



Primary Industries Education
Foundation Australia



NATIONAL AG WEEK 2023

DIGITAL LEARNING KIT

GROW YOU GOOD **THING** #AGDAYAU

Celebrate **STEM** and **Innovation** in
Food & Fibre Production

V9 Australian Curriculum Aligned



FEATURING:



**PRIMARY AND SECONDARY PRE-RECORDED FARMER
TIME VIDEOS**



**ACCESS TO TEACHING RESOURCES FOCUSED ON
TECHNOLOGY AND INNOVATION IN FOOD & FIBRE
PRODUCTION**



INTRODUCTION

THIS DIGITAL RESOURCE KIT IS DESIGNED FOR PRIMARY AND SECONDARY EDUCATORS.

Within the resource, teachers can access a series of short Australian Curriculum-aligned videos and accompanying student worksheets celebrating STEM and innovation in food and fibre production.

Five curriculum-aligned questions have been answered by inspiring stakeholders working in different industries within the Australian agricultural sector.

Access the videos to hear about the technologies and innovations helping them sustainably produce Australia's food and fibre. As students view the video resources, they can record their answers to PIEFA's Fast Five questions on the provided worksheets.

Facilitation of each of the activities within this resource will take approximately 30 minutes. Primary Industries Education Foundation Australia thanks our member organisations for collaborating on these resources.

For more food and fibre learning resources, visit www.primezone.edu.au





PIEFA'S FAST 5

Five curriculum-aligned questions have been asked to stakeholders working in the Australian agricultural sector. Learn about the technologies and innovations that are helping people sustainably produce Australia's food and fibre.

Access links and resources throughout this document to deliver a National Ag Week lesson.

PRIMARY QUESTIONS

1. What is the technology/innovation that you have introduced? *(How does it work? What is it used for?)*
2. How were tasks performed before this technology/innovation was available?
3. How does the technology/innovation meet the needs of people, improve sustainability or make a task easier when it is used?
4. What are some of the challenges of using this technology/innovation, and how could these be improved in the future?
5. What will the future of primary industries (food and fibre) be like?

SECONDARY QUESTIONS

1. Describe the technology/innovation and its use in the food and fibre industry.
2. Compare how an operation was performed in the past (before the technology/ innovation) with the present and explain why using this technology/innovation is preferable.
3. Describe how the technology/innovation targets at least one aspect of sustainable production (economic, social or environmental) and identify its potential implications and impacts.
4. Identify the training or experience required to operate/use this technology/innovation *(Identify the career pathway)*.
5. Why should students explore a career in primary industries?



AUSTRALIAN CURRICULUM CONTENT

SECONDARY

Year 7-8

- Analyse how food and fibre are produced in managed environments and how these can become sustainable (ACgTDE8K04)
- Analyse the impact of innovation and the development of technologies on designed solutions for global preferred futures (ACgTDE8K02)
- Analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments (ACgTDE8K01)
- Examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations (ACgS7H03)
- Examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations (ACgS8H03)

Year 9-10

- Analyse how people in design and technologies occupations consider ethical, security and sustainability factors to innovate and improve products, services and environments (ACgTDE10K01)
- Analyse the impact of innovation, enterprise and emerging technologies on designed solutions for global preferred futures (ACgTDE10K02)
- Analyse and make judgements on the ethical, secure and sustainable production and marketing of food and fibre enterprises (ACgTDE10K04)
- Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering (ACgS9H02)
- Examine how the values and needs of society influence the focus of scientific research (ACgS9H04)
- Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering (ACgS10H02)
- Examine how the values and needs of society influence the focus of scientific research (ACgS10H04)

Josh Poke

STRATEGIC PROJECT MANAGER

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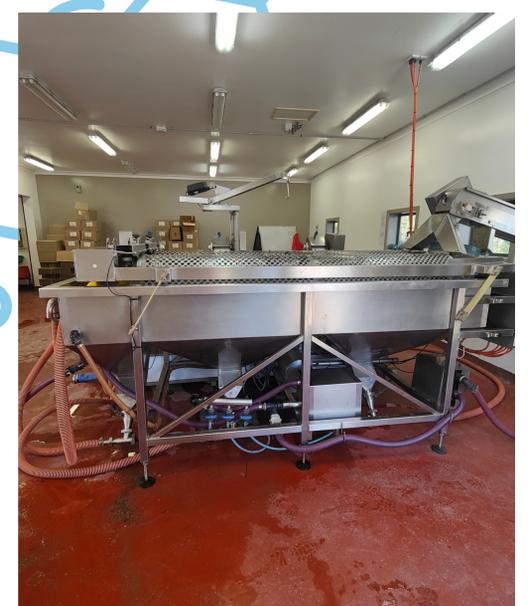
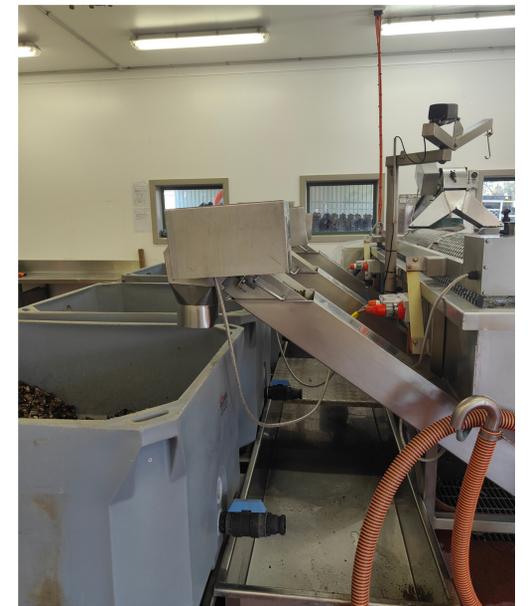


RESOURCE SUMMARY

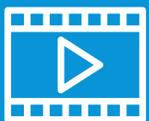
Learn about the importance of oyster grading in ensuring oysters are placed in growing equipment relevant to their size at the different stages of production. Grading oysters improves the health of the oysters and increases production in aquaculture systems.

Hear how innovation in oyster grading technology has allowed the grading process to be completed underwater, reducing manual handling of the oysters. This innovation minimises stress on the oysters, reducing losses and allowing the grading of three different sizes of oysters to occur simultaneously, improving efficiency and productivity.

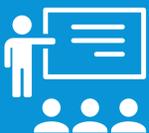
Previous oyster grading operations were labour intensive and time consuming. The implementation of this innovation has allowed staff to attend to other operations in the aquaculture production system, such as monitoring the oysters and managing farming infrastructure to improve productivity and profitability.



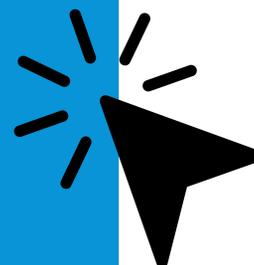
ACCESS THE RESOURCES BY CLICKING ON THE LINKS BELOW.



[SECONDARY VIDEO](#)



[SECONDARY WORKSHEET](#)



ATTRIBUTION, CREDIT & SHARING



This resource was produced by Primary Industries Education Foundation Australia (PIEFA) in collaboration with our member organisations. Primary Industries Education Foundation Australia's resources support and facilitate effective teaching and learning about Australia's food and food industries. We are grateful for the support of our industry and member organisations for assisting in our research efforts and providing industry-specific information and imagery to benefit the development and accuracy of this educational resource.



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