Pasture Biomass Report

Demo Farm - 2024-04-03

This report is subject to the terms laid out in the Cibo Labs Platform Licence Agreement

Click here for instructions on how to use this report.

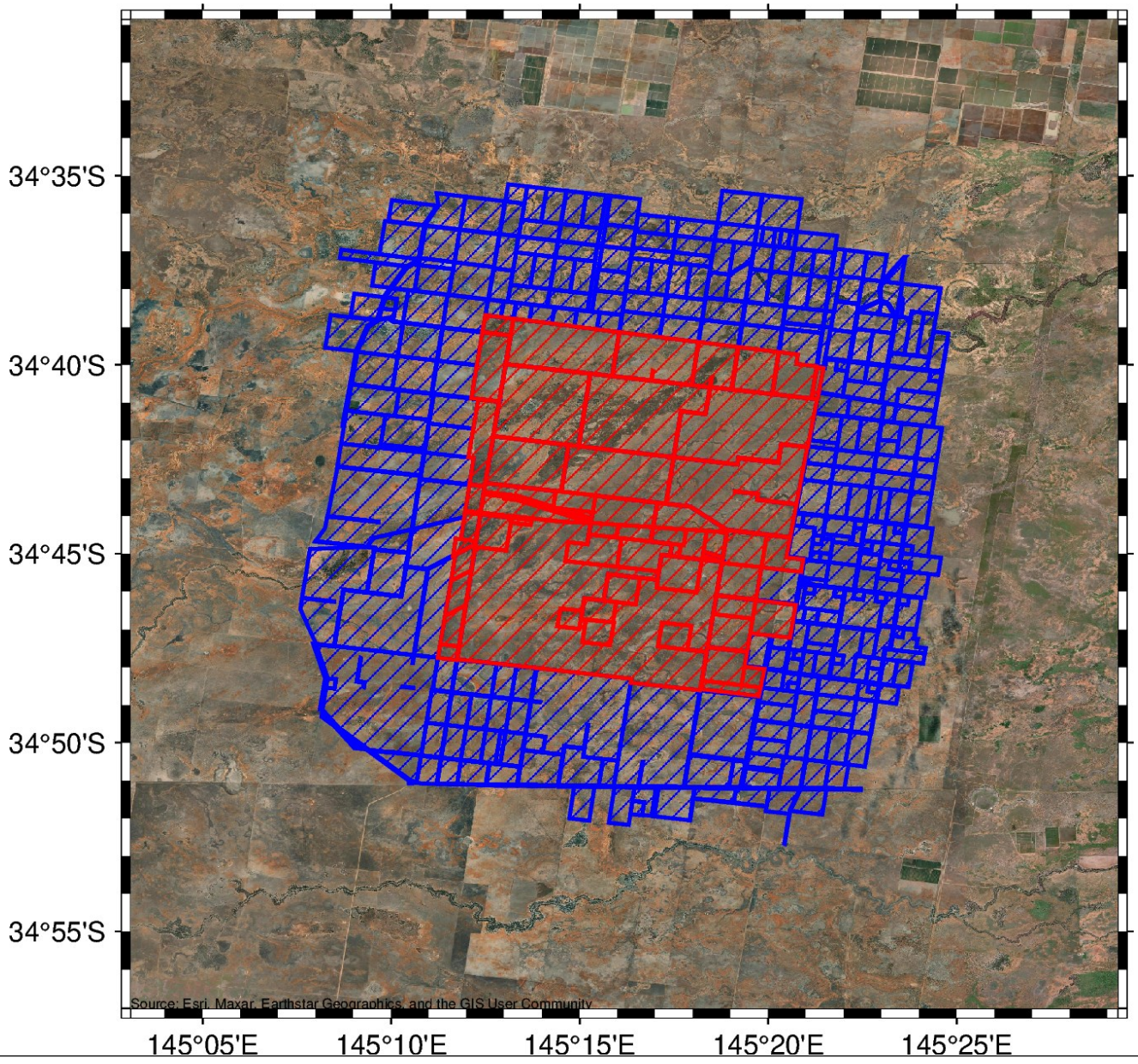
Thank you for downloading your Pasture Biomass Report. This report has been designed to give you a better understanding of your farm's pasture growth over time.

Key Features of this Report

This report has been developed using 5-day satellite imagery, thousands of field observations, and machine learning to estimate monthly levels of pasture & herbage biomass (pasture biomass). Pasture biomass is expressed as Total Standing Dry Matter (TSDM) and measured in kilograms per hectare. It is important to remember that pasture biomass includes all green, actively growing plant material, and any dead material that is standing above ground level.

In addition to monthly pasture biomass, this report also provides estimates of monthly pasture biomass growth (Pasture Growth). This is an indicator of the growth that has occurred each month and can be used to develop a feed curve for your property.

The report is based on your farm area, which is highlighted in red. Your selected reference area (Benchmark) is shown in blue so that you can compare your farm to surrounding areas, likely to have received similar rainfall.



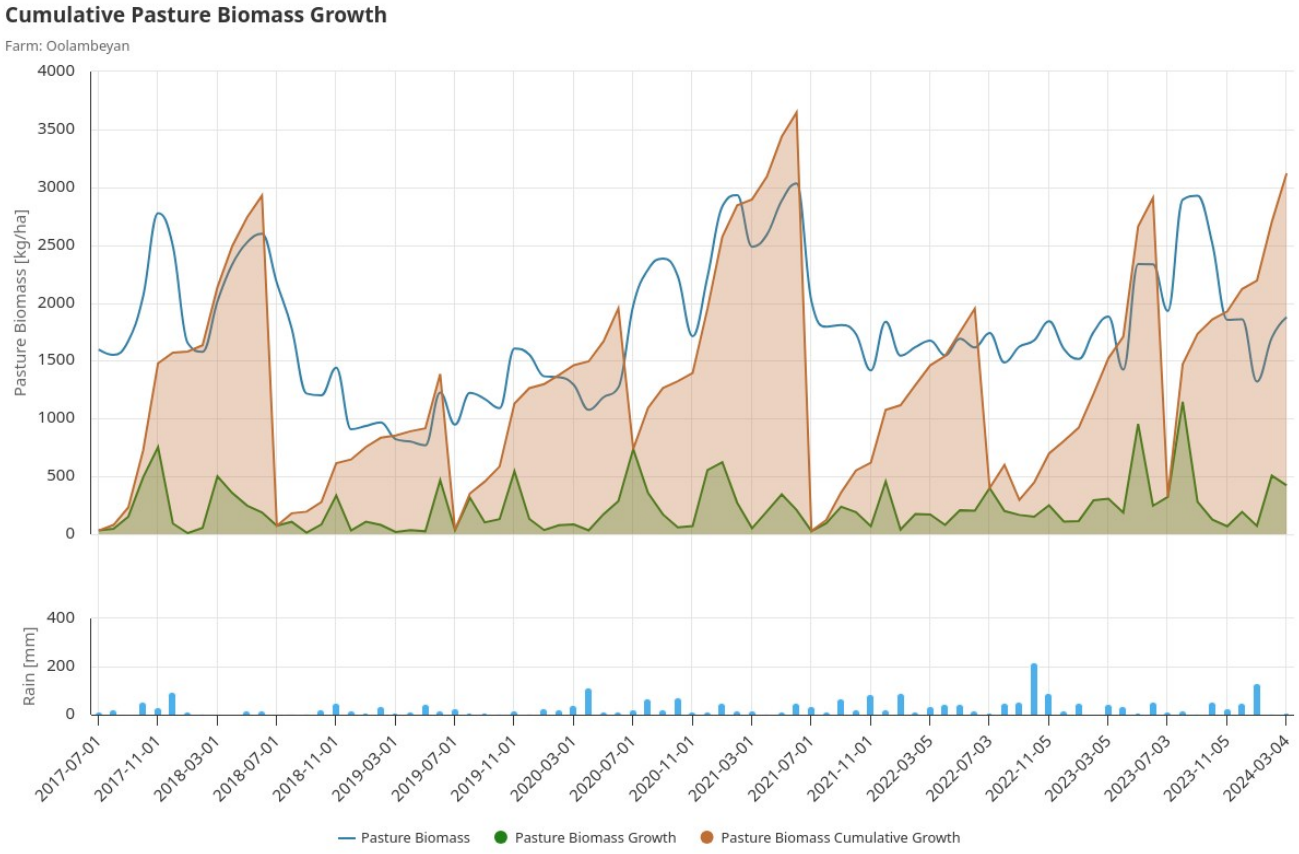
Pasture Biomass Report

Demo Farm - 2024-04-03

Monthly and Annual Pasture Growth

This report provides a chart for your farm that summarises the average pasture biomass present each month; it shows the monthly growth and the cumulative monthly and seasonal growth. The chart also shows rainfall for your location, provided by the Bureau of Meteorology. This can be used to assess the influence rainfall has on pasture responses.

The blue line shows monthly biomass (in kg/ha). The green shaded area shows the monthly biomass growth, and the red area shows the cumulative growth over each season (July-June). The cumulative seasonal growth is "reset" in July. This period was chosen to coincide with likely dry periods in the north and temperature limiting periods in the south.

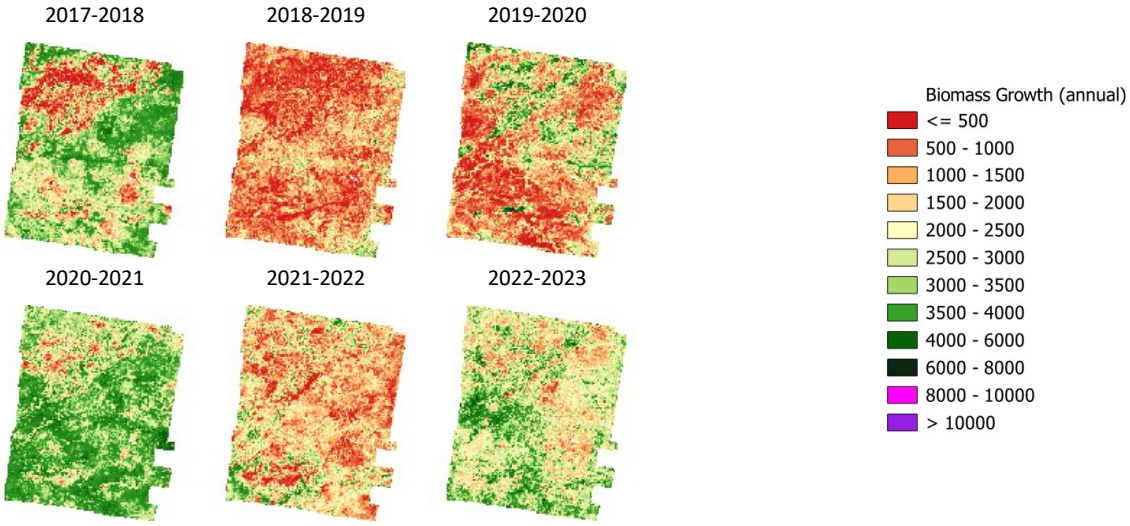


Pasture Biomass Report

Demo Farm - 2024-04-03

The estimates have been generated by an analysis of land within the farm boundary, using satellite imagery with a resolution of 100m (i.e. a pixel size of 1 ha). Changes in pasture biomass in each hectare are estimated. The sum of estimated monthly growth within each 1 ha pixel is used to calculate the average pasture growth for the entire farm. Pasture loss, or no change within each 1 ha pixel area is recorded as zero growth.

The map below shows the cumulative pasture biomass growth in the farm at the end of each growing season.



Pasture Biomass Report

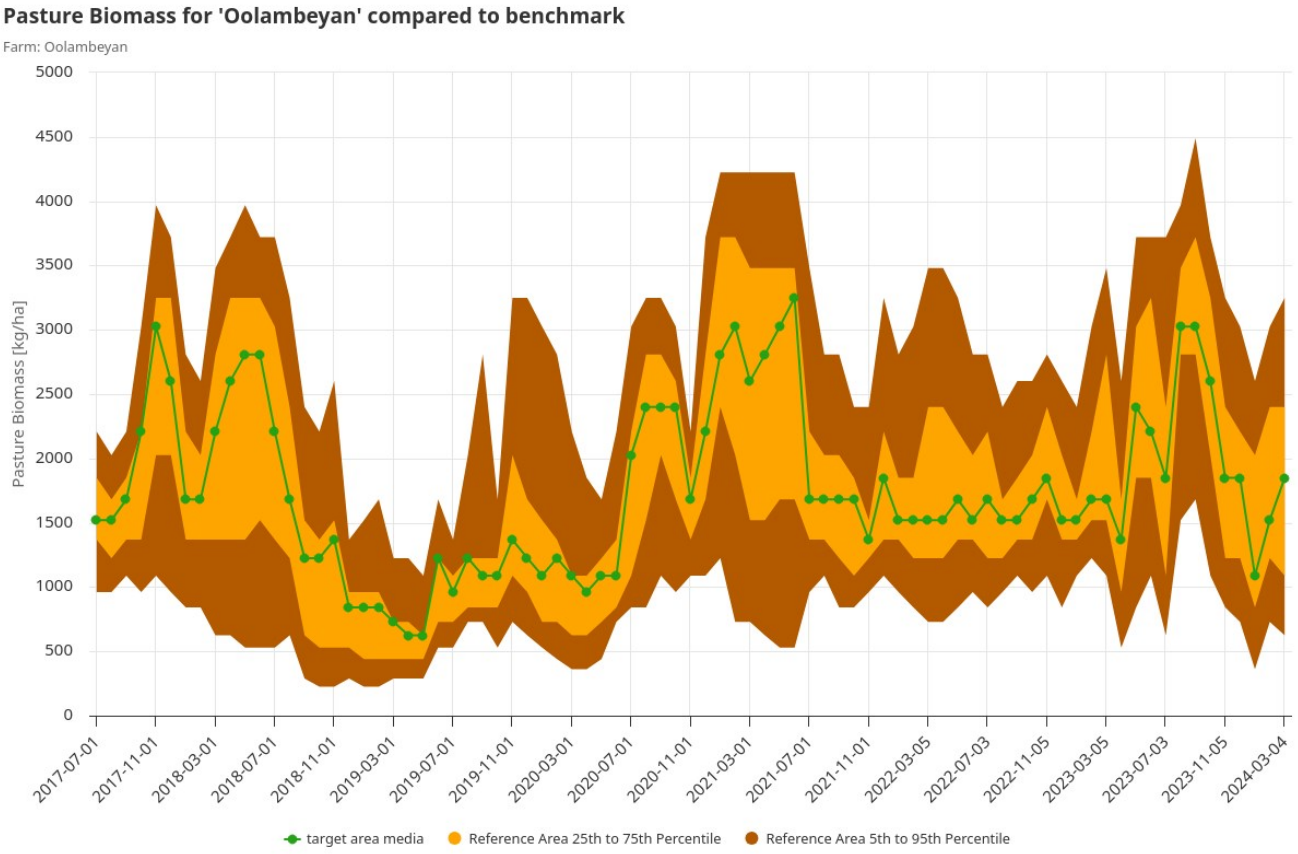
Demo Farm - 2024-04-03

Benchmarking Pasture and Utilisation

Users of this report may wish to compare their pasture and utilisation against the benchmark (reference) area. This benchmarking may be useful in understanding trends and impacts of grazing management or development strategies.

Comparing the monthly pasture biomass of a farm to neighbouring farms (with similar land types, land use and rainfall) helps to reduce the influence of regional climate variability on any comparisons. Differences between the pasture biomass levels on the selected farm and the surrounding farms are then assumed to be due to land and grazing management for similar land types.

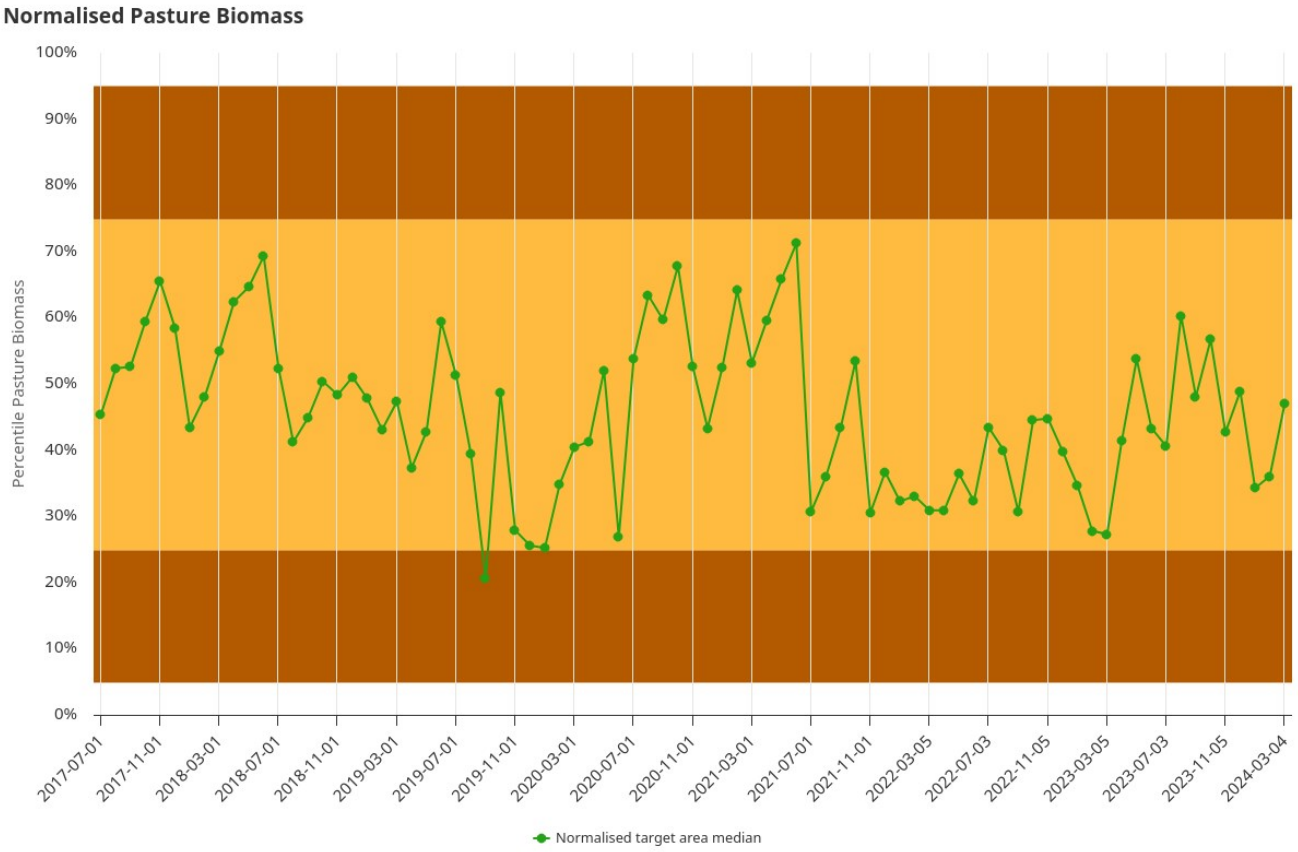
To use this report as a benchmark, there are two summaries available. The first is a monthly comparison of the median pasture biomass of the farm (green line) to the selected benchmark area. If the green line is above the 75th percentile, this indicates the farm has higher levels of pasture biomass than 75% of the benchmark area. Alternatively, if the green line is closer to the 25th percentile, it has significantly lower levels of pasture biomass compared to the benchmark area.



Pasture Biomass Report

Demo Farm - 2024-04-03

The second chart normalises the data and compares the median pasture biomass of the farm to the selected reference area as a percentile rank over time. If the median pasture biomass of the farm is higher than the reference area it will be above the 50th percentile line. It is important to consider both actual pasture biomass levels as well as the percentile rank. For instance, pasture biomass levels could be high across the neighbouring reference area, but the reporting area could be in a lower percentile range, showing that the pasture biomass levels for the reporting area are generally high but lower in comparison to the reference area.



The data used to develop this report, including the charts, can also be downloaded in a csv file for additional analysis. For advice or support in understanding your report, assistance is available from the Cibo Labs team support@cibolabs.com.au.