



Arizona Range and Livestock News

ARIZONA COOPERATIVE EXTENSION

December 2022

Featured Plant: Zinnia

Arizona is home to two perennial species of the genus *Zinnia*, Texas Zinnia (*Zinnia grandiflora*) and Desert Zinnia (*Zinnia pumila*). These plants are considered subshrubs that are rounded or flat-topped.

Texas Zinnia: The showy ray flowers are bright yellow and bloom from May through October. In Arizona, Texas Zinnia is found in Navajo County to eastern Mohave County, south to Greenlee, Cochise, and Santa Cruz counties. Commonly on calcareous soils, it can be found at elevations between 4,000 to 6,500 feet on dry slopes, flats, and mesas.



Desert Zinnia: The flowers are usually white, but sometimes a pale yellow, blooming from April through October. Desert Zinnia can be found in Arizona from central Yavapai County to Cochise and Pima counties on dry slopes, flats, and mesas. Also commonly growing on calcareous soils, it is found between 2,500-5,000 feet in elevation. Desert Zinnia is woodier than Texas Zinnia.

Both species are rarely eaten by wildlife or livestock. Several sources mention that these plants are attractive and worth considering in gardens and landscapes.

Monitoring Minute – Ground Rules and Field Preparation

Establishing written ground rules makes field work efficient and minimizes future errors. If data are not collected the same way every time, the data are not useful for comparison. In addition, different rules on different dates destroy the value of monitoring data. Many ranches have their own ground rules that may differ from agency norms, making the need for writing them down even more important.

Before You Go to the Field

Look at the monitoring file and take it or a copy of the previous monitoring information with you to the field. Be sure that you know how many plots/transects were read previously (100 vs 200 quadrats). You will also need the photos to do the repeat photography. Sometimes the diagrams on the back of the data sheets provide useful information for getting to the site (i.e., mileage from a known point, trail location, landmarks, plot layout).

Data Sheets/VGS Documentation and Collection

Put down as much information as you can on the data sheet or in the VGS general information while you are at the site. Fill in the pertinent location information (allotment, date, key area, observers, etc.) on the front side of your data sheet or in the VGS database. Look at the back of the previous year's transect layout sketch. Follow the layout from previous monitoring to provide repeatable data. Check to make sure there is not more than one layout, and make notes on the directions that you follow if there is a difference and why you chose the option that you did.

Check out this new Extension publication with more in-depth discussion: *The Importance of Strategic Questions and Tactical Ground Rules in Rangeland Studies for Grazing Management*

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az2004-2022.pdf>

Is Artificial Insemination right for your operation?

Ashley Wright, Livestock Area Associate Agent, UArizona Cooperative Extension

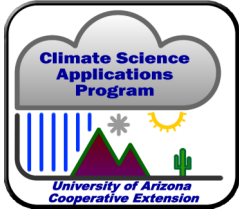
There's no denying that there are significant benefits for the producer who is able to implement artificial insemination (AI) into their breeding program. However, there are also factors around management, facilities, and marketing that producers should consider when deciding to implement AI.

Most producers understand that the use of AI allows them to bring in genetics that might not be available to them otherwise. Purchasing top quality bulls can be a costly (and risky) endeavor. High powered bulls routinely top sales at \$10,000+ (the record holder was set in February 2019, selling for \$1.51 million). These types of bulls are out of reach for most producers, and the risk associated with turning such an investment out onto Arizona rangelands where he could fall victim to any number of issues (including exposure to Trichomoniasis) would make anyone cringe. However, purchasing semen from these high value bulls and using it to artificially inseminate cattle is much more affordable: \$20-\$60 per straw on average. Additionally, the use of AI will reduce the size of the bull battery you do need, allowing you to purchase better quality bulls and reducing the cost of their care.

There are benefits to AI beyond just improving the genetics of your herd. In order to successfully AI, cows will be estrous synched, where a specific sequence of hormones are administered to bring all of the cattle into heat at the same time. These synch protocols provide two benefits: a condensed calving season and earlier bred cows. Both of these increase the value of your calves by making your calf crop heavier (calves will be born earlier in the breeding season), and more uniform in size (the calving season is condensed). Cows that are inseminated on the same day will calve within about a 3-4 week period. However, if you are not utilizing some form of advanced marketing (i.e. selling on the grid, direct marketing) you will be unlikely to capitalize on the improved value of your calves.

The use of AI also allows mating of specific cows or groups of cows to specific bulls. The entire herd doesn't have to (and shouldn't) be artificially inseminated. For example, AI could be used on the replacement heifers only. This allows the use of "heifer bulls" that have low birth weights and high calving ease without having to purchase a bull only for this purpose. The estrous synch protocols can also help set heifers up to be bred early in the season. Heifers that breed and calve earlier in their first season often remain in the herd as early calving cows. Other groups of cows could also be specifically targeted for AI depending on the needs of the operation, such as to increase carcass characteristics or produce future replacement heifers with specific genetics. A general guideline is to AI the top 20% of the females in your herd.

There are some considerations to make before deciding to implement AI on your operation. AI is not ideal for a year-round breeding operation or one that doesn't preg check cows every year to ensure they are open before the synch process is started. A relationship with a veterinarian is also key, as the hormones used to estrous synch must be prescribed by a veterinarian (they can be administered by the producer). Access to facilities is also a problem for many producers in Arizona. Cows will need to be run through a chute 2-4 times during a one week to ten-day period for the sync protocols and the AI process itself. A trained AI tech is important, the AI process must be done correctly. Even the best techs have a success rate of 50%-60%, occasionally higher. However, the average producer can learn the process. Cattle that are gentle and easy to work will be easier to AI and more likely to become pregnant than cattle that are overly stressed by handling. Additionally, AI cannot overcome significant management issues including poor vaccination protocols, BVDV or Trich in the herd, or a poor nutrition plan. If, however, your ranch has a good handle on herd health and is looking for a way to invest in genetics and improve the value of the calf crop, AI might be a consideration for those able to take advantage of it.

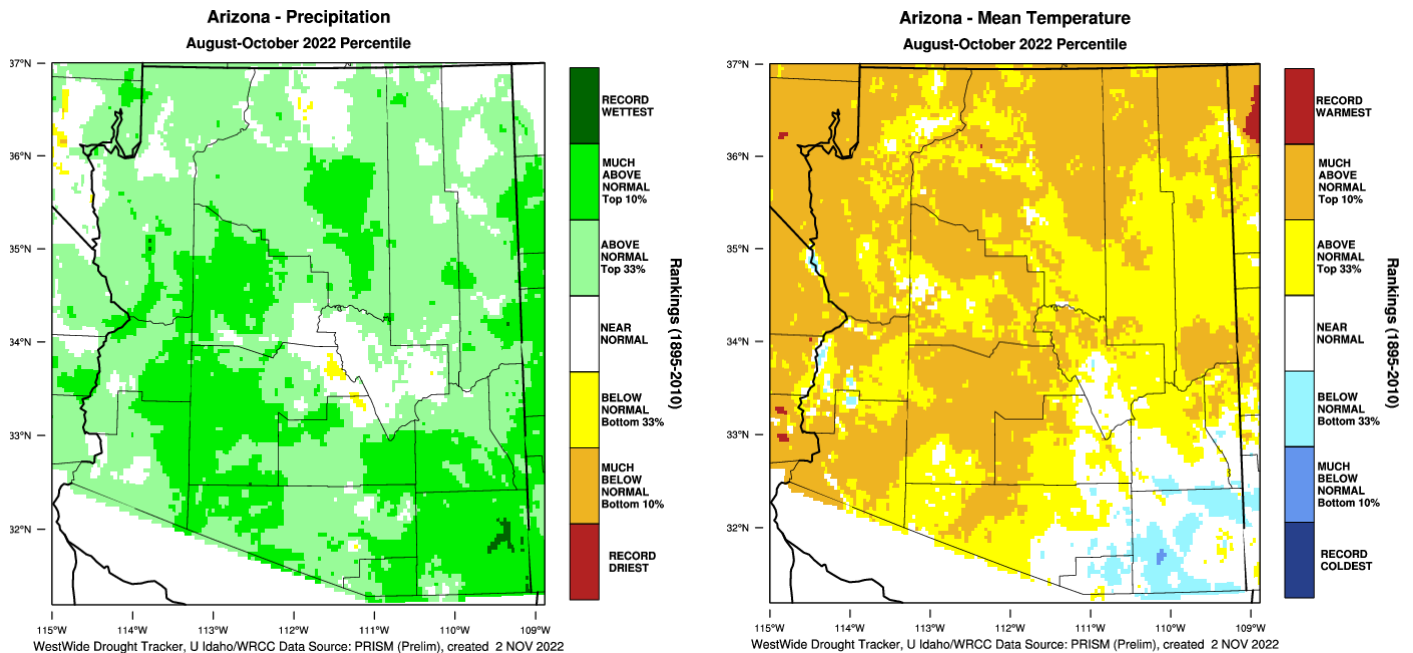


Arizona Seasonal Climate Summary: Fall 2022

Nov 3, 2022 - The 2022 monsoon season was active right through the August to September period and even through the month of October. August was a particularly wet month across Arizona with almost all of the state observing above-average precipitation and some isolated locations in the northeast and southeast corners of the state observing record wet conditions. Monsoon moisture was plentiful through the month and a series of slow moving upper level low pressure systems sparked a couple days of widespread, heavy rain. August 19th was particularly busy with numerous reports of precipitation totals exceeding 2 inches posted to Rainlog.org across southeast Arizona.

Monsoon moisture typically retreats back to the south in early September, but not this year. Hurricane Kay moved up the west coast of Mexico early in the month helping to sustain the deep flow of monsoon moisture in Arizona. This supported several days of widespread precipitation across the region. A fall storm system helped dry out the region briefly later in the month, but moisture returned again in early October. This unusual rebound in monsoon moisture led to more widespread precipitation across Arizona and above-average precipitation totals for the month.

Overall, precipitation amounts were above-average for almost all of Arizona for the August-October period. Temperatures were above-average for most of the region, except for the southeast corner of the state where especially wet conditions suppressed temperatures. Short-term drought conditions have also improved with the latest U.S. Drought Monitor (11/3/22) showing the majority of Arizona experiencing only 'abnormally dry' conditions due to longer-term precipitation deficits.



August-October precipitation and temperature rankings from the WestWide Drought Tracker


(<http://www.wrcc.dri.edu/wwdt/>)



More information available at :
<http://cals.arizona.edu/climate>
<http://www.climas.arizona.edu>

Questions /comments? Contact Mike Crimmins, crimmins@email.arizona.edu





National Weather Service

National Operational Hydrologic Remote Sensing Center

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City, ST

Go

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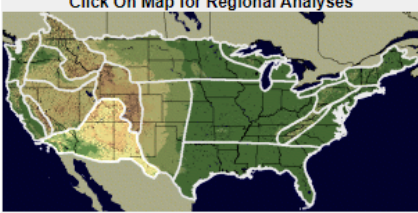
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Regional Snow Analyses: Southwest

[Snow Reports](#)
[Model Assimilation Schedule](#)
[Snow Survey Schedule](#)

Click On Map for Regional Analyses



Automated Model Discussion:
February 17, 2021

- Area Covered By Snow: 42.5%
- Area Covered Last Month: 11.5%

Snow Depth

- Average: 2.5 in
- Minimum: 0.0 in
- Maximum: 61.4 in
- Std. Dev.: 5.5 in

Snow Water Equivalent

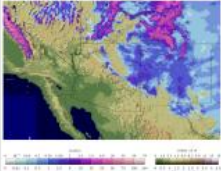
- Average: 0.4 in
- Minimum: 0.0 in
- Maximum: 17.8 in
- Std. Dev.: 1.2 in

more... Metric Units...

Select Region and Date

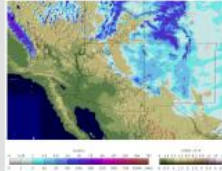
Southwest 2021 February 17 - + Go

Snow Water Equivalent



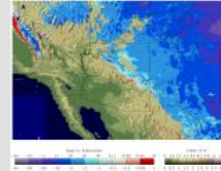
Animate: Season --- Two weeks --- One Day

Snow Depth



Animate: Season --- Two weeks --- One Day

Average Snowpack Temp

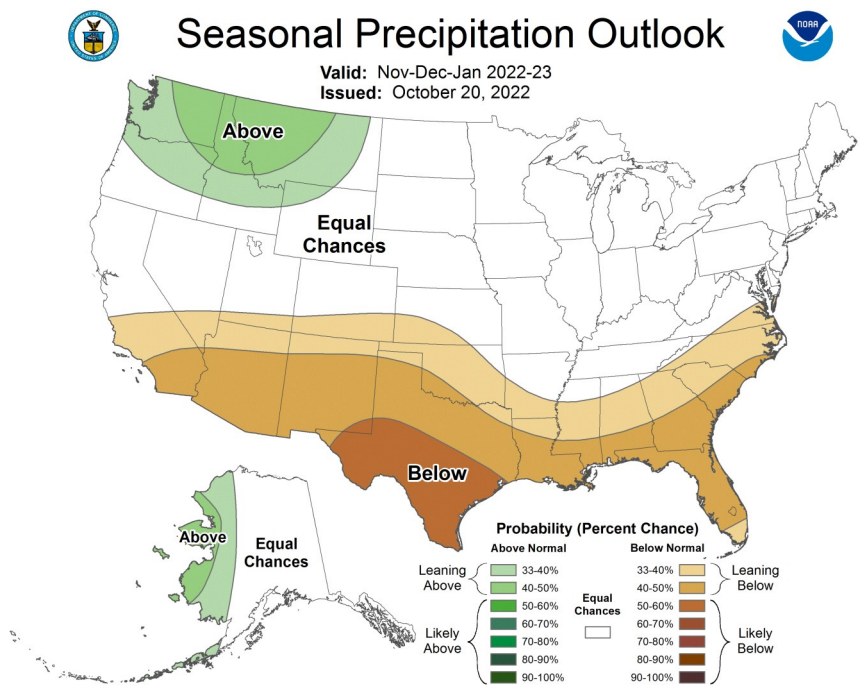


Animate: Season --- Two weeks --- One Day

Finding real-time or recent snow information during the winter can be challenging. There are very few monitoring stations that report snow depth and can often be lagged by days to weeks making real-time decisions difficult. The NOAA National Operational Hydrologic Remote Sensing Center (NOHRSC) works to make snow information a bit more timely and useable by taking different snow observations from locations and from remote sensing data

to predict several different snow variables across the landscape. The NOAA NOHRSC site (<https://www.nohrsc.noaa.gov/nsa/>) provides national to regional maps of snow variables like snow depth, snow water equivalent and snow melt as well as quick links to actual observation sites. The Southwest region provides a close up look at Arizona and New Mexico as well as links to the observing sites across the region. Historical, daily data is also available for all variables back to 2003.

The November through January seasonal precipitation outlook issued by the NOAA Climate Prediction Center in mid-October depicts increased chances of below average total precipitation for this three month period across all of the Southwest. This outlook indicates that there is an increased chance that the total precipitation over the Nov-Jan period will be below the 1991-2020 average for these months. The shift in odds is small and 'leaning below' meaning this isn't a particularly high confidence outlook for Arizona. La Niña conditions have persisted for three years now and are expected to be present through the upcoming winter season. This triple-dip La Niña is expected to bring drier than average conditions to the Southwest again this winter, but may be weaker and may exit early. Regardless, this increases the chances of drier-than-average conditions across the region, especially southern Arizona and New Mexico. Stay tuned to updates here https://www.cpc.ncep.noaa.gov/products/predictions/long_range/



Upcoming Events

A promotional poster for the 2023 Southern AZ Equine Healthcare Symposium. The background features a photograph of a brown horse in a metal stall, with a desert landscape and saguaro cacti visible in the background. The text is overlaid on the left side of the image. A circular badge in the upper right corner indicates the date 'JAN 21'. A 'Register Today' button is located below the event title. A QR code is positioned at the bottom left of the poster area.

2023
SOUTHERN AZ
EQUINE
HEALTHCARE
Symposium

TUCSON, AZ

Register
Today

A full day of education
and tips to help you
care for your horse!



<https://www.southernazequinehealth.com/>

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