WHIP+ Crop Production Loss Estimations
2020 Disasters

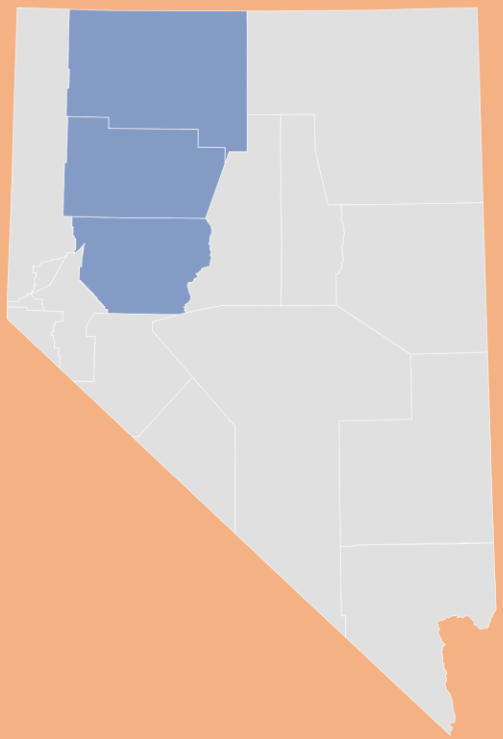
NEVADA

Nevada experienced D3 and D4 drought in 2020

At least $424 thousand in crop damages* went uncovered in 2020.

The following table, based on RMA data, illustrates AFBF crop loss estimates.

Drought	Estimated Total Crop Damage	Paid Insurance (RMA Indemnities)	Unaccounted-for Damages
Alfalfa Seed	$ 134,076.53	$ 58,725.52	$ 75,351.01
Corn	$ 65,003.98	$ 37,572.30	$ 27,431.68
Forage Production	$ 325,555.56	$ 20,510.00	$ 305,045.56
Wheat	$ 36,336.34	$ 19,360.00	$ 16,976.34
Grand Total	**$ 560,972.40**	**$ 136,167.82**	**$ 424,804.58**



WHIP+ Crop Production Loss Estimations
2020 Disasters

METHODOLOGY

*AFBF crop loss estimates **do not** include damage to grazing lands, infrastructure damage, livestock losses, or timber losses associated with the selected weather events. Unaccounted-for damage estimates should be viewed as a minimum baseline as data to estimate these other categories are not readily available.

To begin, AFBF economists compiled a list of states impacted by weather events in 2020 that would have qualified for WHIP+. All D3/D4 droughts, hurricanes, tornadoes, and wildfires were included. Affected states were selected using the National Drought Mitigation Center's U.S. Drought Monitor and the Federal Emergency Management Agency's presidential disaster list. States that had any form of D3/D4 drought were automatically included in the analysis. States that suffered one or more of the weather events that qualify for WHIP+ and had a presidential declared disaster were also included in the analysis.

The first page illustrates the weather events that impacted your state, the affected counties, and the estimated crop losses calculated using the following formula.

Calculations

This analysis utilizes USDA-Risk Management Agency (RMA) crop insurance data to estimate losses if all crop acreage was insured with complete (100%) protection. Methodologies mimic those used by the National Oceanic and Atmospheric Administration's National Climatic Data Center to estimate losses in their annual "Billion Dollar Climate and Weather Disasters" reports (first described in Smith, Katz 2011).

RMA reports on total indemnities (total insurance compensation) paid for each cause of loss (drought, hurricane, flooding, fire, excess moisture, hot wind, etc.) in a given month for each crop type by state. Each storm is defined with a set of cause of loss types based on the weather event and its related conditions covered by WHIP+. For instance, for hurricanes, the following cause of loss filters were included: excess moisture/precipitation/rain, flooding, hurricane/tropical depression, and wind/excess wind. Data was also filtered by the month(s) the storm impacted each state. Once indemnity payments for crops were totaled, adjustments were made for losses outside insured acreage and coverage levels.

This is achieved by first calculating the percent of insured acres in each state (using 2020 data from USDA-National Agricultural Statistics Service and RMA summary of business data). It is assumed all acreage of a given crop has been impacted by a particular disaster. Then RMA coverage level data is used to find the average coverage rate for each crop in each state. Based on these stats, a factor approach defined as 1/ [(% acres insured) (average coverage level %)] is utilized to come up with a multiplier to estimate 100% of losses. This was repeated for crops in each affected state and totaled.

Using a real-life example: In Florida 56% of pepper acreage is insured. Of the covered pepper acreage in Florida, insurance would cover an average of 62% of losses. Following the formula described above, Florida pepper indemnities were multiplied by 1/(0.56*0.62), or 2.88, to estimate 100% of losses.

Questions? Comments?

Danny Munch | Associate Economist | American Farm Bureau Federation

dmunch@fb.org | 860.908.3918