

The Innovation & Collaboration Centre (ICC) is the University of South Australia's startup incubator.

The ICC engages with the community through the delivery of community events, workshops and programs which draw on the research and professional expertise of UniSA and our partners, to support the generation of new startups and the growth of existing companies.

The ICC is headquartered in Adelaide and has a regional centre in Whyalla, South Australia.

icc.unisa.edu.au

VENTURE CATALYST

The ICC's flagship program is designed to develop and grow founders with innovative or disruptive ideas. It targets early stage ventures and works to make their journey more achievable, accessible and focused.

FURTHER INFORMATION

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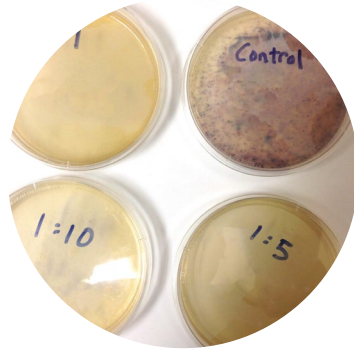
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Beyond Optimum

Removing diseases and toxins from our farming soils and waterways through the use of safe beneficial microbiology.



BENEFITS

- Suppresses phytopathogens in agriculture applications
- Replaces the need for antibiotics in the livestock industry
- Able to treat antibiotic-resistant strains
- Improved nutritional profile in agricultural products
- A solution to various industrial and municipal waste

TECHNOLOGY

Beyond Optimum employs a three-step process to turn seafood waste into an agro-product.

1. Preparation of the raw material (oyster and mussel waste)
2. Inoculation and cultivation of beneficial microbes with the waste
3. Induce dormancy and stabilisation of the microbial products for storage.

POTENTIAL MARKETS

Beyond Optimum are currently working with farmers from South Australia and Queensland who are facing various plant diseases (including fungal diseases) affecting high-value crops to pathogenic nematodes plaguing grain crops. In Queensland, many ginger farmers have lost their entire ginger crop to parasitic oomycetes and the soil remains contaminated for years.



Chun Yean Chong
Founder

BACKGROUND

Beyond Optimum was Founded by ChunYean Chong, a microbiologist with deep AgTech experience working with farmers in the USA with resilient plant pathogens in soil. Beyond Optimum operates in two sectors:

The worldwide **agricultural sector** is without an effective solution for a few soil-borne diseases where the multi-billion-dollar agrochemical companies fail. The lack of an economical/potent fungicide for plant diseases makes agriculture unsustainable to the point where the United Nations is warning of worldwide famine and the need to ensure worldwide food security.

Antibiotic resistance in **poultry operation** - In addition to a potential famine, the United Nations has also issued a warning about a potential bacterial pandemic due to the misuse of antibiotics in farming, with over 70% of antibiotics produced going to our farms. Historically in the pre-antibiotic eras, bacterial pandemics had always dwarfed viral pandemic. The rise of antibiotic-resistant microbes can throw the world back to the pre-antibiotic eras.

Understanding why many effective in vitro studies fail in the field, Beyond Optimum is set to produce solutions for farmers, first in Australia and later globally. The key lies in the use of seafood industry waste that were previously an environmental biohazard and potentially damaging to our waterways, specifically the waste from the oyster industry. The waste allows the company to create two products suitable for agriculture and livestock operation.

