

## **Success factors for Participatory Farming Systems projects – Field notes from the north**

DN Lawrence<sup>1</sup>, P Carberry<sup>2</sup>, ST Cawley<sup>3</sup>, JA Doughton<sup>4</sup>, D Herridge<sup>5</sup>

<sup>1</sup> Farming Systems Institute, Department of Primary Industries, Box 102 Toowoomba, Queensland

<sup>2</sup> CSIRO, Box 102 Toowoomba, Queensland

<sup>3</sup> Farming Systems Institute, Department of Primary Industries, Box 308 Roma, Queensland

<sup>4</sup> Farming Systems Institute, Department of Primary Industries, LMB 6 Emerald, Queensland

<sup>5</sup> NSW Agriculture, RMB 944 Tamworth, New South Wales

### **ABSTRACT**

This paper documents three participatory farming systems project teams' perceptions of the key success factors for good participatory RD&E projects. The relative importance of each factor is scored and the current level of achievement benchmarked. The factors of most importance were participation, communication and leadership. The factors of lesser importance were project focus and outcomes, evaluation and philosophies of RD&E. Reasons for the importance and achievement scores are explored and may provide insights to other farming systems projects on where to focus their efforts.

### **KEY WORDS**

Participation, farming systems, research, extension, evaluation.

### **INTRODUCTION**

Grains research, development and extension agencies in Australia are funding multi-disciplinary farming systems projects with researchers, extensionists and industry to overcome the perceived deficiencies of traditional transfer-of-technology methodologies for addressing complex issues of sustainable farming systems (5). These participatory farming systems projects are introducing methodologies that embrace action learning (AL) with farmer groups and build upon the farming systems research (FSR) and participatory action research (PAR) initiatives of international agricultural development programs.

While PAR gained increased attention within international development programs during the 1990s, until recently, Guerin and Guerin (1) considered relatively few Australian projects to have been applying PAR principles and concluded that the transfer-of-technology paradigm remained the cornerstone of Australian agricultural RD&E agencies. In their more recent review of FSR and its relevance to Australia, Petheram and Clark (3) suggested that modern FSR was more participatory and becoming more widely applied in Australia. They noted that programs were evolving rapidly and ranged in type from groups of farmers running trials involving local advisers, to more formal programs run by technical specialists who sought the participation of farmers to contribute and evaluate ideas from research stations, models or farms.

The farming systems projects in the northern grains region are part of this evolution. As some of the first formally established projects in this participatory, multi-disciplinary, systems genre in Australia, project staff may have some valuable insights into how best to make the transition from the established transfer-of-technology methodology to a more participatory approach. As these projects approach the end of their initial funding periods, project leaders attempted to draw upon members' perspectives to highlight factors critical to the success of participatory farming systems RD&E, and plan their future activities. The relative importance of the 'success factors' and the teams' perceptions of their own progress towards them may also provide a useful checklist and some hard won lessons for other participatory projects.

### **MATERIALS AND METHODS**

The leaders of the Western Farming Systems (Queensland), Central Queensland Farming Systems, and Eastern Farming Systems projects canvassed their teams' perspectives of the factors most critical to the success of participatory farming systems RD&E in Australia's northern grain region. The compiled list of

factors emphasised different aspects of the projects, reflecting each team’s approach and the difficulties faced by its members. For example, one submission highlighted the need for understanding farming systems principles and philosophies, another targeted evaluation and continuous improvement, while another emphasised operational aspects and team functions. The perspectives from each team leader were then collated into themes for discussion with funders and host agency managers. Themes included; philosophies of farming systems RD&E, project focus and outcomes, participation, evaluation, leadership, team structure and skills, organisational factors, and communication and reporting.

A mail survey was developed from the collated material. The survey asked individual team members to rate the importance of the resulting 67 success factors and the extent to which they believed the factor had been achieved by their own project team. Each factor was listed as a statement, with another brief statement to explain the rationale for the success factor (Table 1).

**Table 1. An example of the survey layout and rating scale.**

Example success factor	importance	achievement
8.5 team members clearly understand their roles and responsibilities – a clear understanding of roles and responsibilities is essential in projects with numerous staff.	3	4

Please use the following 5 point scale to rate both the importance and achievement for each success factor:

1 = very low; 2 = low; 3 = medium; 4 = high; 5 = very high

The survey was pre-tested with 6 team members and leaders, then refined and distributed to the 50 members of the projects. The 39 completed surveys provided an overall response rate of 78%, with only one person responding anonymously. The summarised results were interpreted by the project leaders and reported in this paper. Analyses of the survey by team members, funders and host organisation managers are not included in this paper.

## RESULTS AND DISCUSSION

Forty-three of the 67 suggested success factors had mean importance ratings of “high” to “very high”(Table 2). These 43 success factors spanned all of the eight themes included in the survey and may provide a useful checklist for conducting other farming systems projects. It should be noted that in the northern region, GRDC provides funds to the traditional RD&E agencies and not directly to farmers as in other regions. Despite this difference, many of the success factors are likely to apply to other projects.

“Participation” was the theme with the highest mean score for importance, followed by “communication and reporting” and “project leadership”. Themes with the lowest mean scores for importance were “project focus and outcomes”, “philosophies of farming systems RD&E” and “evaluation”.

### Participation

Participation has been a central concept of the farming systems projects and the teams rated their achievement of these factors quite highly. An exception was the collective interpretation of trial results by the teams themselves, which rated much lower than achieving farmers’ interpretation of results. These results surprised some of the authors of this paper. However, participation means different things to different people. Pretty (4) and others have described the different types of participation ranging from consultation where people consult others but maintain the decision making power, through to more interactive forms of participation where decisions on the content and process are shared between

stakeholders. However, team members' knowledge of these classifications and the types of participation that individuals in the projects are seeking vary enormously (2). These factors may explain the large variation in scores for the achievement of the success factors under participation, and emphasise the need for teams to develop a collective understanding of participation for use early in their projects.

### Communication and reporting

The importance of communication and reporting in these large projects is not surprising given the involvement of several institutions and multiple stakeholder groups. In fact, communication was considered by the project leaders to be an area that consumed much of their projects' time and resources. A particular challenge was internal communication, especially dealing with the relationships between individuals to achieve team-work across multi-disciplined and geographically-spread projects.

**Table 2. The importance and achievement of success factors for the northern Farming Systems projects**

<b>Success factors with a mean rating of "high" to "very high" importance</b>	<b>importance<sup>a</sup> (mean score)</b>	<b>ranked<sup>b</sup> importance</b>	<b>achievement<sup>c</sup></b>
<b>Philosophies of farming systems RDE</b>			
external funders <u>support</u> participatory FS RDE	4.5	6	+
external funders <u>understand</u> participatory FS RDE	4.0	17	-
host agency management support participatory FS RDE	4.3	10	+
team members are committed to participatory RDE	4.3	9	+
team believe participatory research can be quality research	4.0	18	+
<b>Project focus and outcomes</b>			
a common project vision is developed by team members	4.1	15	+
the "systems" under investigation are clearly defined	4.1	16	+

farm practices are clarified/described at the start of the project	4.3	9	-
--	-----	---	---

project has a clear focus on “quality not quantity”	4.3	7	+
---	-----	---	---

### **Participation**

project staff have developed trust with grower groups	4.5	2	+
---	-----	---	---

farmers have opportunity to define and prioritise issues	4.3	7	+
--	-----	---	---

farmers’ interpretation of trial results are encouraged/discussed	4.4	4	++
---	-----	---	----

whole team has opportunity to define and prioritise issues	4.3	10	+
--	-----	----	---

whole teams interpretation of trial results is encouraged/discussed	4.4	6	-
---	-----	---	---

team members have a good understanding of participation	4.2	13	+
---	-----	----	---

### **Evaluation**

project leaders directly support project evaluation	4.1	15	+
---	-----	----	---

key evaluation activities are included in project milestones	4.2	11	-
--	-----	----	---

evaluations occur during, not after the project	4.3	10	+
---	-----	----	---

evaluation addresses practice changes, learning and processes	4.2	12	+
---	-----	----	---

a “reflection” stage is built into all major activities	4.3	8	-
peer reviews are used to assess and report on progress	4.0	17	-

### **Project leadership**

the leader is committed to and experienced in participatory RDE	4.4	5	+
the leader is locally based and directly involved in activities	4.4	5	++
the leader has a large personal time commitment to the project	4.4	6	+

### **Team structure and skills**

the team has a balanced range of RDE skills	4.4	6	+
the team has good facilitation skills	4.3	7	+
the team has good issue identification and prioritisation skills	4.3	7	+
team members each have a major time commitment to projects	4.3	10	+
team clearly understand their roles and responsibilities	4.6	1	+
appropriate RDE processes are used	4.3	8	+

### **Organisational factors**

projects have negotiated the involvement of staff	4.3	9	+
projects have good staff continuity	4.3	8	-
staff are based close to the “action”	4.3	8	+
team members have a real desire to work across organisations	4.1	14	+

### Communication and reporting

stakeholders recognise communication is critical to FS RDE	4.3	8	+
specific communications/reporting milestones are developed	4.1	15	+
frameworks are used to plan/communicate/report	4.1	14	+
regular team meetings are held	4.2	12	+
progress is clearly/effectively reported to <u>farmers/industry</u>	4.5	2	+
progress is clearly/effectively reported to <u>host managers/funders</u>	4.3	9	+
high levels of trust exist amongst team members	4.5	3	+
use of dialogue, not arguing	4.3	8	+

<sup>a</sup> mean importance score where 1 = very low; 2 = low; 3 = medium; 4 = high; 5 = very high

<sup>b</sup> some success factors had equal mean importance scores and so were ranked equally

<sup>c</sup> based on mean achievement scores: (-) was less than 3.0; (+) was between 3.01 and 4.0; (++) over 4.0

### Project leadership

The perceived importance of project leadership has implications for both funders and the host agencies. Leaders experienced in, and committed to, participatory farming systems RD&E “do not grow on trees”,

so ensuring such leaders have a major time commitment to a project, are locally based and have direct involvement in activities may be difficult. Achievement ratings to date for leadership factors in the three northern farming systems projects were medium to high. However, the leaders suggest the process for selecting leader and protocols for operating across organisational and state boundaries needs further consideration as some current projects have figure head leaders with small time allocations to their projects.

## **Philosophies of farming systems RD&E**

The authors initially found the lower rating of the importance of the projects' philosophy surprising, especially the low ratings for "team members have prior experience in participatory RD&E" and "team members have a good understanding of participatory RD&E". Both factors seem very important to the authors, but neither made the list of the most important factors. What were seen to be important were the less strategic issues, suggesting that team members were more concerned about their own positions in the projects. The three most important factors in the whole survey dealt with operational dimensions of the projects: (a) what is my role?; (b) is my position/project respected by industry?; and (c) is my position/project respected by peers? The reasons for the low scores for philosophy and the implications of those scores remain to be seen. However, the project leaders believe philosophical differences have been the source of conflict in the projects. They believe philosophical issues are extremely important and reconciling those differences has been difficult and time consuming as they are so ingrained.

## **Evaluation**

The project leaders' beliefs that evaluation and reflection are critical to participatory RD&E are reflected in evaluation factors representing approximately 15% of the survey. However, team members rated evaluation as one of the least important themes. The relatively low achievement scores for evaluation and reflection also suggest that team members recognise that evaluation is proving to be difficult to achieve. It is clear that most team members had little previous experience with evaluation (2) and have probably already done more evaluation in the farming systems projects than in their past work.

The challenge for the northern farming systems projects and any future projects is to develop evaluation processes that team members will use. There has been some internal debate on whether the main limitation to evaluation in the projects was the lack of desire on the part of team members, or a lack of available processes. This survey suggests the desire to evaluate is a major limitation. Significantly, the lowest rating for achievement in the whole survey was "team members take responsibility for evaluating their own activities". This puts severe limitations on the time spent on evaluation, regardless of the tools developed. The teams' honesty in their assessment of this factor may be a major step towards increasing the levels of evaluation and reflection in the projects. It appears that team members see little incentive for evaluating their own activities, or at least see few consequences for not evaluating their work.

## **CONCLUSIONS**

The relative importance of the 'success factors' and teams' perceptions of their progress towards them provides a basis for planning their future activities and may provide a useful checklist for others to plan and assess participatory projects. Projects may have to reconcile the relevance of some factors with their situations. From our experiences, special attention may need to be directed to evaluation and reflection, communication and reporting, team leadership and participation.

## **ACKNOWLEDGMENTS**

Thanks to the northern farming systems project teams for their inputs to this study, to Diane Keogh and Jason Huggins for the comments on the paper, and to the Grains Research and Development Corporation that contributes funds to help the authors and their host organisations run the projects.

## **REFERENCES**

1. Guerin, L.J. and Guerin, T.F. 1994. *Aust. J. Exp. Agric.* **34**(4):549-571
2. Lawrence, D.N. 1999. Internal report on team members' perspectives of the farming system projects
3. Petheram, R.J. and Clark, R.A. 1998. *Aust. J. Exp. Agric.* **38**(1):101-115
4. Pretty, J.N. 1995. *World Development* **23**(8):1247-1263
5. Russell, D.B., Ison, R.L., Gamble, D.R. and Williams, R.K. 1989. A Critical Review of Rural Extension Theory and Practice (*University of Western Sydney: Sydney*)