

Innovative problem-solving

Why creativity matters - Dr David Cropley, UniSA



The question “*Why is Creativity Important?*” is a very sensible one for businesses, organisations and individuals to ask. It is, however, a question to which the answer can be rather elusive and unsatisfying, especially to pragmatic individuals and organisations that are dealing with the day-to-day realities of practical, business-oriented problem-solving. While it is true that creativity is a vital component of human activity that enriches our society and our lives, industry sectors like agriculture can at times have more pressing needs that make it difficult to prioritise innovative thinking.

However, creativity is important to business – whether banks, ship builders, fast-food restaurants or farmers – because it is the means by which these organisations find new and effective solutions to the new problems that they face every day. Albert Einstein is reported to have said that “*we can't solve problems by using the same kind of thinking we used when we created them*” and this captures the essence of the value of creativity perfectly. A simple example is found with climate change and carbon emissions. It is probably not sufficient to address this problem merely by changing from coal-fired power stations to clean-coal systems, because that solution is still based on the same kind of thinking that created the problem in the first place. The only real solution to reducing our dependence on non-renewable fuels is to find alternatives, not just to use less of the same fuels.

The challenge in these situations is that creativity, and creative problem-solving, is hard work! It's tempting to believe, and some pundits encourage the view, that all you need is a little brainstorming or some coloured hats, and your problems will all be solved. However, this fails to address the other factors that play a role in creative problem-solving – the personal properties of the individuals involved and the organisational climate, to name just two.

The ability to be creative, and to find the novel solutions

needed to tackle the challenges we face in a sector like agriculture, should be thought of as a habit. Like other good habits, we need to understand what is required, and we need to work on developing these habits. The good news is that the science of creativity has done a great deal of work on these questions. There is an extensive body of knowledge about what makes people, teams and organisations creative, and how to turn this knowledge into practical outcomes.

An important starting point in that process is problem-definition. A mistake we often make is that we identify and solve, not the real problem, but only a symptom of the real problem. This can happen because frequently the symptom is more immediately visible, and may even deliver a short-term result. However, this is like taking aspirin for a toothache. There is no doubt that the aspirin will make it hurt less, but it's clear that the tooth is still decayed.

Agriculture currently faces a wide array of problems and challenges, and more keep coming. These come from a variety of sources, and may be, for example, brought about by changes to government regulation, changes to international markets, natural disasters, new technology and more. What is clear is that, with creativity, new solutions can be found to these new problems. They may not be obvious – indeed, they almost certainly won't be – but the science of creativity has put us in a good position to find them. Like the parcel delivery company UPS then, the solution to reducing their fuel bill and carbon emissions may be as simple – and effective – as programming their GPS devices to avoid turning across traffic. A few minutes per day sitting idling at intersections may not seem a lot for one van, but multiplied by their international fleet becomes very significant. Similarly, a 5% reduction in drag on your aircraft may not seem to matter much, but when an international airline reduces their fuel bill by 3 or 4% as a result of installing winglets – the turned-up ends on aircraft wings – the savings can run into millions of dollars, not to mention a handy reduction in carbon emissions.

Finding novel and effective solutions to the problems faced in agriculture begins with understanding the science of creativity – those personal properties, processes and organisational factors that can either stimulate, or inhibit, our ability to generate engage in effective problem-solving.