



Increasing resilience to water-related risk in the South African fresh fruit system



The South African fresh fruit system is increasingly reliant on irrigation to grow fruit to the standards demanded by retailers in export markets. To sustain quality and market access, South African growers have to be more intensive and increasingly reliant on irrigation in an environment of increasing uncertainty in relation to water availability. The recent and current droughts in South Africa have brought this situation into stark relief. In addition to the physical water risk, growers are also exposed to regulatory and reputational risks that can create shocks or disturbances to the secure and sustainable functioning of the system.

This project aims to understand the resilience of the SA fresh fruit system (from grower to consumer) to current, and future, water-related risks. This research forms part of a broader project that is investigating the resilience of the UK fresh fruit and vegetable system. South Africa, as the third largest supplier of fresh fruit to the UK, is an important element of the broader research. There are 4 research questions:



1. How, and where, is the SA fresh fruit system exposed to water-related risks and how may these change in the future?
2. What does a water-resilient fresh fruit system look like at a societal level?
3. Are measures to increase water efficiency complementary with increased resilience? What is the relationship between sustainability and resilience?
4. How can the SA fresh fruit system, and the UK system, work together to become more resilient to water-related risks in the future? How do different interventions affect the resilience of different stakeholders, and what are the trade-offs?



The research approach in South Africa is to identify high-risk fruit producing catchments from a water perspective and engage value chain stakeholders, catchment stakeholders and state actors to answer the research questions. The research will seek to deliver value to South African producers through participatory engagement and shared learning approaches to create conversation spaces for producers to share experiences around water use and resilience and share the knowledge generated.

The project consortium brings together expertise in plant science, agriculture, environmental science, irrigation technologies, applied mathematics, sociology and water politics to address a key aspect of the resilience of the fresh fruit system. The Institute of Natural Resources is leading the South African case study, with overall project leadership by Dr Tim Hess from Cranfield University (UK) and Prof Bruce Lankford of the University of East Anglia.

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