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ATASA

Goyder's Line

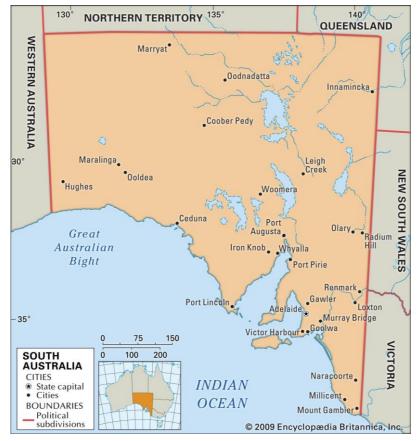
Learning intentions

- become familiar with where Goyder's Line is
- understand how Goyder's Line was developed
- understand the challenges of farming on Goyder's Line
- consider how climate change impacts farming in this region
- reflect on the relevance of Goyder's Line today

Background:

In the 1860s, Surveyor-General George Goyder was given the task to map the regions in South Australia that were suitable for cropping and create a line outside of which cropping was unreliable. This became known as Goyder's Line and is still referred to today, 160 years later.

1. Mark Goyder's Line on the map of South Australia provided. How far are you from Goyder's Line?

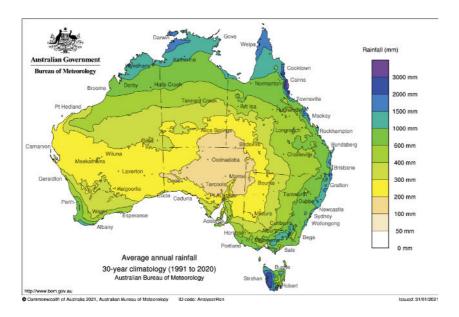


(image source: https://cdn.britannica.com/55/129355-050-BECBBEC5/South-Australia.jpg)

- 2. How did Goyder work out the line? What information did he use to decide where the line should be?
- 3. Define these key terms:
 - surveyor
 - vegetation
 - rainfall
 - drought
 - arable
 - climate change

What is it like to farm near Goyder's Line? Watch this video: *Will climate change kill the Goyder Line, Australia's farming backbone*? <u>https://youtu.be/ua5V3knkY74?si=BuBB8MxNN9whs6e9</u>

- 4. In the video, they refer to the "10 inch isohyet"
 - a) How many millimetres is 10 inches of rainfall?
 - b) What is an isohyet?
 - c) How closely does Goyder's Line match the 10 inch isohyet?



The video mentions technology to help manage soil and soil moisture will be crucial in the future. Check out the resources about ag-tech at: <u>Cropping AgTech - PIRSA</u>

The SA Drought Hub provides support and resources for farmers such as those near Goyder's Line. Explore what is available at: <u>SA Drought Hub - Supporting SA farmers and regional communities</u> including the website *My Climate View* which can be used to forecast the climate changes that may happen in particular areas by 2050 <u>My Climate View</u>.

- 5. Imagine what it was like for George Goyder as he surveyed the South Australian agricultural regions in the 1860s. If he was doing this work today, what tools would he be able to use to help him?
- 6. Goyder's Line does not mean that farms inside the line never experience crop failure. **Other than rainfall**, what factors can contribute to below average crop yields?
- 7. What can farmers do to reduce their risk of below average crop yields?
- 8. *The Australian* newspaper wrote an extensive article about Goyder's Line which was summarised in the video you watched earlier.
 - a) Who do you think they wrote the article and made the video for?
 - b) Who are key stakeholders in the discussion around Goyder's Line?
 - c) Should we still be interested in Goyder's Line? Explain why or why not.

Further resources:

- George Woodroffe Goyder, CMG | SA History Hub
- How do you farm under a warming future climate change https://youtu.be/qAzAf97veuk?si=OKuFrC9xbh02HLV1
- Australian agriculture and climate change: a two-way street Curious (science.org.au)

Disclaimer: This curriculum resource is designed to support schools in delivering quality food and fibre content to students. It has been developed by Lead Ag Teacher Sue Pratt, AgCommunicators – a registered teacher with more than 30 years' experience in teaching agriculture and science. Prior to using this resource, teachers should conduct a risk assessment in line with their site's curriculum and safety guidelines and check all links are appropriate to the school's online policies. The risk assessment may include provision of specialised Personal Protective Equipment and review of the school's policies and procedures on chemical use.