

Impact of Climate Change- Challenges for Rural Communities

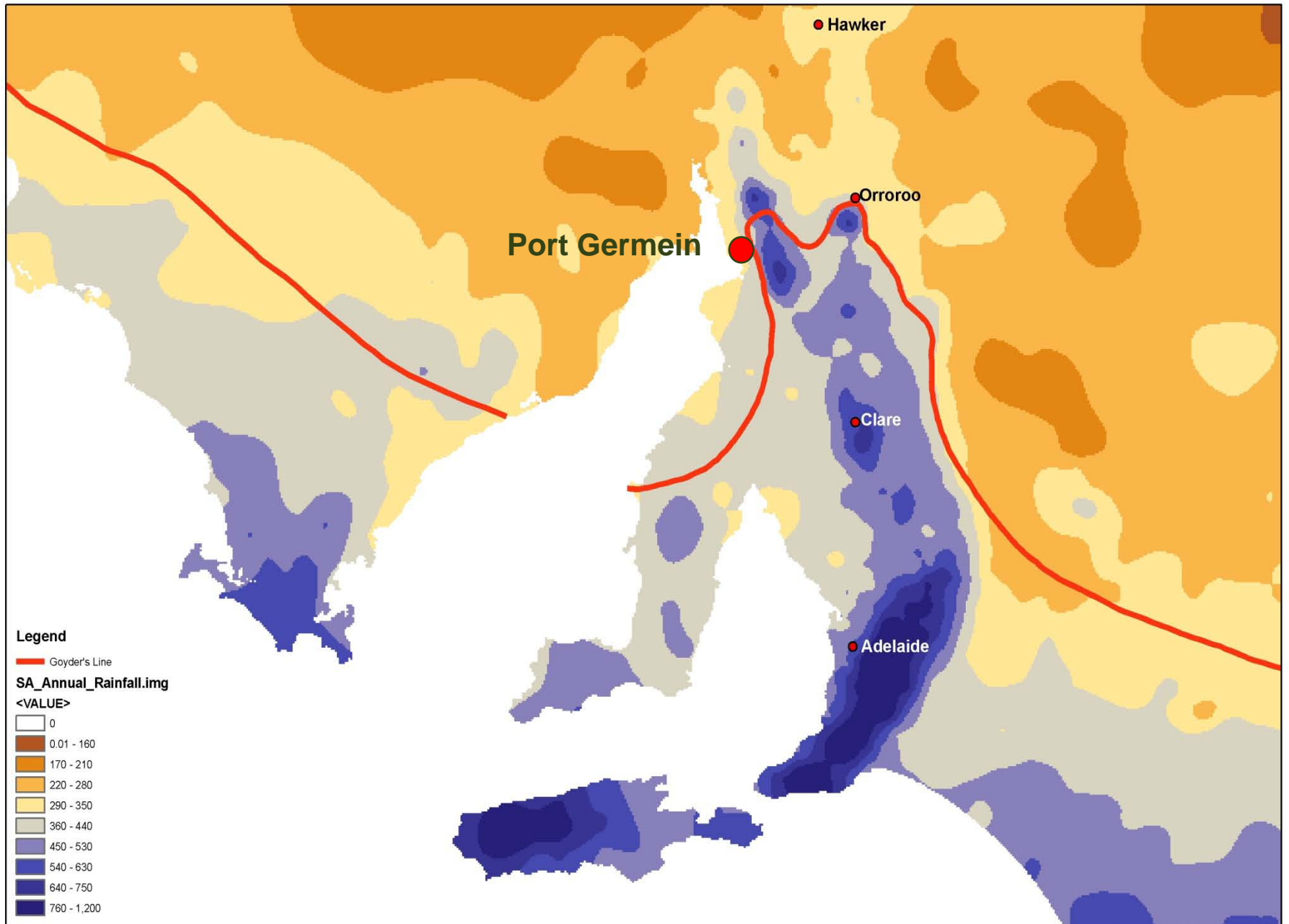
Low Rainfall Cropping Perspective

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Low Rainfall Example

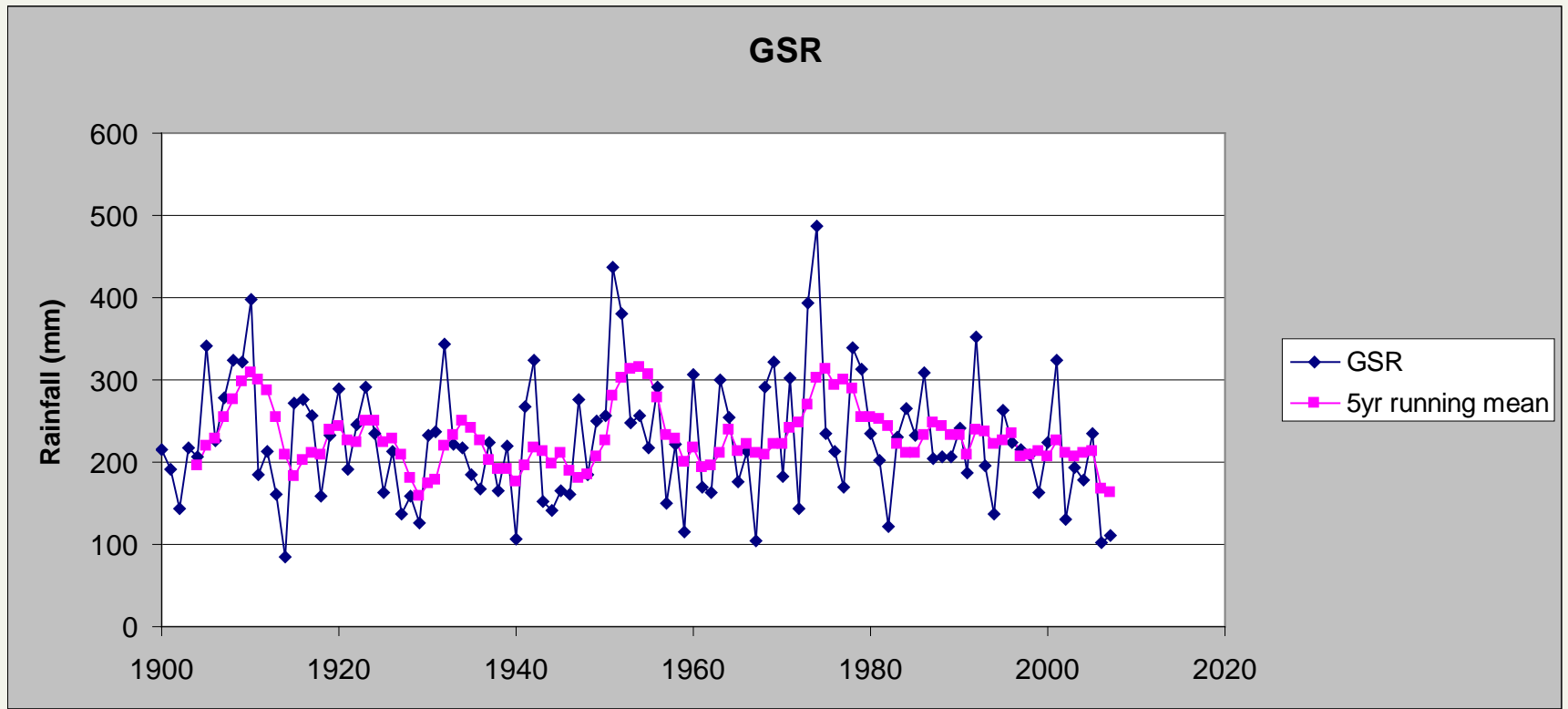
- Farm size 1600 ha over three locations (Mambray Creek, Baroota and Port Germein)
- Annual Mean Rainfall 300 – 340 mm
- Growing season rainfall (April to October) 210 -240 mm
- Characterised by mild winters, early spring finishes and hot north winds
- Mixed farming system- cereals/ livestock
- Grain yields 0 – 4.5 tonne/ha. Average 1.2 – 1.8 t/ha.



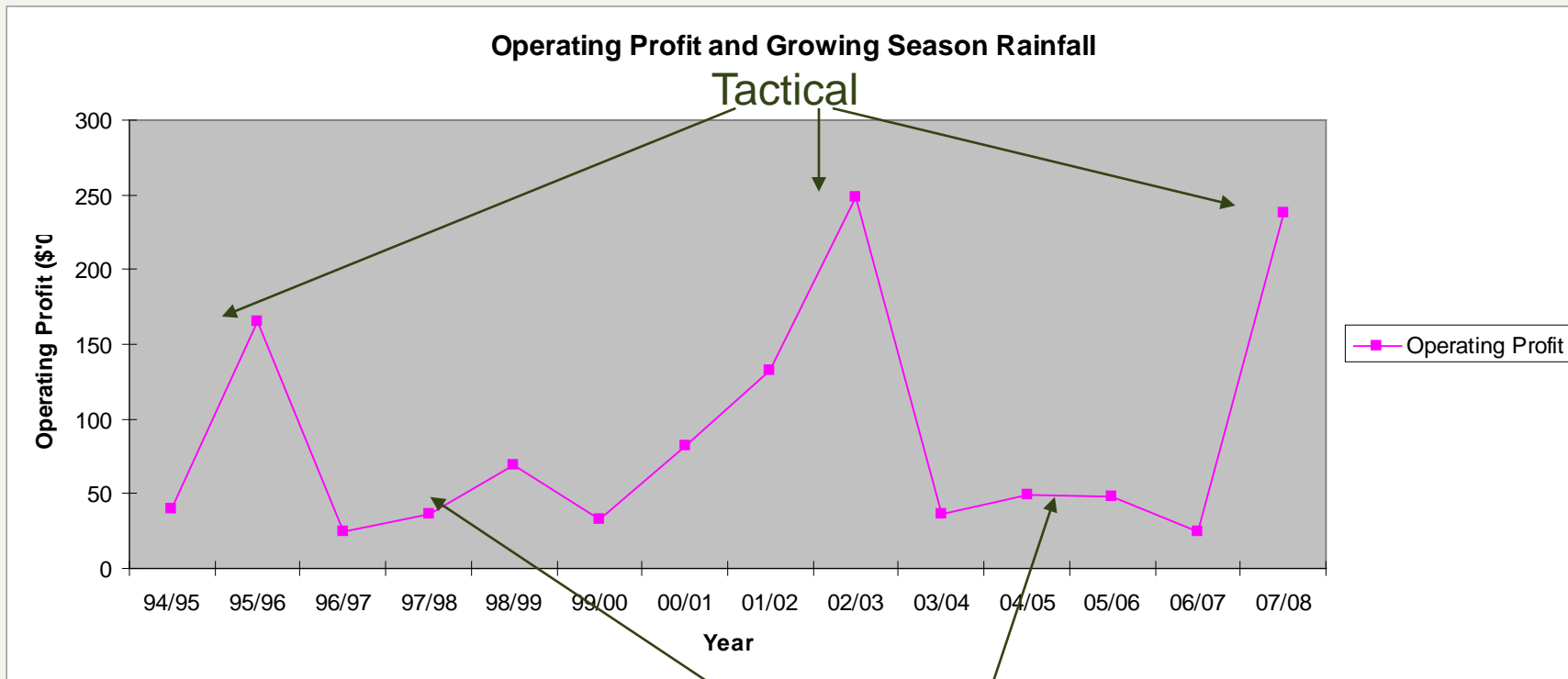




Port Germein Growing Season Rainfall and 5 year running mean



Business Profit over Time



Strategic



Strategic Response- Building Resilient Businesses

- Diversification
- Scale
- Maintain high equities
- Attention to detail
- Livestock Management
- Identify the profit drivers and compromise where possible



Tactical- Building Responsive Businesses

- Crop area and type
- Crop input levels



Unreliable, not Unviable

- Resilience in the face of adversity
- Responsiveness in the presence of opportunity



Climate Change Impacts

- Best science suggests a warming and drying trend
- Impacts expected to be overshadowed in the short term by normal variability
- Input/ Output pricing is likely to have a greater impact on short term viability
- Emphasis will be on continued adaptation, flexibility and innovation
- More extreme scenarios possibly suggested for later this century are likely to be beyond adaptive capacity



Adaptation and Innovation





Adaptation and Innovation

- Direct Drilling (earlier and more efficient seeding)
- Precision Agriculture (variable rate inputs across zones)
- Better understanding and use of stored soil moisture
- More responsive farming systems
- Improved livestock management- cell grazing, feedlots, nutrition management, native grass pastures, breeding



The Bottom Line

- Low rainfall farmers have shown remarkable resilience where fundamental economics would suggest otherwise
- Unreliability does not imply non-viability- already well versed in the management of a variable climate
- Climate change provides a challenge of unknown proportions
- Adaptation has been and remains the key requirement

