

# Grass-Cast: An Experimental Grassland Productivity Forecast

## Coming to NM and AZ in Spring 2020!

For livestock producers, Extension, NRCS, and rangeland managers—a new forecast of your area’s peak standing grassland biomass, for the whole growing season, across the Great Plains.

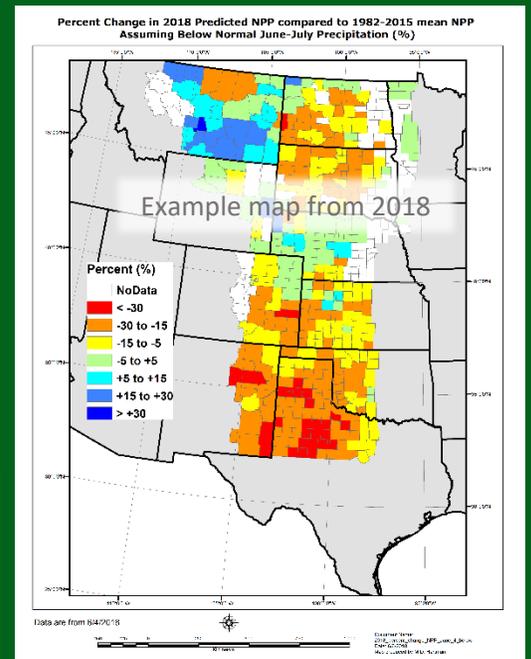
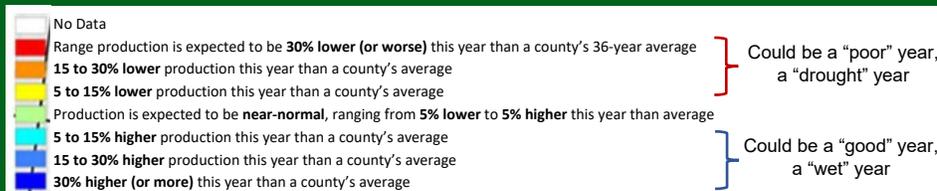
### How does it work?

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.

Managers can use Grass-Cast to help make decisions about the upcoming growing season such as proactive drought management plans, trigger dates, stocking dates, and grazing rotations.

For more info visit:

<http://grasscast.agsci.colostate.edu/>



**Have questions** about the interpretation or science behind Grass-Cast?

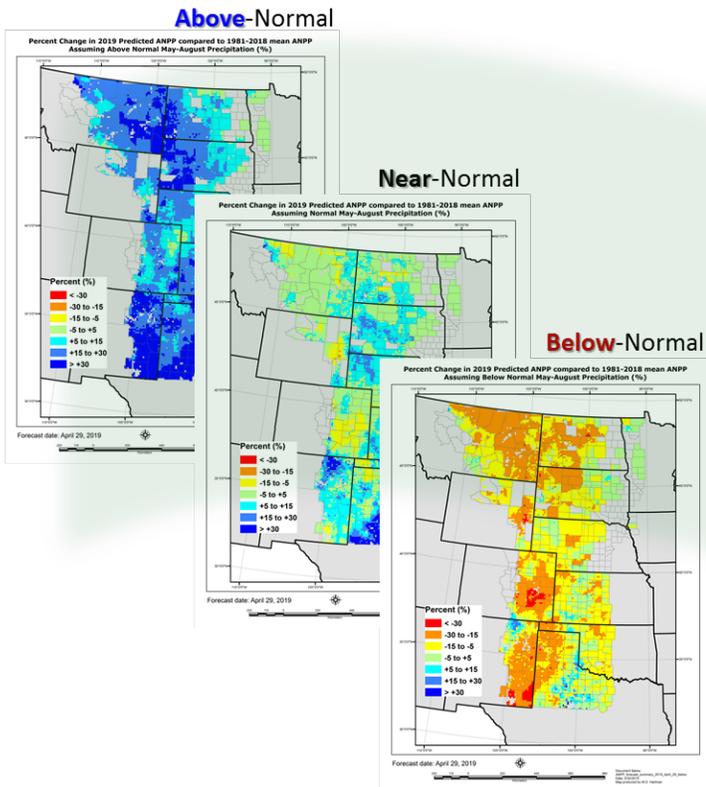
Contact **Dannele Peck** by email or phone: [dannele.peck@usda.gov](mailto:dannele.peck@usda.gov) or 970-744-9043

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.

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# 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](mailto:dannele.peck@usda.gov)

## The “Grass-Cast” Procedure

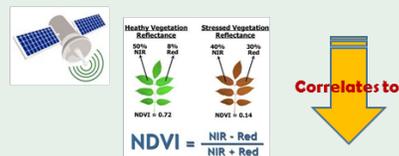
1. **Observed** weather + **Forecasted** weather



2. **Evapotransp.** for the growing season



3. **Greenness** for the season



4. **Lbs/Acre** of Veg for season



FUNDED BY:



Natural Resources Conservation Service  
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November 2019