## SWOT Analysis of WUE Options for Infield Irrigation Systems

<table>
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<th>Options</th>
<th>Strengths</th>
<th>Weaknesses</th>
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| Conversion to Centre Pivot or Lateral Move | • Precise application of water  
• Reduced labour requirements  
• Flexibility in farming system options; potential to integrate other Water Use Efficiency practices (e.g. stubble retention); significant benefits for germination | • Energy and pumping costs  
• Higher level of skills required to operate and realise water savings  
• Capital cost | • Incorporate fertigation  
• Reduce offsite impacts  
• Expand production area through water savings | • Poor design skills of suppliers  
• Requires good water quality  
• Low water availability (i.e. stranded asset) |
| Conversion to Drip               | • Precise application of water  
• Reduced labour requirements  
• Flexibility in farming system options; potential to integrate other WUE practices (e.g. stubble retention) | • Energy and pumping costs  
• Higher level of skills required to operate and realise water savings  
• Maintenance of system  
• Very high capital cost | • Incorporate fertigation  
• Reduce offsite impacts  
• Expand production area through water savings | • Rat strike  
• Poor design skills of suppliers  
• Requires good water quality  
• Low water availability (i.e. stranded asset) |
| Improving system performance for surface irrigation | • Low cost  
• Limits changes in infrastructure | • Improvements can be volatile (throughout the season)  
• Recommendations can be difficult to implement with existing labour force flexibility | • Implement improvements across the enterprise more rapidly | • Measurement and monitoring phase can be labour intensive  
• Control must be more precise when flow rates are decreased (i.e. Potential for decreased performance if cut-off times lapse) |
| Surface system redesign and upgrade | • Low maintenance  
• Low energy | • May require significant change to on farm practices to realise gains | • Improve the efficiency of other on farm practices | • Limited opportunities to redesign and develop an existing site |
| Sprinkler upgrades               | • Low cost  
• Simple improvement | • Not likely to result in a net improvement in the long term (i.e. sprinklers eventually wear out) | • Improve versatility of the machine | • Difficult to determine real gains  
• Shifts weakest link to other aspects of the system  
• Replacement package must be correctly designed and must meet a need (i.e. system check must be performed beforehand) |
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Further Information
For a full copy of An appraisal to Identify and Detail Technology for Improving Water Use Efficiency in Irrigation in the Queensland Murray Darling Basin go to:  

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