

Virtual Farm

Case study workbook



Department of
Primary Industries



Acknowledgements

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Virtual Farm Case Study Workbook

The following workbook along with the additional worksheets, are designed to cover the Stage 6 Preliminary Farm Case Study and associated outcomes of the NSW Agriculture Stage 6 syllabus.

Outcomes:

P1.1 describes the complex, dynamic and interactive nature of agricultural production systems

P1.2 describes the factors that influence agricultural systems

P2.3 describes the farm as a basic unit of production

P3.1 explains the role of decision-making in the management and marketing of agricultural products in response to consumer and market requirements

P5.1 investigates the role of associated technologies and technological innovation in producing and marketing agricultural products.

For the best learning outcomes we suggest students visit Tocal College, CB Alexander Campus to carry out the first hand observations and practical activities associated with the Farm Case Study syllabus requirements.

Farm tours are accessible year round via [appointment](#). However, information for completion of this booklet can be accessed through the following links.

The following section requires students to utilise the [Tocal College resources](#) to complete the following worksheet and activities.

- [Tocal Property and Farms](#)
- [Property Overview \(Virtual farm\)](#)
- [Soils of Tocal](#)
- [Water on Tocal](#)

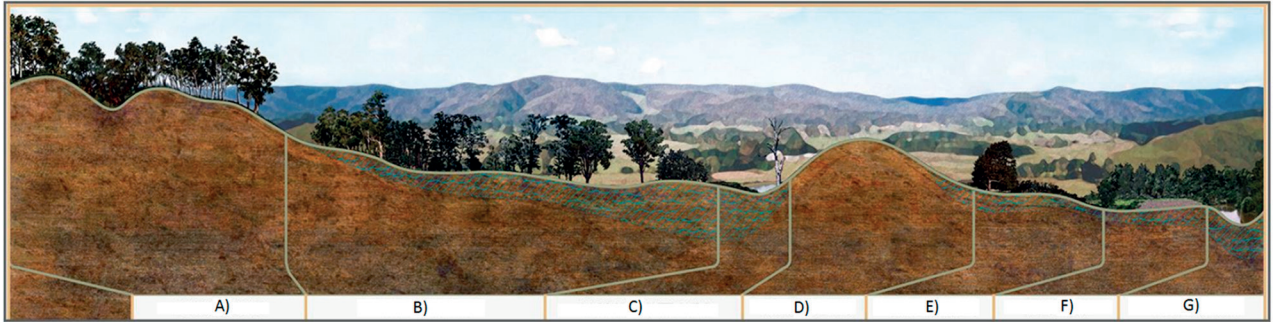
The Farm Unit

Property description

Property Name	
Location	
Managers	
Size (Hectares)	
List the main farm enterprises and 'herd/flock size'	

Give a brief property history (see the [History of Tocal](#)).

Physical and biological resources on the farm



Topographic landscapes on Tocal

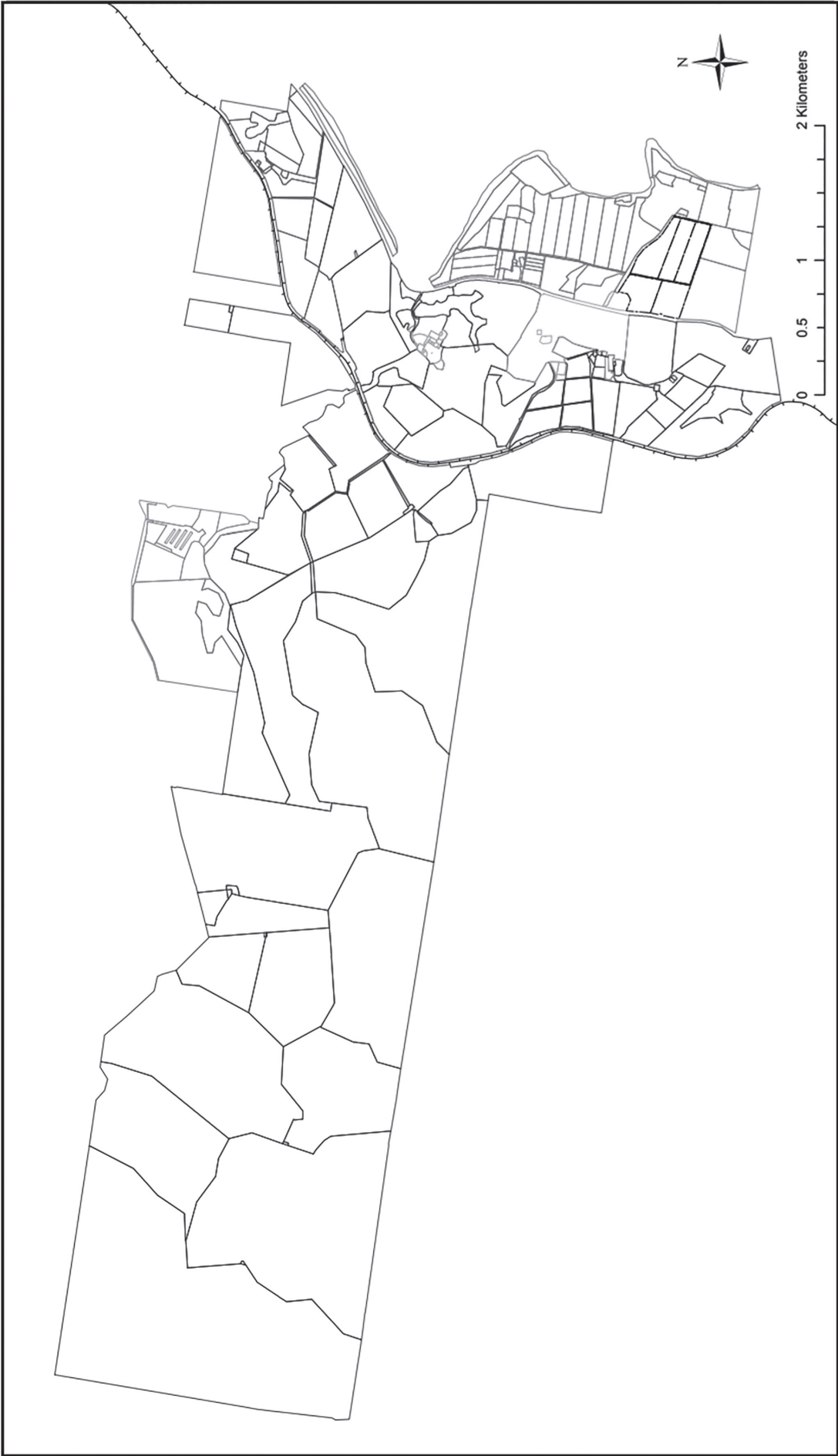
Label the topographic landscapes of Tocal in the transect A)-G).

- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____

On the Tocal Property layout include the following information and a key.

- Land capability classifications
- Sources of water

Total Property layout



Describe the importance of the following physical features to production. In your description address how each affects the type of production on the farm and how any problems are overcome?

- Soils:

- Water:

- Climate:

- Topography:

- Infrastructure:

Describe the importance of the following biological features to production. In your description address how each affects the type of production on the farm and how any problems are overcome?

- Vegetation:

- Pest and disease:

Enterprises- Animals

Answer the following parts for at least one Tocal college enterprise.

- Enterprise name:

- Enterprise size:

- List production figures:

- List the inputs:

- List the outputs:

- Identify the operations and processes within the enterprise:

- List the purpose of plants in this enterprise:

- Identify methods used to control pest and disease:

- Describe methods of marketing the products from the enterprise:

- List 10 technologies used for production in this enterprise:

- Outline any management practices used to improve production:

Enterprises- Plants

- Identify 5 introduced, improved pasture species at Tocal College.

- Identify 5 naturalised pasture types at Tocal.

- Identify 5 native pasture species at Tocal College.

- Identify 5 invasive weeds at Tocal.

- List 5 factors the farmer can change to manage pastures.

- List remnant vegetation types on Tocal College.

- Outline the importance of developing vegetation corridors and where possible protecting areas of remnant vegetation.

Tocal College has a strong ecological management plan to improve sustainability. It focuses on holistically managing climate, soils, water, vegetation, organisms and minimising pollution. For each of the following, briefly outline the goals, policy and management procedures.

- Climate:

- Soils:

- Water:

- Vegetation:

- Organisms:

- Pollution:

- Conserving cultural heritage:

Production goals

- Identify 5 production goals for Tocal College:

Risk Management

- Identify 5 causes of risk and uncertainty in agricultural production.

- Identify 5 ways producers can manage risk and uncertainty.

- List 5 identified Workplace Health and Safety (WHS) hazards at Tocal College.

References and Further Reading:

ESRI Story Maps

Hathway, J 2017, NSW Department of Primary Industries, Tocal College, <https://trade.maps.arcgis.com/apps/MapSeries/index.html?appid=54c8fa832fc445d8a8994e4731956e0a>, viewed 8 February 2018

History of Tocal

NSW Department of Primary Industries, 2018, NSW Department of Primary Industries, Tocal College , <http://www.tocal.nsw.edu.au/about-us/history-of-tocal>, viewed 15 March 2018

Soils of Tocal

Hathway, J 2017, NSW Department of Primary Industries, Tocal College, <https://www.arcgis.com/apps/MapSeries/index.html?appid=be34e7c52a6249c8a6e74219dfed3f4e>, viewed 19 February 2018

Tocal Property and Farms

Hathway, J 2017, NSW Department of Primary Industries, Tocal College, <https://www.tocal.nsw.edu.au/tocal-farms>, viewed 8 February 2018



Water on Tocal

Hathway, J 2017, NSW Department of Primary Industries, Tocal College, <https://www.arcgis.com/apps/MapSeries/index.html?appid=ec24797e7d9943f5a407b7d3c34b8859>, viewed 19 February 2018