



Sustainable Australian Alpacas

TEACHER GUIDE

LESSON 2

YEAR 7–10

This resource has been developed by:



Primary Industries Education
Foundation Australia



www.primezone.edu.au
The place for all your food and fibre resources



AgriFutures
Australia



Australian Alpaca
ASSOCIATION

LESSON 2

Sustainable Australian Alpacas

➤ LEARNING AREAS / YEAR LEVEL

Design and Technologies (Year 7–10)


➤ AUSTRALIAN CURRICULUM CONTENT

Analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments **(AC9TDE8K01)**

Analyse how food and fibre are produced in managed environments and how these can become sustainable **(AC9TDE8K04)**

Analyse and make judgements on the ethical, secure and sustainable production and marketing of food and fibre enterprises **(AC9TDE10K04)**

Contents

Learning Area/Year Level	Page 2
Australian Curriculum content	Page 2
Lesson Objective	Page 3
Lesson Overview	Page 3
Resources and Equipment	Page 4–5
Lesson Guide	Pages 6–8
Student Resources	Page 9
Answers.....	Pages 10–13
References	Page 14–15
Student Worksheets 	Page 16

This resource has been developed by:

> LESSON OBJECTIVE

Students will learn about the Australian alpaca industry's sustainability considerations. They will investigate how stakeholders are invested in the economic, environmental and social aspects of sustainability in alpaca production. Students will access a range of secondary source materials focused on these areas of alpaca production and work with peers collaboratively to complete various engaging activities.

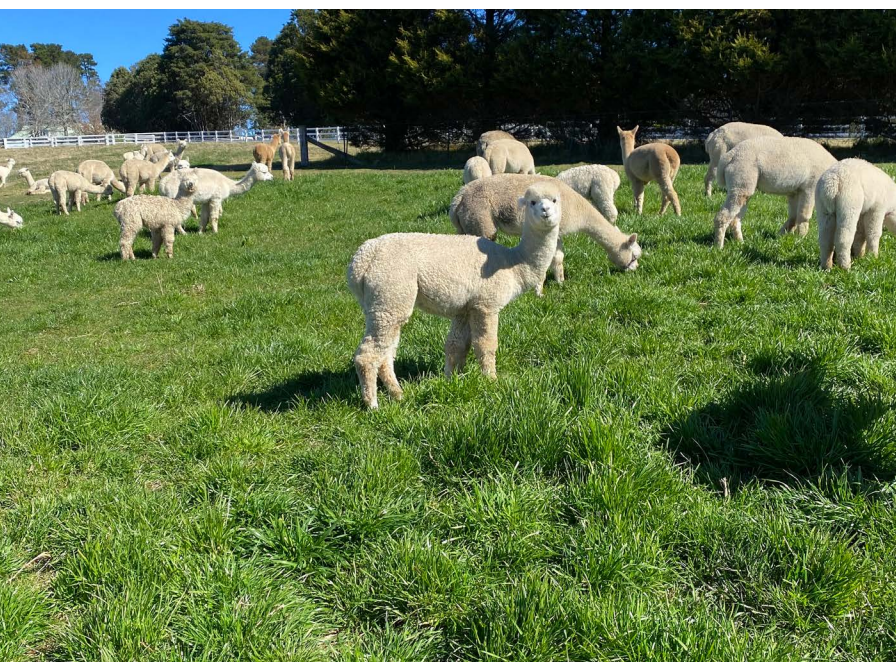
> LESSON OVERVIEW

Activity 2.1 – Are Australian Alpacas Sustainable? (60–80 minutes)

Activity 2.2 – Looking Deeper (60 minutes)

Activity 2.3 – Sustainability Summary (30-60 minutes)

This work is licensed under CC BY-NC 4.0. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/4.0/>



This resource has been developed by:

Resources and Equipment

➤ **ACTIVITY 2.1 – Are Australian Alpacas Sustainable?**

1. Access to computer/digital device
2. **Worksheet 2.1a – Agricultural Sustainability** (Introductory activity)
3. [About the Australian Alpaca Association](#) (0:58)
4. **Worksheet 2.1b – Agricultural Sustainability** (Pre-research questionnaire activity)
5. **Worksheet 2.1c – Agricultural Sustainability** (Secondary source one activity)
6. [What is Sustainable Agriculture? Episode 1: A Whole-Farm Approach to Sustainability](#) (3:20)
7. **Worksheet 2.1d – Agricultural Sustainability** (Secondary source two activity)
8. [Why farm alpacas in Australia](#) (1:14)
9. [What makes Australia a great home for the Alpaca](#) (1:23)
10. [Why Alpaca is the Smart Future for Australia](#) (7:06)
11. **Worksheet 2.1e – Economic Sustainability** (Secondary source three activity)
12. [What is Sustainable Agriculture? Episode 8: The Economics of Sustainable Agriculture](#) (2:27)
13. [Alpaca Market Assessment 2016 – AgriFutures Australia](#)
14. [Alpaca jumper for a Chile journey](#)
15. **Worksheet 2.1f – Social Sustainability** (Secondary source four activity)
16. [What is Sustainable Agriculture? Episode 4: Social Sustainability](#) (3:24)
17. [Animal Movement Educational Video](#) (2:14)
18. [Youth](#)
19. **Worksheet 2.1g – Economic Sustainability** (Secondary source five activity)
20. [What is Sustainable Agriculture? Episode 6: Sustainable Grazing](#) (2:50)
21. **Worksheet 2.1h – Sustainable Alpacas?** (Post-research questionnaire activity)

(Resources and Equipment continued following page...)

This resource has been developed by:

> ACTIVITY 2.2 – Looking Deeper

1. [Meat ‘Pacas](#) (7:50–13:54) (*read lesson guide for carcass image times*)
2. [Worksheet 2.2a – Meat ‘Pacas](#) (Opinion activity)
3. [Worksheet 2.2b – Looking Deeper into Sustainability](#) (Bookmark activity)
4. Access to computer/digital device
5. [Sustainability Framework](#)
6. [Vicuña Wool Is So Expensive | So Expensive](#) (9:44)

> ACTIVITY 2.3 – Sustainability Summary

1. Access to computer/digital device, poster presentation materials
2. [Worksheet 2.3a – Presentation Feedback](#) (Peer response activity)

> Additional reading

1. [Sustainability and Sustainable Development – What is Sustainability and What is Sustainable Development?](#)

Lesson Guide

➤ ACTIVITY 2.1 – Are Australian Alpacas Sustainable?

Students will use various secondary source materials to investigate Australian alpaca production and determine whether the industry is sustainable. They will focus their research on the three areas of agricultural sustainability (economic, environmental and social) and work in groups to assess sustainability within the industry.

1. Distribute **Worksheet 2.1a – Agricultural Sustainability** (Introductory activity), and as a class, watch [What is Sustainable Agriculture? Episode 1: A Whole-Farm Approach to Sustainability](#) (3:20). During the video, students will understand the components contributing to sustainable agriculture production (economic, environmental and social sustainability).
2. In a central area, define these terms for students to record on their worksheets. Sample definitions can be sourced from the additional reading area if required.
3. Allocate students into groups of three to four, and assign the task of researching the provided secondary sources to determine whether the Australian alpaca industry is currently 'unsustainable', 'working towards being sustainable' or 'is already sustainable and is seeking to improve'.

Answers

4. Using **Worksheet 2.1b – Agricultural Sustainability** (Pre-research questionnaire activity), groups make predictions about the three areas of sustainability and record their pre-research ideas.
5. Provide groups with digital device access and project the series of Worksheets 2.1c–g in a central area, focused on the different areas of sustainability. Explore the range of secondary source materials with students and demonstrate how they can use information in them to make their decisions about the level of sustainability. Students can access the materials using QR codes, active hyperlinks, or by printing the reading sources.
 - **Worksheet 2.1c – Agricultural Sustainability** (Secondary source one activity)
 - **Worksheet 2.1d – Agricultural Sustainability** (Secondary source two activity)
 - **Worksheet 2.1e – Economic Sustainability** (Secondary source three activity)
 - **Worksheet 2.1f – Social Sustainability** (Secondary source four activity)
 - **Worksheet 2.1g – Environmental Sustainability** (Secondary source five activity)

(Activity 2.1 continued following page...)

This resource has been developed by:

- Determine the method of research students will use, based on individual classes and the time available. Options include either:
 - Allocating individuals to separate research areas and secondary source materials and allowing time for individuals to report back to group members, or
 - Allowing students to move through each secondary source material simultaneously.
- Groups research the source materials to find information that assesses each area of sustainability and record notes using their own paper.
- At the end of the research time, group members collaborate to assess sustainability within the Australian Alpaca Industry and record their findings on **Worksheet 2.1h – Sustainable Alpacas?** (Post-research questionnaire activity).

Answers 

ACTIVITY 2.2 – Looking Deeper

Students will view a video focused on two producers who were at the forefront of breaking into the alpaca meat industry. They will look closely at the development of a specific sustainability plan by the Australian Alpaca Association and compare this to a Bolivian fleece case study.

- As a class, access the link [Meat ‘Pacas](#) (Landline, 2013) and click on the ‘play’ icon to watch the video Meat ‘Pacas from 7:50-13:54 (meat production only). Note: at 9:04-9:25, alpaca carcasses are shown, and at 12:32, an internal ultrasound is performed. If viewing the entire video between 2:24-3:44, alpaca reproduction is featured. Teachers are responsible for viewing content and determining its suitability for their classes.
- Ask students to focus on the aspects of the source material that relate to securing an economic future for the alpaca meat industry. Distribute **Worksheet 2.2a – Meat ‘Pacas** (Opinion activity) to students and allow time for them to answer the questions and share their responses with the class.

Answers 

- Allocate students into pairs and provide them with digital devices and **Worksheet 2.2b – Looking Deeper into Sustainability** (Bookmark activity). Pairs use the QR code or the link [Sustainability Framework](#) to research the sustainability considerations of the Australian Alpaca Association and the future of Alpaca production.

Answers 

(Activity 2.2 continued following page...)

This resource has been developed by:

4. Students read the information and create a series of targeted responses to subheadings on the bookmark templates. Bookmarks can be laminated and cut out after the activity.
5. As an extension task, view the video [Vicuña Wool Is So Expensive | So Expensive](#) (9:44) to compare how fleece production in Bolivia is managed and how sustainability is being addressed in this area of the world. Facilitate a discussion with students about their thoughts after watching this case study.

➤ **ACTIVITY 2.3 – Sustainability Summary**

Students create a summary presentation to educate others about sustainability in the Australian alpaca industry.

1. Working in the same groups as were formed for Activity 2.1, students collaborate to create a presentation summarising the primary information they have learnt about sustainability in the Australian alpaca industry. Students spend time discussing their mode of presentation (poster [physical or digital], pamphlet, webpage, etc.), information to include, target audience and assign members' specific roles.
2. Provide groups with the materials and time necessary to complete their presentations. Use **Worksheet 2.3a – Presentation Feedback** (Peer response activity) and allow time to read the information detailing some of the traits of alpaca fleece that and allow students to provide feedback to other groups.

Student Resources

➤ ACTIVITY 2.1 – Are Australian Alpacas Sustainable?

Worksheet 2.1a – Agricultural Sustainability (Introductory activity)

Worksheet 2.1b – Agricultural Sustainability (Pre-research questionnaire activity)

Worksheet 2.1c – Agricultural Sustainability (Secondary source one activity)

Worksheet 2.1d – Agricultural Sustainability (Secondary source two activity)

Worksheet 2.1e – Economic Sustainability (Secondary source three activity)

Worksheet 2.1f – Social Sustainability (Secondary source four activity)

Worksheet 2.1g – Environmental Sustainability (Secondary source five activity)

Worksheet 2.1h – Sustainable Alpacas? (Post-research questionnaire activity)

➤ ACTIVITY 2.2 – Looking Deeper

Worksheet 2.2a – Meat ‘Pacas (Opinion activity)

Worksheet 2.2b – Looking Deeper into Sustainability (Bookmark activity)

➤ ACTIVITY 2.3 – Sustainability Summary

Worksheet 2.3a – Presentation Feedback (Peer response activity)

Acknowledgments

- Gayle Herring, Fibre Naturally Alpaca Woollen Mill
- Waratah Alpaca Fibre
- Mulberry Park Alpaca Stud
- Coolawarra Storybook Alpaca Stud
- Ambersun Alpaca Stud
- EP Cambridge Alpaca Stud
- Mllduck Alpaca Stud
- Dairy Road Alpaca Stud
- Wedgetail Rise Alpaca Stud
- Barrooka Alpaca Stud
- Precision Alpaca Stud
- Australian Alpaca Association
- Tirrikee Alpaca Stud
- Fleurieu Prime Alpaca
- Malakai Alpaca Stud
- Yaringa Alpaca stud

This resource has been developed by:

Answers

➤ ACTIVITY 2.1 – Are Australian Alpacas Sustainable?

3. **Worksheet 2.1a – Agricultural Sustainability** (Introductory activity)

Schools use their own definitions of sustainability. Source guidance from [Sustainability and Sustainable Development – What is Sustainability and What is Sustainable Development?](#)

4. **Worksheet 2.1b – Agricultural Sustainability** (Pre-research questionnaire activity)

Answers will vary depending on individual student responses.

8. **Worksheet 2.1h – Sustainable Alpacas?** (Post-research questionnaire activity)

Answers will vary depending on individual student responses. Suggestions for inclusion have been taken verbatim from secondary source materials.

Overall:

- The Australian Alpaca Association is developing an Alpaca Sustainability Framework to document how the industry intends to meet responsibilities and ensure a sustainable future for the industry.
- The Sustainability Framework demonstrates to global consumers and manufacturers that members of the Australian Alpaca Association farm their alpacas in a way that is good for people, animals, and the environment.
- It is a sustainable and commercial rural industry.
- Emerging European and Chinese markets.
- In 2016, there were 170,000 registered alpacas (AAA, January 2016) with an estimated clip of 242 tonnes. The total size of the Australian national herd is in the order of 450,000, when unregistered alpacas are included. The industry's peak body, the Australian Alpaca Association Ltd (AAA), represents more than 2,000 Australian alpaca breeders (www.alpaca.asn.au).

Economic sustainability:

- Australia is the second largest alpaca industry in the world.
- Australia is at the forefront of breeding, fibre quality and development.
- The international export demand for Australian-quality alpaca fleece far outstrips demand, so the industry has great potential for further growth.
- The alpaca meat industry is another pathway to commercial alpaca farming and is growing in popularity as alpaca meat is extremely lean, highly nutritious and flavoursome.
- Some of the best fibre and genetics in the world come from Australian alpacas.
- A better return than cattle, sheep or dairy.

(Answers to Activity 2.1 continued following page...)

- Meat is starting to become more accepted by the Australian public.
- A strong market is developing in China and producers are looking at ways to meet this demand.
- Australian alpaca fibre production was estimated at 242 tonnes with a gross value of \$3.4 million and a unit value of \$14.18/kg in 2015-16.

Social sustainability:

- An industry that caters to large-scale and smaller producers.
- Possibilities for youth to drive the industry forward.
- Easy to handle – many women run alpaca farms.
- Wonderful lifestyle for families.
- The Australian Alpaca Association seeks to support all producers invested in alpaca farming. Their website provides an area for professional development and contact areas to support producers.
- The Australian Alpaca Association has a dedicated ‘youth support area’ on their website for emerging alpaca producers, which conducts training and support sessions. Videos are used to demonstrate animal handling to improve animal welfare outcomes.

Environmental sustainability:

- They are sustainable and environmentally friendly, with soft padded feet that create minimal soil damage, and their natural fibre further supports the green natural fibre industry.
- Alpacas are a great green fit for Australia’s farming climate, as they perform far better in dry conditions than most livestock. As ruminants, they require only small amounts of supplementary feeding.
- Very ‘green’ and eco-friendly.
- Very efficient eaters and drinkers and are very soft on the land, much less compaction of the soil.
- Alpacas graze gently, allowing faster pasture regrowth. Their dung makes excellent fertiliser, and it is conveniently dropped in areas where they avoid grazing.
- Their ground foot pressure of 39kPA is much less than other farm animals.

> ACTIVITY 2.2 – Looking Deeper

2. **Worksheet 2.2a – Meat ‘Pacas** (Opinion activity)

Question 1: What is your opinion about farming alpacas for meat production?

- Answers will vary depending on individual student responses.

Question 2: Why do you think eating alpaca meat is not as popular or in demand as other types of meat?

- Many believe that the animal is a ‘pet’ or an animal that is only used to produce fibre, and therefore do not feel comfortable consuming their meat

Question 3: How would you go about promoting alpaca meat to people? What strategies would you use to increase demand?

- Answers will vary depending on individual student responses. Markets, advertisements, sampling and taste-testing to promote the product.

Question 4: How does increasing the demand for alpaca meat make the industry more sustainable?

- When all of the animal’s body can be used as a product, farmers are not keeping unproductive animals on their farms (i.e. ability to acquire revenue from selling the meat from animals that are not producing high-quality fibre).

3. **Worksheet 2.2b – Looking Deeper into Sustainability** (Bookmark activity)

Sustainable Alpaca Production means:

Sustainable alpaca production encompasses the genetics, fibre and meat produced by Australian alpacas. It means ensuring alpaca farming and processing is responsibly undertaken by current and future generations ethically, environmentally, socially, and financially.

Sustainability presents many exciting opportunities to members:

- Increasing access to markets and investment.
- Building confidence in the integrity of the alpaca industry.
- Enhancing community trust.
- Rewarding businesses that meet their obligations.
- Producing high-quality products.

The Sustainability Framework covers these five areas:

- Animal Welfare.
- Environmental Stewardship.
- Biosecurity Control.
- Economic Resilience (keeping farmers profitable).
- People and Community (ensuring staff and external workers are paid fairly and have safe working environments and products are safe and of high quality).

This resource has been developed by:

> **ACTIVITY 2.3 – Sustainability Summary**

2. **Worksheet 2.3a – Presentation Feedback** (Peer response activity):

Answers will vary depending on student opinions of presentations.

References

- Australian Alpaca Association. (n.d.-a). *Sustainability Framework*. Australian Alpaca Association. Retrieved November 22, 2022, from: <https://alpaca.asn.au/sustainability-framework/>
- Australian Alpaca Association. (n.d.-b). *Youth*. Australian Alpaca Association. Retrieved November 22, 2022, from: <https://alpaca.asn.au/youth/>
- Australian Alpaca Association. (2015, September 11). *Why Alpaca is the Smart Future for Australia*. www.youtube.com. <https://www.youtube.com/watch?v=quXELeJI7bc&t=225s>
- Australian Alpaca Association. (2019a, November 13). *About the Australian Alpaca Association*. www.youtube.com. <https://www.youtube.com/watch?v=a7HkV7RG4JE>
- Australian Alpaca Association. (2019b, December 12). *What makes Australia a great home for the Alpaca*. www.youtube.com. https://www.youtube.com/watch?v=7Xn0fIPE_jk
- Australian Alpaca Association. (2019c, December 12). *Why farm alpacas in Australia*. www.youtube.com. <https://www.youtube.com/watch?v=svz2RESTz-U>
- Australian Government Department of Agriculture, Fisheries and Forestry. (2021, June 15). *Alpaca jumper for a Chile journey*. Australian Government Department of Agriculture, Fisheries and Forestry. <https://www.agriculture.gov.au/about/news/media-releases/alpaca-jumper-chile-journey>
- Business Insider. (2022, February 13). *Why Vicuña Wool Is So Expensive | So Expensive*. www.youtube.com. <https://www.youtube.com/watch?v=xSFh0rsidPU>
- Circular Ecology. (2022). *Sustainability and Sustainable Development*. Circular Ecology. <https://circularecology.com/sustainability-and-sustainable-development.html>
- Department of Agriculture, Fisheries and Forestry. (2018). *Agricultural Trade Matters, August 2018 - DAFF*. Agriculture.gov.au. <https://www.agriculture.gov.au/biosecurity-trade/market-access-trade/agricultural-trade-matters/aug-2018#read-more-about-canada-alpaca-my-bags>
- Landline. (2013, July 28). *Meat 'Pacas*. www.abc.net.au. <https://www.abc.net.au/local/archives/landline/content/2013/s3812656.htm>
- Armstrong-graham, K. (2023, July 27). *Alpaca movement and handling*. www.youtube.com. <https://www.youtube.com/watch?v=NqbjpoHVIRA>

(References continued following page...)

- Rural Industries Research and Development Corporation, & Clarke, M. (n.d.). *Alpaca Market Assessment 2016*. AgriFutures Australia. Retrieved November 22, 2022, from: <https://agrifutures.com.au/wp-content/uploads/publications/17-010.pdf>
- SARE Outreach. (2021a, February 25). *What is Sustainable Agriculture? Episode 1: A Whole-Farm Approach to Sustainability*. www.youtube.com. <https://www.youtube.com/watch?v=iloAQmroRK0&list=PLWlItQ6Oy0zpgxVhd2vZqTDvVXpPhSVd0>
- SARE Outreach. (2021b, February 25). *What is Sustainable Agriculture? Episode 4: Social Sustainability*. www.youtube.com. <https://www.youtube.com/watch?v=6896Nwydzg0>
- SARE Outreach. (2021c, February 25). *What is Sustainable Agriculture? Episode 8: The Economics of Sustainable Agriculture*. www.youtube.com. <https://www.youtube.com/watch?v=ZwAOZI5dCK0&list=PLWlItQ6Oy0zpgxVhd2vZqTDvVXpPhSVd0&index=8>
- SARE Outreach. (2021d, June 15). *What is Sustainable Agriculture? Episode 6: Sustainable Grazing*. www.youtube.com. <https://www.youtube.com/watch?v=sZeKNWNSM3l&list=PLWlItQ6Oy0zpgxVhd2vZqTDvVXpPhSVd0&index=7>

This resource has been developed by:

INTRODUCTORY ACTIVITY

Agricultural Sustainability



Scan the QR code or click on the [link](#) to view the source material.

▶ **What is Sustainable Agriculture? Episode 1: A Whole-Farm Approach to Sustainability (3:20)**
<https://www.youtube.com/watch?v=iloAQmroRK0&list=PLWlItQ6Oy0zpgxVhd2vZqTDvVXpPhSVd0>

Copy a definition of each of the terms under the relevant heading.

Environmental sustainability

Economic sustainability

Social sustainability

This resource has been developed by:

PRE-RESEARCH QUESTIONNAIRE ACTIVITY

Agricultural Sustainability

Write a statement under each heading about whether you believe alpacas are a sustainable agricultural farming choice in Australia. Provide a reason to support your answer.

1. Is the Australian alpaca industry environmentally sustainable?

2. Is the Australian alpaca industry economically sustainable?

3. Is the Australian alpaca industry socially sustainable?

This resource has been developed by:

SECONDARY SOURCE ONE ACTIVITY

Agricultural Sustainability



Scan the QR code or click on the [link](#) to watch the video, or read the information provided by the Australian Alpaca Association on the following pages.

▶ About the Australian Alpaca Association (0:58) <https://www.youtube.com/watch?v=a7HkV7RG4JE>

From the Australian Alpaca Association:

Alpacas are now an established and beloved part of the Australian natural fibres, breeding and farming industries. As the second largest alpaca industry in the world, following the Peruvian alpaca industry, Australia is at the forefront of breeding, fibre quality and development. We have reached record prices and quality, and are moving from strength to strength, focused on increasing production volumes and improving consistency. The Australian Alpaca Association plays a vital role in the current strength and continued development of the industry by providing education, communication, resources and marketing for the industry as a whole.

The international export demand for Australian-quality alpaca fleece far outstrips supply, so the industry has great potential for further growth. In support, the AAA encourages sustainable husbandry focusing on animal health, breeding programs and herd development.

Building on the strength of the Australian wool industry, the AAA has teamed up with the AWEX (Australian Wool Exchange) to establish quality assurance guidelines for alpaca fleece that are equivalent to the standards of the wool industry. This means consistent classing, packaging and branding of Australian alpaca fleece. This move will enhance the commercial image and guarantee a consistently high-level product through an organised collection system for fleece production.



This resource has been developed by:

SECONDARY SOURCE ONE ACTIVITY

Agricultural Sustainability (cont.)

The Alpaca Lifestyle

Those interested in commercial breeding and farming of alpacas are entering a strong industry that provides support, guidelines and a great reputation. You may choose to focus on alpacas or diversify your current livestock herds by introducing alpacas. These animals mix well with other ruminants and function well as herd guards for smaller livestock. They are sustainable and environmentally friendly, with soft footpads that create minimal soil damage, and their natural fibre further supports the green natural fibre industry. Alpacas are a great green fit for Australia's farming climate, as they perform far better in dry conditions than most livestock. As ruminants, they require only small amounts of supplementary feeding.

The alpaca lifestyle extends in many directions, as alpacas are also ideal for small-scale and home production, where owners of small herds value-add to their fleece by producing fibre products themselves, such as felts and yarns. There are a variety of ways that farmers sell their animals, e.g. via individual private sales, advertising on eAlpaca or other applications, a herd reduction sale or, if there is an intention to leave the industry, a dispersal sale.

The alpaca meat industry is another pathway to commercial alpaca farming and is growing in popularity as alpaca meat is extremely lean, highly nutritious and flavoursome. It is an excellent source of protein with little saturated fat or cholesterol and is environmentally sustainable to produce. Alpacas also offer a high yield with very little wastage.

Alpacas grow fibre that is valued for its luxurious handle and lustre, and in a wide range of natural colours that are unique among commercial fibre-producing animals. However, unlike many other animals, alpacas do not shed their fibre. Also, even when 'bonded' with an accompanying sheep flock and sleeping close by, alpacas will not come into physical contact with them unless forced to do so during yarding. Even then, the risk of fibre cross-contamination is much less likely than from sheepdogs during yard work.

The alpaca does not grow fibre underneath its short tail or in the breech area and avoids contact with its urine and dung pellets by using a crouching method during urination and defecation. Together with almost no grease in its fibre, this means that no mulesing or crutching is required, and fly strike does not occur.

This resource has been developed by:

SECONDARY SOURCE ONE ACTIVITY

Agricultural Sustainability (cont.)

Sustainability Framework

Agriculture is at the centre of many of the sustainability challenges facing the world today, with issues such as animal welfare, land degradation, biodiversity loss, climate change, population growth, water scarcity, and human rights challenging the way food and fibre are produced.

Customers and consumers want to feel confident that the food and fibre they purchase have been responsibly produced.

The alpaca industry in Australia is still in its infancy compared to other farming enterprises and does not share the same level of resources. However, the industry is aware of its impact and are committed to addressing these issues in order to align the alpaca industry with other livestock industries throughout Australia and the world.

The Australian Alpaca Association is developing an Alpaca Sustainability Framework to document how the industry intends to meet its responsibilities and ensure a sustainable future.

The Sustainability Framework will demonstrate to global consumers and manufacturers that members of the Australian Alpaca Association farm their alpacas in a way that is good for people, animals, and the environment.



This resource has been developed by:

SECONDARY SOURCE TWO ACTIVITY

Agricultural Sustainability

Scan the QR codes or click on the links to view each source material below.



» What makes Australia a great home for the Alpaca (1:17) https://www.youtube.com/watch?v=7Xn0fIPE_jk



» Why farm alpacas in Australia? (1:14) <https://www.youtube.com/watch?v=svz2RESTz-U>



» Why Alpaca is the Smart Future for Australia (7:06) <https://www.youtube.com/watch?v=quXELeJl7bc&t=225s>

This resource has been developed by:

SECONDARY SOURCE THREE ACTIVITY

Economic Sustainability



1. Scan the QR code or click on the [link](#) to view the source material.

» What is Sustainable Agriculture? Episode 8: The Economics of Sustainable Agriculture (2:27) <https://www.youtube.com/watch?v=ZwAOZI5dCK0&list=PLWiltQ6OyOzpgxVhd2vZqTDvVXpPhSVd0&index=8>

Using what you've learnt, determine (✓) which category Australian alpaca production falls into:

Unsustainable

Working towards sustainability

Is already sustainable and is seeking to improve.

2. Scan the QR code or click on the links below to access the reading material.



» Alpacas Market Assessment 2016

<https://agrifutures.com.au/wp-content/uploads/publications/17-010.pdf>

Information relating to alpaca economics can be found on pages 1 (Overview), 2 (Production Volumes and Value), 3 (Domestic and Export Markets), 5 (Alpaca Meat Supply Chain) and 6 (CoProduct Potential).



» Alpacas jumper for a Chile journey

<https://www.agriculture.gov.au/about/news/media-releases/alpaca-jumper-chile-journey>

Did You Know?

Including fleece, animal and domestic meat sales, the value of the Australian alpaca industry exceeds \$12 million.

(Source: Department of Agriculture, Fisheries and Forestry, 2018)



This resource has been developed by:

SECONDARY SOURCE FOUR ACTIVITY

Social Sustainability



1. Scan the QR code or click on the [link](#) to view the source material.

» What is Sustainable Agriculture? Episode 4: Social Sustainability (3:24)
<https://www.youtube.com/watch?v=6896Nwydzg0>

Using what you've learnt, determine (✓) which category Australian alpaca production falls into:

Unsustainable

Working towards sustainability

Is already sustainable and is seeking to improve.

2. Scan the QR code or click on the links below to access the reading material.



» Animal Movement Educational (2:14)
<https://www.youtube.com/watch?v=NqbjpoHVIRA>

The Australian Alpaca Association supports new and young farmers by providing several mentoring services. One of these services is a series of handling videos performed by experienced producers.



» Youth
<https://alpaca.asn.au/youth/>

The Australian Alpaca Association has a dedicated area on their website for Youth. Use the QR code or the link to investigate some of the other services this industry provides to support its youth (and all alpaca producers).



This resource has been developed by:

SECONDARY SOURCE FIVE ACTIVITY

Environmental Sustainability



1. Scan the QR code or click on the [link](#) to view the source material.

» **What is Sustainable Agriculture? Episode 6: Sustainable Grazing (2:50)**
<https://www.youtube.com/watch?v=sZeKNWNSM3I&list=PLWlItQ6Oy0zpgxVhd2vZqTDvVXpPhSVd0&index=6>

Using what you've learnt, determine (✓) which category Australian alpaca production falls into:

Unsustainable

Working towards sustainability

Is already sustainable and is seeking to improve.

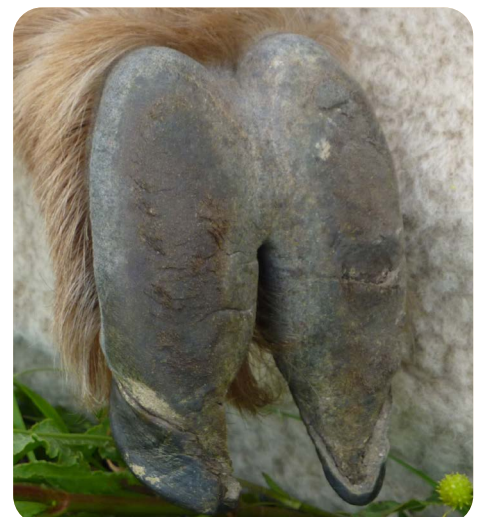
Alpacas and the Australian Environment

Alpacas do less damage than most other farm animals as they have pads, not hooves, so cause little land degradation. Alpacas tend to graze gently, allowing faster pasture regrowth. Their dung makes excellent fertiliser and it is conveniently dropped in areas where they avoid grazing.

Alpacas are undoubtedly the most environmentally friendly of all domesticated animals in Australia. Like all camelids, they do not have hooves but soft padded feet, each with two fairly soft toenails. Their ground foot pressure of 39kPA is much less than sheep (82kPA), cattle (185kPA) and humans (95kPA). Even the kangaroo at 46kPA exerts more pressure on our thin top soils than the alpaca.

Alpacas differ slightly from true ruminants, such as cattle and sheep, because of the structure of their three-compartment stomachs. The alpaca's digestion is adapted to high fibre diets and their dietary efficiency is superior to goats and sheep who share a similar high fibre diet. Although their adult weight of 60-90 kg is greater than sheep, their DSE is between parity and 10% above the merino.

Alpacas place their dung and urine in specific spots and do not graze close to these areas, thus avoiding ingesting internal parasites to which they also have high resistance.



This resource has been developed by:

OPINION ACTIVITY

Meat ‘Pacas

Complete the questions focused on the production of alpacas for meat.



1. What is your opinion about farming alpacas for meat production?

2. Why do you think eating alpaca meat is not as popular or in demand as other types of meat?

3. How would you go about promoting alpaca meat to people? What strategies would you use to increase demand?

4. How does increasing the demand for alpaca meat make the industry more sustainable?

This resource has been developed by:



PEER RESPONSE ACTIVITY

Presentation Feedback

Use this form to provide feedback on another group's presentation.
Be positive and constructive with your advice.

1. Things that are great about this presentation are:

2. One suggestion for improvement is:

3. One question I have about this presentation is:

4. One idea I would 'borrow' and incorporate into my presentation is:

This resource has been developed by: