

Researcher shines a light on crop growth

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Dr Jason Wargent.

New funding will help a Massey University researcher develop lighting technology that will assist crop growth.

The company that Dr Jason Wargent, of the Institute of Agriculture and Environment, helped establish has been given funding by Callaghan Innovation, which along with funding from the Central Energy Trust and MIG Angels, will help him develop LED [lighting systems](#).

Biolumic Ltd has emerged from Dr Wargent's research into the ways [UV light](#) affects the growth of various fruit and [vegetable crops](#). The establishment of BioLumic has been supported by Massey and the BCC, the University's commercialisation partner.

"We're going to be producing [lighting technology](#) that will offer tight control over food and [crop quality](#) and productivity," he says. "These devices use very precise parts of the lighting spectrum to get plants to do certain things that historically may not have had much control over."

The LED lighting systems would be used to deliver a "[light](#) recipe".

"If you have the right recipe that can protect a plant from stress and maximise its growth productivity, you can use this technology to administer that recipe. There is a lot of breadth in the potential applications – the technology could be used to grow crops indoors or to 'prime' plants grown outdoors to grow better later in life," he says.

The next six months will be spent developing and testing the devices before commercial trials are started with local growers. The early focus will be on leafy vegetables and high-value herbs.

Director of research management and commercialisation Mark Cleaver says this is a great example of the partnerships in the region providing an environment for new ideas.

"Finding opportunity for early-stage ideas is traditionally very difficult due to the inherent risks, but the combination of the University, private investors, Central Energy Trust and the ministry means that the risk is spread and the right experience and expertise can be used to increase the best chances of success."

Provided by Massey University

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