Grass-Cast: the Grassland Productivity Forecast
(look for it online mid-April thru August)

For livestock producers, Extension, NRCS, and other rangeland managers—a forecast of your grassland’s peak total pounds per acre for the growing season, across the Great Plains and Southwest.

How does it work?

Grass-Cast uses well-known relationships between historical weather and grassland production. It combines current weather data and seasonal climate outlooks (from NOAA Climate Prediction Center) with a well-trusted grassland model (DayCent) to predict total biomass (lbs/acre) for individual counties, compared to their 38-year average.

Grass-Cast is an optional tool that managers can use to form a more-educated guess about the upcoming growing season. It can help inform the design of proactive drought management plans, trigger dates, stocking dates, and grazing rotations.

For more info visit https://grasscast.unl.edu

Have questions about the interpretation or science behind Grass-Cast?
Contact Dannele Peck by email or phone: dannele.peck@usda.gov or 970-744-9043

Producers and agencies should not rely on Grass-Cast as a sole source for making management decisions. Nor should they look at Grass-Cast just once during the growing season. The accuracy of Grass-Cast improves with time as the growing season unfolds, so it should be consulted every 2 weeks, when it is updated with newly observed weather data. Agencies are discouraged from using Grass-Cast as a sole source of information for setting stocking rates, determining turnout dates, or other aspects of lease agreements, allotments or permits.
How much more or less grass will my area have if precipitation in May, June, July & August is...

Why 3 different maps? Because forecasts are sometimes wrong! With 3 maps, you can explore 3 different “What-if” scenarios:

1) What if...your area receives above-normal precipitation in May-August? How much rangeland vegetation might grow, compared to your area’s 30+ year average? The top-left map shows this scenario (using 2019 as an example).

2) What if your area receives near-normal precipitation? The middle map shows vegetation growth under this scenario.

3) What if your area receives below-normal precipitation? Consult the bottom-right map.

For those wanting to “look under the hood,” this diagram shows how the Grassland Productivity Forecast or “Grass-Cast” map is made. For details, contact Dannele Peck dannele.peck@usda.gov

The “Grass-Cast” Procedure

1. Observed weather + Forecasted weather

2. Evapotranspiration, for the growing season

3. Greenness for the season

4. Lbs/Acre of Veg for season

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