



Climate change adaptation in the Midlands

Introduction

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Photo: Graham Green

Local climate has a big bearing on our lives. It is often a significant determining factor as to why we choose to live where we do. With a long-term stable climate we have learned what to expect with each season and we shape our lifestyle, activities or our businesses accordingly.

Adaptation to climate change is the effort we make in response to changing conditions and/or to prepare for the likely changes to come. Adaptation is those actions taken that may determine whether we are equipped to stay where we are or forced to move elsewhere as circumstances that make our lives worthwhile and satisfying change.

In the Midlands most people are aware that change is occurring, whether we've felt or noticed it ourselves, or heard anecdotes from people who have a long connection with the region.

For successful adaptation there needs to be an understanding of the impending risks and then a strategy formulated to manage or cope with the risk. For business, this is a run of the mill exercise using likelihood, consequence and risk rating – but how do we do this on a personal level, how do we equip ourselves to manage disasters that are increasing in frequency, such as wildfire, flood, and drought? How do we build robust mental health, the coping mechanisms to deal with sudden changes and potential shortages of the things we once took for granted?

For farmers, particularly Midlands graziers, tradition is important. The production of fine wool, recognised internationally for its quality, is dependent upon a small band of country through the midlands whose physical attributes and climatic conditions make it perfect for running merino sheep that produce internationally renown fine wool.

Any change in the balance of conditions that have underpinned this tradition could render the survival of the industry tenuous or ultimately unviable unless a coping strategy, or adaptation mechanism is adopted.

For newer industries such as stone fruit and viticulture, the cumulative length of the winter chilling period, and intensity of chilling is important for the productivity of some cultivars. A decline in the number of frost days has implications for the viability of these industries – the only adaptive strategy potentially being to change what is grown.

For Southern Midlands residents who aren't farmers, there is less at stake as change occurs. Some may be willing to roll with whatever happens, accept change and be prepared to deal with the consequences of climate-forced extreme events as they happen.

Nonetheless, climate change breeds uncertainty. Already, many Midlands residents are disturbed by the frequency and intensity of dry spells. Rainfall patterns are unreliable and the often talked about saving grace, an autumn rain break, is now the exception rather than the rule. We know something is not right - a sense that average annual rainfall is declining is backed up by long-term data from the Bureau of Meteorology. With temperature rise, annual evaporation is increasing, rainfall has become unpredictable and unreliable.

For farmers, adaptation in these circumstances requires detailed planning – as continuing business as usual implementing reactive response to change may ultimately be financially challenging and environmentally damaging.

Some farmers began to innovate over a decade ago to build resilience and reliability into their operations. This included adopting land and stock

management practices that are effective in maintaining or building cover and increasing biodiversity in pastures. This increases likelihood of actively growing pasture and herbaceous species across all seasons, an approach that can also improve stock nutrition. Farmers willing to innovate invariably build resilience in the face of extreme conditions such as drought. Additional benefits include improved animal welfare, and building the fundamentals required for product certification based upon responsible land stewardship.

This type of adaptive management requires detailed observation of how local extreme conditions have affected biodiversity; extrapolation based upon modelled future conditions; anecdotes from successful adaptation strategies adopted elsewhere; and a willingness to be brave and break with the way things have traditionally been done in the Midlands. Some farmers adopt as a management policy to minimise risk by planning for 'worst case scenario'. Stock numbers and rotations are then managed accordingly to level out the boom-bust cycles that are becoming synonymous with farming in the era of climate change.

The consequences of inflexibility and unwillingness to adapt in the face of change contribute to the observed decline in the natural capital required to sustain a productive landscape e.g. topsoil, pasture cover, water resources, and tree/understorey cover (woodland dieback).

Observation of this change in our landscape can be a motivating factor for some and be a catalyst for action as we ask ourselves, how far are we willing to allow this to go? How much more of the things we value are we willing to lose?