



Evaporation mitigating solution for Australian cotton water storages

1. What is the project about?

This project is about developing and demonstrating cost-effective and practical solutions to reduce evaporation from water storages. It builds on previous large-scale field trials and subsequent lab trials to develop a unique solution to mitigate wind impacts on monolayer films, reducing water evaporation.

2. Why do irrigators need to know about it?

A key challenge this technology addresses is water losses from storages due to evaporation. Although there are alternative means of reducing evaporation, such as shade cloths and floating systems, these often have significant capital costs. The aim of this project is to provide a potentially lower cost alternative while also achieving reductions in water losses.

3. How will the research benefit irrigators?

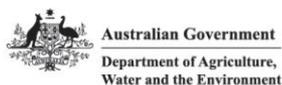
More than 1320 gigalitres of water from on-farm storages evaporates each year. Cotton industry research shows that evaporation losses from farm water storages represents the major loss of water on cotton farms, estimated to be between 20 – 40%. One of the direct benefits of this technology is that it will help to reduce the amount of water growers will need to purchase. The economic benefits being greatest in years when water allocations are low.

4. Key results to date

Barrier technology, in combination with monolayer film, has been demonstrated on medium to large scale laboratory experiments (16m²). The barrier technology efficiently reduced the impact of the wind, allowing monolayer film to cover larger surface area undisturbed by local wind. These trials showed that the combined system was able to achieve good reduction in evaporation under wind. Preparations are currently underway for further trials to optimise the design in anticipation of field trials to be conducted in late 2020.

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