



Abstract

In the second half of 1953 coffee prices exploded demonstrably due to several cold surges in the coffee growing areas of southern and south-eastern Brazil during wintertime. The cold surge of 5 July 1953 has been graded as an extreme frost event with measured minimum temperature of -0.1°C in São Paulo, but no measurements are available for the coffee growing region to the south-west. Reanalyses such as version 2c of the “Twentieth Century Reanalysis” (20CRv2c) provide an opportunity to study extent, evolution and synoptic conditions of the event. 20CRv2c shows the movement of a cold core anticyclone towards South America and its deflection and advection of cold air equator-wards. However, cold air in 20CRv2c does not reach São Paulo, likely due to erroneous surface pressure observations. Only the reanalysis NCEP/NCAR with assimilated upper-air temperature reaches surface temperature values that are similarly low as observations.