

RANGELANDS

THE WEATHER DATABASES OF THE NMSU CORONA RANCH

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THE STORY IN BRIEF: As a research ranch the Corona Range and Livestock Research Center has a need for detailed and accurate weather data as researchers attempt to quantify the effect of weather and the environment on production systems. Adjacent ranches also need timely weather information for planning and stocking rate decisions. Numerous weather recorders are available for the Corona Ranch including automated weather stations and hand-collected rainfall data. Databases and spreadsheets summarizing the weather data have been developed with links from the Corona Ranch website. Data include hourly, daily, monthly, and annual recordings from automated weather stations starting back in 1990. Available weather data includes rainfall, soil moisture, air and soil temperature, relative humidity, and wind speed and direction.

THE PROBLEM: There is a need to have the weather databases of the Corona Ranch readily available on the web with adequate instructions for data access, understanding and use.

OBJECTIVES:

17. Make the weather databases of the Corona Ranch available on the web and provide adequate instructions for data access, understanding, and maintenance of the databases.
18. To broaden the awareness about weather data that is available for the Corona Range and Livestock Research Center.

OUTCOMES:

7. Historical weather data for the Corona Range and Livestock Research are now available on the web with links from <http://Corona.nmsu.edu>. The databases are updated monthly.
8. Research Report 761 titled “*Eighteen Years (1990–2007) of Climatological Data on NMSU’s Corona Range and Livestock Research Center*” is available at <http://www.cahe.nmsu.edu/pubs/research/>.
9. Technical Report 46 titled “*Procedures for Updating Weather Databases and the Weather Data Website on the NMSU Corona Range and Livestock Research Center*” is available at <http://www.cahe.nmsu.edu/pubs/research/>

DURATION: January 1990 to current period

APPROACH: Corona Ranch employee’s periodically download data from automated weather recording devices located at two locations on the Corona Ranch. A third automated recorder located on the ranch is the Natural Resources Conservation Service (NRCS) Soil Climate Analysis Network (SCAN) site located on the Corona Ranch and referred to as the Adams Site

(<http://www.wcc.nrcs.usda.gov/scan/site.pl?sitenum=2015&state=nm>). Ranch employee’s also record rainfall amounts following storms from rain gauges scattered

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across the ranch. As described in detail in NMSU technical report 46, the hourly and daily data are maintained in Access and Excel files and made available on the web.

RESULTS: Current and updated weather data for the Corona Ranch are available on the web.

POTENTIAL APPLICATION: Weather data can be accessed by those conducting research on the Corona Range and Livestock Research Center and by area ranchers and others that could use current and accurate localized weather data for the Corona area.

REFERENCES:

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- Torell, L.A., K.C. McDaniel, S. Cox, and S. Majumdar. 2008. Procedures for Updating Weather Databases and the Weather Data Website on the NMSU Corona Range and Livestock Research Center. New Mexico State Univ. Agr. Exp. Sta. Research Report 761.