

NSW research results

RESEARCH & DEVELOPMENT – INDEPENDENT RESEARCH FOR INDUSTRY

The following paper is from an edition of the Northern or Southern New South Wales research results book.

Published annually since 2012, these books contain a collection of papers that provide an insight into selected research and development activities undertaken by NSW DPI in northern and southern NSW.

Not all papers will be accessible to readers with limited vision.
For help, please contact: Carey Martin at carey.martin@dpi.nsw.gov.au

©State of NSW through the Department of Regional New South Wales, 2023

Published by NSW Department of Primary Industries,
a part of the Department of Regional New South Wales.

You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose, provided that you attribute the Department of Regional New South Wales as the owner. However, you must obtain permission if you wish to charge others for access to the publication (other than at cost); include the publication advertising or a product for sale; modify the publication; or republish the publication on a website. You may freely link to the publication on a departmental website.

Disclaimer

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Department of Regional New South Wales or the user's independent adviser.

Any product trade names are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product name does not imply endorsement by the department over any equivalent product from another manufacturer.

Seasonal conditions 2015

The 2015 season was characterised by below average minimum temperatures in June and mid-September, followed by above-average temperatures at the end of the season (Figure 1). The lower temperatures early in the season reduced biomass production and were followed by a rapid shift in temperature extremes in September, which caused crops to mature quickly.

There were 16 frosts at the Wagga Wagga Agricultural Institute (WWAI) in 2015 with the most severe on 3 July (-3.5°C) and the latest on 23 and 24 September (-1.0°C and -0.5°C respectively) (Figure 2).

Growing season rainfall (April–October) in 2015 was 333 mm, which is almost average for the site, but this fell predominantly in early to mid-season with September and October rainfall below average (Figure 3).

Across the district, growers and agronomists reported average to above average yields in the majority of locations including WWAI. Above average rainfall throughout winter provided a full soil profile leading

into spring, helping the crops cope with higher than average temperatures in late September and early October. Despite quicker crop development in spring (flowering dates had a very tight range for the later sowings of 3–5 days compared with 14 days for early sown crops), crop yields were not adversely affected around Wagga Wagga.

Generally speaking, disease was slow to develop in crops early in the growing season due to drier conditions in autumn (May). However, very wet conditions in June, July and August were ideal for root and foliar pathogens to establish in many crops in the region. Multiple wet days meant long periods of leaf wetness and high soil moisture, causing multiple infections and high disease pressure heading into spring. In spring, below average rainfall and warm temperatures significantly reduced disease progression across the region. However, in many crops the damage from disease had already been done in winter and these crops struggled with the dry finish to the season.

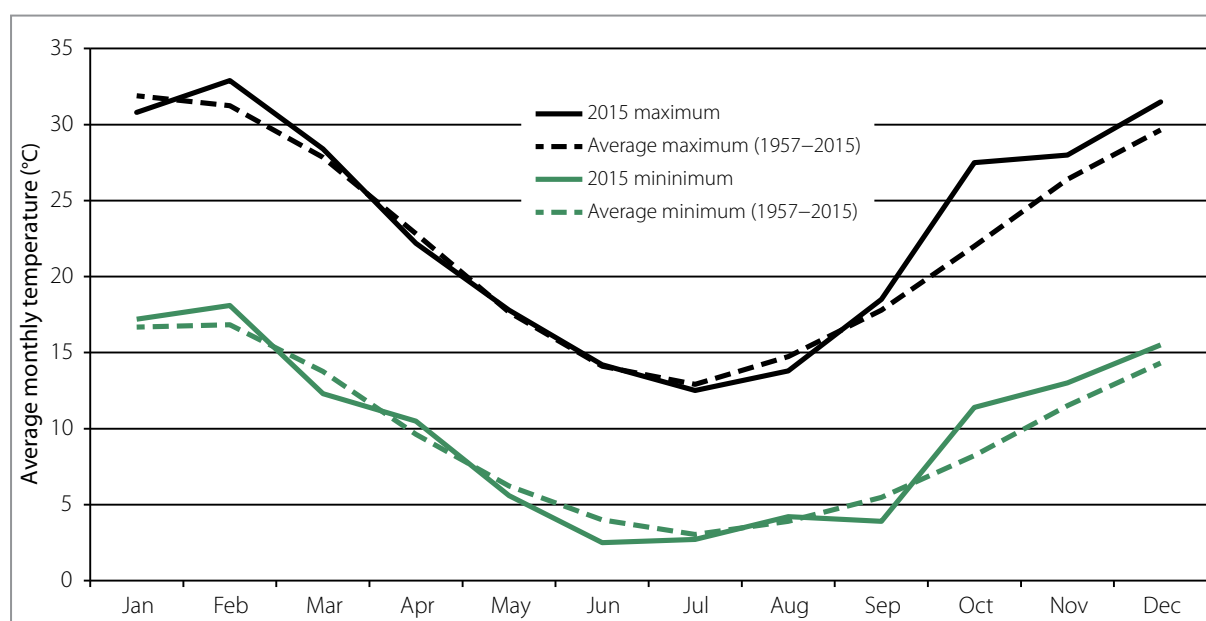


Figure 1. Monthly temperatures at WWAI in 2015.

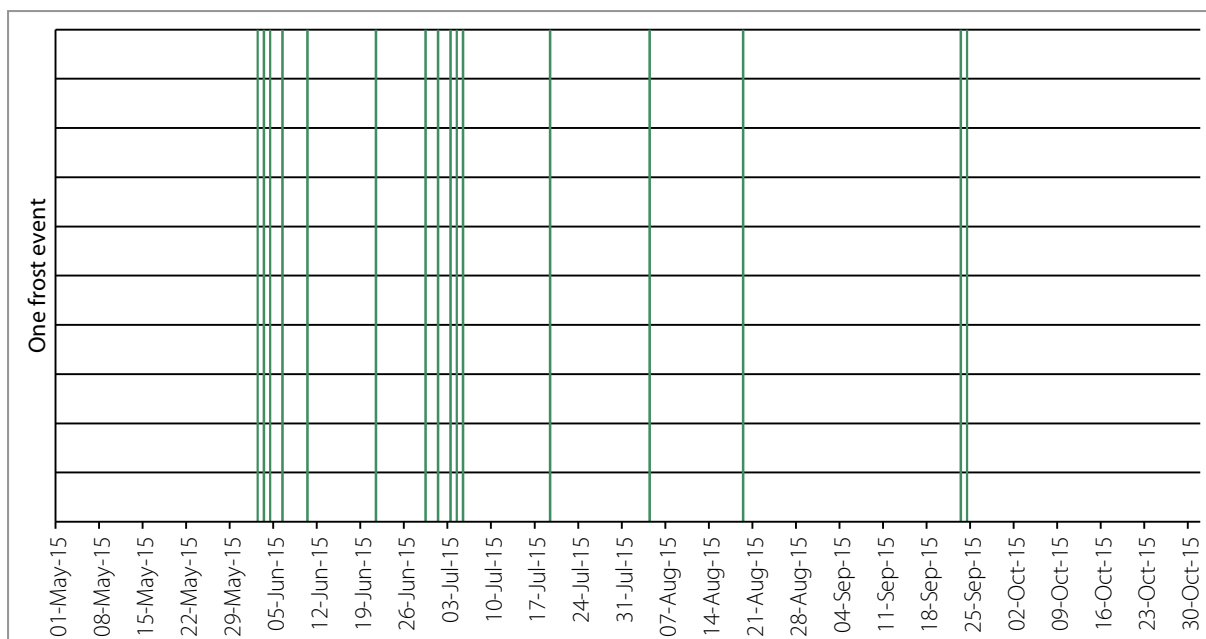


Figure 2. Timing of frost events (<-2 °C) at WWAI in 2015.

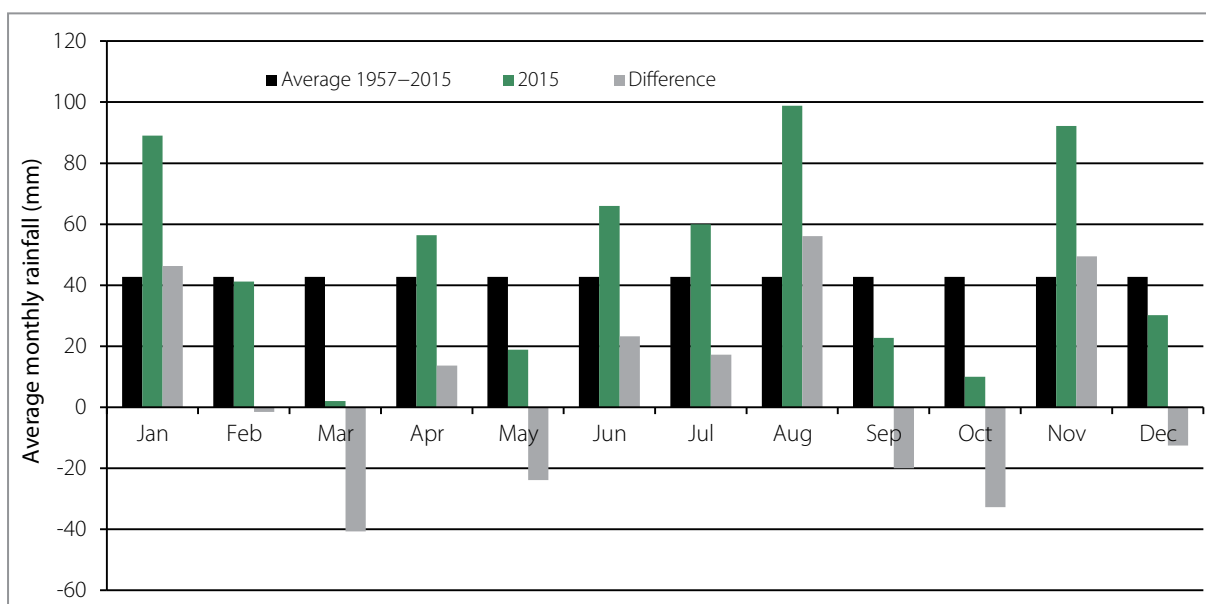


Figure 3. Monthly rainfall at WWAI in 2015.