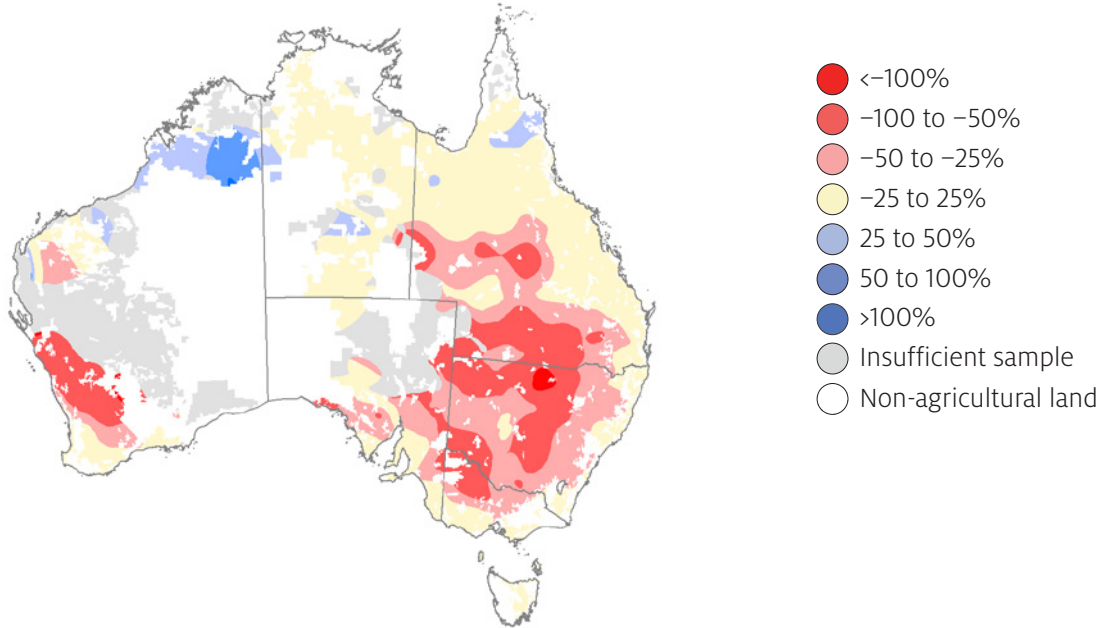




Climate change impacts and adaptation on Australian farms

Recent changes in seasonal conditions have affected the profitability of Australian farms

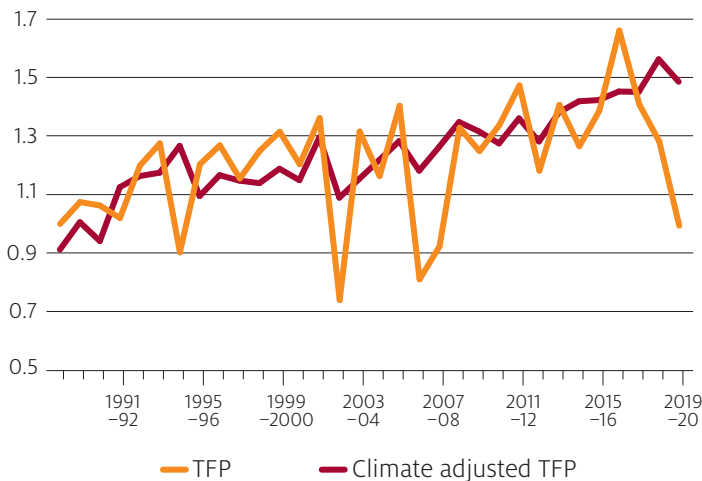
Effect of recent (2001 to 2020) seasonal conditions on farm profit



Notes: Simulated broadacre farm profit with current (2015–16 to 2018–19) farms and commodity prices and recent (2000–01 to 2019–20) climate, relative to historical (1949–50 to 1999–2000) climate. Source: ABARES farmpredict model

Productivity gains are helping to offset climate effects

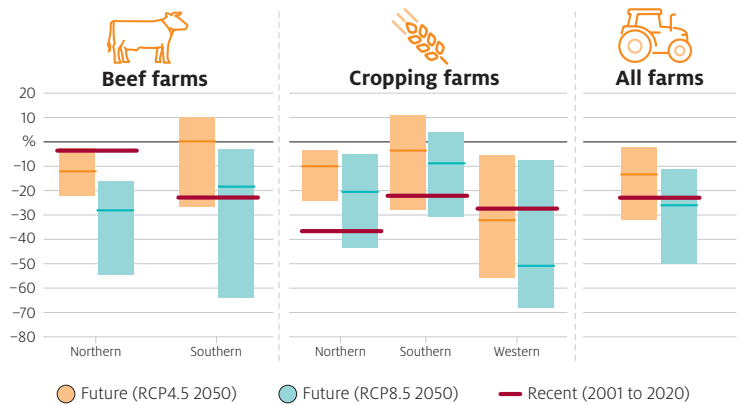
Climate-adjusted Total Factor Productivity (TFP) Australian cropping farms, 1988–89 to 2019–20



Notes: Climate-adjusted productivity under average of 1988–89 to 2019–20 climate conditions. Source: ABARES AAGIS data, ABARES farmpredict model, Chancellor et al. (2021)

Future changes in climate could make conditions tougher for Australian farms

Percentage change in simulated farm profits relative to the Historical (1950–2000) climate



Notes: Change in simulated average farm profit for broadacre farms, assuming current farms and commodity prices (2015–16 to 2018–19), by climate scenario relative to historical climate conditions (1949–50 to 1999–2000). Source: ABARES farmpredict model (Hughes, Lu et al. 2021)

Further adaptation will be needed

- ▶ Further adaptation and productivity gains will be required to maintain competitiveness in international markets
- ▶ Climate change could lead to structural changes including shifts in land use and increases in average farm size
- ▶ New diversified income streams, such as biodiversity and carbon farming, could be important in the long run



Supporting adaptation

- ▶ Improvements in climate information will help farmers adapt to climate change more decisively
- ▶ Investment in R&D remains crucial
- ▶ Drought risk management on farm and effective drought policy will be increasingly important

