledge between research and extension providers and consultants.

The Cotton Catchment Communities CRC, an incorporated joint venture including partnerships with public and private participants and affiliates established in 2005, provides extension services as a key component of The Adoption program.

Key CRC partners engaged in extension delivery include:

- NSW and Qld Departments of Primary Industry
- Cotton Research and Development Corporation
- Australian Cotton Growers Research Association and its regional cotton grower associations
- Cotton Australia
- Cotton Consultants of Australia
- Cotton Seed Distributors
- National Resource Management Bodies and Catchment Management Associations.

Industry programs focussed on regional and national priorities have been developed under the leadership of the Cotton CRC Extension and Knowledge Manager in The Adoption program are delivered in collaboration with public and private partners.

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