

## **Climate variability of precipitation, temperature and their extreme events in the South of Santa Fe**

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### **Summary**

Climate variability on different time scales (long-term, interdecadal and interannual) of precipitations, temperatures and climate extremes are determinants in agricultural production in southern Santa Fe. This variability causes economic and social damage. In this context, our aim was to establish the climatic extreme precipitation and temperature indexes in southern Santa Fe, and determine their long-term, interdecadal and interannual variability. Precipitation and temperature series for Zavalla were identified. Extreme precipitation and temperature indexes were established. Long-term warming increased significantly and wet days' decrease. Annual precipitation showed decreasing trend, opposite that found at regional level, explained by the differential sensitivity of the work scales. Interdecadal variability on consecutive wet days and heatwaves was significant. In every variable and indexes studied the interannual variability was the most important. This could limit crop yields in the study region.

**Key words:** trends; decade; extreme precipitation; extreme temperature